

Inequality, trust and the welfare state: the Scandinavian model in the Swedish mirror

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Abstract

Lindert (2004) coins a Robin Hood paradox the fact that rich and equal countries redistribute more than countries with large pre-fiscal income inequalities. It suggests that inequality was reduced before the welfare state. Comparing Esping-Andersen's (1990) three welfare state models, we conclude that only the Scandinavian one is conditioned on low inequality. We explore the inequality evidence for Sweden all of which testifies to a sharp reduction in inequality before the establishment of the welfare state in the 1950s. The reason inequality plays an important role in the formation of the Scandinavian model is trust, which varies negatively with inequality.

1. Introduction

The rise of social transfers is a distinguishing feature among affluent countries in the second half of the twentieth century. The result of the increase in social transfers is what we call the emergence of the welfare state.¹ Besides the emergence of the welfare state, many affluent countries witnessed an impressive decline of inequality that appears closely related to certain welfare state policies aiming at redistribution. The parallel rise of equality and welfare distribution make most of us inclined to perceive of the welfare state as an institution designed primarily to redistribute incomes from people who are well off to those that are needy (Esping-Andersen & Myles 2009); hence, welfare state first, equality thereafter.

With this view of the welfare state in mind, it follows that we would expect social spending aiming at redistribution to take place in countries with large pre-tax income gaps, where the effort to scale down on inequality is needed the most. The median voter's theorem, which posits that a majority of voters will support redistribution if the median voter's income is below the mean, backs this preconceived idea (Persson and Tabellini 1994).² However, a historical glance dispels the notion that the welfare state was pursued for purely egalitarian reasons (Esping-Andersen & Myles 2009). Instead, rich and equal countries redistribute more than countries with large pre-fiscal income

¹ The welfare state is "a system whereby the government undertakes to protect the health and well-being of its citizens, especially those in financial or social need, by means of grants, pensions, and other benefits" (Oxford Dictionary).

² This was empirically supported by Husted and Kenny (1997) who investigated US redistribution in 1950–1988.

inequalities. History reveals a Robin Hood Paradox in which “redistribution from rich to poor is at least present when and where it seems most needed” (Lindert 2004:15).

What the Robin Hood Paradox in fact suggests is that today’s welfare state countries were equal well before they developed into welfare states. Apparently, the welfare state-inequality nexus has more dimensions to it than what the vast majority of the welfare state literature, considering inequality the result of welfare state policy, presupposes. In contrast, a recent literature views the level of inequality an important factor explaining why some countries grew into welfare states while others did not (Rothstein and Uslaner 2005; Moffitt et al 1998; Espuelas 2011). The pertinent question then reads why reduction of inequality would be prerequisite for the appearance of welfare state policies aiming at redistribution.

Before meeting to the challenge of viewing inequality important in the formation of welfare states poses, we need to remind ourselves that welfare regimes are not alike. Social scientists alert that the share of social transfers in GDP, the most commonly used measure of welfare state ambitions, conceals a great variety of principles on which the distribution of benefits depends. Esping-Andersen (1990) identifies three welfare state models, the Liberal, the Conservative and the Scandinavian³, each with particular designs affecting our perceived ideas of what role the level of inequality may play in the formation of the welfare state. After a brief comparison of the three models, we argue that that any reduction in inequality is in fact quite unimportant for understanding the emergence of the Conservative and the Liberal welfare state models. In contrast, inequality is of special importance for the emergence of the Scandinavian model because of its underlying principles of welfare distributions.

The reason why the level of inequality matters for the rise of the social-democratic welfare state is trust, a conception that has quite recently come into the minds of social scientists. The level of trust a society musters correlates inversely with the level of inequality; if it is high, trust is low. Trust bolsters efficient institutions and slashes costs of free riding and misuse of public goods. Taxpayers bear the burden of high taxes with the belief that other taxpayers make the same commitment. Trust constitutes the very foundation on which the universal welfare state rests. Low inequality breeds trust, which is what makes the Scandinavian welfare state possible.

To illustrate the importance of inequality levels for the rise of the Scandinavian welfare state, we examine Sweden, whose low levels of inequality and very large public sector made here the trademark of a modern welfare state in the latter half of the 1960s. The first attempts to establish social reforms were made in the 1910s but the intellectual origin of the Swedish welfare state springs from discussions in the 1930s and 1940s (Åmark 2005 p.). However, the welfare state system that contains all of the hallmarks Esping-Andersen coins social-democratic did not come into being until the late 1950s. Hence, to cast light on the forces shaping the welfare configurations of the full-fledged model,

³ The Scandinavian model is also called social-democratic or sometimes universal (Bergh 2004). We will use these different terms synonymously.

we need to direct our attention to what happened to the evolution of inequality before the end of the 1950s. We review the previous evidence of income distribution and add new pieces of inequality evidence based on market incomes. The evidence points to a remarkable reduction of inequality from the mid-1930s to the end of the 1940s. It brings profound implications for our understanding of the Scandinavian welfare state model.

2. Welfare state models

2.1 Theoretical categories of welfare states

The share of social spending as a percentage of GDP conceals the real size of the welfare state and the design of its underlying principles. In addition, we need to identify the principles underpinning the welfare state to assess the importance inequality might have played in the formative stages. We use Esping-Andersen's (1990) admittedly crude yet widely accepted classification of welfare state regimes, presented in his famous book *The Three Worlds of Welfare Capitalism*. Even though in reality no welfare state fits perfectly into the suggested prototypes, the classification of different models gives a proper understanding of the basic principles embedded in different welfare states (Goodin et al. 1999). Esping-Andersen classifies welfare systems according to their degree of de-commodification, which describes how far a person can maintain the standard of living without the reliance on the market. He furthermore distinguishes between social rights and state provision on the one hand and social stratification on the other. Social stratification indicates whether the welfare state tends to diminish class differences⁴. Citizens obtain welfare from three main sources: the family, the market and the state. Orientating on these basic characteristics, Esping-Andersen distinguishes three systems: the liberal, the conservative and the social-democratic.⁵

Strict entitlement rules and modest social rights characterize the liberal system, to be found in the USA, Canada and the UK. State provision of benefits is universal but levels are low, which implies that the degree of de-commodification is insignificant. The system relies upon the assumption that citizens can obtain adequate welfare from the market. In other words, the state interferes only if the market fails. The state further favours the market by guaranteeing only a minimum welfare and subsidizing private insurances. The poor rely on the state while the rich rely on the market, which entails a dual class structure.

The conservative model, mainly found in continental Europe, like Germany, France or Austria, assumes that primary welfare responsibilities lie within the family. The state interferes if the family's resources are exhausted. Consequently, the system serves to preserve traditional family roles. Even

⁴ "It [the welfare state] is an active force in the ordering of social relations." (Esping-Andersen 1990 p. 23)

though benefit levels are high, strict entitlements achieve only a middle degree of de-commodification. The model maintains the class structure because benefits depend on contributions and thus social status.

The social-democratic welfare state is highly de-commodifying. Universal, social rights and income security lie at the very heart of the model. Earnings-related benefits on top of universal, equal for all, benefits secure most citizens, in particular those in the large middle class, reasonable income levels in the event of illness, unemployment and retirement. High state provision accompanies low status differentials. The model provides all citizens a decent standard of living (Esping-Andersen & Korpi 1987 p.). The system serves to equalize living conditions across income classes, guarantee income security and emancipate recipients from the dependence on the market and the family (Esping-Andersen & Myles 2009 p.).

2.2 The emergence of the Swedish welfare state

In Sweden the road to the welfare state design that would eventually meet the requirements of Esping-Andersen's Scandinavian model begins around the turn of the century and ends in the late 1950s. Although still predominately rural, Sweden stood on the threshold of massive industrialization and urbanization in the 1890s, when the government introduced public support for the various voluntary sickness funds run by labour unions. In times of sickness and old age, urban workers lacked the kind of support the farm and families had provided in the rural settings. Modernization called for a security system sufficiently flexible and sustainable to cater for the needs of mobile wage earners.

A reformed version of the *sickness insurance* came about in 1910. This early model of health insurance was far from universal; it was voluntary, small in size and income related. The path towards a universal solution proved long and complicated. In 1937, the Social Democratic minister, Gustav Möller, appointed a committee (Socialvårdskommittén) with the aim of designing a universal and compulsory health insurance. Möller espoused the principle of universalism, everybody's right to benefit, regardless of class, occupation or gender. He dismissed the idea of earnings-related benefits. The final design of the health insurance came about in 1955, when the Social Democrats in alliance with the Peasant's Party, launched a model that made benefits universal (flat-rate benefits) and earnings-related. The system comprised wage earners and excluded self-employed.

A universal, flat-rate *pension* system appeared in 1948. The benefits were low but still sufficient to liberate many retired from being dependent on the poor relief system. The new pension system had outstanding redistribution effects since it raised income levels of the most needy in society significantly (Broström 2012). The supplementary income-related pensions on top of the flat-rate

⁵ Mind that Esping-Andersen's (1990) models were based on patterns of welfare state spending that prevailed in the latter half of the 1980s. The identified principles underlying some countries' welfare state systems may have changed significantly since.

universal scheme appeared on stage in 1958, based on the earnings of the fifteen top-earning years. Pension benefits now mirrored white-collar workers higher earnings, which made them less dependent on supplementary pension schemes provided by their employers.

From the very beginning in 1892, labour unions handled the *unemployment* insurance. Instead of endorsing universal, compulsory unemployment insurance, a solution preferred in many other countries, Sweden adhered to the so-called Ghent system, which requires union membership for eligibility. Public support for the unemployment funds was low until the 1940s, because of disagreement on stipulated terms between labour unions and the government. As the labour unions gathered political influence in the 1930s and 1940s, the government granted them conditions that would meet their requirements. Despite high rate of labour organization in Sweden, a great share of workers remained, and still remains, outside the insurance system; until the present day, Sweden has no universal unemployment insurance.

Graph 1 here

Even though the Swedish journey towards a welfare state began early in the twentieth century, the mature version of it did not assert itself until the late 1950s. Noteworthy increases in social transfers did not therefore take place until the early post-WWI era. Graph 1 shows the share of social transfers relative to GDP as a quantitative approximation of the Swedish welfare programs. It remains below 3 percent until 1930, increases slowly in the 1930s and 1940s, and jumps to 10 percent in the late 1950s. In 1960 to 1990, the spending share surges from 10 to 30 percent. The conspicuously large share of GDP the welfare state swallows has rendered the so-called Swedish model a great deal of attention (Lindert 2004 ch. 11).

In sum, the intellectual origin of the Swedish welfare state springs from discussions in the 1930s and 1940s (Lundberg & Åmark 2001 pp. 160–4). The actual implementation occurred in three phases, the first with introduction of universal flat-rate benefits in the early 1950s, the second with extension of earnings-related benefits in the end of the 1950s, and the expansion of the public sector in the 1960s and the 1970s (Olsson p. 1990). From the end of the 1950s, the principles of income security and universality form the backbone of the Swedish welfare state. Having pinned down the temporal localization in the late 1950s when the substance of the Swedish welfare state conferred to Esping-Andersen's archetype of the Social democratic model, we are now ready to direct our attention to what happened to the evolution of inequality in the first half of the twentieth century. Though before doing so, we need first to identify the link between income distribution and the rise of the Social democratic welfare state, which leads us to trust, the subject of what is to follow.

3. Trust: the link between welfare and inequality

The main factor that ties inequality and the social democratic welfare state is trust. Trust is part of the broader concept of social capital that has recently crept into the language of economists and social scientists. Zaheer et al (1998 p.) define trust as an expectation of a partner's reliability with regard to her obligations. In a welfare state context, this definition implies for instance that taxpayers obey tax regulations and recipients claim benefits according to entitlements. Trust itself is however hard to grasp. Whereas there are ways to measure recent trust, the historical dimensions of it cannot be directly observed. What has spurred the increase in trust is that it co-varies with societal characteristics that most people would deem desirable. These characteristics comprise for instance low levels of corruption, fewer committed crimes and well working democratic institutions (Putnam 1993). To focus on the determinants of trust is thus one way to circumscribe the dearth of historical sources of trust (Bergh and Bjørnskov 2011). One of the most promising predictor of trust is inequality, some authors argue (Uslaner 2002 p. ; Rothstein 2009). The following section therefore attempts to cast some light on this proposed nexus.

3.1 Inequality and trust

It appears that the level of trust is negatively correlated with inequality; low levels of trust go hand in hand with high levels of inequality. But what are the mechanisms tying inequality and trust together? Jordahl (2009) lists various causal mechanisms that may link income distribution and trust together. First, people who belong to the same socio-economic group tend to trust each other more than people who are split by large gaps in incomes, skill levels and professional characteristics. Familiarity, which is ubiquitous among people within the same group, provides incentives for trustworthiness; cheating on somebody you may see again costs too much. Second, differences between groups of people reduce trust. These differences may concern income inequality or ethnic heterogeneity. Wide income gaps make people more prone to look with envy at each other, and positional concerns overwhelms the ideals of fraternity. Blau and Kahn (2009) point out that the level of labour market inequalities in inter-industry and inter-sector wage differentials affect cross-class solidarity. Great income gaps diminish solidarity among workers in different industries. Someone who considers herself disadvantaged instead of privileged is disposed to mistrust; a lack of trust that may be directed to society in general or towards wealthy people in particular (Jordahl 2009). The impact of earnings differentials on trust levels is felt most strongly at the lower tail of the income distribution (Gustavsson & Jordahl 2008). Third, inequality may lead to struggles for public goods. In a welfare state context struggling for resources is particularly troublesome because it feeds into free-riding and erodes thereby the moral foundation on which the distribution of public goods rest.

It remains unsettled if large earnings gaps or skewed distribution of disposable household income affect trust the most. In a regional study of Sweden between 1994 and 1998, Gustavsson and Jordahl (2008) argue that disposable incomes, hence consumption opportunities, matters more for trust levels than do earnings in pre-tax incomes. It boils down to an issue of whether one is familiar with other people's wages or their consumption bundles. What speaks in favour of the importance of consumption is that the artefacts that we bring to the fore are more conspicuous than our earnings capacity. You know which car your neighbour can afford but you do not know what he earns. The difference between the two options declines however the further off in history we focus our attention because the link between market wages and disposable incomes is stronger historically than at present.

Concisely, low inequality generates trust. The notion of 'social trap' outlines the opposite situation in which high inequality prevents an increase in trust. Public policies that would bring about equality do not gain support because trust is lacking. Rothstein and Uslaner (2005) argue that trust creates social solidarity. Social solidarity, in its turn, is an essential aspect of the Scandinavian welfare state, which leads us to the relationship between trust and the welfare state.

3.2 Trust and welfare states

The Scandinavian countries boast the highest trust levels, have very low levels of inequality and share a similar welfare state model. It entertains the possibility that the three factors are interrelated somehow (Bjørnskov and Svendsen 2012 p.). We suggest that inequality was reduced first, which boosted trust levels. Higher trust was an important requirement for the establishment of the Scandinavian welfare state model. The welfare state then reinforced trust levels. The causality between trust and welfare state thus runs both ways. The design of the welfare state influences the level of trust; the more encompassing social policies, the more the welfare state breeds trust (Rothstein 2009; Bertilsson and Hjorth-Andersen 2009). The easiest way to bring the importance of trust for Scandinavian welfare in full relief is to contrast it with the other two welfare state models, the liberal and the conservative.

Because the liberal model targets only the poor, most people look with suspicion at the welfare state that requires from them a significant proportion of their incomes and wealth. In addition, poor people who claim their rights to benefits run the risk of being stigmatized, which widens the gap between them and the middle to upper classes. Lack of social cohesion discourages cross-class solidarity and breeds mistrust (Kumlin and Rothstein 2005). The liberal model does not cultivate a sense of shared fate among different groups of people. It keeps the needy that depend on the state apart from the well to do that depends on the market. The liberal model does not therefore require a compressed income pattern and it does not presuppose high levels of trust. It is difficult to perceive what role inequality possibly could play in the formation of the liberal model. If anything, inequality promotes the formation of it.

Contribution-based benefits on which the conservative model rests do not serve to diminish class differences. The conservative model does not rely on cross-class solidarity if anything it cultivates within group solidarity (Goodin et al. 1999 pp. 51–55). Above all, it is highly dependent of solidarity within the family, the most important distributor of welfare. Low inequality is neither intended nor necessary for this kind of welfare state. It is conceivable that too high inequality demolishes the underlying principles of the model. If the poor cannot pay their contributions or if the number of needy is too large the model runs into difficulties.

To explain the impact of trust on the conservative welfare state, we may distinguish between general and particularistic trust. Countries with conservative welfare state models display much lower levels of general trust than Scandinavian countries (Jensen & Svendsen 2009 p.). In Germany, for instance, particular and social trust scores are uncorrelated, which reinforces the argument that trust in one's own family and close friends matters though independent from trust in society (Naef and Schupp 2009 p.). This makes sense if we keep in mind that the family is the foremost provider of social welfare.

The social democratic system, known for its universal principles and generous benefit levels, has a two-sided relationship to trust. It requires trust and creates trust. It creates trust through various channels (Rothstein 2009): First, the universal system encompasses everyone; everyone pays and everyone receives. The encompassing characteristic explains why the universal welfare state gives rise to cross-class fraternity and fosters high levels of trust. Second, because means tested programs play a minor role in the universal welfare state, the risk of being subjected to discretionary, bureaucratic treatments, diminishes. In addition, there is no shame in drawing on public resources. Everybody does so. It implies that there is no stigma attached to needy welfare recipients. Universal programmes instead create a feeling of social cohesion in society. An additional bonus is that universal programmes are delivered with little bureaucratic hassle and control. Since the social-democratic welfare state fosters high levels of trust it does not come as a surprise that Nordic countries score very high on all sorts of social capital characteristics, may they be attitudinal measures about social trust or behavioural measures about memberships in formal and informal organizations (Delhey and Newton 2005; Bjørnskov 2007).

Apart from spurring trust, the Scandinavian welfare state takes trust as an essential prerequisite for its existence. Trust constitutes the very foundation on which the emergence and sustenance of the encompassing welfare state model relies. Hence, the intriguing question is what role trust played in the formation of the social-democratic welfare state? In a social democratic welfare state everyone though in particular the middle class and the wealthy must accept that taxed incomes and wealth are channelled to public investments or spent by the lower classes (Bjørnskov & Svendsen 2012 p.). With high trust levels a society achieves this acceptance through the conviction among its citizens that contributions are collected, and benefits are redistributed, in a fair manner. Generalized trust in society

and particularized trust between people and public institutions therefore underpin the development of the Scandinavian welfare state.

It is hard to imagine a universal welfare state emerging in a very unequal country. The financial burden borne by the middle class would be burdensome. Furthermore, if a universal welfare state were to appear in a very unequal society, the risk of free-riding behaviour would be higher. For instance, some benefits depend on whether people live together or if they have supplementary incomes besides public transfers. This kind of information is asymmetric, shut off from the bureaucrats' view, which tempts recipients to overuse public resources. Social trust provides a moral constraint on selfish behaviour and solves the free-rider problems that otherwise would undermine the backbone of the universal welfare state. Trust moreover implies that public authorities work more effectively (Bjørnskov & Svendsen 2012).

Without low inequality and trust the upper classes would revolt against their high charges. The tax burden in the Scandinavian countries is high compared to countries with the Liberal or the Conservative model. To collect the required taxes, it takes either a very efficient, even draconian, state apparatus or citizens that on voluntary grounds pay taxes in compliance with regulations (Rothstein 2009). The voluntary trustworthiness may consist of moral obligations and, which matters for the present context, the belief that other people also obey the rules by paying their stipulated shares of taxes. Low levels of inequality and high levels of generalized trust are essential requisites for the consent to pay high taxes (Jensen & Svendsen 2011). Recent research shows that trusting populations are willing to vote for extensive welfare spending notwithstanding the risk of free-riding behaviour (Nannestad 2008; Jensen and Svendsen 2011). Low levels of inequality and high levels of trust bolster policies that aim to reduce socio-economic disparities and promote equal opportunities.

In sum, the social-democratic welfare state spurs trust levels, and, as we emphasize, takes trust as a precondition for its very existence. If inequality breeds mistrust, the countries that would develop encompassing welfare state policies should have been relatively equal well before the welfare state appeared on stage; in this, we agree with Rothstein and Uslaner (2005). As Nannestad (2008 p.) concludes, the combination of tax financed benefits that are generous but not means tested entail a high risk of free-riding; aptly coined a "social dilemma". Trust solves the dilemma that otherwise would have involved severe efficiency losses. It remains to be seen, then, if equality came before the welfare state.

4. The evolution of inequality

4.1 Previous research

Previous research about inequality for the first half of the twentieth century consists of scattered pieces of evidence but points nevertheless to an early equality revolution before the emergence of the welfare

state, confirming our conjecture. Data that allow the researcher to assess the entire distribution of disposable household incomes begin in 1967. Through the Luxemburg Income Study, international comparable data exists from 1975 onwards. We therefore know quite well how the distribution of disposable incomes has developed in the more recent decades but less so how it developed further off in the past.

Our first long-run indicator of inequality is Gustafsson and Johansson's (2003) study of Gothenburg, in which they draw on preserved tax records for 1925, 1936, 1947 and 1958. It points to important changes in gini-coefficients, representing equivalent disposable incomes. In 1925, the gini was 0.41 and in 1958 it was 0.28, hence a remarkable decline in the spread of household incomes. To translate the size of the Gothenburg gini in 1925 to something more tangible we may contrast it with today's standard across OECD-countries. In the mid-2000 only Turkey and Mexico had ginis above 0.4. Most people would probably conceive of them as infamously unequal. Sweden and Denmark were the only ones with ginis below 0.25 (OECD 2008 p. 25).

In the Gothenburg study the authors also decompose the change in the gini-coefficient by income source. They conclude that changes in capital incomes and taxes explain most of the fall in inequality. The wage structure did not have a significant impact on the compression of disposable incomes, they argue. What instead stands out from their investigation is that the relative income growth of the top deciles was brought to a halt. Real capital incomes decreased and the share of gross incomes taxed away increased, both by a factor of three. In addition, the growth of earnings was slower for the top deciles than for the average. Their study is limited to the city of Gothenburg and may therefore miss countrywide patterns. That is why graph 2 contrasts their Gothenburg ginis with national ones from 1967 to 2010. The contraction of the Gothenburg gini from 1925 to 1958 looks like an early equality revolution predating most of the important welfare state policies in the late 1950s and the strong expansion of the public sector in the 1960s and the 1970s.

Graph 2 here

Graph 3 here

The local study of Gothenburg anticipates what Roine and Waldenström (2008, 2010) confirm by studying top income shares, our second source of existing inequality evidence, namely that a marked reduction of top income earners' share takes place before the 1950s. They use tax returns going back to the birth of the modern Swedish tax system in 1892. The tax returns enable them to construct an unbroken series of top income shares until today. The series gives a long-term characteristic of certain aspects of income distribution but fails to provide information on the distribution patterns for layers

other than top income earners.⁶ Graph 3 shows that shares of the top ten deciles contract until the beginning of the 1980s. In the last two decades, top income earners recapture the loss of the 1970s. Their shares of total incomes today are identical to the shares they hold during the 1950–1970 period. So the long-term trend may be outlined.

What matters for our quest is that a major inequality drop occurs before the 1950s. From the turn of the century until 1920, the share goes down from about 45 to about 35 percent. The interwar years do not imply further dramatic changes, while a precipitous fall brings the level down to 30 percent in the aftermath of World War II. The next episode of income convergence takes place in the 1970s. A closer look at the upper one percent of the distribution, the super-rich, so to speak, reveals that the most of the levelling forces in operation were unkind to their fortunes. It suggests, and is confirmed empirically, that the fate of capital incomes is crucial for the evolution of the top deciles income share. Income shares for the lower half of the top deciles (P90–95), for which capital incomes play a less prominent role, remain unaltered.⁷

Benzel (1952) and Spånt's (1975, 1981a) investigations of the early income distribution in 1930–1976 constitute our third category of inequality evidence, and they too point to an early equality revolution. Spånt (1975) traces the development of individual market incomes before taxes and transfers in 1951 to 1976. He finds evidence that inequality decreases slowly, owing to equalization of women's incomes, at the same time as men's income patterns remain unchanged.⁸ Bentzel (1952) in a pioneering study of Swedish income distribution, reveals two important characteristics of the 1930s and the 1940s by utilizing primary (tax assessed) income. First, the distribution of incomes across sectors (broadly defined) is quite stable. For instance, no noteworthy change occurs in the functional distribution of incomes. Second, the spread of market and disposable incomes declines. He uses the maximum equalization percentage, which indicates how large a percentage of total income that has to be taken from those above to those below average income to bring about a complete equalization of incomes.⁹ For household's primary incomes, the percentage goes from 41 in 1935 to 34 in 1948, and for household's disposable incomes, from 37 in 1935 to 28 in 1948. Bentzel explains the compression of household disposable incomes patterns inter alia by changes in the tax systems. Spånt (1981a) confirms Bentzel's conclusion that the income distribution narrows between 1935 and 1951. Drawing on tax-assessed incomes for males he computes the maximum equalization percentage, which declines from 39 to 25. Hence, the compression of the income distribution owes significantly to an equalization

⁶ For critique against the top income share, see Milanovic (2011 p.)

⁷ Gustafsson and Jansson (2008) confirm the upturn in the share of top income earners that began in the 1980s in a study using micro data. In fact, the increase of the Swedish gini coefficient in the 1980s appears to have been driven largely by the higher capital gains and market wages accruing to top income earners.

⁸ Björklund and Palme (2000) shows that ginis based on household's disposable income decreased in the same period. It dropped from 0.38 in 1951 to 0.32 in 1976. The most important explanation was wage compression for male wage earners, and to a smaller extent increased female labour participation.

⁹ Maximum equalization percentage is also called relative mean deviation which can be viewed as the maximum distance between the Lorenz curve and the line of perfect equality (Mehran 1976)

of labour market outcomes. Spånt (1981a) tracks some fundamental aspects of what happened with Swedish labour markets between 1935 and 1950, which leads us to the topic of the coming section, inequality measured by market wages.

4.2 Inequality by labour market outcomes

To buttress the picture our review of previous inequality evidence paints, we tap into the great supply of official wage statistics from at least the 1920s to build up inequality measures of labour markets outcomes. The wage statistics, gathered in the Historical Labour Database (HILD), enable us to study long-term changes in the distribution of market incomes throughout most of the twentieth century. Wages classified by sectors, industries and labour categories give insights into income patterns for the great majority of people who would either support or militate against the underlying concepts of the welfare state.

We measure the evolution of the wage structure by computing the annual coefficient of variation across the sample of units in the official wage statistics, although recognising that this index does not satisfy all requirements of an index that pretends to show the evolution economic inequality. Atkinson (1970) in a critical remark, points out that the coefficient of variation weights redistribution at the lower and the upper tail in the same way. He argues that an inequality index should weight transfers at the lower end more heavily. Furthermore, the coefficient of variation across manufacturing industries does not take into account changing inequality between earnings in agriculture and industry. As time goes by, it captures a declining share of workers because the service sector outgrows manufacturing. However, we also compute a measure of inter-sector inequality, the urban-rural wage gap, which gives insights into the relative standing of agriculture and manufacturing. Our use of hourly wages, which do not take account of working hours, may also evoke protest but Blau and Kahn (2009) find a strong positive relationship between the extent of earnings and hourly wage inequality across many countries.

The official wage statistics for manufacturing workers came into being in 1913, although our series begins in 1921, when the Social Board enlarged the sample of industries (Prado 2010). The Social Board collected data by requesting firms to provide information on wages and other closely related issues in surveys. It extracted from a single firm the total sum paid out as wages during one year and divided this sum by the number of working hours, days or workers (the average number of workers on a number of pay-days, for instance once a week). The coefficients of variation for industrial workers that are based on average hourly earnings incorporate the effects of reductions in working hours. We also use the official wage statistics of agricultural workers. Between 1865 and 1945 they were published in the official statistics of agriculture and record wages of day workers, farm servants and contract workers by county. In 1938 the wage statistics of agricultural workers entered Statistics Sweden's official wage statistics. They contain detailed classifications of workers professional characteristics but lack the geographical dimension.

Our first within-sector inequality measure is the annual coefficients of variation across the entire sample of manufacturing industries. A distinguished feature of nearly all kinds of official statistics is inter-temporal heterogeneity. In our case, it implies that the number of industries ranges from 42 to 66 between 1921 and 1967. There are two ways in which the investigator may handle the problem of inter-temporal heterogeneity. First, allocate each industry to groups of industries (9–10 branches) and compute the coefficient of variation across these branches. This was the response in previous studies of the evolution of the wage structure within the manufacturing industry (Prado 2010; Lundh 2002 p. 203). Second, recognize, as we do, that the aggregation of industries into branches distorts a measure that pretends to track the spread of wages over time. Aggregation makes most of the variance slip away; and, the true magnitude of inter-industry variation over time is what we are keen on assessing. Therefore, we confront the inter-temporal inconsistency by computing the coefficient of variation for those industries that appear in the official statistics during at least two consecutive years. It gives us several overlapping sub-periods. We then splice each sub-period without paying attention to the actual level of the coefficient of variation, which gives us an index series that tracks the movement of variation over time. In the final step, we establish the actual level of the coefficient of variation for a benchmark year in which we have access to a great sample of industries, and use the spliced index series to extrapolate the movement of variation over the entire era.

Graph 4 here

Graph 5 here

The outcome of our efforts appears in graph 4, plotting the coefficient of variation from 1921 to 1967. The inter-industry wage differentials start declining in the beginning of the 1930s. The decline accelerates as the 1930s come to an end. In the 1940s the coefficient of variation literally collapses. It falls from 16 to 10 between 1939 and 1947. The additional contraction of it until 1967 is modest. The magnitude of this equalization of wage differentials across industries is dramatic and brings major implications for our interpretation of the wage structure. The significance of this observation depends on the relative size of the manufacturing industry in the 1940s. Sectoral shares of employment show that the manufacturing industry surpasses agriculture as the largest sector in terms of employment in the 1940s. Therefore our evidence of inter-industry wage differentials in the mid-twentieth century counts.

Inter-regional wage differentials, another measure of within-industry inequality, bring forward a similar story. In 1931, the Social Board began reporting average wage levels of manufacturing workers by county. The spatial dimension of manufacturing wages disappears from Social Board's publication in 1948 but reappears in 1967. Graph 5 displays the evolution of the coefficient of

variation across the 24 counties. It bears a striking resemblance to the previous graph showing inter-industry wage differentials. The series of inter-regional wage differentials starts to decline in the end of the 1930s. Between the years 1938 and 1948, the coefficient of variation diminishes from 15 to 10. In addition, it continues on its downward trajectory in the 1950s and 1970s and remains at a level of about 4 percent in the 1980s.

Common forces join largely the evolution of inter-industry and inter-regional wage differentials together. When the spread of wages across industries narrows, inter-regional differences also become smaller. The foremost explanation is that different industries are unevenly distributed across Sweden. Regional specialisation implies wide distribution of wage levels as long as inter-industry wage differences remain sizable. When the spread of wages among industries narrows, so does inter-regional wage differences.

Graph 6

Regional wage-differentials for day workers in agriculture, another inter-sector inequality measure, show a similar tendency of decline in the first half of the twentieth century (graph 6). If the downward trajectory extended into the post-World War II era we cannot tell because the information on agricultural wages by county ceases to exist in 1945. What our data allow us to confirm is that a tendency though slight towards smaller inter-regional wage differentials among day workers' wages manifests itself during two episodes, the first in the late nineteenth and early twentieth century and the second from about 1935 to 1945, whether or not nominal wages are deflated by regional-specific cost-of-living indices. In the parlance of the vast literature on convergence, Enflo et al. (2012a) identify the contraction of regional wage differentials for agricultural workers as beta convergence, i.e. low wage regions catching up with high wage regions. Enflo et al. (2012b) attribute the propelling force of regional wage convergence in the first episode to the mass exodus from Sweden to the New World and in the second to internal migration.

Our final inequality measure pertains to the evolution of the urban/rural wage ratio, our sole measure of between sector inequalities.¹⁰ The size of the earnings gap between the two sectors was estimated for the benchmark year of 1890, adjusted for urban-rural price differentials.¹¹ The time series of average hourly earnings for manufacturing workers and day workers' wages in agriculture

¹⁰ The urban-rural wage gap in 1860–1985 is taken from a forthcoming paper by Bohlin et al. (2012)

¹¹ For instance, Bohlin et al. (2012) estimate that higher urban cost-of-living translate the nominal ratio of 229 to a real one of 164 in 1933.

were used to extrapolate the movement of the ratio between 1860 and 1945. The series of day workers' wages were adjusted for reductions in working hours.¹²

Graph 7 here

Graph 7 conveys that an era of favourable conditions for agriculture in the decades preceding the outbreak of World War I was followed by remarkable shifts of fortunes, in favour of, first industrial, then agricultural workers. A noteworthy sequent of events begins in 1915, when the ratio drops, first, and then soars to unprecedented order of magnitudes. In 1921, industrial workers earned 135 percent more than agricultural. After 1927, the ratio begins to decline slowly until 1939, when it literally collapses during the Second World War. During the Second World War agricultural workers recapture what they had lost since the beginning of the First World War. In comparison to the estimated wage gap in 1890 of 61 percent the size of the wage gap comes full circle in the end of the era; the wage gap in 1948 lands at 55 percent. The ratio then largely stays in place until 1985.

The remarkable swings in the ratio stem mostly from reductions in working hours. A series of annual wages for the two sectors would give a different impression. A specific feature of the working week reform was that the reduction of working time should not affect workers total incomes negatively. By inference, employers had to pay higher hourly wages than before. In a few years, the industrial sector cut weekly working hours by 16 percent. *Ceteris paribus*, the reduction in working hours boosted hourly wages there by 19 percent. The lack of trade union strength of agrarian workers, and the exclusion of agriculture from the working hour reform, explains about fifty percent of the increased urban-rural wage gap in the early 1920s.

However, the relative standing of agricultural workers was improved after the all time high urban/rural wage ratio in 1928. Slowly, the gap diminishes down to the outbreak of World War II. Bohlin et al. (2012) lists various factors that benefit the rural sector in the interwar period. First, unionization of rural workers increases. Second, rural organizations grow stronger. Third, regulations that favour the rural sector were introduced in 1930–1935, some of which accrued to the peasant party in return for providing support to the Social Democrats in the agreement of 1933.

4.3 Inequality in the remote past

The inequality evidence that we have brought to the fore so far corroborates the view that Swedish equality was established quite late and oppugns the literature suggesting that either Sweden has always been equal or that her transition to equality took place in the remote past (Rothstein and Uslander 2005;

¹² With an exception, though, because the series of day workers' wages ends in 1945; so we lengthened the agricultural day workers' series by splicing it with a series of tractor drivers' wages, which carry the agricultural series on to 1985.

and Bergh (2009 p.). That Sweden earned a reputation of being particularly equal owes above all to two recent episodes of marked compression of the income distribution, the first of which occurs in 1935 to 1950 and the second in the end of the 1960s and the 1970s. In 1980/1981, the gini reaches an all time low point of 0.2.

If we take the assumption seriously, and we should, that inequality and trust are negatively correlated, the development of inequality approximates to the development of trust. Against this view stands the notion that trust is sticky and path dependent (Bjørnskov and Svendsen 2012). Rothstein and Uslaner (2005) take a very pessimistic stance as to whether a factor affecting trust could make it grow from low to high levels. To explain why, they appeal to a principle of inertia according to which high levels of inequality and low levels of trust frustrate politicians' attempt to implement universal policies. Inequality brings mistrust, which prevents the establishment of social policies that would eventually bring about equality and thereby increase trust. Although we lack firm evidence of historical trust dimensions, the idea of path dependence in the field of social capital has an intuitive appeal; it is a reasonable assumption that the level of trust in a society does not go through abrupt changes. The same cannot be said about inequality, however.

Compelling evidence from the economic history literature testifies instead to various episodes when the level of inequality has undergone major changes, in particular among the Western countries during the twentieth century (Morrison 2000; Atkinson, Piketty and Saez 2010). Whether we trace the record of economic inequality in a narrow sense or the evolution of inequality in opportunities in a wider, the twentieth century brought dramatic changes (Fogel 2000). Hence, if we believe that inequality and trust are bounded together there must be no doubt that trust levels were quite a bit different in the past. Some country studies support the assumption that trust levels are elastic, under the sway of for instance inequality. So a study about inequality and trust in the United States illustrates the negative relationship between the two. Since about 1975 the US has experienced a significant increase in income inequality (Piketty & Saez 2003), and as Putnam (2000 p.) and Nannestad (2008) observe, trust has declined during the same period. In addition, levels of social trust in West Germany rose steadily from 9 percent in 1948 to 45 percent in 1993 (Cusack 1997 p.).

To make the Swedish story consistent with the idea of an inequality trap, Rothstein and Uslaner (2005) argue that equality has deep roots in the Swedish society. They dredge up the old argument that Swedish equality can be traced to agrarian institutions, as the doyen of Swedish economic history, Eli F. Heckscher (1954 ch. 2) once remarked; Swedish and Norwegian peasants were not kept shackled by the forces of feudalism that permeated most of continental Europe. Swedish peasants had their own estate in the parliament until 1867 and were legally independent. The egalitarian structure of the Swedish agricultural sector left an indelible mark on the future design of welfare institutions, it is argued. While there are no reasons to dispute the evidence that some agricultural institutions in Sweden evolved differently, recent phenomena speak directly to the issues of social structures and

inequality. We would like to point out five features that defy the idea that Sweden was particularly equal even in the late nineteenth century, although attributing to each of the four features a specific significance goes beyond the scope of our venture.

The first feature we would like to point out follows up on the argument that egalitarian institutions in agriculture formed the basis for Swedish equality in the twentieth century. In the course of the nineteenth century, the increase in population made the group of landless and semi-landless grow rampantly. Large-scale land clearance provided employment for these groups until the last quarter of the nineteenth century, and the emergence of labour intensive industrialization absorbed a significant portion of them henceforth. They made up a growing class of low-paid proletarians who by their sheer number probably made the lower tail of the income distribution wider. A smaller share of the landless would in addition end up as contract workers (*statare*) at large estates (Gadd 2011 p. 140–143).

The second feature concerns the great export dependence of the Swedish manufacturing and mining industries. The export industries that expanded rapidly from the 1890s were quite skill intensive, like mechanical engineering and electro technical industries. In general, hourly wage rates in the manufacturing industries that were exposed to foreign competition exceeded wages in the ones that relied mostly on the domestic market. Besides, the mining industry in the north of Sweden paid traditionally very high hourly wages. Since the export industries increased their share of employment, the earnings gap between the two groups of industries widened the shape of the income distribution.

The third feature attests to the concentration of ownership in Swedish industry, which is skewed, also by international standards. It has implications for the distribution of wealth (Stevenson 1974). The large concentration of ownership, in particular among manufacturing industries with an inclination towards exports, emerged when industrialization gained paced in the end of the nineteenth century (referens). The inequality of wealth peaks in the early twentieth century (Ohlsson et al. 2008). Much of the skewed wealth distribution levels off before the 1960s (Spånt 1987).

The fourth and fifth features remind us that there is nothing exceptional about Sweden as provider of equal political, social and economic rights in the late nineteenth and early twentieth century. Remember, Sweden was not a forerunner in the introduction of universal suffrages (last among the Nordic countries); and Sweden lagged behind in the provision of higher education (Lindert 2004 p.). While for instance mass (secondary) schooling came in the early twentieth century America (Goldin 1999), the take off in Sweden did not occur until the interwar years.

We agree with Rothstein and Uslaner (2005) that the formation of universal policies were preconditioned on low levels of inequality and thereby high levels of trust, but we disagree with them that equality stemmed from ancient egalitarian structures. Instead, the inequality evidence that we have marshalled illustrates that Sweden was relatively unequal in the 1920s but experienced a true equality revolution in the 1930s and 1940s, which predated the emergence of the universal welfare state model in the end of the 1950s.

5. Inequality beyond the Swedish settings

Sweden is not the only country whose welfare state design fits into Esping-Andersen's definition of Social-democratic. We therefore broaden our view by offering a brief examination of Norway and Denmark, two other clear-cut cases of Social-democratic welfare state designs, and Finland, a latecomer that completes the Scandinavian mirror.¹³ Can we identify a similar equality revolution before the establishment of the welfare state in three countries?

We make use of the World Top Income Database, which provides income shares of different income groups in a sample of countries. Regrettably, the Norwegian data contain gaps in our study period and the Danish data do not begin until 1970. We fill these gaps with complementary information. Graph 8 shows the development of income shares held by the upper 5 percent. We use this indicator of upper income shares to get a sense of the inequality developments. The very first impression is that inequality diminishes in all four countries prior to the Second World War. Each country though shows some particularities briefly summarized below.

Graph 8 here

Graph 9 here

After the First World War Finland has an inequality level close to the Swedish. The interwar years bring a significant drop in inequality until 1949. Jäntti et al (2010) use tax statistics as well as the few available gini coefficients to reinforce the impression that a reduction of inequality occurs before the 1950s. Flora (1988) attributes the decrease in inequality to the solidarity wage policy and the government's control of wages and prices. Compared to the other countries, the inequality decline in Finland appears sharp. The Norwegian case shows a trend similar to that of the other Scandinavian countries even though some gaps split the series into sub-periods. At the beginning of the twentieth century, the share held by the upper 5 percent was much higher than after World War II. A reduction of inequality took place before the Norwegian government launched the most important social reforms (Flora 1988 pp. 121–123). For Denmark, we rely on evidence of top 1 percent wealth shares. The distribution of wealth shares in Denmark accords very well with the Swedish (graph 9). Furthermore, previous research strengthens the impression of falling Danish inequality before the 1950s (Ohlsson et al 2008).

In general, all countries demonstrate an overall decline in the top income and wealth shares. At the same time as the top earners lost income shares, the main winner was the middle class. They could increase their income shares especially between 1930 and 1950. The bottom 60% also improved or at

¹³ For the development of the welfare state in the Scandinavian countries, see Flora et al. (1981) and Flora (1988).

least maintained their shares at the expense of top 10%. The outcome was a marked compression of incomes patterns, particularly marked in Sweden and Denmark (Flora & Heidenheimer 1981 [p.](#))

In a broader perspective, the drop in the inequality level was outstanding in the Scandinavian countries (Flora & Heidenheimer 1981). Although the factors responsible for the fall in inequality may differ among the four countries in our sample, economic egalitarianism predated the enactment of those principles that underpin the Scandinavian welfare state model.

6. Conclusions

To consider the welfare state an institution designed primarily to narrow gaps in disposable incomes is a perspective that fails to appreciate the importance of inequality as a factor affecting the design of the welfare state. In particular, the Scandinavian model of welfare distribution hinges on premises of cross-class solidarity and high levels of generalised trust. Without them, the problems of free-riding and misuse of public goods would be insurmountable. In addition, the middle to upper classes would revolt against their high charges. Inequality, however, is a social characteristic that gives rise to mistrust and prevents welfare distribution policies along universal principles from being established, sociologists and political scientists concur. Countries plagued by a very skewed income distribution are imprisoned in a viscous circle, an inequality trap, which frustrates all attempts to establish policies aiming at redistribution because social disparities breed mistrust (Rothstein and Uslaner 2005; Espuelas 2011).

To confirm the view that egalitarianism is an essential requisite for a particular design of the welfare state we need to identify a true inequality revolution in a country with a Scandinavian kind of welfare state that predated the emergence of the universal principles of welfare distribution. Or conclude, as some previous authors suggest, that inequality levels have always been low in countries with this kind of welfare state design.

We examine at length the previous evidence of income distribution in Sweden, known for her ambitious social policies and narrow income gaps, by many considered the prototype of a social-democratic welfare state. The evidence conveys that income distribution narrowed in the 1930s and 1940s, well before the most important welfare state reforms came into being in the latter half of the 1950s. We bolster this view of income levelling in Sweden by constructing new inter-sector and between sector inequality measures of labour market outcomes. Our new evidence bears testimony to a remarkable contraction of wage differentials across industries and sectors from 1935 to 1950. Thus inequality levels were brought down already before the welfare state was established. Our brief review of Denmark, Norway and Finland shows a similar inequality reduction before the welfare state appeared on stage.

The Scandinavian countries do not appear to have been particularly egalitarian in the early twentieth century, which contradicts the assertions that Scandinavian egalitarianism belongs to the very remote past. They escaped the inequality trap that prevents so many other countries from introducing policies aiming at inequality reductions. And once the universal welfare state manifested itself, it proved capable of bringing down earnings differentials additionally (Korpi and Palme 1998). It also brought forth and sustained the high trust levels that come out in recent cross-country surveys. In these, the Scandinavian countries overachieve.

But how did Sweden unlock the inequality trap? If we believe in the logic of it, the key is not social policies aiming at redistribution. Instead we need to direct our searchlight to factors beyond the scope of politics. What future research endeavours need to uncover is what caused the compression of income patterns. For instance, were labour market institutions responsible for the reduction in wage differentials across industries? Or did supply and demand shocks in the deep recession of the 1930s and during World War II favour wage convergence by reducing wages in high-wage industries and boosting them in low-wage ones? Future research will, hopefully, show. A second issue future research needs to address is how the reduction in inequality affected people's perception of welfare state arrangements. Is it possible that the emergence of a more egalitarian income distribution affected voting behaviour, for instance? Moreover, how did the altered relative standing of different sectors affect the bargaining strength of political parties? A final aspect concerns the impact of World War II. Although Sweden did not belong to the belligerent countries people suffered many hardships that may have evoked a feeling of shared fate. Perhaps the feeling of solidarity spurred generalised trust levels, which in turn paved the way for welfare state principles based on universality and income security instead of market solutions.

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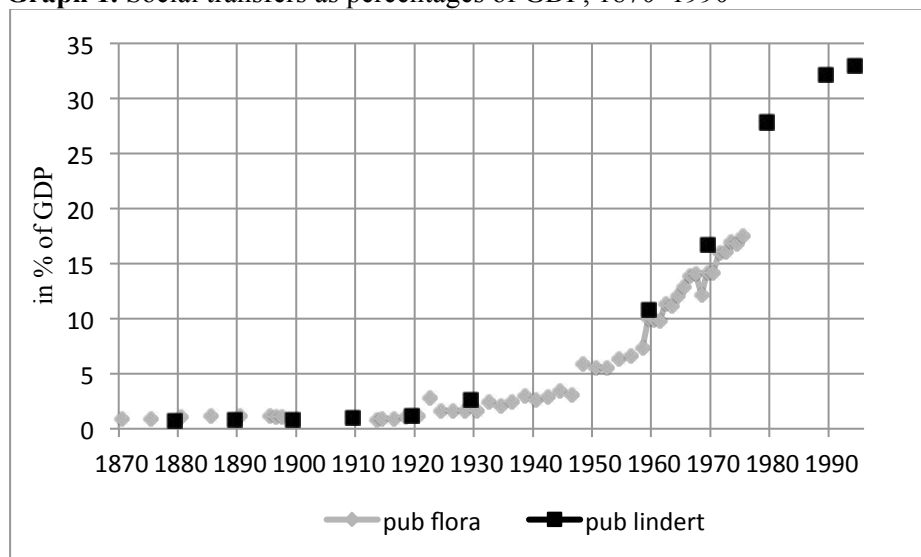
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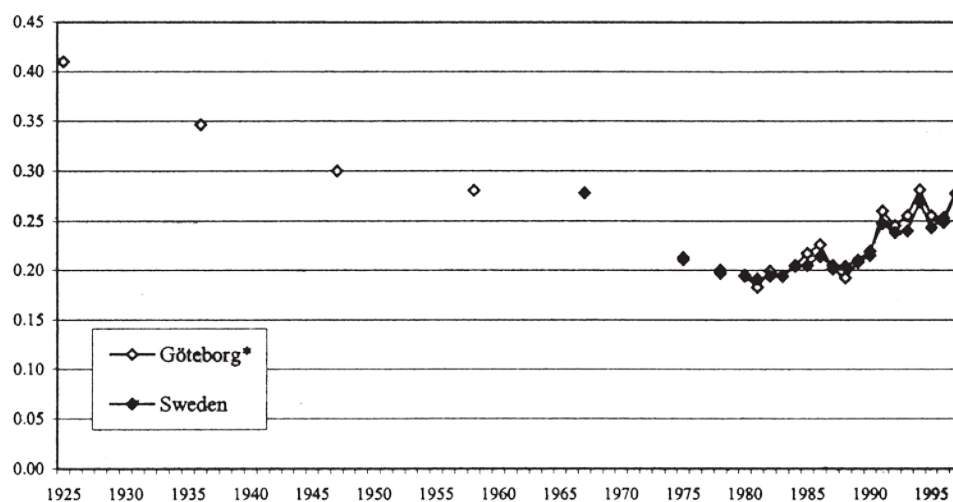
Graphs

Graph 1. Social transfers as percentages of GDP, 1870–1990



Source: Lindert 2004, p.13; Flora et al 1981 (p.)

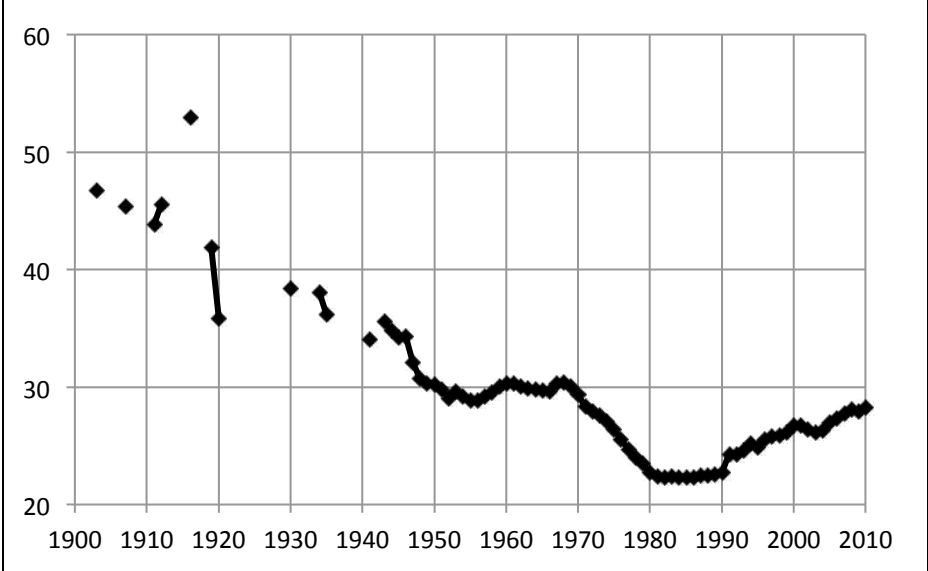
Graph 2. Gini coefficients of Gothenburg and Sweden, 1925–1997



Source: Gustafsson and Johansson (2003)

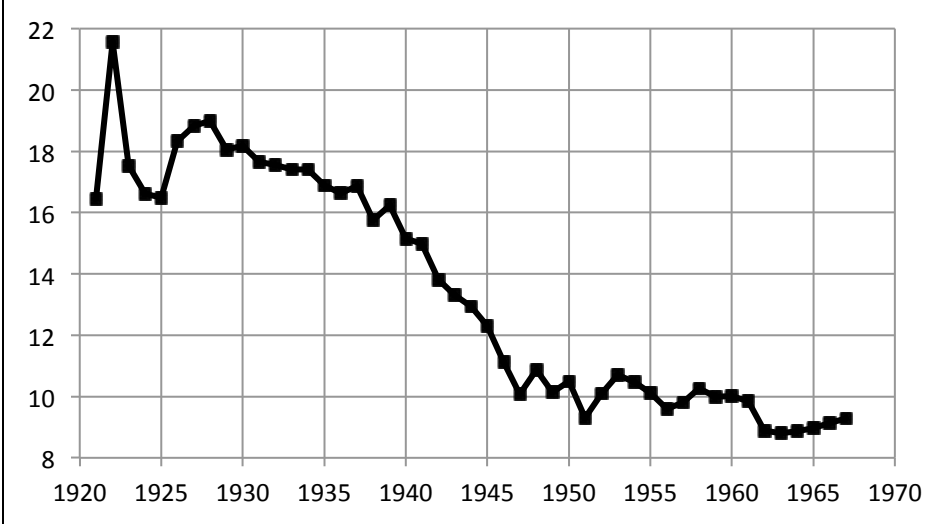
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Graph 3. Top ten percent (P90–100) income shares, 1903–2010



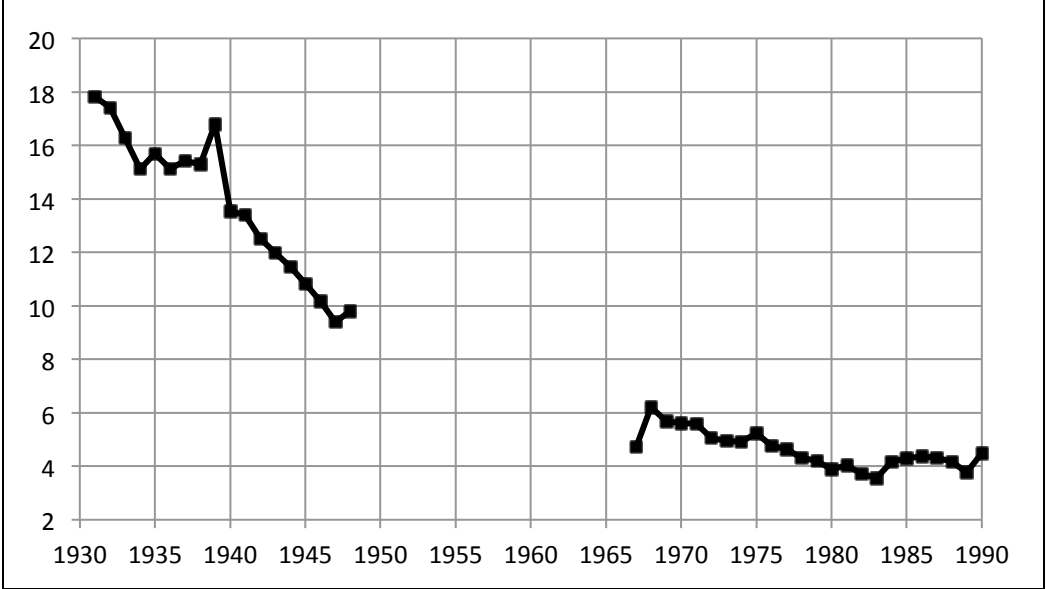
Source: Roine and Waldenström (2010, p.)

Graph 4. Inter-industry wage differentials (CoV), 1921–1967



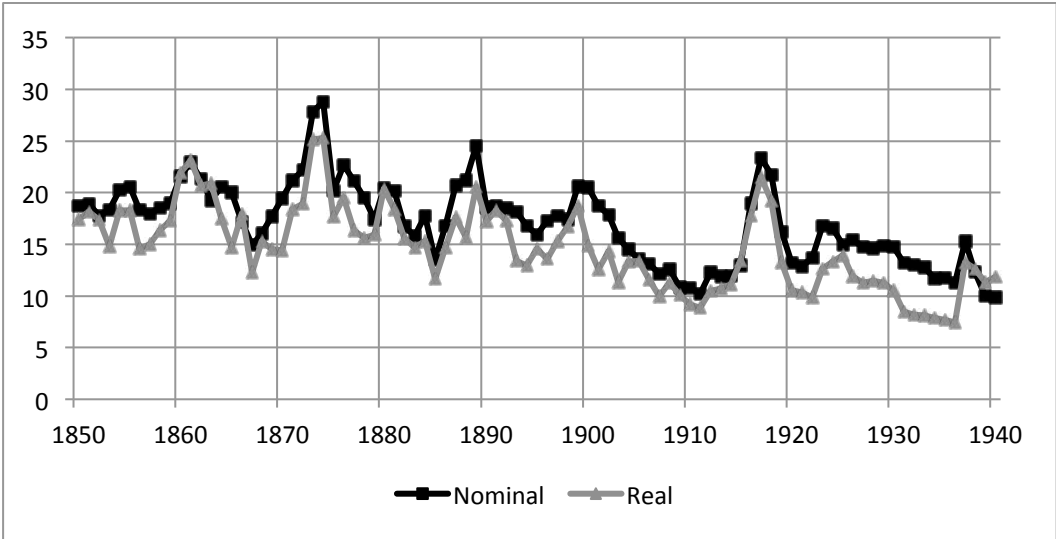
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Graph 5. Nominal inter-county wage differentials (CoV) of manufacturing workers, 1931–1990



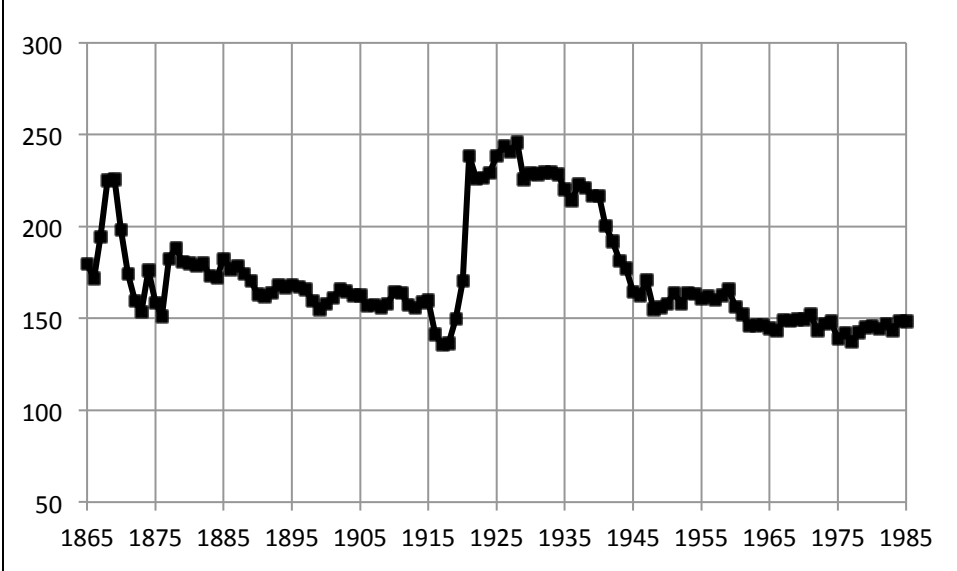
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Graph 6. Nominal and real inter-county wage differentials (CoV) of day workers in agriculture, 1850–1940



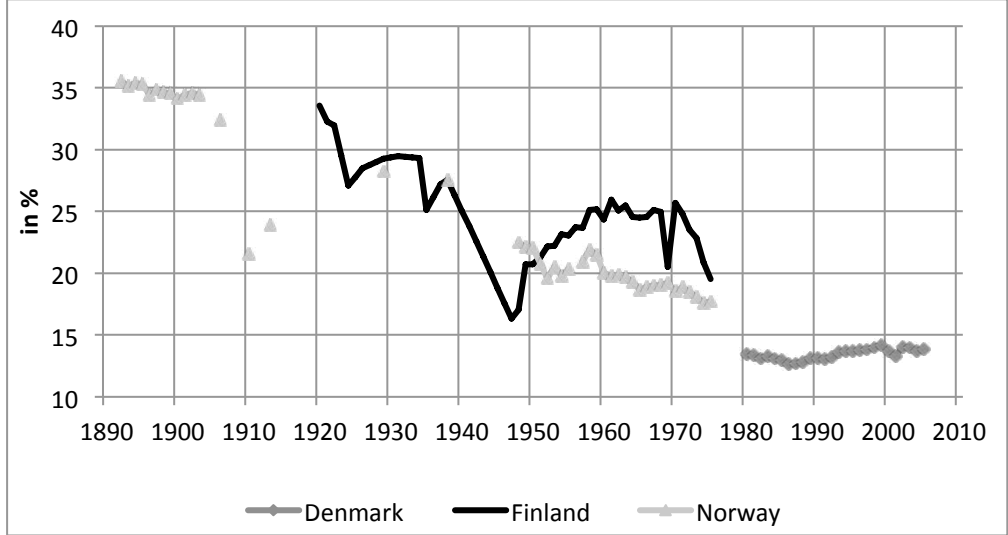
Note: Enflo et al. (2012)

Graph 7. The urban/rural wage ratio in Sweden, 1865–1985



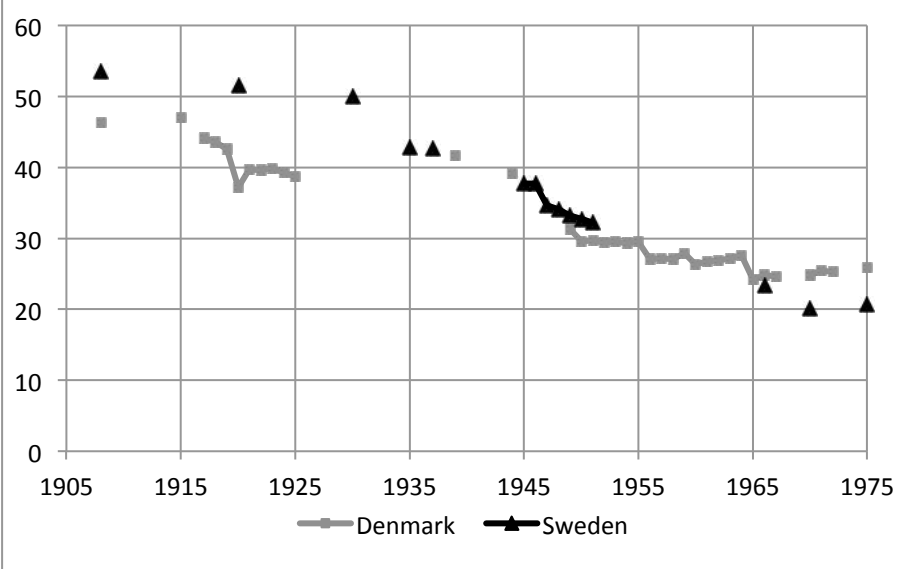
Source: Bohlin et al. (2012)

Graph 8. Top five percent (P95–100) income shares in Denmark, Finland and Norway, 1892–2005



Source: Top Income Database

Graph 9. Top one percent (P99–100) wealth shares in Denmark and Sweden, 1908–1975



Source: Ohlsson et al (2007, table 1)