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SOCIAL WELFARE EXPENDITURES IN THE UNITED STATES AND THE NORDIC COUNTRIES: 1900-2003

Price V. Fishback

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ABSTRACT

The extent of social expenditures in the U.S. and the Nordic Countries is compared in the early 1900s and again in the early 2000s. The common view that America spends much less on social welfare than the Nordic countries does not survive closer inspection when we consider the differences in the structures of social expenditures. The standard comparison examines gross social expenditures. After adjustments for direct and indirect taxes paid, the net social expenditures in the Nordic countries are much closer to American levels. Inclusion of mandatory and private social expenditures raises the American share of GDP devoted to social expenditures to rank among the middle of the Nordic countries. Per capita net public social expenditures in the U.S. rank behind only Sweden. Add in the private spending, and per capita spending in the U.S. is higher than in all of the Nordic countries. Finally, I document the enormous diversity across time and place in public social expenditures in the U.S. in the early 1900s and circa 1990.

Price V. Fishback
Department of Economics
University of Arizona
Tucson, AZ 85721
and NBER
pfishback@eller.arizona.edu

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Price V. Fishback, University of Arizona

The United States and the Nordic countries have long been world leaders in rankings based on measures of economic success. Yet, their institutional structures are quite different. The U.S. is seen as a capitalist nation with a strong streak of individualism and relatively small social spending. Meanwhile, the Nordic countries are more widely known for their emphasis on reallocating a larger share of national income to government social expenditures. My goal in this paper is to document the extent of social spending on health, disability, old age pensions, accident disability, and income maintenance in the U.S. and the Nordic countries in the early 1900s and the early 2000s. In the early 20th century Denmark was the leader in social expenditures per capita but none of the countries spent much as a percentage of Gross Domestic Product (GDP) or in terms of real absolute levels. The Nordic countries adopted several social programs earlier than the United States, however, many of these programs covered only a part of the population.

During the modern era, the most commonly cited OECD statistics on public gross social expenditures as a share of GDP show large differences between the Nordic countries and the U.S. However, the commonly reported statistics are misleading in several ways. First, they do not take into account the striking differences in taxation of public benefits and tax breaks and tax subsidies for low-income people. Adjustments for tax structure lower the social welfare share of GDP in the Nordic countries and raise it in the United States. Second, the share of GDP only tells part of the story because per capita GDP in the United States is higher than in the Nordic countries. Comparisons of publicly mandated social welfare spending adjusted for purchasing power parity in both 1995 and 2003 show that the amount the U.S. spends ranks in the midst of

the Nordic countries. Third, the U.S. system relies much more heavily on private provision of health and disability insurance, retirement pensions, and charitable distributions to the poor than do the Nordic countries. After accounting for this voluntary private social expenditure, the U.S. in 2003 had higher net social expenditures as a share of GDP than all of the Nordic countries except Sweden. Since the U.S. GDP per capita is higher, U.S. net social expenditures per capita in 2003 were more than $1000 higher than Sweden, which was the highest among the Nordic countries.

Finally, the U.S. aggregate social spending disguises a great deal of variation across the states within the U.S. The U.S. is a federal system and many of the public benefits in the social welfare programs are determined at the state level. To truly understand developments in the U.S., therefore, you must examine the variation across the states. Prior to the 1930s nearly all public social welfare spending was the responsibility of local governments with some activity by the states. I document the extent of the various programs using state and city level data in the 1920s and then examine the extent of path dependence in the ranking of the states in terms of their spending on various types of benefits. There is some evidence that there was significant path dependence before Franklin Roosevelt's New Deal expanded the federal government's role in social welfare programs in the 1930s. There were major shifts in the relative rankings of the states between 1930 and 1940. Changes in the rankings have continued to this day, as shown by the low correlations in workers' compensation benefits paid to injured workers in 1940 relative to 1990.

Social Expenditures, 1880 to 1930

The most obvious feature of social expenditures at the turn of the 20th century was how much smaller they were in comparisons with the levels at the turn of the 21st century. Peter

Lindert (1994, 2004) performed yeoman work in developing estimates of *government* social expenditure as a percentage of GDP for the years 1880 to 1930. Throughout the paper, I will follow Lindert in using the OECD definitions of "social expenditures."[1] The social expenditures include old-age pensions, survivor benefits (but not from private life insurance), incapacity-related aid, health expenditures, aid to families, unemployment benefits, government job training, housing subsidies, and income maintenance. Table 1 shows his estimates for the U.S. and the Nordic Countries. In 1880 all five countries have government social spending of roughly one percent of national income or less. Denmark leads the way in expanding spending as it rises across time up to 3.4 percent. Most of the expansions in spending in the other Nordic countries occurred in the 1920s. The timing of the expansions relates to some extent to the timing of the adoption of the social welfare programs in the Nordic states in Table 2. Despite the adoption of the programs that eventually became much larger, the amount of spending as a share of GDP stayed relatively low because they tended to cover the relatively small nonfarm sector of the economies and some were voluntary in their early years.[2] The very rough estimates of per

[1]The OECD definition of social expenditures is the "provision by public and private institutions of benefits to, and financial contributions targeted at households and individuals in order to provide support during circumstances which adversely affect their welfare, provided that the provision of the benefits and financial contributions constitutes neither a direct payment for a particular good or service nor an individual contract or transfer. " "Social benefits include cash benefits (e.g., pensions, income support during maternity leave, and social assistance payments), social services (e.g., childcare, care for the elderly and disabled) and tax breaks with a social purpose (e.g. tax expenditures towards families with children, or favourable tax treatment of contributions to private health plans." In further discussion, the OECD says that "social spending does not include remuneration for work, as it does not cover market transactions, i.e., payments in return for the simultaneous provision of services of equivalent value. Employer costs such as allowances toward transport, holiday pay, etc. are part of remuneration in this sense." (OECD 2007, 7-8).

[2] For examples with respect to health insurance, see Winegarden and Murray 1998.

capita social spending in 1990 dollars in Table 3 show that the leader Denmark was spending only $182 per capita while the United States trailed the pack at $35 per capita.

Lindert (1994) confines his measures to social spending by governments, and thus government mandates for private social spending and private social spending are not included. Based on this focus for the period 1880 to 1930, Bizmarck's Germany loses its place as the leader in providing social insurance because the German government established mandates for social insurance but did not fund it.

In my view Lindert's emphasis on government spending in the 1880 to 1930 comparisons is too narrow in assessing how societies deal with these social issues. A government mandate to require sickness, accident and old age insurance is a method for the society to deal with the issue. The mandates force people to create insurance pools that deal with these issues and remove the possibility that someone will end up on the government dole. Consider workers' compensation programs in the United States in the 1910s. A few states had state monopoly workers' compensation insurance that collected premiums from employers that funded the payment of accident benefits. Many other states mandated that employers fund the coverage but the employers paid the premiums to private insurers. In some states the employers could choose to buy private or state insurance coverage for their workers. An exclusive focus on government programs requires that we count the premiums paid to state funds but not the private workers' compensation insurance. Yet both types of programs provide accident benefits to injured workers and they both require that the employer fund the benefits.

Consider U.S. unemployment insurance. This is considered a government program under Lindert's definition because it is "run" by state governments even though it is funded almost entirely by employer contributions. In the U.S. the federal government provides less than 3

percent of the total funding for administrative costs and the rest of the funding comes from the employers. Is this really different from the workers' compensation mandates? In a world where wages adjust to amenities and disamenities in the workplace, it does not make that much difference if the employer or the worker makes the contributions to the funds. For example, even though the contributions in the U.S. to fund social security old-age pensions are split 50-50, most economists believe that the employer passes the cost on to the worker almost fully in the form of lower wages. Even in the early 1900s, Fishback and Kantor (2000, 1995) find that nonunion workers essentially paid for the bulk of the improved accident benefits they received under workers' compensation through indirect adjustments to wages in labor markets. A series of studies summarized in Fishback (1998) found evidence of compensating wage differentials in the U.S. for other aspects of the workplace.

A focus on government programs misses a significant part of the rise in private social welfare spending during this period in the United States. John Murray (2008) documents the rise in sickness insurance, which paid people for lost time worked, as well as the explicit rejection of state sickness insurance in every state. A number of industries began offering pensions and there were a broad range of labor unions, fraternal societies, and other organizations offering various forms of life insurance, sickness insurance, and accident insurance (Emery and Emery 1999, Murray 2008, Fishback and Kantor 2000, Clark, Craig, and Wilson 2003).

Lindert (1994) recognized that focusing on government social expenditures missed a significant amount of the provision of transfer payments to the poor, but I want to emphasize it further in the American case. Private spending on income maintenance for the poor accounted for 67 percent of total transfers from private and public sources in Massachusetts in 1903, 1920, and 1930. In 1930 private spending on income maintenance for the poor was 1.4 percent

relative to state personal income, while public spending was 0.7 percent (Livingston, 2009). Even though Massachusetts was at the high end of public poverty payments relative to other states, the point here is that a focus only on government transfers misses a substantial amount of social expenditures.

Another reason the private and public distinctions might be de-emphasized is based on the nature of subsidies across different parts of the income distribution. The family allowance programs started by the Nordic countries soon after World War II are primary examples. All families receive a base payment for children, including families in the upper tiers of the income distribution. In contrast, the United States does not have such a broad-based payment program because the emphasis is on providing payments to families in the lower tier of the income distribution. It should be noted, however, that child credits in the income tax system provide a subsidy to the upper and middle class tax payers. This raises a philosophical question about the meaning of the OECD social expenditures overall. If we see the social expenditures as providing a safety net for people, should we really be counting government transfers to the upper and middle tiers of the income distribution as social protection expenditures, when such households can easily handle the costs of raising children without such subsidies?

The issue of old-age pensions highlights another difficulty for cross-country comparisons. As seen in Table 2, Denmark established old-age pensions in 1891 and Sweden did so in 1913. In maintaining consistency, Lindert (1994) decided to eliminate military pensions from his comparisons. This makes sense when we consider that disability and retirement pensions paid to soldiers can be treated as part of the rewards structure for serving in the military. On the other hand, these are income maintenance programs for workers in the economy just like workers' compensation and disability programs would be.

Closer study of the U.S. military pensions raises another issue. Theda Skocpol (1992) and Ann Orloff (1993, 134-7) argue that the disability pensions for Civil War veterans became essentially a shadow social security system in the United States outside the south. The U.S. Congress changed the eligibility rules in ways that treated old-age as a disability and provided survival benefits for widows. As a result, roughly 40 to 48 percent of the elderly in the North and Midwest in the early 1900s were receiving pensions in the early 1900s through the system (Fishback and Thomasson 2006, 2-703, note 4). With so many elderly covered, it likely altered the political calculus in ways that delayed the adoption of old-age assistance and pensions in the United States for a decade or two.

These are all U.S. examples that cause a focus on government programs in the early 1900s to understate what I consider to be the true size of social expenditures. I am sure that the same issues arise in the Nordic countries as well, and I have not yet explored them. To the extent that the relative share of government mandates and private social expenditures was the same in the early 1900s as the share in the modern period described below, the estimates focusing on government social expenditures understate the U.S. expenditures more than the expenditures by the Nordic countries.

Even after making adjustments to Lindert's estimates, government social spending in all of these countries was a very small share of GDP. There are two major compositional reasons that can account for a great deal of the rise in social expenditures over the 20th century in these countries: the rise in spending on health and the increase in the share of elderly in the population.

Unlike today, there were relatively small expenditures on health care because health care technologies were nowhere nearly as effective as they are today. The medical profession could

perform a limited range of effective operations, set bones, and provide painkillers and nursing services to ease pain and discomfort to a limited degree. There were effective vaccines that prevented most diseases and these were relatively inexpensive. Doctors essentially price discriminated across patients in ways that subsidized the poor. Expenditures on doctor care were small enough that the primary form of insurance sold by companies, run by fraternal societies, and government's like Germany were income replacement plans. Not until the late 1930s in America do we see the development of plans designed to pay for medical expenditures. Health insurance, designed to pay doctor's fees, really does not take off until the 1940s and 1950s (Thomasson 2002). By that time new medical technologies had opened the door to high expenditures by making many procedures available to people that were impossible before but now had a cost that someone could pay. Health expenditures currently account for roughly one-third of government social expenditures in the U.S. and about one-fifth to one-fourth in the Nordic countries. The U.S. has seen a tripling of health expenditures (private and public) as a share of GDP since 1960 from 5 percent to over 15 percent in 2005, while Finland has seen a doubling from 3.8 percent in 1960 to over 8 percent in 2005. [3]

Another major change is the dramatic rise in the number of the elderly. When the countries committed to providing public pensions for the elderly, the share of elderly over aged 65 was dramatically lower. In the United States in 1900, people aged 65 and over accounted for only 4.1 percent of the population, compared to 12.2 percent in 2000. The Nordic countries also experienced substantial rises over the same period: Denmark from 7 to 15 percent, Finland 5 to 15, Norway 8 to 15, and Sweden 8 to 16 (Sundstrom 2009, 98). The shares in the Nordic

[3]Percentages derived from OECD Health Statistics downloaded from OECD Health statistics database on July 15, 2009. http://stats.oecd.org/Index.aspx?DatasetCode=HEALTH.

countries in 2000 are even higher, ranging from 14.9 percent in Finland to 15.3 percent in Sweden. The share of population aged 80 and higher in 2000 was 3.4 in Finland and the U.S. and 4 percent or higher in the remaining Nordic countries. As a result, elderly pensions account for roughly one-third of government social expenditures in the U.S. in 2003 and roughly one-fourth to one-third in the Nordic countries.[4] The point made here is purely a mechanical point that the elderly as a share of the population mechanically raises the share of social expenditures. Lindert (1994, 2004, 183-185) shows that countries with more elderly tend to have higher social expenditures aside from ones related to old-age. He tentatively argues that interest in safety nets and security in the political arena tends to rise with the share of elderly in the population.

The Modern Era

Most studies in the modern era that compare U.S. and European spending on social welfare start and end with the information in the top panel of Table 4, which shows estimates of the amount of *PUBLIC* social welfare spending as a percentage relative to GDP. It is not truly a share of GDP because much of the spending is in the form of transfer payments, which do not change GDP. These are the numbers that are routinely reported in the OECD data bases and in their publications and therefore are the ones easily at hand whenever someone searches the internet. The figures suggest that the Nordic countries have far larger social expenditures than the United States for aiding people with health care, disability, poverty relief, and pension benefits to the disadvantaged. In the 1990s and the early 2000s, Sweden's relative percentage

[4] Percentages derived from OECD Health Statistics downloaded from OECD Health statistics database on July 15, 2009. http://stats.oecd.org/Index.aspx?DatasetCode=HEALTH.

was 35 to 37, compared with roughly 32 in Denmark, 27 in Norway, and 25.7 in Finland. The U.S. lags well behind with roughly 17 percent.

The gross spending data do not capture the fact that beneficiaries of social expenditures pay different amounts of taxes on their benefits in the various countries. For example, in 2003 people receiving old-age cash public pensions in Sweden paid an average itemized tax rate of 28.6 percent on the benefits received, while in the U.S. the tax rate on social security benefits was 5.2 percent. The Swedes receiving unemployment benefits paid a tax rate of 28.7 percent on their benefits, while Americans paid 12 percent. The Swedish benefit recipients then turned around and paid taxes on their consumer purchases of between 22 and 28.8 percent, while Americans paid 4.7 to 7 percent. Finally, the U.S. offers a wide of tax breaks that are similar to cash benefits--like the earned income tax credit for low-income workers with families--and tax deductions and breaks for medical expenses, pensions and to stimulate charitable giving and other private social protection. Many are not found in Swedish tax laws.[5]

When the taxes paid are subtracted from the social transfers and the tax breaks are added to them, net public spending as a percentage relative to GDP falls sharply in many of the Nordic countries, while the U.S. percentage rises slightly. The middle panel of Table 4 shows that Sweden's net public social expenditure in 2003 is 28.8 percent relative to GDP, 8.3 percentage points below its gross percent of 37.1 percent. Meanwhile, the U.S. net public expenditure percentage relative to GDP is 18.6, up slightly from the gross spending of 17.4 percent.

[5]The average itemized tax rates Sweden and America are 28.6 for old-age cash benefits, 28.3 for survivors benefits, 27.7 to 30.8 for incapacity related benefits, 30.8 for family cash benefits, 29.6 for benefits while in labor market training and 29.8 on unemployment insurance benefits. In the U.S. social security benefits are taxed at 5.2 percent, unemployment compensation at 12.1, and Pension and IRA distributions at 14.8. See OECD 2007, 78, 80.

The other feature that is ignored, explicitly or implicitly, is the dramatic difference in philosophy toward social expenditures in the countries. The Nordic countries are more focused on providing the same basic benefit to everybody, while the U.S. focus is on providing benefits once someone is in trouble. This is most obvious in the health care system where the Nordic countries provide a basic national health care system run by some combination of the state and employers. Denmark and Finland also have some private insurance. Meanwhile, in the U.S., health insurance and health care is privately funded, largely through employers. Someone without health insurance still has access to health care, but only if their income is below a set amount relative to the poverty line. The two systems lead to quite different amounts of private social expenditures. In 2003 the U.S. had voluntary private health expenditures of 5.6 percent relative to GDP compared with 0.2 percent in Finland, 0.1 in Denmark and nearly zero in Norway and Sweden (OECD 2007, p. 23). Similarly, private pension payouts are 3.8 percent relative to GDP in the U.S. compared with 2.2 percent in Denmark, 2 percent in Sweden, and less than one percent in Finland and Norway. When the private social expenditures are added to the totals in the bottom panel of Table 4, the U.S. is ranked in the middle of the Nordic countries. By 2003 Sweden was still leading the way with net social expenditures of 30.9 percent relative to GDP, followed by the U.S. at 27 percent and the remaining Nordic countries in the 23 to 25 percent range.

The comparisons of social expenditure to GDP are often used because they give a sense of the share of income the countries are willing to devote to social expenditures. Yet a country with higher GDP per capita could have a lower percentage of social expenditures relative to GDP and still be spending more in absolute amounts per person in the country. This is the case in comparisons between the U.S. and Nordic countries, because the U.S. has a higher per capita

GDP. If we focus only on net public spending per capita in the middle panel of Table 5, the U.S. by 2003 is spending $5,408 (in 1990 purchasing power parity dollars), which is below the spending in Sweden of $6,259 and Norway at $5901, about the same as the $5,408 spent by Denmark $5408 and more than Finland's $4,232.

Add in the private spending at the bottom of Table 5 and the U.S. in 2003 is leading the group with expenditures of $7,580. Sweden spends roughly $1100 less at $6,715, followed by Norway ($6,315), Denmark ($5,818), and Finland ($4,920). These spending figures clearly show that the Nordic countries and the U.S. are rich countries. The U.S. and Sweden are spending more per capita on *social expenditures alone* than the $6,459 in per capita *GDP* earned throughout the world (Maddison dataset 2009). Social expenditures in each of the Nordic countries exceed GDP per capita in many of the countries that formed the former USSR. As is always the case, some large bounds should be put on all of these estimates given the difficulties of comparing purchasing power across countries.

Americans spend a higher share of GDP on health care than people in the Nordic countries. In 2003, the U.S. spent 5.6 percent relative to GDP through government and another 5.6 percent privately. Both percentages are higher now. In comparison, the Nordic countries spent between 8 and 10 percent of GDP.[6] Some might claim that the private share is bloated by higher administrative costs. Comparisons of the official statistics on the administrative costs of public versus private programs hide two key features that business insurance scholars note. First, the public plans do not have to hold large reserve funds as a private insurer does because the

[6] (OECD Health Statistics downloaded from OECD Health statistics database on July 15, 2009 http://stats.oecd.org/Index.aspx?DatasetCode=HEALTH). The government expenditures largely went to fund Medicare for the elderly (42.3 percent based on 1997 estimates), Medicaid for the poor nonelderly (31.5 percent) and some additional programs for the poor and government employees (26.2 percent.

public plans have the option of turning to the taxpayer when the health insurance taxes do not cover health insurance expenditures. There are no easy ways to estimate the hidden costs of this reliance on taxpayers as the backstop, but they are likely to be similar in size to the private plans costs. Second, the private plans are more active and successful at limiting fraudulent activity than the public plans. Catching fraud costs resources while fraud itself wastes resources. This has two conflicting effects on comparisons of expenditures under private and public plans. The public expenditures are likely to be larger than under private health plans to the extent that the public programs overpay for fraudulent claims. On the other hand, the spending by public programs is likely to be lower than under private health plans to the extent the public programs spend less on detecting fraud.

Say we ignore the hidden administrative costs for government programs. What would be the implications for the comparisons of social insurance expenditures in Table 4 and 5 if we assumed that high private administrative costs inflated American health spending? To make the following comparison robust, we should overstate the difference in administrative costs between private and public health insurance funds. One-third of private insurance premiums paid typically go to administrative costs. Assume that all of this is excessive and that government insurance has no administrative costs. To eliminate excessive administrative costs, we should reduce the 5.6 percent relative to GDP spent in the U.S. on private health expenditures by one-third, which comes to a reduction of 1.87 percent relative to GDP. This cut in private health expenditures would cut the U.S. net social expenditures relative to GDP in the bottom of Table 4 from 27 percent to 25.1 percent, which is about the share in Denmark. The adjustment would cause the U.S. net per capita social expenditures in the bottom of Table 5 from $7,850 to $7,307, which would still leave the U.S. ranked first in terms of social spending per capita. We could

take a further step and assume that the bloat in the American system is two-thirds of the private spending on health care. At that point, U.S. per capita net public and private social expenditures would approximately equal Sweden's expenditures of $6,700.

What these comparisons highlight is that all of the countries spend extensively on social welfare, but that the U.S. and Nordic countries go about doing it in quite different ways. The Nordic countries tend to provide benefits to all members of society at all income levels and consequently collect a large share of income in taxes. Meanwhile, the United States follows a strategy more focused on nongovernment provision of many social welfare activities, while providing income, health, and in-kind benefits for the poor. The main question about the U.S. social safety net is how well it covers the poor population. The focus in the United States has long been on children and their families, the elderly, and the disabled. Single adults who have not been working face more haphazard coverage in the form of local payments.

The safety net in the U.S. is probably more porous than in the Nordic countries. The most commonly cited problem is the absence of private or public health insurance for approximately 15 percent of the American population at any point in time (as of 2005 and 2006, see U.S. Bureau of the Census, 2007). Access to health insurance is relatively fluid, as people move in and out of coverage, so that the number who are not covered throughout the year is more like 8 to 12 percent (Congressional Budget Office, 2003). But this statistic does not imply the absence of medical care. Some of the lack of health insurance is likely voluntary choices by healthy people who can afford health insurance but choose to pay as they go rather than pay the $5,000 to $6,000 per year for health insurance for an individual. They are gambling that they will be among the very large share of the healthy population at the beginning of the year that does not experience a severe medical problem that year. The premiums give a pretty good

picture of the combination of the odds of having a severe problem multiplied by the costs of that problem. Nearly 60 percent of the uninsured are aged 18 to 44, where health risks are less dire, while 35 percent are in households earning over $50,000 per year.[7] Others without health insurance also receive care in emergency rooms. A number of health providers provide health care in ways that can be missed by official statistics (Bovbjreg, et. al. 2006).

The safety net is the U.S. is porous in another way, as many who are eligible for benefits do not apply for them. A significant proportion of the working poor who are eligible for the earned income tax credit, which offers substantial tax rebates and subsidies to the working poor with families, do not file the required income tax returns to obtain the benefits. As a result, the United Way charity has developed programs to aid the working poor in filing tax returns. A recent New York Times article summarized a series of studies that showed that significant shares of the eligible poor are either not applying for benefits or not getting them (DeParle 2009). The reasons vary from dealing with the complexities of welfare applications to lack of information to unwillingness to go through the process for fear the government might interfere with their lives.

Certainly, an important feature of any society is how it treats the people in the lower portion of the income distribution. Poverty researchers constantly debate whether poverty should be measured relative to others in the same country or should be measured on an absolute basis. The Gini coefficients, which show relative poverty within the same country, are shown for the various countries before and after taxes and transfers are taken into account in Table 6. The income distribution before taxes and transfers in the United States was slightly more equal than

[7] Meanwhile, over the past decade the income levels at which children are eligible for government subsidized health insurance through the Children's Health Insurance Program (CHIP) have risen to double the poverty line of in many states (The federal poverty line for a family of four in 2009 is $22,050 see http://ccf.georgetown.edu/index/eligibility-schip).

Sweden and less equal than Finland in the mid 1970s. The income distributions before taxes and transfers all became more unequal over time, as the Gini coefficient rose above .39 in each country. By the mid-2000s the U.S. distribution was the most unequal of all of the countries.

One purpose of taxes and transfers is to realign the income distribution. Comparisons of the lower half with the upper half of Table 6a and the changes in Table 6b show that the income distributions after taxes and transfers are substantially more equal than the distribution before taxes and transfers. The taxes and transfers had much stronger effects on the income distribution in the Nordic countries than in the U.S. In the Nordic countries after the mid-1980s, the Gini coefficients in Table 6a dropped from above 0.39 before taxes and transfers to below 0.28 after taxes and transfers. Taxes and transfers had much smaller effects on the U.S. income distribution with a shift in the Gini from above 0.45 to under 0.38 in the same years. Similarly, in Table 6b the shares of people with income below 40 percent of the median income in the country are cut sharply in all countries by adjustments through direct transfers and taxes. Again, the U.S adjustments for taxes and transfers have a smaller effect than in the Nordic countries. In all five countries the income distribution after taxes and transfers has become more unequal over time.

Absolute levels of poverty deserve strong consideration as well because the world economy is increasingly global and people compare themselves not only with their close neighbors but with people throughout the world. Timothy Smeeding (2005, pp. 957, 960) used the Luxembourg income study to develop estimates of the disposable income of the poor in each country relative to the median income in the United States in the year 2000. Disposable income in the study includes earned income from wages, salaries, and self-employment; other cash income from private sources, including property, pensions, alimony, and child support; public

transfer payments for retirement, family allowances, unemployment compensation and welfare benefits. Income taxes and Social Security contributions are deducted. Not included in the measure are capital gains, imputed rents, home production or in-kind income. Also no account is taken for indirect taxes like consumption taxes or the benefits from public spending on social goods like healthcare, education or most housing subsidies. As in the other studies discussed above, he adjusted the values for purchasing power parity, and the usual caveats about the problems with purchasing power parity apply.

Table 7 shows the incomes per equivalent person in 2000 in year 2000 dollars for people in households at the 10th percentile and at the 90th percentile in each country. The figures for income show that the poor in the U.S. were receiving incomes after taxes and transfers at roughly the same level as the poor in Finland and Sweden. To be more precise, Finnish people in households at the 10th percentile of the Finnish income distribution had incomes of roughly $9,300 by this measure, as did Swedes in the 10th percentile of Swedish households. Americans in the 10th percentile of American households earned about $9,500.[8] There is a stark contrast at the upper end of the distribution. Americans in households in the 90th percentile of the American distribution were earning $51,300 per equivalent person in the household, nearly double what Swedes in the 90th percentile of the Swedish distribution were earning and what Finnish people in the 90th percentile of the Finnish distribution were earning. People at the 10th percentile in income in the U.S. and the Nordic countries fare well relative to averages in the rest of the world and in the past. In the year 2000 the $9,300 earnings are in the same range as per capita income in Mexico, Hungary, and Turkey and higher than the per capita incomes of countries accounting

[8] Being at the 10th percentile implies that the person at the 10th percentile has a higher income than 9.9999 percent of the population and lower income than 90 percent of the population.

for more than 79 percent of the world's population. The $8,350 figure for a single person in the year 2000 is 31 percent higher than per capita GDP in America in 1929, and higher than per capita income in America as late as 1941 on the verge of World War II.[9]

The holes in the safety net in the U.S. create major problems for people below the 10th percentile in the income distribution in the United States. In Smeeding's (2005) study he noted that a significant share of children in one-parent households fared much worse than the 10th percentile comparison suggested. Figure 1 from a recent OECD (2008) study of income inequality shows the *average* income per person in 2005 U.S. dollars for each decile of the disposable income distribution. The OECD study used roughly the same definition of disposable income used by Smeeding although they appear to have weighted people in each household differently.[10] The bottom line on the rectangle for the U.S. in the far right of the Figure shows that the average disposable income for people in the bottom 10 percent of the income distribution was roughly $6,000 in the mid-2000s. The next higher line in the rectangle, roughly $12,000, is the average income of the people between the 10th and 20th percentile. The top of the rectangle shows that the average income for the people in the top 10 percent of the distribution was approximately $94,000. Finally, the diamond shows the average per capita income of roughly $33,000 in the U.S.

Note that Smeeding's study focused on the people right at the 10th percentile, while the OECD study looks at the average for all of the people ranked below the 10th percentile. Thus the

[9] The $17,050 figure for a family of four compares to average annual earnings of $13,209 in year $2000 for manufacturing workers in 1929, $14,289 in year $2000 in 1939, and $19,826 in 1949. Annual earnings were calculated from series Dd5 and Dd8 in Carter.et al. 2006, volume 4, p. 579 and then adjusted to year 2000 dollar from Officer and Williamson, 2009.

[10] Smeeding used equivalence scales which counts children as having smaller weights than adults, while the OECD gave equal weighting to all persons using the square root of the number of people in the household.

difference between the two figures is driven by what happens below the 10th percentile. The group in the bottom in the U.S. does not fare well relative to the Nordic countries, as the U.S. average is $5,800 in 2005 compared with averages in the Nordic countries that range from $8,000 in Finland to $12,000 in Norway. The one advantage the poor Americans would have had in spending their disposable income is that they face consumption tax rates in the 4 to 7 percent range, while consumption taxes in the Nordic countries are above 20 percent. On the other hand, the public services not counted in disposable income, like health care and education, likely are better for the very poor in the Nordic countries than in the United States. One sign is the lower infant mortality rates in the Nordic countries than in the United States.

Variation Across Jurisdictions in the U.S.

Comparisons of U.S. aggregates with those in other countries miss the tremendous variation in income and social welfare spending income across states within the United States. Since the Nordic countries are roughly the size of large U.S. states, it is interesting to see how the Nordic countries fared relative to the various U.S. states on a series of dimensions.[11] Figures 2 and 3 show where the Nordic countries fit in terms of per capita income and per capita income growth between 1920 and 2000. The two figures show that in terms of per capita income and income growth the Nordic countries look most like states in the American South. Finland and Norway grew the most rapidly of any of the economies with Sweden, Mississippi, North Carolina, Georgia, and Tennessee the next in the growth rankings in Figure 2. Finland's per

[11] Ranking the Nordic countries among the American states in terms of population in 2000, Sweden would rank 9th, Denmark, 20th, Finland 22nd, and Norway 25th. Sweden has a population similar to New Jersey, Denmark is like Wisconsin, Finland like Maryland and Arizona, and Norway is like Louisiana. In 1920, Sweden would have ranked 4th, Denmark 11th, Finland 13th, and Norway 16th among the U.S. states. In population terms Sweden most resembled Ohio, Denmark and Finland were similar to New Jersey, and Norway was most like Wisconsin.

capita income in 2000 was an incredibly high 12.6 times larger than it was in 1920. Part of this rapid growth is driven by the lower levels of income in these economies in both 1920 and 2000. As seen in Figure 3, the Nordic countries and southern states remain in the lower portion of the distribution in both 1920 and 2000.

Income does not tell the whole story, however. Infant mortality rates give a sense of the health of the most vulnerable age group in the population. They also give a sense of the relative welfare of the poor in the economies, because high infant mortality rates are generally associated with poverty. The infant mortality rates for Norway and Sweden ranked among the 10 lowest rates for the economies in 1921. Denmark ranked in the middle of the pack and Finland had one of the highest rates of any of the locations. By the early 2000s infant mortality rates had fallen below 11.5 per thousand in every one of the areas. The Nordic countries had four of the five lowest infant mortality rates in the distribution.

The dramatic differences in income and infant mortality are matched by substantial variation in social expenditures at the state and local level. Figures 5a and 5b show two different rough estimates of welfare expenditures per capita in 1990 dollars for 248 cities. Figure 5a includes welfare spending that is calculated by adding together per capita spending by city government and per capita spending by state government institutions on indoor and outdoor aid to the poor, care of children, care of the deaf, blind, and mute, and mothers' pensions. This assumes that the state spending is distributed across rural and city areas in the same way that the population was distributed. The figure understates the spending to the extent that county governments and special districts contributed to welfare spending and it also misses the extent of spending on state workers' compensation. Figure 5b includes per capita information on

compensation of workers killed or injured on the job and their families. Administration costs and payments for medical care of the injured workers are not included.

The very rough estimates of per capita government welfare spending in 1990 dollars for 280 cities in Figure 5 range from 45 cents to $29 in 1923 and from 71 cents to $56 in 1930. When workplace accident compensation is added to the figure, the per capita spending ranges from $3.24 to $92 in 1923 and $4.19 to $116.6 in 1930.

Over the course of the 1920s in both graphs there was a clear sense of path dependence in the per capita welfare spending, as shown by the clustering of observations around the positive diagonal slopes in Figure 5a and Figure 5b. The spending per capita across cities around 1930 was influenced not only by the prior spending per capita in 1923 but also changes in employment the labor market. Table 9 shows regressions run on a subset of the spending, per capita city government spending on care of the poor and veterans. The regression shows the results of regressions of the natural log of per capita city government spending in 1929 (and 1931) on the natural log of the same spending in 1923 and the change in the natural log of state manufacturing employment between 1923 and 1929 (1931). The coefficients can be read as elasticities. The strong path dependence is still there after controlling for changes in employment. Cities with per capita relief spending one percent higher in 1923, holding other things constant, tended to have per capita spending in 1929 and in 1939 that was 0.93 and 0.94 percent higher, respectively. Per capita welfare spending responded strongly to offset drops in the natural log of employment. The negative elasticity implies that a one percent reduction in the change in the log of employment led to an increase in per capita relief spending of 1.48 percent in 1929 and 2.52 percent in 1931.

To compare the U.S. city and state government welfare spending with the Nordic countries, estimates of per capita welfare and unemployment spending from the Nordic countries based on Lindert (1994, 11) were added to Figures 5a and 5b. Both figures are included because I am not sure how Lindert (1994, 11) treated accident compensation in his calculations for the Nordic countries. Given that Lindert's USA estimate sits in the lower left of Figure 5b, it seems likely that he did not include workplace accident payments in the USA numbers. Since Lindert focused on government spending, this is not a mistake on his part because only a small share of U.S. accident compensation came from state government workers' compensation programs. If we believe that social expenditures should include government mandates for employers to provide accident benefits to their workers through workers' compensation programs, then these payments would belong in the comparisons.[12]

Excluding workers' compensation in Figure 5a, Denmark and cities in Massachusetts are clearly the leaders in terms of welfare/unemployment spending in both 1923 and 1930. Finland, Norway, and Sweden rank just below most Massachusetts cities in 1923 and then among the Massachusetts cities in 1930. The picture changes when workers' compensation payments are incorporated into Figure 5b. The Nordic countries lie in the lower tier of the distribution in the early 1920s. In 1930 Denmark lies in the middle of the distribution, while the other Nordic countries remain in the lower tier. Remember that the comparisons with the Nordic countries are not definitive until I find out what Lindert did with injury compensation. However, the comparisons within the United States are all performed the same way.

[12]I am checking with Peter to see how he treated the accident compensation in his comparisons. Workers' compensation in the U.S. did not include agricultural workers and domestic servants. Since the focus in the figures is on cities, where there were very few agricultural workers, this should not create too much of a problem this is not a problem.

Denmark is again the leader in 1930 when we compare per capita health spending in 1990 dollars in purchasing power parity in the 1920s for the U.S. cities and the Nordic countries in Figure 6. The remaining Nordic countries are in the bottom of the distribution in the early 1920s. The U.S. city spending includes per capita city government cost payments to general hospitals and hospitals for the insane, feeble-minded, and others as well as per capita state hospital spending. Given the position of Lindert's circled USA observation in Figure 6, the U.S. per capita spending may be understated for the cities because of the exclusive focus on hospitals. The main lesson to be drawn from Figure 6 is that there was tremendous variation in government spending in hospitals throughout the United States and that the rankings stayed relatively stable through the 1920s.

The entire structure of spending for the maintenance of the poor changed during the Great Depression of the 1930s in America. Franklin Roosevelt's New Deal involved the federal government in a series of federal emergency programs designed to aid the unemployed and the poor. It was the first time the federal government had taken responsibility for relief of the poor and the unemployed for nonveterans. Federally funded income maintenance programs like the Works' Progress Administration, Federal Emergency Relief Administration, Civil Works Administration, and the Civilian Conservation Corps lasted no later than 1943. The Social Security Act of 1935 established a series of long range programs that included the national old-age pension system for workers; matching grants to the states for public assistance programs that replaced the pre-existing state programs for means-tested old-age assistance, aid to widowed mothers, and aid to the blind; and state-funded unemployment insurance programs that received some federal funds for administrative costs. State and local governments still retained responsibility for providing income maintenance to others that did not meet these categories.

Federal government involvement led to sizeable shifts in the per capita spending for relief of the poor and the unemployed. As can be seen in Figure 7, the amounts spent per capita in each city rose dramatically between 1931 and 1940. These years were chosen because the national unemployment rates in the two years were similar. The unemployment rate in 1931 was 16.3 percent and 14.8 percent in 1940. The federal government did not become heavily involved in relief efforts until 1933; therefore, the changes wrought by the federal government involvement in relief become more obvious in comparing these two years. Boston, Massachusetts and Rochester, New York led the rankings in 1931 at over $82 per head (1990$). By 1940 the median expenditure per capita was $179 (1990$) and spending in Boston was leading the country at nearly $370 (1990$) per capita on relief.

Path dependence in per capita relief spending was much weaker across the 1930s than across the 1920s. The tight clustering around the diagonal line seen in Figures 5a and 5b for the 1920s is no longer present in Figure 7. The raw correlation is 0.58 in Figure 7 for the 1931/1939 comparison, compared with 0.89 in Figure 5b for the 1923/1930 comparison. The impact of 1931 per capita spending levels on 1939 spending levels is even weaker after we control for the state of the economy in the cities in 1931 and 1939. The elasticities from the regression in Table 10 show that a city with one percent higher relief spending per capita in 1931 on average had relief spending per capita that was only 0.17 percent higher in 1939. Meanwhile, the per capita spending was strongly influenced by changes in the labor market. The estimated elasticity of -1.11implies that a one percent reduction in the change in the log of state manufacturing employment was associated with a 1.11 percent increase in per capita relief spending.

The increase in the role of the federal government during the Depression was not the only factor that influenced the long run changes in the rankings of state and local government in the

U.S. over the course of the entire 20th century. Figure 8 shows a plot of the maximum weekly workers' compensation payments (1990$) paid to workers injured in temporary accidents in each state in 1940 and 1990. Workers' compensation benefits were chosen because workers' compensation has always been the responsibility of state governments with no direct role for the federal government. The top weekly benefit payments in 1940 were $235 per week (1990$) in Connecticut, South Carolina, New York, and California. By 1990 many of the states had set up rules that adjusted weekly maximums each year in response to changes in average weekly wages in the states. The 1990 rankings of weekly maximums look nothing like the 1940 rankings. Of the leaders in 1940 only Connecticut remains among the leaders in 1990, while South Carolina, New York, and California fall below the median. The correlation between the 1940 and 1990 weekly maximums was essentially zero.

Conclusions

My goal has been to document the extent of social expenditures in the U.S. and the Nordic Countries in the early 1900s and again in the early 2000s. A careful look at the extent of social expenditures has revealed some surprises. The common view that America spends much less on social welfare than the Nordic countries does not survive closer inspection when we consider the differences in the structures of social expenditures. The standard description of the modern era is based on total government social expenditures as a share of GDP that are prominently displayed in the OECD statistics and in the datasets freely available at the OECD website. But these are gross transfers that do not take into account the dramatic differences in tax structures in the U.S. and the Nordic countries. The Nordic countries collect income taxes

on the cash payments made to social welfare recipients at rates that are four to five the rates paid by American recipients. When the poor go out to make purchases, they then pay consumption tax rates on their purchases that are 4 to 5 times the rates paid by the poor in America. Further, the American governments offer a series of tax breaks to promote social welfare that are not found in the Nordic countries. As a result, net social expenditures after taxes and transfers as a share of GDP in the Nordic countries are much closer to American levels.

The picture changes even more dramatically when we look at absolute amounts of expenditures. Such international comparisons are more difficult to measure than shares of GDP due to the issues related to measuring purchasing power across countries. If the adjustments for purchasing power are correct, net social expenditures by governments in America are roughly in the middle of the Nordic countries. If we take into account that a significant portion of social expenditures in the United States are made privately in the U.S., Americans spend more per capita on social welfare than do any of the Nordic countries.

The U.S. differs from the Nordic countries in that it is much more willing to allow people to choose privately how much to spend on in the social welfare spending categories. In all of the countries, taxes and transfer payments lead to a substantial increase in the equality of income after taxes and transfers are incorporated. Comparisons of Americans and people in the Nordic countries at the 10^{th} percentile of the income distribution show that Americans at the 10^{th} percentile are faring about the same as people in some of the Nordic countries in terms of the level of income after taxes and transfers. Americans in the upper half of the distribution have much higher incomes than people in the upper half of the income distribution in the Nordic countries. The unfortunate feature of the American distribution is the low incomes for the people below the 10^{th} percentile of the income distribution. There are clearly holes in the American

safety net that people are falling through and the debates about the reasons are ongoing. We know that a substantial number of people eligible for a wide range of benefits in the United States either don't apply for them or do not receive them after applying.

Finally, the sheer size of the U.S. economy relative to the Nordic countries likely influences the way the U.S. structures its social expenditures. In the U.S. federal system the states make many of the choices about the types and level of benefits to be provided. Therefore, there is enormous diversity across U.S. states and cities in their levels of social expenditures per capita as well as incomes per capita. In terms of income per capita in the early 1900s and again in the early 2000s, the Nordic countries look most like states in the American south. The Nordic countries currently have much lower infant mortality rates than the U.S. states, as the Nordic countries had more success at cutting infant mortality to levels below 5 infant deaths per live birth than the American states. The jury is still out on the rankings of the Nordic countries and American cities with respect to spending on income maintenance and health in the 1920s.

Table 1
Government Social Spending as Percentage of National Product (Welfare--Unemployment, Pensions, Health, and Housing), 1880-1930

	1880	1890	1900	1910	1920	1930
Denmark	0.96	1.11	1.41	1.75	2.71	3.4
Finland	0.66	0.76	0.78	0.9	0.85	2.97
Norway	1.07	0.95	1.24	1.18	1.09	2.39
Sweden	0.72	0.85	0.85	1.03	1.14	2.6
United States	0.29	0.45	0.55	0.56	0.7	0.56

Source: Lindert (1994, p. 10).

Table 2

Dates of Adoption of Government Social Welfare Programs

	Denmark	Finland	Norway	Sweden	USA
Old Age Pensions or Assistance	1891	1937	1936	1913	Federal 1935, States see Table 8
Disability	1921	1937	1936	1913	Some States after 1942, Federal 1957
Sickness and Maternity	1892	1963	1909	1891	Elderly 1965, Disabled 1972
Work Injury	1898	1895	1894	1901	1911 and after by state, see Table 8
Unemployment	1907	1917	1906	1934	1935
Family Allowance	1952	1948	1946	1947	None

Source: Social Security Administration 1999, pp. 104-7, 126-129, 267-270, 337-340, 372-375.

Table 3
Very Rough Estimates of Government Social Spending Per Capita
in 1990 Dollars, Purchasing Power Parity, 1880-1930

	1880	1890	1900	1910	1920	1930
Denmark	21	28	43	65	108	182
Finland	8	10	13	17	16	79
Norway	16	16	23	26	30	87
Sweden	13	18	22	31	32	102
United States	9	15	22	28	39	35

Notes. Percentages from Table 1 multiplied by Angus Maddison's (2009) estimates of Gross Domestic Product per Capita in 1990 GK Purchasing Power Parity Dollars.

Table 4
Estimates of Social Expenditures as Percentage of Gross Domestic Product at Factor Cost in the United States and the Nordic Countries, 1993-2003

	Gross Public					
	1993	1995	1997	1999	2001	2003
Denmark	33	33.5	32	31	30.5	32.2
Finland		30.5	29	25.5	24.5	25.7
Norway		27	25.5	28	26	28.2
Sweden	41	37	35.5	35.5	35	37.1
United States	17	17	17	16	17	17.4
	Net Public					
	1993	1995	1997	1999	2001	2003
Denmark	25	24.5	23	23	22.5	23.7
Finland		23.5	22	20	19.5	20.3
Norway		21	20	23	22.5	22.8
Sweden	31	28	27.5	27.5	27	28.8
United States	17	17	17	16.5	18	18.6
	Net Public and Private					
	1993	1995	1997	1999	2001	2003
Denmark	26	25.5	25	25	24.5	25.2
Finland		26	25	23	22.5	23.6
Norway		22	21	24.7	22.5	24.4
Sweden	33	30	29.5	30	29.5	30.9
United States	24	24	24	24	25	27

Source and Notes. OECD (2007, pp. 41, 81-85). The 2003 figures are provided in the text. The figures for 1993 through 2001 are estimates from reading graphs provided in the text. Gross Public is the most widely reported figure. Net public adjusts for taxes paid on benefits, consumption taxes, and tax breaks. Net Public and Private adds in net private expenditures (mandatory and voluntary).

Table 5
Rough Estimates of Social Expenditures per Capita in 1990 Purchasing Power Parity Dollars in the United States and the Nordic Countries, 1993-2003

	Gross Public					
	1993	1995	1997	1999	2001	2003
Denmark	6,227	6,817	6,844	6,899	7,033	7,435
Finland		4,805	5,006	4,808	4,960	5,357
Norway		5,860	6,063	6,852	6,622	7,298
Sweden	6,784	6,554	6,510	7,052	7,312	8,063
United States	4,015	4,183	4,429	4,438	4,829	5,059
	Net Public					
	1993	1995	1997	1999	2001	2003
Denmark	4,718	4,986	4,919	5,119	5,188	5,472
Finland		3,702	3,798	3,771	3,948	4,232
Norway		4,558	4,755	5,628	5,730	5,901
Sweden	5,129	4,960	5,043	5,463	5,640	6,259
United States	4,015	4,183	4,429	4,576	5,113	5,408
	Net Public and Private					
	1993	1995	1997	1999	2001	2003
Denmark	4,906	5,189	5,347	5,564	5,650	5,818
Finland		4,096	4,315	4,337	4,555	4,920
Norway		4,775	4,993	6,044	5,730	6,315
Sweden	5,460	5,314	5,410	5,960	6,163	6,715
United States	5,668	5,905	6,252	6,656	7,101	7,850

Source and Notes. Calculated by using the percentages in Table 4 multiplied by Angus Maddison's estimates of GDP per capita in GK purchasing power parity dollars. OECD (2007, pp. 41, 81-85). The 2003 figures are provided in the text. The figures for 1993 through 2001 are estimates from reading graphs provided in the text. Gross Public is the most widely reported figure. Net public adjusts for taxes paid on benefits, consumption taxes, and tax breaks. Net Public adds in net private expenditures (mandatory and voluntary).

Table 6a
Gini Coefficients for the Income Distribution in the United States and the Nordic Countries, mid 1970s through mid-2000s.

	Income Distribution Before Taxes and Transfers			
	mid 70s	mid 80s	mid 90s	mid-2000s
Denmark		0.37	0.42	0.42
Finland	0.34	0.33	0.39	0.39
Norway		0.35	0.4	0.43
Sweden	0.39	0.4	0.44	0.43
United States	0.37	0.4	0.45	0.46

	Income Distribution After Taxes and Transfers			
	mid 70s	mid 80s	mid 90s	mid-2000s
Denmark		0.22	0.21	0.23
Finland	0.23	0.21	0.23	0.27
Norway		0.23	0.26	0.28
Sweden	0.21	0.2	0.21	0.23
United States	0.32	0.34	0.36	0.38

Source. OECD. OECD Stat Extracts downloaded from http://stats.oecd.org/index.aspx on July 16, 2009.

Table 6b
Shares of People with Incomes Below 40 Percent of the Median Income in that Country Before and After Direct Taxes and Transfers

		mid-70s	mid-80s	mid-90s	mid-2000s
Denmark	Before Taxes and Transfers		18.0	22.8	21.3
	After Taxes and Transfers		1.8	1.5	2.1
	Change		-16.2	-21.3	-19.2
Finland	Before Taxes and Transfers				13.8
	After Taxes and Transfers				2.8
	Change				-11.0
Norway	Before Taxes and Transfers		16.6	21.7	21.2
	After Taxes and Transfers		1.9	3.1	3.5
	Change		-14.7	-18.6	-17.7
Sweden	Before Taxes and Transfers	19.8	23.7	26.5	24.1
	After Taxes and Transfers	1.3	1.5	2.0	2.5
	Change	-18.5	-22.2	-24.5	-21.6
United States	Before Taxes and Transfers	19.1	21.3	22.0	21.7
	After Taxes and Transfers	10.1	11.8	10.7	11.4
	Change	-9.0	-9.5	-11.3	-10.3

Source: Extracted statistics from the OECD.Stat website on July 17, 2009. Adjustments have not been made for indirect taxes on consumption of the individuals.

Table 7
Estimate of Income per Equivalent Person in Households at the 10th Percentile and the 90th Percentile in 2000 U.S. Dollars, Purchasing Power Parity

	10th Percentile	90th Percentile
Finland	9,300	27,100
Sweden	9,300	27,600
United States	9,500	51,300

Source: Calculated from Smeeding (2005).

Table 7

Structure of Major Social Insurance and Public Assistance Programs in the United States, 1900, 1929, and 2000

2000		1929		1900
Type	Provider	Type	Provider	Type
General Relief	Local	Indoor	Local Govt /Charities	Indoor
		Outdoor Relief	Local Govt /Charities	Outdoor Relief
Temporary Assistance to Needy Families	State with Federal Matching Grants	Mothers' Pensions	45 States	
Need Based Old-Age Assistance	State with Federal Matching Grants	Need Based Old-Age Assistance	7 states/Opitional	
Aid to Blind	State with Federal Matching Grants	Aid to Blind	29 states in 1935	School or Home for Blind
Workers' Compensation	Employer Pays Premiums to Private Insurers or State Insurer	Workers' Compensation	44 States	Negligence Liability
Health Insurance	Employer/Private	Sickness Insurance	Private	
Health Care for Poor/Medicare	State with Federal Matching Grants	Health Care for Poor	City and Private Hospitals	
Life Insurance	Private Sales	Life Insurance	Private Sales	Life Insurance
Unemployment Insurance	State Collections from Employers with Federal Paying Admin. Expenses		None	
Food Stamps	Federal			
Old-Age Pensions	Federal/Private	Old-Age Pensions	Some Private, Military Pensions	
Disability Insurance	Federal Social Security/Private	Disability Insurance	Private/Mutual Societies	Disability Insurance
Food Stamps	Federal			
Home Fuel Subsidy	Federal			
Housing Subsidies	Federal	Indoor Relief	Local Govt. /Charities	
Earned Income Tax Credit for Households with Children	Federal			

Table 8
The Presence of State Social Welfare Programs in the United States in the Early 1900s

	Workers Compensation	**Mothers' Pension**	**Old-Age Pensions**	**Aid to the Blind**
State	**Year Law Permanently Enacted**	**Year Enacted if before 1935 when Federal Act Passed**	**Year Enacted if before 1935 when Federal Act Passed**	**Making Cash Payments as of August 1, 1935**
Alabama	1919	1931	----	No
Alaska	1915	1917	1915	No
Arizona	1913	1917	1933	No
Arkansas	1939	1917	----	Yes
California	1911	1913	1929	Yes
Colorado	1915	1912	1927	Yes
Connecticut	1913	1919	----	Yes
Delaware	1917	1917	1931	No
Florida	1935	1919	----	No
Georgia	1920	----	----	No
Hawaii	1915	1919	1933	no
Idaho	1917	1913	1931	yes
Illinois	1911	1911	----	yes
Indiana	1915	1919	1933	yes
Iowa	1913	1913	1934	yes
Kansas	1911	1915	----	yes
Kentucky	1916	1928	1926	yes
Louisiana	1914	1920	----	yes

Maine	1915	1917	1933	yes
Maryland	1912	1916	1927	yes
Massachusetts	1911	1913	1930	no
Michigan	1912	1913	1933	no
Minnesota	1913	1913	1929	yes
Mississippi	1948	1928	----	no
Missouri	1926	1917	----	yes
Montana	1915	1915	1923	no
Nebraska	1913	1913	1933	yes
Nevada	1913	1913	1925	yes
New Hampshire	1911	1913	1931	yes
New Jersey	1911	1913	1931	yes
New Mexico	1917	1931	----	no
New York	1913	1915	1930	yes
North Carolina	1929	1923	----	no
North Dakota	1919	1915	1933	no
Ohio	1911	1913	1933	yes
Oklahoma	1915	1915	----	yes
Oregon	1913	1913	1933	yes
Pennsylvania	1915	1913	1934	yes
Rhode	1912	1923	----	no

Island				
South Carolina	1935	----	----	no
South Dakota	1917	1913	----	no
Tennessee	1919	1915	----	no
Texas	1913	1917	----	no
Utah	1917	1913	1929	yes
Vermont	1915	1917	----	no
Virginia	1918	1918	----	no
Washington	1911	1913	1933	yes
West Virginia	1913	1915	1931	no
Wisconsin	1911	1913	1925	yes
Wyoming	1915	1915	1929	yes

Sources: Reprinted from Fishback and Thomasson (2006, 2-709). Workers' Compensation Laws: See Fishback and Kantor (2000). The date listed above is the date at which a permanent law was enacted. New York passed a compulsory law in 1910 and an elective law in 1910, but the compulsory law was declared unconstitutional, and the elective law saw little use. New York passed a compulsory law in 1913 after passing a constitutional amendment. The Kentucky law of 1914 was declared unconstitutional and was replaced by a law in 1916. The Missouri General Assembly passed a workers' compensation law in 1919, but it failed to receive enough votes in a referendum in 1920. Another law passed in 1921 was defeated in a referendum in 1922 and an initiative on the ballot was again defeated in 1924. Missouri voters finally approved a workers' compensation law in a 1926 referendum on a 1925 legislative act (see Kantor and Fishback 1994). Maryland (1902) and Montana (1909) passed earlier laws specific to miners that were declared unconstitutional.
Mothers' pension laws: For laws enacted prior to 1920, see Thompson, 1919, pp. 7-11 and for laws enacted after 1920 see Theda Skocpol (1992, p. 457). In the states of Missouri (1911), (California pre1913), Wisconsin (1912), Michigan (1911), and Oklahoma (1908) there were state provisions that provided funds similar to mothers' pensions in indirect ways. Some of the provisions were limited to specific cities and others were indirect means of providing funds to dependent children. Arizona in a 1914 referendum passed a mothers' pension and old-age

pension system that hinged on the abolishment of the almshouses in the state, but it was found unconstitutional (Thompson, 1919, pp. 7-9). More detail on the specifics of mothers' pension laws as of 1934 are available in Stevens 1970, pp. 28-29 and Committee on Economic Security 1937, pp. 233-249).

Old-Age Pensions: See Stevens, 1970, 20-24 and Committee on Economic Security, 1937, pp. 160-71. Arizona set up an old-age pension subject to the elimination of almshouses in a referendum in 1915, but the pension was declared unconstitutional. Pennsylvania passed an old-age pension law in 1923 that was declared unconstitutional in 1924. Nevada also passed an act in 1923 that was replaced by the 1925 act listed above. Information contained there also offers more detailed descriptions of the laws.

Aid to the Blind: See "Public Provision for Pensions for the Blind in 1934," Monthly Labor Review 41 (3) (September 1935), pp. 584-601; reprinted in Stevens, 1970, 29-31.

Table 9
Elasticities from Regressions of the Natural Log of Per Capita Relief Spending in City (1967$) in Year t on the Natural Log of Per Capita Relief Spending in 1923 and Change in Log State Manufacturing Employment from 1923 to Year t.
(t-statistics below each coefficient)

	ln(per capita poor relief) fsc	
	1929	1931
Natural Log of Per Capita Poor Relief in City in 1923	0.9306	0.948
	22.98	*16.62*
Change in Natural log of state manufacturing employment from 1923 to year	-1.482	-2.52
	-2.31	*-2.53*
Constant	0.2644	0.3705
	4.5	*1.16*
R-squared	0.817	0.68
Number of Observations	167	147

Sources: Manufacturing employment from U.S. Bureau of Census (Manufacturing Censuses), 1929 and 1931; city per capita poor relief from U.S. Bureau of the Census *Financial Statistics of Cities* (1925c, 1932).

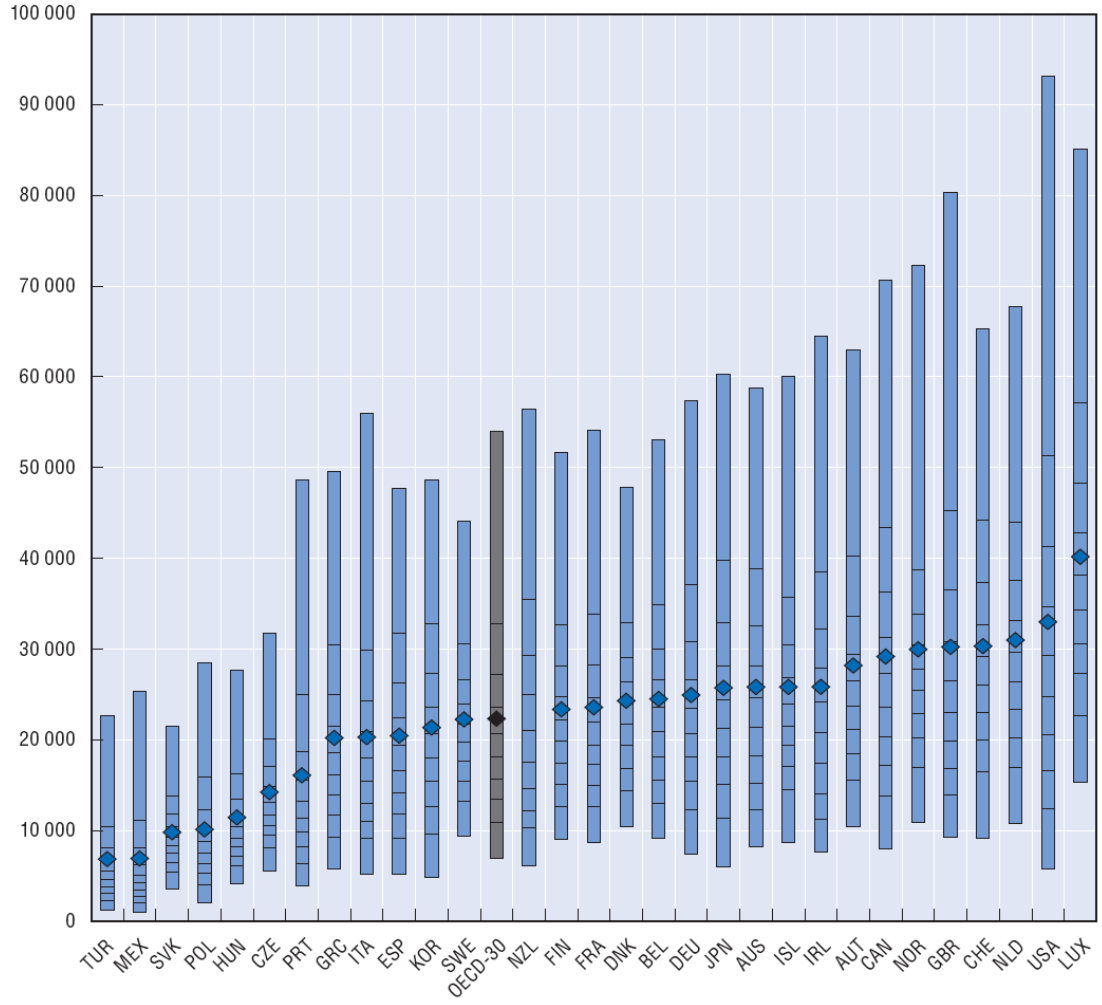
Table 10
Elasticities from Regressions of the Natural Log of Per Capita Relief Spending in City (1990$) in 1939 on the Natural Log of Per Capita Relief Spending in 1931 and Change in Log State Manufacturing Employment from 1931 to 1939.

	Elasticity
	t-statistic
Per Capita Public Relief in 1931 in 1990$	0.17
	6.14
Change in Natural Log of State Manufacturing Employment, 1939-1931	-1.11
	-4.60
Constant	4.89
	47.26

Sources: Manufacturing employment from U.S. Bureau of Census (Manufacturing Censuses), 1929 and 1931; City per capita poor relief in nominal terms from Baird (1942). They are adjusted to 1990 dollars using the 1967 CPI from U.S. Bureau of the Census 1975, series E-135,

p. 211 and then multiplying by 3.91, which is the CPI conversion factor for 1967 dollars to 1990 dollars from Officer and Williamson's Measuring Wealth website.

Figure 1
Average Incomes for Each Decile in the Income Distribution
in U.S. Dollars Purchasing Power Parity, Mid-2000s



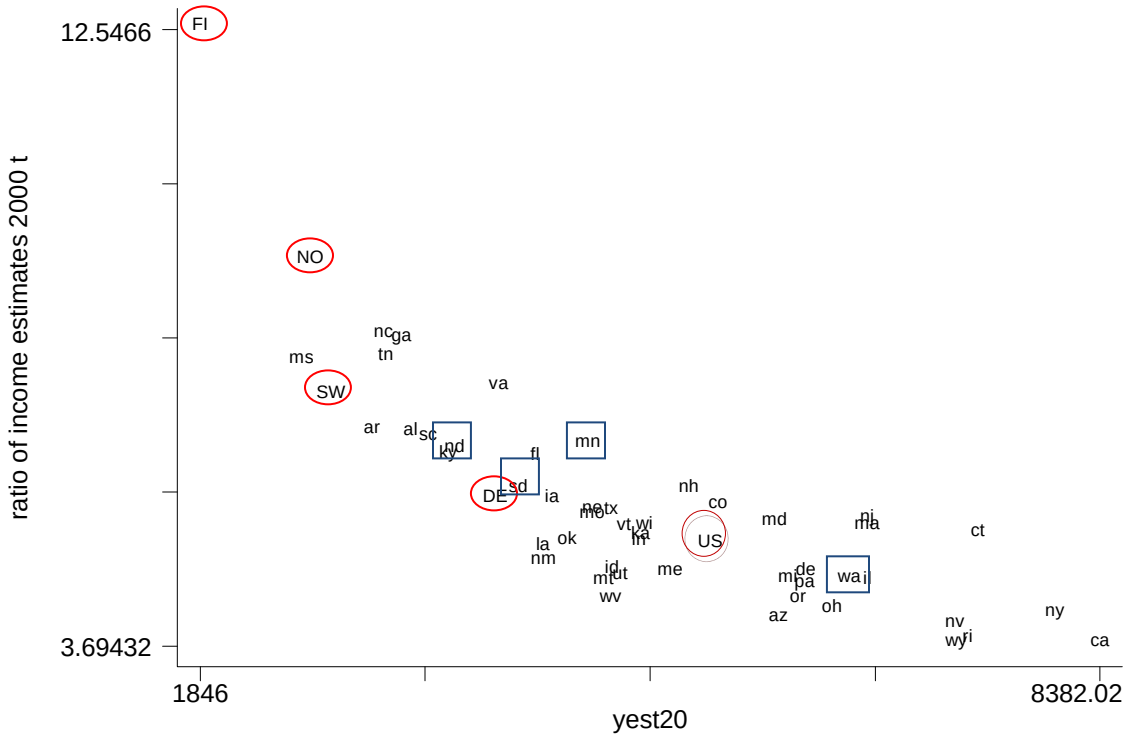
StatLink http://dx.doi.org/10.1787/420721018310

Note: The data refer to equivalised household disposable income of people at different points of the distribution. For each country, the bar starts at the average income of the first decile and ends at the average income of the 10th decile. The figure also shows the mean income over the entire population (shown as a diamond). Income data for each country are adjusted for inflation (when they refer to a year different from 2005) and then converted into US dollars based on PPP rates for actual consumption in 2005. This exchange rate expresses the costs of a standard basket of consumer goods and services purchased on the market or provided for free (or at subsidised rates) by the public sector in different countries. Countries are ranked, from left to right, in increasing order of mean equivalised income.

Source: OECD income distribution questionnaire and other OECD databases.

Figure 2

Ratio of Per Capita Income in 2000 to Per Capita Income in 1920 Plotted Against Per Capita Income in 1920 for U.S. States and Nordic Countries

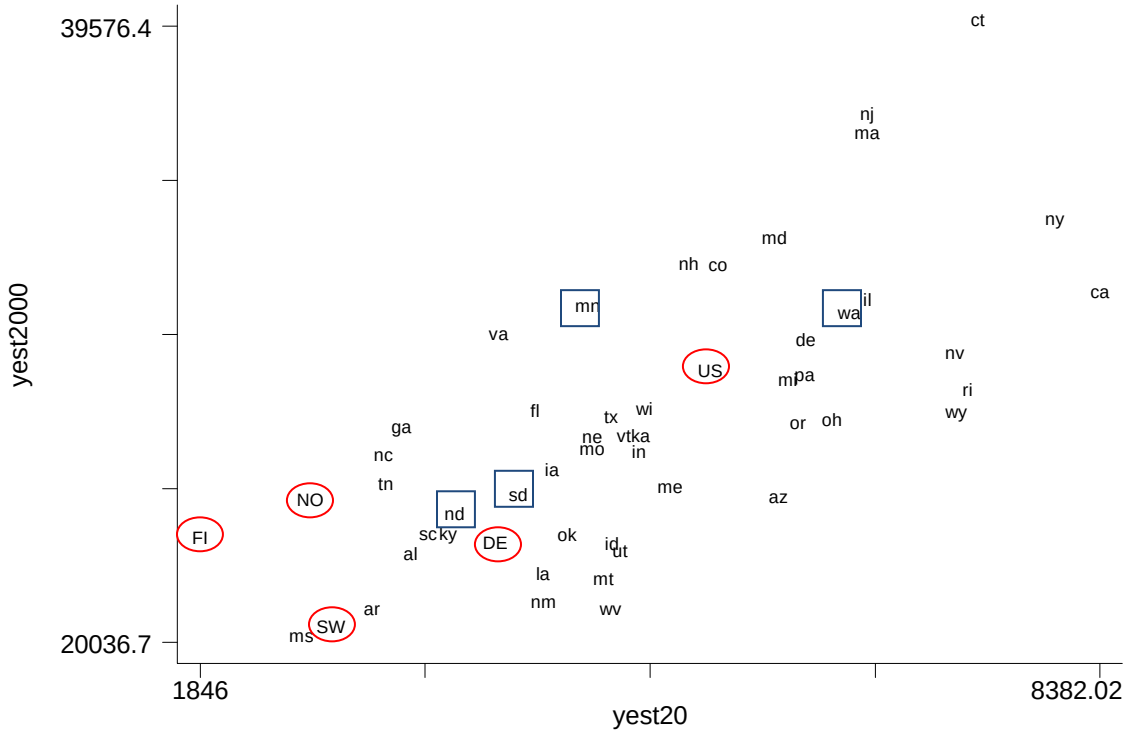


Sources and Notes. U.S. aggregate and Nordic countries circled in red, U..S. states with large population shares of Nordic descent boxed in blue. U.S. and Nordic Countries per capita GDP from Madisson Dataset data downloaded on May 5, 2009. See also Maddison (2003). U.S. State Estimates are calculated by multiplying the U.S. Estimate for Madison by the ratio of personal income in the state to the personal income in the entire U.S in that year. Personal income by State for 1920 is from Martin (19??) and from the BEA data set downloaded on May 5, 2009. Shares of population born in Nordic countries in 1920 is from the 1920 Population Census and the dataset from ICPSR 2896 compiled by Haines (undated). Information on Iceland was not available, so the Nordic ancestry includes only Denmark, Finland, Norway, and Sweden.

Figure 3

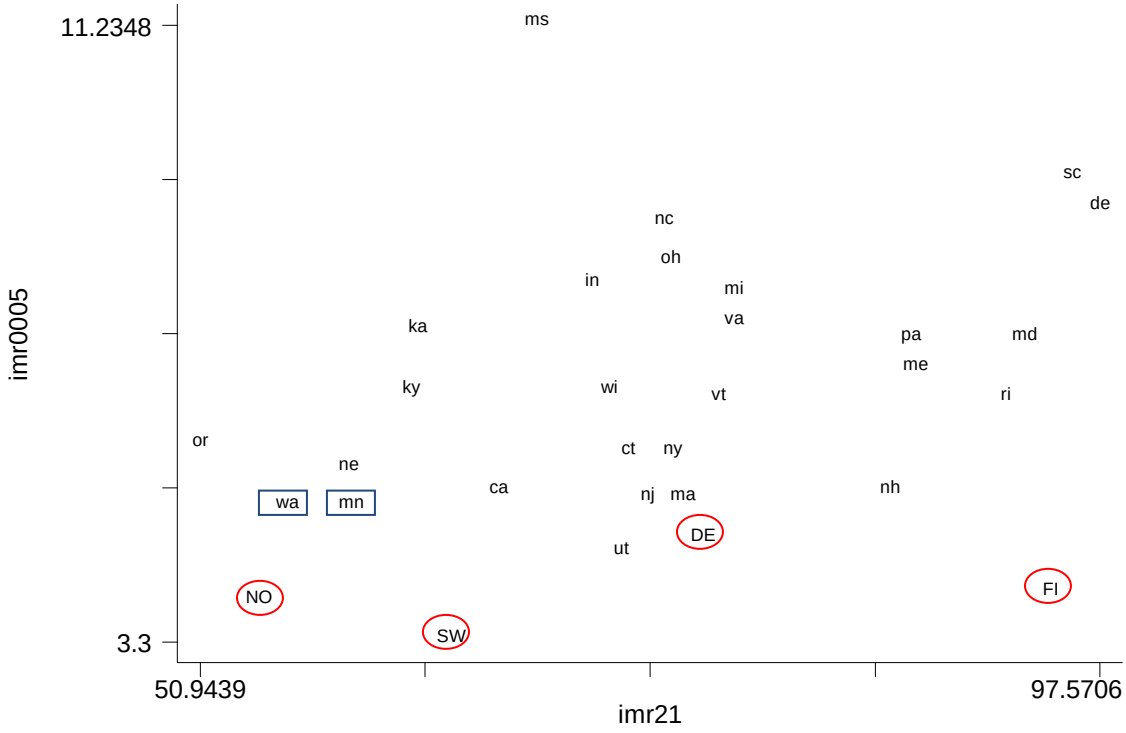
Estimates of Per Capita GDP for U.S. States and Nordic Countries

in 1920 and 2000 ($1990 US$ PPP)



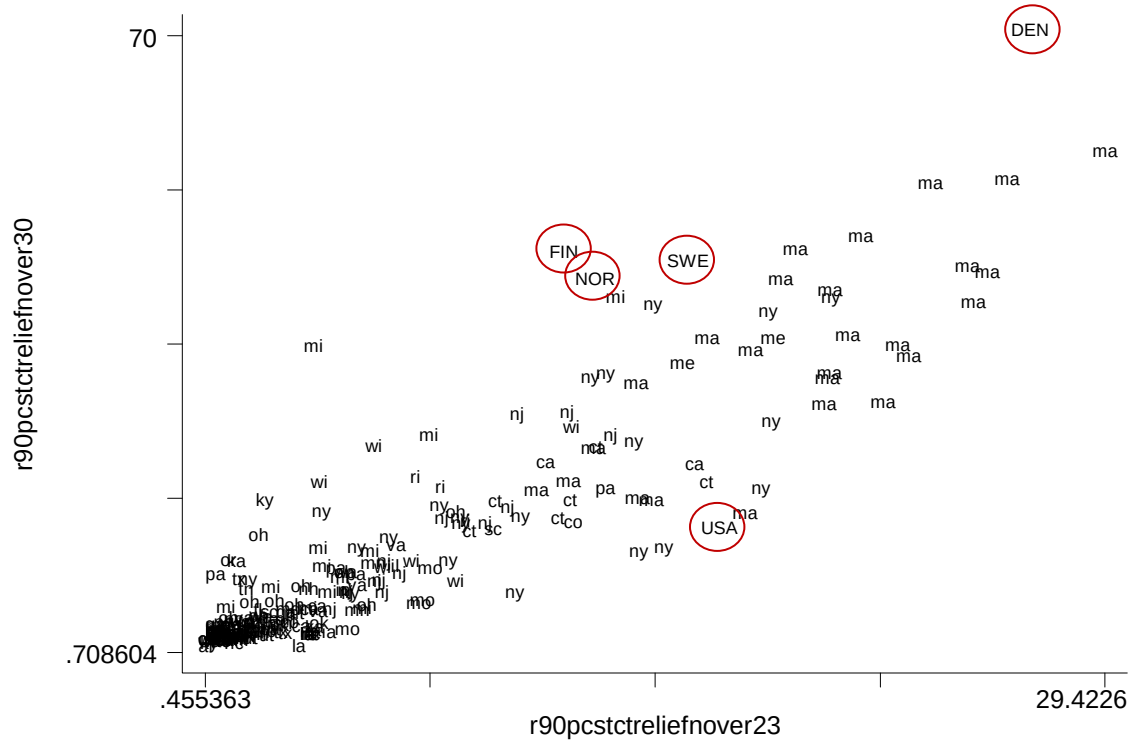
Sources: See Figure 2.

Figure 4
Infant Mortality Rates for the Years 2000-2005 and 1921
for the Nordic Countries and the U.S. States



Sources: Data for 1921 for U.S. states is from U.S. Bureau of the Census, 1923b. Data for 1921 for the Nordic countries is from Mitchell 1978, 42-3. Data for mid 2000-2005 from OECD.Stat quality of life statistics at http://stats.oecd.org/index.aspx downloaded in May, 2009.

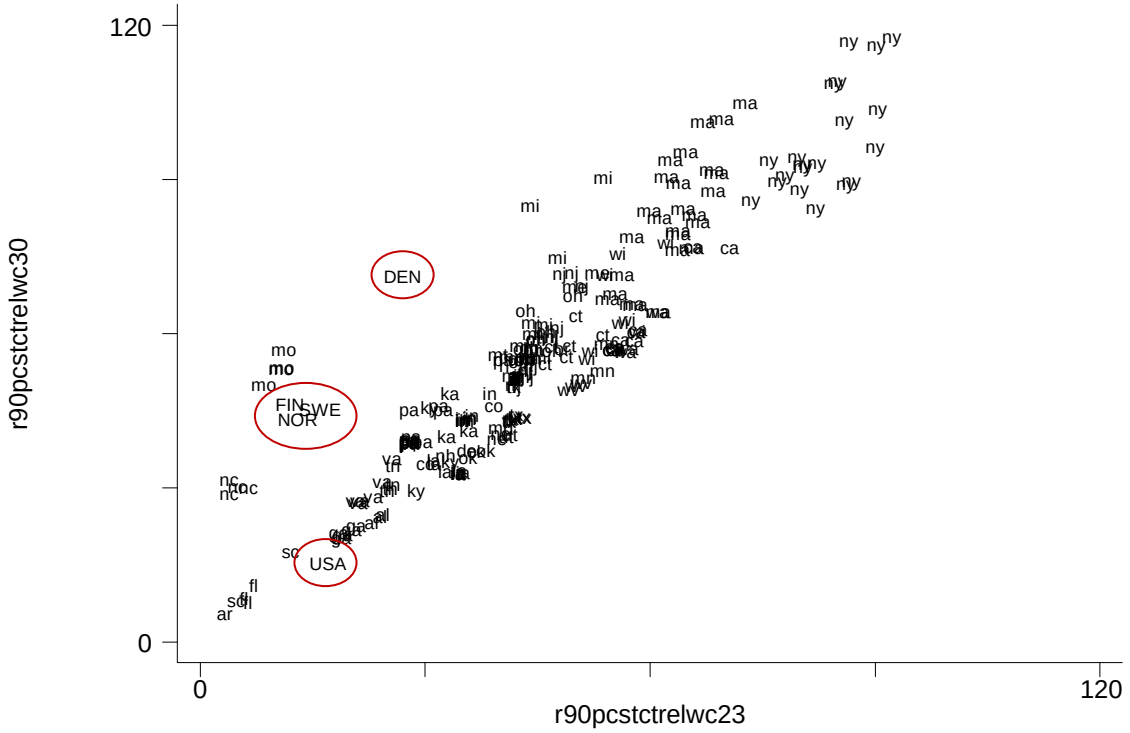
Figure 5a
Rough Estimates of Per Capita Government Welfare/Unemployment Spending in the early 1920s and 1930 in the Nordic Countries and 248 Cities in the United States in 1990 Dollars Purchasing Power Parity



Sources: Estimates for the Nordic countries in 1920 and 1930 are based on percentages of National Product in 1920 and 1930 from Lindert (1994, 11) multiplied by Maddison's GDP estimates for those years in 1990 GK Purchasing Power Parity Prices. Estimates for U.S. cities are the sum of per capita spending in the city plus per capita spending for the state in 1923 and 1930 from the U.S. Bureau of the Census's *Financial Statistics of Cities* and *Financial Statistics of States* for 1923 and 1930 (U.S. Bureau of the Census 1925c, 1925s, 1932c, 1932s). The 1923 and 1930 values for the U.S. cities were adjusted to 1990 dollars using the CPI comparisons at Officer and Williamson's Measuring Worth website. The per capita city spending includes governmental cost payments by the city government on outdoor poor relief, poor institutions, care of children, other charities, and mothers' pensions. The state per capita spending includes governmental cost payments for outdoor poor relief, state poor institutions care of children in state institutions, care of blind, deaf, and mute in state institutions, other charities in state institutions, relief to mothers and relief to all others. We did not include spending on poor institutions all other, care of children all other, care of blind, deaf and mute all other, and other charities all other to avoid double-counting if such state spending might have been used to fund

city spending. Inclusion of this spending changes the positions in the figure only slightly.County government spending is missing.

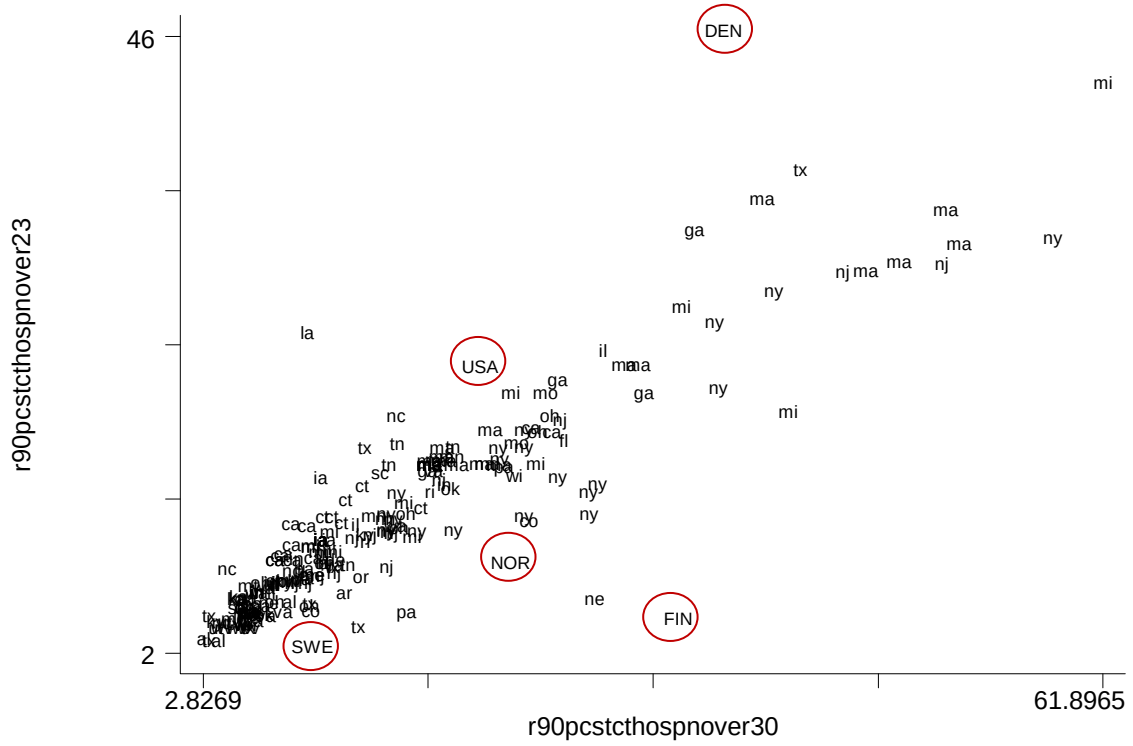
Figure 5b
Rough Estimates of Per Capita Government Welfare/Unemployment Spending and Workplace Accident Compensation in the early 1920s and 1930 in the Nordic Countries and 248 Cities in the United States in 1990 Dollars Purchasing Power Parity



Sources: Estimates for the Nordic countries in 1920 and 1930 are based on percentages of National Product in 1920 and 1930 from Lindert (1994, 11) multiplied by Maddison's GDP estimates for those years in 1990 GK Purchasing Power Parity Prices. Estimates for U.S. cities are the sum of per capita spending in the city plus per capita spending for the state plus accident compensation in 1923 and 1930 The welfare spending is from the U.S. Bureau of the Census's *Financial Statistics of Cities* and *Financial Statistics of States* for 1923 and 1930 (U.S. Bureau of the Census 1925c, 1925s, 1932c, 1932s). The per capita city spending includes governmental cost payments by the city government on outdoor poor relief, poor institutions, care of children, other charities, and mothers' pensions. The state per capita spending includes governmental cost payments for outdoor poor relief, state poor institutions care of children in state institutions, care of blind, deaf, and mute in state institutions, other charities in state institutions, relief to mothers and relief to all others. We did not include spending on poor institutions all other, care of children all other, care of blind, deaf and mute all other, and other charities all other to avoid double-counting if such state spending might have been used to fund city spending. Inclusion of this spending changes the positions in the figure only slightly. County government spending is missing. The worker's compensation spending is estimated using Fishback and Kantor's (2000) estimates of expected benefits per dollar of annual income (see expben10 in the workers'

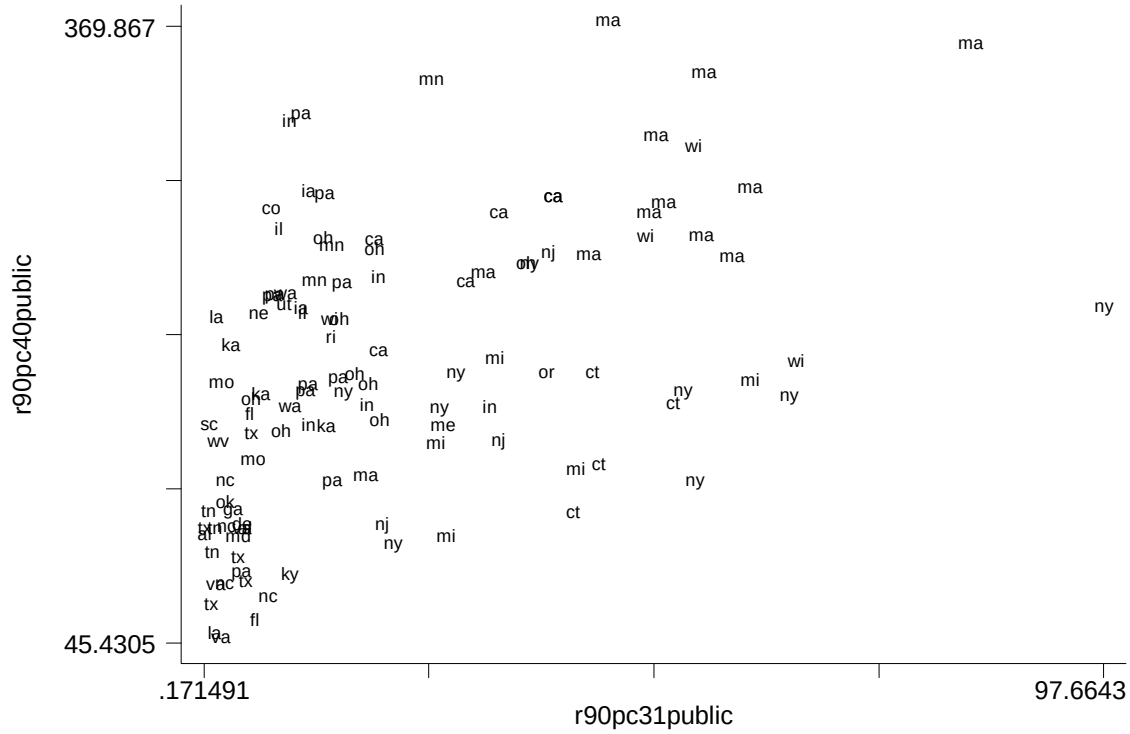
compensation dataset at Fishback's website http://www.u.arizona.edu/~fishback/Published_Research_Datasets.html . The expected benefits were multiplied by average annual manufacturing earnings for the state reported in the U.S. Bureau of the Census, Census of Manufacturing, various years. The value was then multiplied by 0.30, which is the share of the overall population of males aged 15 to 64 participating in the labor force at the national level in the 1920s calculated from age statistics and labor force statistics in Carter, et. al. 2006, pp. 1-44 to 1-47 and 2-77. This is an estimate of compensation only and leaves out medical payments for the injured workers and administrative costs for the programs. The 1923 and 1930 values for the U.S. cities were adjusted to 1990 dollars using the CPI comparisons at Officer and Williamson's Measuring Worth website.

Figure 6
Rough Estimates of Per Capita Health Spending in U.S. Cities and Nordic Countries in the Early 1920s and 1930 in 1990 Dollars Purchasing Power Parity



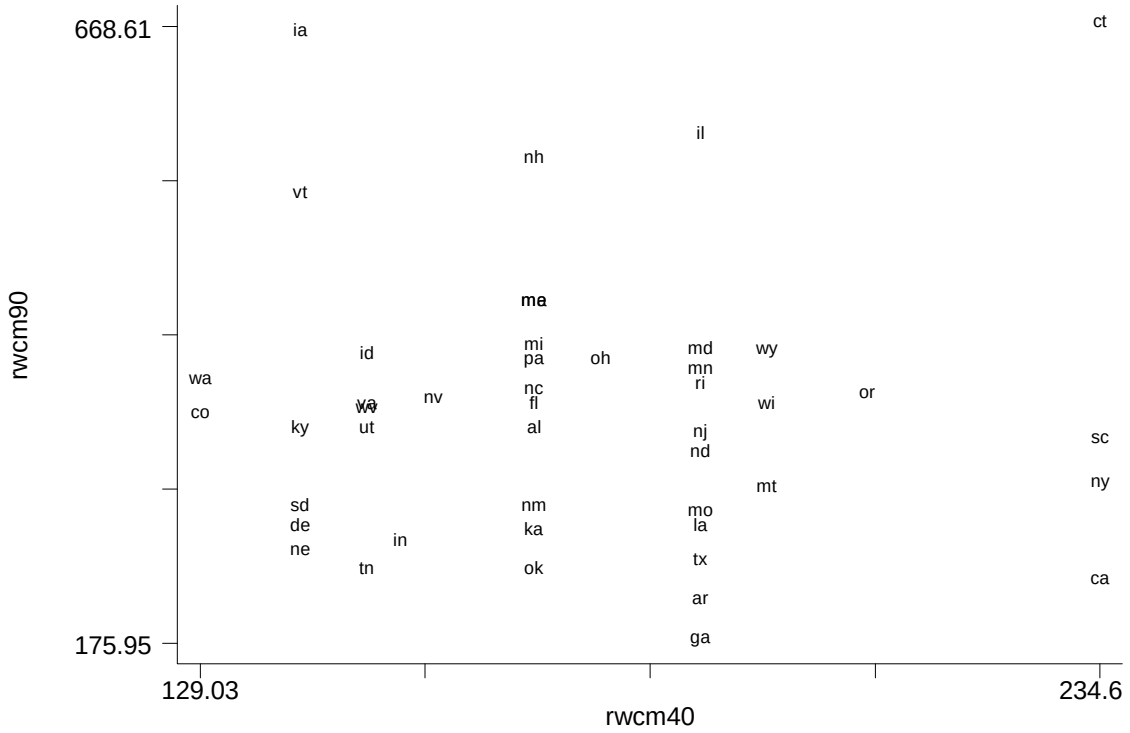
Sources: Estimates for the Nordic countries in 1920 and 1930 are based on percentages of National Product in 1920 and 1930 from Lindert (1994, 13) multiplied by Maddison's GDP estimates for those years in 1990 GK Purchasing Power Parity Prices. Estimates for U.S. cities are the sum of per capita spending in the city plus per capita spending for the state in 1923 and 1930 from the U.S. Bureau of the Census's *Financial Statistics of Cities* and *Financial Statistics of States* for 1923 and 1930 (U.S. Bureau of the Census 1925c, 1925s, 1932c, 1932s). The 1923 and 1930 values for the U.S. cities were adjusted to 1990 dollars using the CPI comparisons at Officer and Williamson's Measuring Worth website. The per capita city spending includes governmental cost payments by the city government on general hospitals and hospitals for the insane. The state per capita spending includes governmental cost payments for state general hospitals and state special hospitals for the insane, feeble-minded, and all others. We did not include spending on state spending for hospitals not listed as state institutions to avoid double-counting if such state spending might have been used to fund city spending. Inclusion of this spending changes the positions in the figure only slightly. County government spending is missing.

Figure 7
Per Capita Government Relief Spending in 114 U.S. cities in 1931 and 1940 in 1990 Dollars



Source and notes. Data are from Baird (1942). They are adjusted to 1990 dollars using the 1967 CPI from U.S. Bureau of the Census 1975, series E-135, p. 211 and then multiplying by 3.91, which is the CPI conversion factor for 1967 dollars to 1990 dollars from Officer and Williamson's Measuring Wealth website. Per capita relief spending includes spending from federal, state, and local sources. It includes direct relief payments, work relief payments, and public assistance through old-age assistance, aid-to-the-blind, and aid to dependent child (mothers' pensions).

Figure 8
Maximum Weekly Workers' Compensation Benefits in 1940 and 1990 in 1990 Dollars



Source. These are the maximum weekly payments to workers with temporary injuries under the workers' compensation in each law. The original values are the values in 1967 dollars reported in Allen (2004, 197-8). They are adjusted to 1990 dollars by multiplying by 3.91, which is the CPI conversion factor from 1967 dollars to 1990 dollars from Officer and Williamson's Measuring Wealth website. Allen (2004) shows that a large majority of American workers who have accidents receive the maximum weekly payments.

Appendix I
Taxes and Tax Breaks in Sweden and the United States

The following tables for Sweden and the United States are reproduced from OECD (2007, 78 and 80) to show the direct taxation on benefits paid, the indirect taxes paid for consumption, and the nature of tax breaks in the countries. This is the information that the OECD used to adjust gross social expenditures to obtain net social expenditures.

Table Annex 2.
Detailed information on the impact of the tax system on social expenditure in 2001 and 2003 *(cont.)*

SWEDEN

A. Average Itemised Tax Rates (AITR %)

	2 001	2 003
1. Old-age cash benefits		
a - public pensions	25.0	28.6
b - early retirement pensions	29.0	28.6
c - private pensions	32.1	28.6
2. Survivors benefits		
a - public pensions	22.3	28.3
b - private pensions		
3. Incapacity-related benefits		
a - disability pensions	24.8	27.7
b - occupational injury benefits	32.4	30.8
c - sickness payments	34.1	30.8
4. Family cash benefits		
a - family benefits		
b - maternity and parental leave payments	33.8	30.8
c - sole parent benifits		
5. Active labor market policies		
a - benefits while in training	29.6	29.6
6. Unemployment		
a - unemployment insurance benefit	29.8	28.7

Source : Data supplied by Statistics Sweden.

B. Average implicit indirect tax rates of consumption out of benefit income
Indirect taxes paid out of consumption of cash transfers, in millions of Swedish kronor

		2001	2003
(1)	Private final consumption expenditure	1 102 627	1 124 240
(2)	Private consumption plus Government consumption minus Government wages	1 357 282	1 375 513
(3)	General consumption taxes plus excise duties (5110+5121)	280 447	306 858
	5110 General taxes	206 916	226 370
	5121 Excises	73 531	80 488
(4)	Taxes on production sale transfer (5100)	289 098	315 641
(5)	Taxes on Goods and Services (5000)	296 762	323 968
	Implicit average indirect tax rate on consumption out of benefit income:		
(6)	**using general consumption taxes plus excise duties (3)/(2)**	**20.7%**	**22.3%**
(7)	using a broad concept of the indirect tax base (5)/(2)	21.9%	23.6%
(8)	using a broad concept of the indirect tax base and ignoring government consumption (5)/(1)	26.9%	28.8%

Sources : Source: OECD (2006), National Accounts of OECD Countries: Main Aggregates, Volume I, 1993-2004 (2nd version) OECD, Paris (Lines 1 and 2) and OECD (2006), Revenue Statistics, OECD, Paris, (lines 3, 4, and 5).

C. Tax breaks for social purposes (in millions of Swedish kronor)

Information on TBPS that were not accounted in the direct tax calculations is not available.

Table Annex 2.
Detailed information on the impact of the tax system on social expenditure in 2001 and 2003 *(cont.)*

UNITED STATES

A. Average Itemised Tax Rates (AITR %)

	2 001	2 003
Social Security Benefits	4.0	5.2
Unemployment compensation	8.0	12.1
Pension and IRA distributions	15.0	14.8

Source: US Department of Treasury.

B. Average implicit indirect tax rates of consumption out of benefit income
Indirect taxes paid out of consumption of cash transfers, in millions US dollars

	2001	2003
(1) Private final consumption expenditure	6 987 000	7 055 000
(2) Private consumption plus Government consumption minus Government wages	7 553 125	7 554 200
(3) General consumption taxes plus excise duties (5110+5121)	335 805	355 001
5110 General taxes	223 748	234 292
5121 Excises	112 057	120 709
(4) Taxes on production sale transfer (5100)	408 635	433 266
(5) Taxes on Goods and Services (5000)	474 771	509 054
Implicit average indirect tax rate on consumption out of benefit income:		
(6) using general consumption taxes plus excise duties (3)/(2)	**4.4%**	**4.7%**
(7) using a broad concept of the indirect tax base (5)/(2)	6.3%	6.7%
(8) using a broad concept of the indirect tax base and ignoring government consumption (5)/(1)	6.8%	7.2%

Sources : Source: OECD (2006), National Accounts of OECD Countries: Main Aggregates, Volume I, 1993-2004 (2nd version) OECD, Paris (Lines 1 and 2) and OECD (2006), Revenue Statistics, OECD, Paris, (lines 3, 4, and 5).

C. Tax breaks for social purposes (in millions of US dollars)

	2001	2003
Tax breaks similar to cash benefits	**78 658**	**84 304**
Deductibility of medical expenses	4 990	6 240
Medical savings accounts	20	-30
Additional deduction for the blind	41	40
Earned income credit	4 940	5 089
Credit for child and dependent care expenses & exclusion for employer provided child care	3 182	3 310
Exclusion. of certain foster care payments	500	430
Adoption assistance (adoption credit and exclusion)	130	220
Assistance for adopted foster children	190	250
Child credit (from 1998 onwards)	29 312	37 970
Personal allowance for dependants (largely for children)	35 353	30 785
Tax breaks to stimulate private social protection (not including pensions)	**116 470**	**141 320**
Exclusion. of employer contributions for medical insurance premiums and medical care	82 800	101 920
Self-employed medical insurance premiums	1 520	2 550
Exclusion. of interest on State and local debt for private non-profit health facilities (excl. interest hosp	-	-
Deductibility of charitable contributions (health)	270	3 390
Special Blue Cross/Blue Shield deduction	140	350
Tax credit for orphan drug research	50	160
Credit for disabled access expenditures	50	50
Deductibility of charitable contributions, other than education or health	30 150	30 020
Empowerment zones, enterprise communities, renewal communities	380	1 070
New markets tax credit	10	190
Exclusion of hospital construction bonds	1 100	1 620
Memorandum item		
Tax breaks for pension	**110 990**	**131 980**
Net exclusion of pension contributions:		
Employer plans	42 070	59 480
401(K) plans	44 080	51 560
Individual retirement accounts	18 680	20 060
Keogh plans	6 160	880

Source: US Department of Treasury.

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