Markets, Governments, and the Institutional Structure of Social Welfare Expenditures in the United States and Sweden in the 20th Century

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Abstract

A Comparative History of Social Welfare Programs in the U.S. and Sweden During the 20th Century

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Social welfare spending on health, welfare, and insurance against adverse outcomes expanded a great deal in all of the developed countries during the 20th century. The institutional structure of the spending varies with respect to the extent that governments or market institutions provide the services. Sweden and the United States are on opposite ends of this spectrum. After discussing the problems with adverse selection and moral hazard that bedevil private and public social welfare organizations, I compare the development of the social welfare institutions in the U.S. and Sweden in the 20th century.

The institutional structure of social welfare programs and expenditures changed dramatically over the course of the 20th century and substantial variation across countries is still present in the modern era. Social welfare expenditures include private and public funds distributed to the poor and spending on health care, pensions during old-age, and replacement of income arising from adverse events, including unemployment, disability, and workplace accidents. The do not include direct purchases by individuals of services in these categories.

My goal in this paper is to illustrate how social welfare spending has changed over the past 120 years using comparisons of the United States and Sweden as representatives of different ends of the spectrum in terms of their reliance on market versus government provision of social welfare. As in the other developed countries around 1900, households in Sweden and the U.S. largely depended upon their own resources with some help from their extended families, churches, charities, market institutions, and limited government support to deal with adverse events. Over the course of the century, as the countries grew richer, social welfare spending expanded.

In the modern era both the U.S. and Sweden are market economies and the relationship between workers and employers plays a significant role in the structure of the social welfare system. Both countries face the standard insurance problems associated with adverse selection and moral hazard. Both provide means-tested aid for low-income households that amounts to a small share of social welfare spending. In both their levels of public and private social welfare spending net of taxation account for similar shares relative to Gross Domestic Product (GDP).

They differ because Sweden relies much more heavily on government social insurance programs heavily financed by payroll taxes collected from employers. In the U.S. a significant

share of social expenditures are financed by employers paying into privately run retirement pension funds and insurance for health, disability, and workplace injuries, while providing paid leave for illness, personal time, and family leave for varying shares of their workers. Swedish programs are more likely to be universal, while the U.S. is more focused on providing a safety-net for the elderly households and low income households with children. Swedish households pay much higher rates of taxation on income and consumption, and lower income households, including benefit recipients, pay much higher rates of taxation than similar American households. Finally, the safety net in America tends to be more porous than the Swedish universal net.

The rest of the paper starts by showing the change in social welfare spending as a percentage relative to GDP using information collected by Peter Lindert (2004) and the OECD (2007, 2022s). It is followed by a discussion of the economics related to the societies' choices between private and public provision of social welfare, which are influenced by problems with adverse selection and moral hazard. This is followed by a series of discussions of the historical paths followed in the various categories of social welfare during the 20th century. The initial attempts at providing social insurance came with coverage of lost earnings from illness and injuries. Health insurance, which focused on the covering the costs of medical care, came later. Sweden followed the path to government health insurance because local governments ran the hospitals in the late 19th century; therefore, physicians who opposed government control had much less political clout than they had in the U.S. Poverty among the elderly was a major problem in both countries, although it was more severe in Sweden because the elderly composed a larger share of the population. Both eventually developed both public and private pension programs. Both countries developed unemployment insurance, but unions were the originators

in Sweden and have maintained control of the system because they have maintained a much larger share of the labor market in Sweden than in the U.S. Sweden developed a broader range of family benefits in part because the Swedes worried about low birth rates, which were lower than in the U.S. throughout the century. The final sections document the extent to which employers contribute to social welfare expenditures directly or through payroll taxes, the much higher tax rates paid by Swedish workers, particularly at lower income levels, and the greater porousness of the social welfare net in the U.S.

I. OECD Measures of Social Welfare Spending

During the modern era, the most easily available and commonly cited statistics on social welfare spending come from the Organization of Economic Co-operation and Development (OECD). Therefore, I will use the OECD's definitions of social welfare expenditures, which are comprised of "cash benefits, direct in-kind provision of goods and services and tax breaks with social purposes." The programs have to "involve either redistribution of resources or compulsory participation." Thus, the benefits might be paid to low-income households, the elderly, disabled, sick, unemployed, or for care and education of children under age 6. They also can be universal as in the case of child allowance payments in Sweden for all children. Education for children 6 and over is not included (OECD 2020, 2007).

Over the course of the 20th century social welfare expenditures have risen a great deal and account for a major part in the growth of government activity in the developed nations. Peter Lindert (1994, p. 10) estimated *public* social welfare expenditures for 20 countries and found no country spent more than the 1.4 percent spent by Denmark in 1900 and the 5 percent spent by Germany in 1930. Sweden spent 0.9 and 2.6 percent in the two years, while the U.S. spent 0.6

percent in both years. Lindert did not report on private social welfare expenditures, which understates the total of private and public expenditures in countries like Germany and the U.S.[1]

Table 1 shows the OECD estimates of social welfare expenditures in the U.S. and Sweden as a percentage relative to their GDPs in the year 2003, just after the end of the century. The public expenditures are ones for which the financial flows are controlled by a central, state, or local government, or a social security fund. The contrast in public expenditures between Sweden and the U.S. in 2003 was striking. Sweden's public spending in Table 1 was 28 percent relative to GDP, 12.2 percentage points higher than U.S. public spending. When broken down by category, public spending in Sweden was substantially higher for the elderly, for sickness and disability, and for family-issues and around the same for health-related issues. Sweden spent 4 percent more on the elderly and on incapacity in part because their population share aged 65 and over in 2000 was 17.2 percent, compared with only 12.4 percent in the U.S.[2] Public spending on family issues was also much higher because of more extensive spending on public child care, pre-kindergarten schooling, a child allowance for all children, and maternal and family leave. Public social health insurance spending was approximately the same in the U.S. and Sweden, but the U.S. component covered only the poor, the elderly, and veterans, while the Swedish spending covered almost all of the population.

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[1] Peter Lindert (2004) provides a detailed look at the rise of public spending throughout the world. For detailed comparisons of social welfare systems across countries in the modern era, see Lane Kenworthy (2011). For a recent description of a wide range of American public assistance and social insurance programs, see the November 2019 special issue of the *Annals of the American Academy of Political and Social Science*, guest edited by Robert Moffitt and James Ziliak.

[2]The share of the Swedish population over age 64 was 17.2 in 2000 and 20.1 in 2020. https://www.statista.com/statistics/525637/sweden-elderly-share-of-the-total-population-by-age-group/ Downloaded on 1/10/22. U.S. share was 12.4 percent in 2000 and 16.9 in 2020. https://www.statista.com/statistics/457822/share-of-old-age-population-in-the-total-us-population/ downloaded on 1/10/22. e

Another reason for the differences in public spending is that the U.S. relied much more heavily on private social expenditures, particularly through employers, nongovernment organizations, and charities. In 2003 the U.S. private social spending was 10.1 percent relative to GDP compared with only 2.6 percent in Sweden. Private social expenditure involve social benefits delivered through the private sector that "involve an element of compulsion and/or inter-personal redistribution." For example, health, life, and disability insurance pool contributions and share risks among the participants; retirement pension benefits are included because they are based on past voluntary contributions. The definition of private social welfare spending does not include individual direct spending. For example, individual out-of-pocket spending on health services or on child care are not regarded as social welfare spending (OECD 2020).

The U.S. relied much more heavily on private retirement pensions and thus the private spending for the elderly in the U.S relative to GDP was 1.9 percentage points higher than in Sweden. The big difference was in private provision of health insurance of 6 percent relative to GDP in the U.S. and only 0.1 percent in Sweden. [3] Only a small amount of the private spending relative to GDP 2003 was mandatory and stipulated by law. In the U.S. employers are required to purchase workplace injury insurance to cover work accidents and occupation disease, while in Sweden most unemployment insurance is organized by unions.

[3]U.S. total health social welfare expenditures have been substantially higher than in Sweden. Among the reasons claimed for higher US health expenditures has been much higher administrative costs associated with market insurance (Himmelstein, et. al. 2014). Subtract one-third of the private health expenditures for administrative costs in Table 1 and the private health spending in the US in 2003 falls by 2 percent of GDP, and US net private and net public social welfare spending falls to 23.2 percent to GDP, or 0.5 percent lower than in Sweden. There are also extensive and complex discussions about cost and quality of care that cannot be dealt with as easily as administrative costs. At the very least these comparisons between the U.S. and the Nordic countries are comparisons of intentions to provide health care.

The final major difference between the U.S. and Sweden comes in the form of taxation through direct taxes on recipient benefits, indirect taxation through consumption taxes, and tax reductions. In Table 1 Sweden in 2003 directly taxed a variety of the benefits being paid out at rates ranging from 27.7 percent for incapacity related benefits to 30.8 for family benefits. In contrast, the average rate of taxation in the U.S. was 4 percent for Social Security old-age pensions, 15 percent for private old-age pensions, and 8 percent for unemployment benefits with no taxes (OECD 2007, pp. pp. 33, 78, 80).

The indirect taxation came in the form of consumption taxes when recipients purchase goods and services. For the year 2001 the OECD offered estimates of average consumption tax rates that ranged from 22.3 to 28.8 percent of purchases in Sweden compared with 4.7 to 7.2 percent in the U.S. (OECD 2007, pp. pp. 33, 78, 80). The U.S. also provided a wide range of tax deductions with social welfare purposes. The most prominent of these are an Earned Income Tax Credit (EITC) for the working poor with children, tax deductions for children as dependents and a specific child tax credit, tax breaks for pensions, deductions for charitable contributions, and no taxes on employer contributions to medical care and insurance. These added up to about 3.1 percent relative to GDP in 2003 (OECD 2007, p. 80), compared with virtually no similar tax breaks in Sweden.

After summing up public and private expenditures and adjusting for taxation the OECD reported Net Total Social Welfare Expenditures relative to GDP in 2003 in Sweden of 23.7 percent, slightly less than the 25.2 percent in the U.S. Among the OECD countries, only France at 28.5 percent and Germany at 27.1 percent had higher percentages than the U.S. and Sweden, while Belgium (23.3), the Netherlands (23.3), the United Kingdom, and Austria (22.9) were

close behind.[4] Between 2003 and 2017 the net total social welfare spending in the U.S. surged to 29.6 percent relative to GDP, while Sweden's rose only to 24.4 percent relative to GDP. The major reason was a much larger surge in health care spending in the U.S. from 12.8 to 15.4 percent. The Affordable Care Act contributed to a rise in U.S. public spending on health from 6.6 to 8.4 percent relative to GDP as the share of households on Medicaid for the poor rose and subsidies were given to mid-income households to purchase insurance. Private spending rose from 6.2 to 7 percent as people bought subsidized coverage in exchanges created by the Act. Much of the private spending on health insurance by employers shifted from voluntary to mandatory when the Act mandated health coverage for employers with more than 50 full-time equivalent workers. The rise in private spending in exchanges often replaced private coverage by employers not subject to the mandate (Blase 2021).

II. Markets, Governments, Adverse Events, and Poverty

In setting up social welfare systems the society answers several questions. First, what issues are covered? The adverse events include loss of income, loss of job, loss of life, health problems, and diminished capacity for earnings to take care of oneself due to innate problems from birth onward or due to problems with health, injury, and old age. Second, who is responsible for handling each issue? The choices typically ranges from the household to extended family to their employer to their governments? Third, how widely are the benefits distributed? They might be targeted at the poor and misfortunate or be universally provided to

[4]The figures reported here are based on the latest estimates for 2003 reported in the OECD (2022s). The OECD (2007) analysis of social welfare expenditures in 2003 using an older definition reported net total social welfare expenditures relative to GDP of 26.1 percent in Sweden, which ranked third among OECD countries and 25.2 percent in the U.S., which ranked fifth.

all members of society. Fourth, how does society treat the beneficiaries? They might have rights to benefits and are free to choose how to use them or there might be social stigma attached to receipt of benefits and the recipients are treated more as subordinates with prescriptions on how they behave.[5]

There are multiple institutional forms that have developed to deal with the adversity faced by households. The focus in this paper is on social welfare spending in advanced market economies since 1900, so assume the people are working in market settings. For illustrative purposes, consider a situation where the primary earner in the household faces a positive probability that at some time a workplace accident might throw them out of work for a year. Say the probability this might happen is 1/1000 and the lost earnings would be $30,000.

One possibility is for the society to leave the responsibility entirely to the household when dealing with the injury. At the other extreme would be "public assistance," where the taxes collected from the general public fund a program that pays the worker their lost salary and covers their health care costs while injured. In the absence of the public assistance program, the household might take precautions and save a share of their earnings over several years to help them survive for a year if the accident happens. Yet, saving enough to fully offset the loss from the adverse event is difficult because it likely would take several years to set aside a year's worth of earnings, and the accident might occur before enough has been saved.

Institutions have been created in market economies to help resolve these problems. Various groups have formed mutual societies in which members contribute to a pool of funds that are used to provide benefits to injured members. The groups have been composed of

[5] This list of questions was inspired by and differs slightly from discussion of the Swedish welfare system by Bo Rothstein (2017, 69-70).

neighbors, ethnic groups, unions, and workers at the same firm with help from employers, to name just a few. Insurance companies are financial institutions that grew out of mutual societies and sell injury insurance in which the household pays a premium and then receives payments when an injury occurs. If there are low costs to determining the injury probability for the household, the premium would likely be equal to the expected loss from the injury of $30, which is equal to the probability of occurrence 1/1000 times the $30,000 in earnings lost, plus the administrative costs associated with the insurance, say $10, for a total premium of $40. The household's ability to pay the premium would be enhanced in competitive labor markets where more dangerous jobs pay an annual wage risk premium roughly equal to the expected loss of $30.

Insurance markets work best when everybody has the same risk of 1/1000, the risks for different workers are not correlated with each other, and insurers can cover a large number of people to allow the actual risk of injury to hit the average through the law of large numbers. If the probability of the accident differs across workers, the insurance markets still can work well if the insurer can group participants by their risk level into separate pools where everybody has the same risk and the rates in each pool reflect that risk.

The insurance and labor market institutions do not work as well when it is difficult for the insurance company to identify the expected loss for each household and each household has problems identifying the expected injury losses from various jobs. The insurance company likely would charge higher premiums. It might even stop selling the insurance altogether if it expects to go bankrupt because it is stuck dealing mostly with households with higher than average expected losses, a problem known as "adverse selection." Similarly, the households

would find it difficult to demand a higher wage risk premium to accept the job if they cannot tell which jobs are more dangerous.

One way to resolve the information problems in private insurance markets is to have government regulations that require all participants in the insurance and labor markets to report their information accurately. Alternatively, the government might mandate that all employers have insurance, which was the solution eventually adopted by nearly all of the U.S. states for workers' compensation insurance.[6] Yet another way was for the government to require all employers to sign up for the government's own insurance system, which is essentially the Swedish model.[7] All three of these methods help resolve the adverse selection problem, the first by providing full information. The latter two work by forcing all workers and employers in the risk pool, as long as the insurers can correctly identify the average expected loss.

There still might arise problems with "moral hazard." On the household's side, moral hazard occurs when the insured worker takes more risk or overreports accidents because they have more protection against that risk. Moral hazard for employers would lead them to practice less accident prevention because the worker is better protected against loss. The government can mitigate these problems to the extent that they can tie the premiums paid by the worker and the employer to their ability to prevent the accident. In essence, mitigating moral hazard is more effective when the person bears a larger share of the cost of the injury. One other feature in the

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[6] The early workers' compensation laws allowed employers to "elect" to participate, but the alternative was to be in a negligence system with none of the three defenses, so nearly all employers elected. Eventually, most states required employers to have workers' compensation insurance or document that they had the resources to pay all accident claims.

[7]Originally, less than 20 percent of the U.S. states followed this route for workers' compensation, while a number of other states set up state insurance funds that competed with private insurers. In most states the state funds competing with private insurers have ended up as the insurers for high risk employers who struggle to obtain private insurance.

labor market likely would arise if workers can readily assess accident risk across jobs. An increase in the share of the premium paid by the worker would likely result in employers offering a higher wage to cover the risk premium, and vice versa.

The government insurance programs are described as "social insurance" when the workers and employers involved in the workplace injury are the ones who pay the premiums to the government workplace insurance program. Alternatively, the workplace program could just fund the accident reimbursement out of tax revenues collected from the general public. In that case, we would call it "public assistance" because the source of the funding is coming from the populace as a whole rather than the people involved in decisions that might influence the probability of an accident.

A common public assistance program in the early 1900s in the U.S. was mothers' pensions, which provided funds to widowed mothers with low incomes to help them raise their children in their own homes. Prior to the mothers' pensions programs the mothers might have received aid from charities, received government payments in the form of poor relief, or the children would be raised in almshouses or orphanages. In the U.S. the mothers' pensions later evolved into Aid to Dependent Children in the 1930s, Aid to Families with Dependent Children in the 1960s, and Temporary Assistance to Needy Families in the 1990s. They have all been need-based programs funded out of general revenues. One reason they were needs-based in the U.S. is that a number of families were able to protect against the lost income from widowhood by purchasing life insurance. About half of the workers in the U.S. Bureau of Labor Statistics Cost of living study of urban working families in 1918-19 had purchased life insurance that paid a death benefit equal to about a year's income. If the life insurance death benefit had been paid in monthly amounts based on the mothers' pensions maximums at the time it would have lasted

for 19 months in Colorado up to 86 months in Delaware. Once social reformers agreed that it was best for the mother to raise her own children, they found that there was little reason for opposition on cost grounds because 1) widows with children were a small share of the population and 2) a substantial share of widows had funds from life insurance, workers' compensation benefits, jobs, and extended families. In fact, there might have been cost savings because the monthly payments to the widows were often less than the almshouse cost for housing children. As a result, 39 out of 48 U.S. states adopted mothers' pension laws between 1911 and 1919 and the rest followed over the next two decades (Eli, et. al. 2021; Skocpol 1992).

The issues of adverse selection and moral hazard have bedeviled private insurance markets, social insurance, and public assistance from their beginnings. Moral hazard in various forms has arguably been the issue that has led to the most administrative costs associated with these programs. Hardly anybody, past or present, has had qualms about providing benefits to the "worthy" poor; the people who are working hard but have hit lean times through no fault of their own. The moral hazard issue arose when the benefits were being paid to people whose own choices greatly contributed to their demise. Charities, churches, and progressive reformers in the late 1800s and early 1900s interviewed recipients to determine their needs, the reason why they were in trouble, and to suggest ways for the recipients to reform their behavior, sometimes with threats to remove them from the relief rolls if the behavior continued. The modern equivalent is to help addicts and people suffering mental health problems into programs to help resolve their issues.

One factor that reduced moral hazard was the social stigma attached to being on relief. Yet, the sigma seems a high price to pay for the people who were poor despite their best efforts. In the U.S. during the New Deal, the stigma was reduced for people who performed work relief,

because the relief workers were performing public service, and the work itself helped eliminate problems with moral hazard. Advocates for social security pensions and unemployment pensions recognized that social insurance reduced because the person or their employer had paid the "premium" upfront for the benefits received by the worker. Similarly, Gustav Moller, the Swedish Minister of Health and Social Affairs at various times in the early 1930s and from 1939 through 1951 also recognized this and advocated for a universal program so that all people would be eligible for the benefits so that the stigma would be fully removed (Rothstein 2017). Lundberg and Amark (2001, p. 52) suggests that there has long been a Scandinavian welfare paradox that combines a broad social insurance system that is tied closely to working with a strictly controlled and needs-tested poor relief social assistance.[8] The U.S. is similar in that it provides extensive social insurance, ties many benefits to work, and the 50 states and Washington, D.C. have their own controlled needs-tested systems. The U.S. differs in that many of the health care, child care, and maternal/paternal leave benefits associated with work are provided by the employer outside government programs and the coverage is not universal for all employers.

The historical paths followed in the different categories of social welfare have differed based on a variety of factors, including the nature of the organizations involved in the category in the early 1900s, demographic differences, and the political strength of the major stakeholders. different categories. The next few sections describe the histories of sickness and disability

[8] In Sweden means-tested benefits in the modern era are regulated by national legislation but administered in municipalities by social workers. On average since World War II about 5 to 8 percent of the population has received means-tested assistance each year. The mix has changed. The share of single mothers receiving means-tested assistance rose from 9 percent in 1950 to 17 percent in the 1980s, while the share of elderly receiving means-tested assistance fell from 22 percent in 1950 to only 5 percent during the 1980s (Stenberg 2000, 230-231).

insurance, workplace injury insurance, health insurance, old age support, unemployment insurance, and family benefits.

III. Sickness and Disability Insurance

Sickness insurance originally was designed primarily to replace lost earnings due to illness or accident with some provisions for medical care. In the 1800s in both the U.S. and Sweden various groups formed mutual societies in which members contributed funds that would be distributed to members who lost income due to illness or accident. Some formed by occupation, others by different social groups and still others through unions or employers. Private companies had become active in selling life insurance to a significant share of the population. Some of those companies also offered accident insurance with premiums that rose with the risk of the workers' occupation. Adverse selection was a problem for the accident insurance policies due to limited information, and thus the premiums were expensive, the payout limited, and they were bought by only a small share of workers.

III.1 Sickness Funds in Sweden

In 1891 the Swedish government began regulating and providing some subsidies to the sickness societies. In Sweden the 1910 Health Insurance Society Act expanded the government subsidies; allowed individuals at different income levels to choose different premiums and benefit levels; and imposed a legal obligation on sickness societies to provide benefits to injured workers during the 60 day waiting period before accident benefits became available. Most of the societies soon amalgamated into large national societies composed of all types of workers, in which the premiums did not vary by risk category. This "community rating" potentially led to adverse selection, but the societies limited that problem and the moral hazard problem by

requiring existing members to sponsor new members; establishing maximum ages; denying membership to people with chronic illness, problems with alcohol, and moral failing; and checking for malfeasance by people receiving benefits. Roughly 80 percent of Swedish *urban* workers circa 1910 were members of the health insurance societies, which also accepted women (Andersson, et. al. 2021, p. 30; Lundberg and Amark 2001).

After fending off a 1919 proposal to establish national health insurance, the sickness fund leaders succeeded in lobbying for a 1931 Sickness Fund Law that more than doubled the state subsidies to the funds while requiring the funds to cover the costs of medical care. The result was an expanded national network of coordinated insurance funds (Immergut 1989, pp. 150-154).

By the late 1930s all employees were covered by mutual societies (Andersson, et.al, 2021). The Swedish reforms of 1954 made sickness insurance universal to all employees and based it on an income-based replacement principle. Social health insurance was financed by employers who paid fees into the social insurance system (Andersson, et.al, 2021 and Andersson and Eriksson 2021). Andersson, Eriksson, and Nystedt (2021, 30) claim that the shift was largely "for political rather than economic reasons—that mutualism was replaced by statutory state provision…The successful adoption of rules that maintained the perception of loyalty and fairness sustained mutualism…the very idea of mutualism…may have constituted fertile ground for the rise of the universal welfare state."

By 2000 sickness insurance had been incorporated into a suite of employment benefits offered by the state that included workplace injury insurance, sickness insurance, and disability insurance. There is some private provision for sickness benefits, as well. The benefit replacement rate for lost earnings while sick reached as high as 100 percent in the mid 1970s

(Lundberg and Amark 2011, 168). Moral hazard became a problem with such high replacement rates and the rate was cut to 90 percent circa 1987, then changed multiple times before settling at 80 percent in 1998 (Palme and Svensson (2007). The disability insurance component replaces lost earnings with a basic benefit and a supplementary benefit based on the same calculations as the old age pension.

III.2. Sickness Funds in the U.S.

In the U.S. the mutual societies for illness in the 1910s tended to be all-male and only covered about one-third of male workers (Andersson, et. al. 2021; Lundberg and Amark 2001). A number of states investigated the possibility of mandating health insurance or creating their own programs of sickness insurance. The American Association of Labor Legislation (AALL), led by many progressives and institutional economists originally thought that the various interest groups were supportive of the idea. Once the proposed bills were written up, however, the AALL ran into a buzzsaw of opposition from doctors, the leading unions, insurance companies, and employers, and the movement failed (Moss 1996, pp. 132-157; Murray 2007).

Since that time the equivalent of sickness insurance has been provided by employers through paid sick leave. The attempts to develop government *health* insurance to cover the costs of treatment are discussed further below. In 2020 87-88 percent of full-time U.S. workers had paid sick leave, paid holidays and paid vacations, and 55 percent had paid personal leave, 25% had paid family leave, and 92 % unpaid family leave. For part-time workers the shares are much lower at 45% paid sick leave, 47% paid holidays, 39% paid vacations 20% paid personal leave. 8% paid family leave, 80 % unpaid family leave (U.S. Bureau of Labor Statistics 2020, Table 31).

Disability insurance in the U.S. has been provided both by the federal government, a handful of state governments, and private insurance provided mostly through employers. Federal government disability insurance began in 1957 and was funded by equal contributions of 0.9 percent of earnings by workers and employers by 2000. In addition, a number of employers offer opportunities to purchase both short term and long term disability insurance. Since workers tend to be healthier than nonworkers on average, the insurance premiums through employers are typically lower than when an individual purchases their own insurance. As of 2020 approximately 47 percent of full-time workers had access to disability insurance through their employers and 46 percent took advantage of it. The figures are 44 and 42 percent for long-run disability insurance. For part-time workers the numbers were 16 and 15 percent for short-term and 34 and 33 percent for long-term disability (U.S. Bureau of Labor Statistics 2020, Table 16).[9]

IV. Workplace Accident Insurance

The development of coverage of workplace accidents during the 20th century was similar in both countries. Prior to 1900 employers faced liability for workplace accidents when they could be shown to be negligent. It was costly for workers to sue for negligence so compensation from employer to worker typically came in the form of settlements that often fell short of covering the full losses from the accident. In the U.S. some employers had created labor contracts in which workers when hired signed away their rights to sue when injured in return for a guaranteed injury payment when injured. By 1910 most states had made those contracts illegal and workers and reformers had succeeded in getting state legislatures to eliminate one or more of

[9] U.S. Table 16 Full time life insurance 74 access 73 part time life 14 13

three defenses that employers could use to escape liability: assumption of risk, contributory negligence, and fellow servant (Fishback and Kantor 2000; Andersson and Eriksson, 2021).

In 1901 Sweden enacted workers' compensation legislation that made the employer liable for all accidents arising at the workplace in manufacturing, transport, construction, and mining. Workers were not compensated by the employer unless the accident lasted beyond a waiting period of 60 days and the compensation was one-third of the workers wage (Andersson et. al. 2021). These limits were ways of limiting moral hazard by the worker. In the same year the state of Maryland in the U.S. also passed a similar plan for coal miners but it was declared unconstitutional.

By 1910 workers, reformers, and employers in the U.S. were becoming increasingly dissatisfied with the costs and uncertainties of this system of dealing with workplace injuries. Going to court to establish employer negligence to obtain compensation was costly for both worker and the employer. Thus, the vast majority of accident payments came from out-of-court settlements. The settlement payments to workers often fell well short of covering their losses, and employers were distressed about the costs of lawsuits, the complaints of their workers, and an increasing number of "jackpot" court verdicts. A significant share of both groups lobbied for a solution known as workers' compensation that gave a worker injury compensation no matter who was at fault as long as it arose out of or in the course of employment. To control moral hazard, the states established waiting periods of up to 5 weeks. The benefits were set to cover up to two-thirds of the worker's earning but were subject to a weekly maximum. As a result, the benefit replacement rate for higher earning workers sometimes ended up as low as 35 to 40 percent. Yet, the payments still were often higher than under the averages under the de facto system of settlements during the negligence liability regime. In the initial laws the employer

could elect to join the system but if they did not elect, they lost access to the three defenses, so nearly all joined. Eventually, employers were required to obtain workers' compensation insurance or show evidence that they could cover future losses (Fishback and Kantor 2000).

The shift to workers' compensation mitigated the problems with adverse selection because nearly all employers and workers were in the system. Moral hazard for workers was reduced because workers did not get full payments for their losses, and employers still had incentives to prevent many kinds of accidents. Much to the chagrin of insurance companies, a handful of states required firms to purchase workers' compensation insurance from a state insurance agency, and in a number of others the employers could purchase the insurance from a state fund or from private insurers. In the states that did not allow for state insurance, insurance companies gained because they were able to provide insurance for all workers, in contrast to the limited amount of insurance they could sell to individual workers and employers before workers' compensation was introduced. The political path to workers' compensation was often not smooth because the interest groups fought over benefit schedules and whether the state should provide insurance. By 1916 33 of the 48 states had adopted workers' compensation laws, followed by another 10 by 1920 (Fishback and Kantor 2000).

U.S. state governments continue to run the workers' compensation programs in the modern era. Mississippi was the last state to enact a law in 1948. Workers' compensation has expanded to cover occupational illnesses and some states cover mental health problems related to work. Until the 1970s weekly maximums often failed to keep pace with inflation and wages because states had to enact new changes. In response to pressure from the federal government in the early 1970s nearly all states reformed their programs. A large majority of states raised their weekly maximums and then tied future changes to some measure of the average wage.

Through the end of the century workers' compensation faced two sets of problems. Health care became more expensive in part because new technologies were developing that could treat injuries that could not be treated before. Relative to the first half of the century moral hazard became more of a problem because a sharp rise in the share of injuries that were difficult to measure, like backs, wrists, and mental health. In addition, workers' compensation benefits were not taxable, which mean that the benefits were replacing a higher share of after-tax income. In response, a number of states established medical guidelines and more restrictions on the pool of doctors in the system.

While the states were passing workers' compensation laws in the U.S., Swedish unions and employers had been striking agreements for accident insurance coverage. In 1916 a new act was replaced with a compulsory program that covered all workers and was administered by the health insurance societies. The waiting period was reduced to 35 days and the benefits were set at two-thirds of the normal wage up to a maximum amount that typically cut the benefit to less than two-thirds of the normal wage for many workers (Andersson et. al. 2021; Andersson and Eriksson, 2021).

In 1955 accident insurance was largely unified with the health/sickness insurance system. In 1966, the waiting period in health insurance was eliminated, and in 1973 benefits replaced 90 percent of income loss. Collective bargaining in the 1970s offered additional compensation to some workers. In 1976 the coverage expanded to cover a broader range of work-related illnesses, and the benefits replaced close to 100 percent of income lost. In 1977 a new work accident and injury law allowed injured persons to appeal rulings of local insurance agencies up to the Insurance High Court. Many appeals were successful and the rise in costs and the high income replacement rate contributed to the welfare state crisis in late 1980s (Lundberg and

Amark 2011). The changes led to major deficits in the fund provided by employer's fees, and a deficit of roughly 2 billion dollars was eventually transferred to the public budget in 1991 (Andersson and Eriksson 2021).

In response the replacement rates were cut back to 90 percent circa in 1987 and were changed multiple times and ended up at 80 percent in 1998 (Palme and Svensson 2007). As in the U.S., some other changes were made to tighten the system, including longer waiting periods, tightening the definitions of work-related injury and less support for occupational health services at the work site (Dembe 1997).

V. Healthcare and Health Insurance

In contrast to sickness insurance, which covers lost earnings from illness, health insurance is focused on paying medical care expenses. During the early 1900s in the U.S. the demand for health insurance was low. Medical expenditures were low because medical technology was limited, most patients were treated at home, and hospitals were to be avoided due to dangers of cross-infection.[10] Most insurers did not offer health insurance policies because there was not much good information available about rates of illness and the costs of medical treatment were difficult to monitor. The sickness insurance societies and policies thus offered limited coverage of health care costs. The poor obtained healthcare through almshouses and hospitals run by local governments and charities that often could do little more than warehouse the chronically ill and try to make them comfortable (Thomasson 2002).

V.1 The Development of Health Insurance in the United States

[10] In U.S. studies the cost of health care were only one-fifth the size of lost earnings, and average spending on hospitals, doctors, dentists, and eyeglasses accounted for less than 4.2 percent of income of urban blue-collar workers around 2018 (U.S. Bureau of Labor Statistics, 1924, pp. 4, 453).

Over the next 40 years in the U.S. a market developed for health insurance and was driven by sharp rises in both the demand and supply for health insurance in the private sector with some help from regulatory decisions by the state and federal government. New medical technologies led to new treatments for many illnesses and injuries that could not be dealt with before, raising the expenditures on health care. A number of these treatments were expensive and thus people sought insurance to pay for the treatments. The likelihood of a health problem was low enough that insurance premiums did not rise as fast, and households had more income to cover the costs. Meanwhile, hospitals introduced new prepayment plans and doctors' organizations established Blue Shield prepayment plans for nonhospital treatments. As long as the organizations were non-profits, the states allowed them to avoid state insurance regulations, but the plans had to charge a flat rate to everybody, also known as "community rating." The flat rates opened the door for commercial insurers to compete with lower rates by tying the rates to the risk of illness and insuring groups, like employees at a large firm, who were more likely to be healthy on average. The insurance markets became tied to employers more tightly when wage controls were established during World War II, and firms competed by providing better insurance and other nonwage benefits (Thomasson 2002). After the War the federal government gave favorable tax treatment to employer contributions to health insurance (Thomasson 2000) and employer-based insurance became the primary way households obtained health insurance.

Attempts to develop some form of state-run universal health insurance for the general population were defeated decade after decade by shifting coalitions of interest groups who altered their positions based on the features of the programs suggested. The attempts in the 1930s and 1940s were defeated by physicians who fought to maintain their independence, insurers who refused to give up such large market opportunities, unions who thought they would

attract more members through their bargaining for fringe benefits, and businessmen who were skeptical of expansions of government. During the War on Poverty in the mid-1960s Medicare, government insurance for people over 65 funded by worker and employer contributions while working, was enacted in part because the unions joined their retirees in pushing hard for coverage for the retirees who were not covered under union plans. A compromise was reached in which physicians and hospital administrators retained control of fees and hospital charges, while insurers administered claims and reimbursements and had opportunities to provide Medigap insurance to fill in gaps in Medicare coverage (Quadagno 2004). Medicaid, a new income-tested program funded by general tax revenues, replaced the program of medical vendor payments that had been provided for medical treatment of recipients of old-age assistance, aid to dependent children, and aid to the blind.

Many thought that Medicare and Medicaid would soon lead to universal government health insurance. Presidents Nixon, Ford, and Clinton each proposed some form of national insurance for a broad range of ages but met with little success. In the 1990s between 84 and 87 percent of the population was covered by some form of health insurance, either through their employer, Medicare, or Medicaid. In 2000 families with children had access to Medicaid if their incomes were less than 200 percent of the poverty line in 36 states, 185 percent in 6 states, 170 percent in one, 150 Percent in 5 states, 140 in 20 states and 133 in one state (Kaiser Commission 2021, p. v).

In 2003 the Bush administration managed to expand Medicare to include drug coverage. Concerns with moral hazard led to reimbursement of 75 percent of the beneficiary's drug costs up to $2,250 per year, no reimbursement for the costs between $2,250 and $3600, and then 95 percent of any additional drug costs. As part of the plan, insurers were given new opportunities

for insurance, employers received subsidies to provide coverage, and the federal government was stopped from negotiating drug prices (Quadagno 2004). In March 1910 the Obama administration with large Democratic majorities in Congress managed to enact the Affordable Care Act (ACA) through a controversial budget reconciliation process.[11] The ACA required all employers with more than 50 full-time equivalent workers to provide health insurance. To expand coverage for individual buyers, the ACA set up insurance markets where private insurers were required to offer the same rate to all purchasers. They tried to resolve the problem of adverse selection by requiring everybody to have health insurance and providing subsidies for middle income people whose incomes were not low enough to be eligible for Medicaid. At first the fines for not having health insurance were relatively low, and adverse selection arose as people waited until they were sick or injured before purchasing the insurance, and companies were forced to raise premiums to prevent losses. The problem continued to get worse and was enhanced when the Trump administration eliminated the mandate to purchase insurance. As a result, a large share of the people who gained access to health insurance through the ACA ended up in Medicaid because the 2011 law increased the earnings level for eligibility, even though 12 states did not choose to expand Medicaid under the law (Blase 2021).

V.2 The Development of Health Insurance in Sweden

The path in Sweden led to a much different outcome. In Sweden in the 1860s county councils were given the responsibility for hospital care and the right to fund them with taxes.

[11] The passage became controversial due to Senate rules requiring 60 votes to get past a filibuster and the use of the reconciliation process. When debates on the bill started in 2009 the Democrats had 60 votes to prevent filibusters, but Democratic Senator Edward Kennedy died and Massachusetts voters elected Republican Scott Brown, who campaigned ardently against the ACA, to replace him. The Democrats used the reconciliation process to avoid filibusters and pass the ACA. For a detailed description of the process, see Cannan (2013).

Over the next few decades the councils ran the hospitals but allowed private physicians to practice there. The hospitals also ran outpatient clinics that competed with private physicians. A 1919 proposal of the Social Insurance Commission called for a combination of compulsory and voluntary insurance that would cover cash benefits, drugs, and medical treatment for 80 percent of the population. The managers of the existing sickness funds saw the proposal as a threat and fought it through the early 1920s. The fund managers then lobbied for increased state subsidies in return for providing medical benefits in the 1931 Sickness Fund Law. The 1931 law was passed with the support of the leaders of the Swedish Medical Association over the objections of a large share of its membership, who saw the law as a step towards national health insurance (Immergut 1989, pp. 154-5).

National health insurance was passed with wide ranging support in 1947 but it was not implemented until 1955. During this delay there were major struggles over the details of the program. In 1948 a commission led by Axel Hojer, director of the National Board of Health, recommended a total reorganization of the Swedish health services that would move all outpatient care into one system run by the county councils and eventually require all doctors to become employees paid full-time salaries. The proposal was opposed by doctors who opposed the move from "free professionals to state civil servants" and employers who objected to the high costs of the reform and socialization of medicine. The unions were skeptical of the discrepancies in the various cost estimates bandied about. Even government officials were opposed. The commission was originally supposed to focus on whether the county councils had the right to set up outpatient clinics. The county councils feared that the doctors would refuse to work in the hospital system and set up competing private practices (Immergut 1989, 154-8).

Over the next two decades the Swedish government weakened the doctors' political strength by gaining more control over the medical profession. It built new medical schools, increased the number of new doctors 7-fold, took over specialty accreditation in 1960, eliminated private hospital beds and private fees for hospital inpatients in 1959, required hospitals to provide outpatient care in 1959, and opened local health centers in the mid-1960s. In 1969 the "Seven Crowns Reform" came close to achieving the goal of the Hojer Commission. Instead of paying physicians in the hospitals directly and waiting for reimbursement from national health insurance, patients paid a flat rate of 7 crowns ($1.40) and national health insurance would pay 31 crowns to the hospitals. Employers, the unions, and the county councils supported the change as a means of controlling health costs and allowing doctors to focus on care rather than the business side of medicine. By 1969 all three groups had been negotiating with each other continuously and saw no reason to disrupt future negotiations over the bill. The county council leaders who wrote the bill with the help of national health insurance leaders composed a significant share of the membership in parliament and thus had the clout to insure the enactment of the law. After the act was passed, the Swedish Medical Association and the Federation of County Councils negotiated salaries that would cover in-patient and out-patient work. When negotiations with private doctors and public doctors for their private hours broke down and their patients paid the full fee directly and were reimbursed for 75 percent by national health insurance (Immergut 1989, pp. 158-163).

By 2000 Sweden spent about 9.2% relative to GDP on health care. In Sweden around 2007 the health care system was a decentralized national system with county councils and municipalities acting as the main providers of health care subject to some national rules; only 10 percent of health services were provided privately. Seventy percent of the funding came from

proportional income taxes collected by county councils, twenty percent from national subsidies, three percent from out-of-pocket fees paid by the user, and health services for the elderly and disabled come from municipal taxes. About 3 percent of households had private insurance, which had the main benefit of reducing waiting times for service (Marczewska 2011).

IV. Old-Age Support

By the early 1900s some employers in both countries had begun offering limited old-age pension programs to long-time white-collar workers. Meanwhile, the elderly poor were typically aided by local poor relief in both countries. In the U.S. the federal government's disability pensions for Civil War veterans had become essentially a shadow social security system in the United States outside the south because the eligibility rules by 1906 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. Some states in the South had confederate pensions but the coverage was not nearly as great (Skocpol 1992; Orloff 1993 134-7; 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.

VI.1 The Development of Old Age Support in Sweden

Meanwhile, in Sweden the elderly dominated the poor relief rolls following the emigration of young people that account for 16 percent of the population between 1870 and 1900.[12] By 1900 Sweden had twice as many elderly as a share of the population as did the U.S., Great Britain, and Germany. The Swedish government first introduced an old-age pension

[12] Over the course of the 19th century responsibility for poor relief in Sweden was transferred from the Lutheran church to local government (Kasperson and Lindvall 2008, pp. 128-9).

system in 1913 in two parts. The first was a universal pension plan financed with fees paid by the insured. The fees and thus the benefits were generally very low with benefits in the early 1920s equal to a few hours of an industrial workers' earnings. The second was called a supplementary pension and was an income-tested invalid pension benefit paid by state and local communities. Invalids included everybody over 67 who accounted for about two-thirds of the total benefits paid.

In 1935 Minister of Social Affairs Gustav Moller reported that almost half of old age pensioners in towns and one-fourth in rural areas were on poor relief. He and the Social Democrats passed legislation to raise the pension benefits in 1935 and 1937 to help the pensioners avoid poor relief. Beginning in the 1940s Swedish trade unions, which had a large share of workers as members, pressed hard to develop an old-age supplementary pension that paid higher pensions for people with higher incomes. In 1948 the old-age pension was reformed again by dropping means testing for the supplementary pension and the pension became universal and state-financed with a flat rate. The pension was not more than 20 percent of the wage of an ordinary industrial worker but allowed them to avoid poor relief (Edebalk and Olsson 2010; Lundberg and Amark 2011).

By the early 1990s, the Swedish pension system was composed of multiple parts based on rules set around 1960. The Swedish government old age pension had two components. The basic pension of around $3900 U.S. dollars in 2001 was distributed to everybody without regard to earnings. The supplementary pension was based on the worker's 15 highest years of earnings replaced 60 percent of earnings up to an earnings ceiling of 1.5 times average wage, but it was scaled downward for those who worked fewer than 30 years. The minimum benefit for people who had not worked was roughly equal to 30% of the average wage plus a housing allowance

that was received by about 30 percent of pensioners. Employers made all of the contributions into the government system, 5.86 percent for the basic pensions and 13 percent for the supplementary pension as of 1997. As with the U.S. Social Security program, the Swedish system at that time was a pay-as-you-go system in which the employer contributions were used to pay benefits to current retirees. Both national governments guaranteed that they would collect enough tax revenues when the current workers retired to cover their benefits. In Sweden the government benefits were taxed as regular income, while in the U.S. low income people paid no tax on their benefits, some paid income taxes on 50 percent of benefits, and a higher income group paid taxes on 85 percent of benefits (Social Security Administration 2022). Around 2000 roughly 95 percent of Swedish workers also had occupational retirement pensions that were negotiated by central agreements between unions and employer federations and typical added about 10 percent of pre-retirement wages to the government pensions for blue collar workers and more for white-collar and government workers.[13]

VI.2 The Development of Old Age Support in the U.S.

In the U.S. through the 1920s the elderly poor often were living in alms houses or receiving outdoor relief. Between 1923 and 1934 29 of the 48 states passed laws allowing local governments to establish old-age assistance payments that would allow the aged poor to live on their own. Most of the states did not provide any funding for the payments and the coverage in many states was limited until around 1931 when many of the laws were amended so that the state

[13]See Palme and Svensson (2007, 414-420) and Sunden (2006).

governments provided more funding.[14] Under the Social Security Act of 1935 the federal government established two types of old-age benefit programs. What Americans think of as Social Security is officially known as Old Age and Survivors Insurance (OASI). It is a pension system run by the national government that since 1939 has run on a pay-as-you-go funding model. Originally, employers and workers each contributed 1 percent of earnings to the social security trust fund and retirees received a large subsidy because they had not paid much into the system before retiring. The rates have been increased multiple times. By 2000 employers and workers each contributed about 5.3 percent of the workers income up to a maximum income of $76,200 to the program and the benefits paid upon retirement were based on earnings while working. The average benefit for a retired male in the late 1990s was around 31.5 percent of worker's average earnings (Scheiber and Shoven 1999).

The second program, called old age assistance, began in 1935 to offer matching grants to states of up to $15 per month for the poor elderly if the state adopted a limited set of federal rules of old age assistance, including the provision of benefits in every county. In most states old age assistance provided benefits that supplemented the recipient's other income to reach a target of $360 per year, which was about 30 percent of a full time worker's salary at the time (Stoian and Fishback 2010). In the early 1970s the national government established Supplemental Security Income to replace old age assistance and set the same income-tested benefits nationwide. The benefits still vary by state because a number of states add supplemental benefits.

In addition to the government programs, a significant share of workers have pension programs through their employers and also can invest in various retirement accounts. In 2020

[14] For the elderly poor who owned their own homes, some states placed a lien on the home that required the family heirs to pay back the benefits after death and some took ownership of the home and then provided the heirs with the value of the home left over after repaying the benefits.

about 80 percent of full-time workers had access to employer retirement programs and 66 percent were taking part (U.S. Bureau of Labor Statistics 2020, Table 2).[15]

In both countries people can also establish individual retirement accounts (IRA) that receive preferred tax treatment. In the U.S., for example, the worker investing in a regular IRA does not pay income taxes on the amount invested but later pays regular income taxes when extracting funds after age 59.5. Workers can also invest in Roth IRAs in which they pay taxes on the income being invested but do not pay taxes on the future gains from the investment. Private retirement accounts also receive favorable tax treatment in Sweden (Sunden 2006).

IV.3. Pay-Go, Defined Benefits, Defined Contributions, and Individual Accounts

The pay-as-you-go funding model for government pensions with "defined benefits" during retirement used by both countries for most of the 20th century has required significant adjustments over time. Longer lives and declining birth rates in both countries led to continuing drops in the share of the population paying into the system and increases in the share receiving benefits. As a result, the shares of earnings contributed to the pension system have had to rise substantially. For U.S. social security, for example, the contribution shares rose from 1 percent each for employer and worker in the late 1930s to 5.3 each around 2000. By the 1980s forecasts for the Swedish system predicted that the pay-as-you-go fund would be exhausted by 2015 unless retirement benefits were cut or the contribution rate rose from 18.86 in 1998 to 24 percent by 2015 and 30 percent by 2025 (Sunden 2006). Forecasts for U.S. social security predicted fund exhaustion about a decade later because the U.S. had more immigrants and higher birth rates. In addition, Scheiber and Shoven (1999) did a rate of return calculation using the average

[15] The shares for part-time workers were 40 percent with access and 22 percent participating.

stream of benefits in retirement and the average stream of contributions made in the U.S. system and found that it had fallen to close to zero percent by 2000.

One way for the governments to reduce the problem was to move from a pension system with "defined benefits" to a "defined contribution" system in which retirement benefits are tied directly to the contributions into the system and yields on the assets in which the contributions are invested. By the 1980s most U.S. employers had begun to shift toward defined contribution pension programs. In 1998 the Swedish government began a 16-year transition to a defined contribution government pension program. Out of the mandatory 18.5 percent contribution at the time, 16 percent went to a state plan with the initials NDC and 2.5 percent to an individual retirement account. Under the NDC plan, each worker has a balance in which their annual contributions grow at a specified rate and the annual retirement benefit is then calculated based on average life expectancy and the value of the account at the time of retirement with adjustments for inflation as the retiree ages. The individual account allowed workers through the Premium Pension Agency to choose to invest their 2.5 percent of earnings in up to 460 mutual funds in 2000, and the number of choices have risen since then (Weaver 2003/2004).

When George W. Bush became the U.S. President in 2001, he spent some political capital pushing for part of Social Security to be moved into individual accounts but he met substantial opposition that foreclosed that option. The reformed Swedish programs still provides for a minimum standard of living benefit that was means-tested and offset by the NDC component and is worth 35 percent of the average wage of a blue collar worker. About 30 percent of retirees were receiving some type of guaranteed benefit, typically women with low prior attachment to the labor force (Sunden 2006, 141-2).

VII. Unemployment Benefits.

The Swedish system of unemployment benefits largely runs through union insurance funds, which is also a feature of programs in Iceland, Denmark, and Finland. In general, there is a strong correlation across countries between the union share of the workforce and their control over unemployment insurance (Bandau 2014, Van Rie et.al. 2011). By the early 1900s Swedish trade unions had been gaining strength in part by offering unemployment benefits to their members. In 1914 the state began providing some support for the unemployed through the poor relief system, including work relief jobs. The unions strongly opposed work relief on the grounds that the lower pay exerted a downward pressure on wages. With the support of the Social Democrats in 1934 the trade unions gained some state subsidies for their unemployment funds. To gain enough support from Liberals and employers for the subsidies, the state was given oversight of the funds, employer contributions were eliminated, and the benefit levels were relatively low. The system was voluntary and few union funds joined the system until the subsidies were increased substantially in 1941. The system expanded from 14 funds with 200,000 members in 1940 to 33 funds with over 800,000 members by 1945.

After World War II proposals to develop a compulsory state run system for all workers were successfully opposed by the unions with help from the Social Democrats. Pressure for compulsory insurance built up again in the late 1960s and early 1970s, but the reform of 1974 actually strengthened the union-based situation by raising state subsidies. Increased pressure for compulsory insurance in 1974 led to new reforms that added a form of unemployment assistance for the unemployed without insurance, while strengthening the union-based system with increased weekly benefits and expansions in the time frame over which benefits were paid. These were financed by expanded state subsidies, the introduction of employer contributions to

hold down the contributions by members of the funds, and a requirement that all union members pay into the fund. In 1982 employer contributions were raised further along with the length of time covered (Bandau 2014).

By 1990 the state system with low benefits was still in place for all of the unemployed and 80 percent of the workforce was covered by 42 union-based unemployment funds. The union members were paying one to four dollars a month for benefit rates of 90 percent of earnings for low income workers but lower rates for upper income workers due to weekly benefit caps, while benefits could be paid out for a much longer period than in the U.S. The financing came primarily through taxes and employer contributions. The replacement rates and long time limits meant that the potential for moral hazard was substantial and Sweden faced an economic crisis with high unemployment rates. In the early 1990s a conservative government doubled membership fees and cut the replacement rate to 80 percent, while also removing the inflation indexing of the weekly maximum benefit. In 1994 the conservatives passed a reform with a state run unemployment fund that likely would have out competed the union-based system over the long run, but it was reversed by December when the Social Democrats returned to power and eliminated the new state fund and lowered membership fees for union funds. In 1998 the fund for the uninsured from 1974 was replaced by "basic insurance" with a replacement rate of about 32 percent that was integrated into the administration of the unemployment funds (Bandau 2014). In the early 2000s some unions offered "collective complementary insurance" for workers whose regular benefits were less than 80 percent due to the maximum benefits (Lundgren 2006, p. 3).

After 2007 the system was reformed again by a conservative government that lowered the replacement rate from 80 to 70 percent after 200 days. After 300 days for unemployed persons

with children it was lowered to 65 percent. The ceiling on benefits per day was cut from about $73 to $68 and stayed there at least through 2013. Job search requirements were tightened as was eligibility for students. Employer contributions were reduced and the contributions from fund members raised, were not longer tax deductible and were tied more directly to the unemployment rate in their occupations. The rise in worker contributions contributed to a decline in union membership (Bandau 2014, Van Wie et. al. 2011).

VII.1. The Development of Unemployment Insurance in the U.S.

In the U.S. few unions offered unemployment benefits in the early 1900s. Unions have never had the same economic and political clout as in Sweden. Union membership as a share of the nonagricultural workforce rose from less than 5 percent in the early 1900s to a peak around 35 percent in the early 1950s and has fallen to around 15 percent by 2000 (Carter et.al. 2006, p. 2-56). Until the 1930s the unemployed received limited amounts of local poor relief. When the Depression hit, some local and state government offered work relief jobs and the federal government established a series of temporary work relief programs that paid wages that were less than two-thirds of the wages they were paying on public works program. Some states were thinking of introducing unemployment insurance when the Social Security Act of 1935 established a framework for the states to adopt it. Each state chose their own replacement rates, most often 50 percent of lost earnings, subject to a weekly maximum. As long as they were seeking work, the unemployed could receive benefits for up to 26 weeks, although during severe recessions, there have been temporary extensions of the time limit. Employers finance the unemployment insurance funds and the rates they paid are tied to some extent to the likelihood that their workers will become unemployed, a practice known as “experience rating.” The

federal government provides limited funding to cover the administrative costs of the system and occasionally finances the extension of benefits.

The basic structure of the U.S. system has remained the same since the late 1930s. The weekly maximums in the year 2000 ranged across the states from $282 to $655 in 2019 dollars with a population weighted national average of $442. The maximum relative to the average manufacturing wage plus fringe benefits ranged from 25 to 57 percent (Fishback 2020, Table 4). About two-thirds of the states index their weekly maximums to rise with wage rates.

VIII. Family Benefits and Child Allowances

Benefits for children are a clear example of the universal philosophy in Sweden and the safety-net strategy in the U.S. Ozawa (2004) describes U.S. family policy as almost entirely anti-poverty programs. From the colonial period through the early 1900s families in poverty relied on small amounts of local government aid, care for children in almshouses and sometimes temporarily in orphanages, and ad hoc aid from churches and local charities. In the 1880s a nationwide organization, the Charity Organization Society actually took over the administration of local aid in a number of cities, but within a decade or two relinquished that role (Ziliak 2004). By the early 1900s social workers began to appreciate the importance of children staying with their mothers in independent quarters (Davis 1930).

A large number of states passed mothers' pensions laws in the 1910s to help widowed mothers take care of their children in their own home. The original laws typically "allowed" local governments to provide mothers' pensions and did not provide funding. As a result, the coverage varied by location within states. Over the next two decades, states began funding the benefits, the geographic coverage within states expanded, and a number of states allowed

divorced women to receive benefits for their children. As part of the Social Security Act of 1935, the Aid to Dependent Children (ADC) public assistance programs began replacing the state mothers' pension plans. Under ADC the federal government provided matching grants to states when the states adopted enabling legislation that required all locations to provide ADC benefits. Each state decided the level of benefits to provide, a practice that has continued to the present day. In the early 1960s ADC became Aid to Families with Dependent Children (AFDC) and began adding benefits for the adults in the family as well as the children. In 1996 the Temporary Assistance for Needy Families (TANF) Act more strongly tied the benefits to work activity and shifted away from matching grants to block grants.

VIII.1 Sweden's Move to Universal Benefits and Child Care

Sweden started out like America in the early 20th century but switched to universal coverage after World War II. One reason for the shift has been differences in fertility rates. After losing a large share of the working population to emigration in the late 19th century, the total fertility rate during the 1930s in Sweden fell below 1.8, substantially below the U.S. rate of around 2.1, which matched the replacement rate. Some of the reforms at this time were designed to offset the perceived "population crisis." In 1937 child maintenance advances were offered for children whose parents were unmarried or divorced if the father failed to make payments. The birth rate began to recover by the end of World War II. In 1946 sickness insurance was expanded to include benefits for housewives to allow for a caregiver for the children while the housewife ill.

In 1948 universal child allowances paid to the mother were introduced (Lundberg and Amark 2001, pp. 163-4). Sweden's total fertility rate peaked around 2.5 in 1950, while the U.S. had a much larger baby boom as the total fertility rate peaked around 3.5 around 1960. Access to

the pill and changes in women's roles led the fertility rate in both countries to fall below the replacement rate around 1975.[16] Sweden's responded in the 1960s and 1970s by trying to address the pressures faced by a parent worker, particularly a female parent worker. They added maternity and parental leave programs that provided cash benefits for birth or adoption of a child, temporary cash benefits to stay home with a sick child, cash benefits for pregnant women to take time off from work, and allowances for single parents to adopt a child.

In addition, Swedish local governments developed formal daycare services, household services, and in-kind benefits for all households with children (Ozawa 2004). The changes were associated with a dramatic rise in the employment of women by local governments for childcare. Between 1963 and 1993 local government employment rose by 700,000 people, mostly women, and that growth accounted for nearly all of the growth in employment in the Swedish economy over that period. Sherwin Rosen (1996, p. 734-5) suggested: "In Sweden a large fraction of women take care of the children of the women who work in the public sector to care for the parents of the women who are looking after their children." By 1993 the Swedish government was paying between $8,000 to $10,000 (nominal dollars) per pre-school child per year for pre-schooling (Rosen 1996, pp. 729-731). Meanwhile, Sweden's total fertility rate fell to 1.6 around the year 2000.[17]

VIII.2. The U.S. Choices for Child Care and Pre-Kindergarten Education

[16] Population in both countries still grew between 1975 and 2000, by 0.32 percent per year in Sweden and 1.07 percent per year in the U.S., due to positive net immigration, which was much higher in the U.S.

[17] Rosen (1996, pp. 732-33) Sweden constrains its public sector by tying public welfare programs to employment and running a market economy that does not involve the state in public production of ordinary goods and services. The difference is in greatly enlarged government role in household and family activities. "

In contrast, the U.S. transition toward more government involvement in child care focused efforts on young children in low-income households, with disabilities, or facing educational challenges. In 1960 it was rare for children under 5 to be educated outside the home. Care was primarily performed by parents or through their arrangements with friends and relatives. Increased opportunities for women in the workplace and multiple other factors has led to a much greater reliance on child care outside the home since then. By 2001 52 percent of 3 and 4 year olds were in a nursery school or kindergarten class room. About half of those were in private programs operated by for-profits, nonprofits, and religious organizations. Another 20 percent attended a family home day care or received care from relatives and others (National Institute of Early Education Research 2003, pp. 6-10). [18]

Since 1965 the federal government has funded Head Start for low-income families with enrollments that have risen from 5 percent of 3- and 4-year-olds in 1975 to 11 percent in 2001. Some states also created programs for children in poverty or at high risk of poor academic progress in the mid-1960s, but only 7 states had programs by 1980. The number expanded to 40 states in 2001-2 and 44 in 2018-19. Illinois, Michigan, and Illinois began providing free education for children with disabilities in 1973-74. After the federal government offered funds for that purpose in 1986, nearly all of the states developed programs by the early 1990s. Overall, the share of 4-year-olds in state-sponsored program has risen from 14 percent in 2001-2002 to 34 percent in 2018-19, and the share of 3-year-olds has risen from 3 to 6 percent (National Institute of Early Education Research (2003, pp. 6-10; 2020, p. 10-11).

The difference between Sweden's more universal approach and the U.S. means-tested approach is documented in the spending figures. In Sweden family benefits as a share relative

[18] For a detailed economic analysis of the demand and supply for child care in the late 1990s, see Blau (2001).

to GDP were around 4 percent in the 1980s, rose to 5 percent in the early 1990s and then fell back to 3.2 percent by 1998. Meanwhile, U.S. government family benefit expenditures stayed around one percent of GDP.[19]

VIII.3. Swedish Child Allowances Versus American Child Tax Breaks

The difference in spending overstates the difference in resources available for children because Sweden makes a direct payment to households for each child, while the U.S. reduces the helps households with children through tax deductions. About one percent of the difference in spending came about because Sweden paid a child allowance to families at all income levels that amounted to $1,113.5 per child in 2000 (OECD 2002, p. 366). Sweden had no exemptions for children as dependents in their income tax system. In contrast, the U.S. provides tax breaks to most families. When households with children in the U.S. filed for taxes in 2000, they received a dependency exemption of $2800 per child and a child tax credit of $500 per child. The child tax credit was phased out to zero for married taxpayers with high incomes between $110,000 and $120,000 thousand and between $75,000 and $85,000 for single taxpayers (OECD 2002, p. 389). In the OECD tax calculations for a married couple with one spouse earning 100 percent of the manufacturing average of 33,129 and the other earning 67 percent for a total of $55,236 the couple with two children paid $2174 less than the couple with no children, or 1087 per child.[20]

At incomes below $31,152, roughly $2000 less than the average manufacturing production workers earnings in 2000, the U.S. also provided an earned income tax credit for

[19]The breakdown of spending in the U.S. in 1998 of the 1.06% of GDP devoted to family issues was 0.54% on family cash benefits, 0.52% on family services and in-kind benefits, which included 0.23% on food stamps and 0.1 percent on child nutrition .099%. Sweden's 1998 family breakdown was 0.88% of GDP on family child allowance payments, 0.6% on maternity and parental leave, 1.3% on family day care and 0.2% on household service programs (Ozawa 2004).

[20] Reported in OECD.Stat Data set for Taxing Wages-Comparative Tables at OECD (2022t). .

families with children. Low income workers with a child received an earned income tax credit (EITC) of 34 percent of their earnings up to $6,920. From that level of earnings to $12,690, the credit was equal to $2,352.80. It then phased out until it hit zero when earnings were $27,413. The EITC for low income taxpayers with two or more children was 40 percent of earnings up $9,720, was fixed at $3,888 for incomes between $9,720 and 12,690 and then phased out at an income of $31,152. OECD tax calculations show that a single person earning $22,197, 67 percent of the average for manufacturing production workers, paid $4,435 less in taxes with two children, $2217.5 per child, than they would have with no children.

IX. Taxation of Employers and Workers, and Employer Provision of Benefits

In both Sweden and the U.S. the vast majority of social welfare benefits come through government programs funded by taxes paid by workers and employers and through private benefits largely provided by employers. The mix differs markedly because Sweden relies much more heavily on government social insurance programs funded with taxes, and Sweden taxes incomes and consumption at much higher rates, particularly in the lower parts of the income distribution. Table 2 shows information from the year 2000 for a manufacturing production worker receiving average earnings (including overtime and supplemental pay) with a nonworking spouse and 2 children. In addition to their earnings of $33,129 in the U.S. and $28,775 in Sweden, employers provided private social welfare benefits and paid payroll taxes for government benefits in both countries. Thus, the employer paid a total cost for earnings, private benefits, and government benefits of $42,859 in the U.S. and $39,773 in Sweden for the average worker. Of the added value of $9,730 in employer costs in the U.S. (line 22 minus line 1 in Table 2), the private benefits (lines 11+12 in Table 2) accounted for 56.3 percent. The private

benefits included life, health, and disability insurance, retirement pensions, sick pay, and parental leave. Employer payroll taxes of $2,842 (line 3) covered half of contributions to government retirement pensions, survivor benefits, and disability insurance (OASDI, called Social Security in the U.S.), half of old age health insurance, and all of unemployment insurance. In all but a handful of states the employer was required to buy private injury insurance (workers' compensation) worth about $1,411 (line 12).

In contrast, in Sweden, the employer private benefits (lines 11+12) accounted for only 13.9 percent of the 10,998 in added payments (line 22 minus line 1) and covered unemployment insurance and private retirement and supplements to government programs. The employer payroll taxes covered government retirement pensions, survivors' benefits, parental insurance, health insurance, labor market benefits, occupational health, and a general wage tax.

The payroll taxes paid by workers in the U.S. and Sweden were similar with the U.S. worker paying half of the OASDI and old age health insurance contributions of $2,534 and the Swedish workers paying $2,009 into the government retirement system. Swedish income taxes, however, were substantially larger at $7,696, although they did get $2,227 in child transfer allowances, which led to a net tax of $5,469. The U.S. income taxes were only $2,239 after working through the tax breaks for children. After subtracting out the employer private and public contributions and the net taxes paid by the workers, the families had $28,356 and $21,298 left for other spending.

When taxes of all kinds are considered (including the taxes above, property taxes, and others), Sweden's share of GDP collected in all types of taxes rose from 31.1 percent in 1965 to around 49 percent in 1990 and 2000 and has fallen since to around 43 percent in 2019.

Meanwhile, the U.S. share rose from 22.5 in 1965 to 26 in 1990, then 28.3 in 2000, before falling back to 24.5 in 2019.

IX.1 Differences in Taxation at Lower Income Levels

Another key difference between the U.S. and Sweden is the much higher income and payroll tax rates paid by lower income workers in Sweden. Table 3 shows OECD estimates for the average tax wedges for workers with and without children and at several income levels. Ignoring private benefits from employers (lines 11 and 12 in Table 2), they calculate a total employer cost equal to gross earnings (line 1 in Table 2) plus employer payroll taxes (line 4 in Table 2). They then calculate a measure of net taxes equal to taxes paid by the worker and the employer minus cash transfers (the child allowance in Sweden on line 6 in Table 2). The average tax wedge is the net taxes as a percentage of the total employer cost (line 6 divided by lines 1+4 in Table 2).

Sweden's average tax rates are substantially higher than in the U.S. at income levels ranging from 67 percent to 200 percent of the average manufacturing wage. The lowest difference in tax wedges was the gap between 20.1 percent in Sweden and 10.7 percent in the U.S. for a single person with 2 children who earned 67 percent of the average manufacturing wage. For the same single person with no children, the gap roughly doubles to the difference between 48.6 percent in Sweden and 29.6 in the U.S. The gaps were even larger for the marginal tax wedges, which show the percentage of the next dollar of income that would be owed in taxes. Except for the single person with 2 children the Swedish marginal rates were roughly 20 to 30 percentage points higher.

XI. Porousness of the Safety Net

Even though the main focus in the U.S. is to provide benefits to people in the lower part of the income distribution, the social welfare net in the U.S. is probably more porous than in the Nordic countries. The most commonly cited problem in the early 2000s was 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 was relatively fluid, as people moved in and out of coverage, so that the number who were 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 came from healthy people who could afford health insurance but chose not to buy it rather than pay the $5,000 to $6,000 per year for health insurance for an individual. They were gambling that they would 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 gave 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 were aged 18 to 44, where health risks were less dire, while 35 percent were in households earning over $50,000 per year. A number of health providers provided health care in ways that can be missed by official statistics (Bovbjreg, et. al. 2006). Everybody still had access to medical care because emergency rooms were required to provide care. When faced with a negative health shock, however, the cost of care sharply reduced their assets until they became eligible for Medicaid, a loss that households in the Nordic countries would not have faced.

The safety net in the U.S. is porous in another way, as many who were eligible for benefits did not apply for them. A 2009 *New York Times* article summarized a series of studies that showed that significant shares of the eligible poor were either not applying for benefits or not getting them (DeParle 2009). The reasons varied 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. Access to benefits in the U.S. system appears to be far more complicated than access in Sweden.

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. Table 4 shows the share of people with incomes below 40 percent of the median income before direct taxes and transfer in each country before and after direct taxes and transfers. It is a relative measure because the median income before direct taxes and transfers differs between the two countries. Before taxes and transfers, Sweden's share of 19.8 percent with incomes below the threshold was 0.7 percentage points higher than the U.S. share of 19.1 in the mid-1970s. The gap widened to 4.5 percentage points in the mid-1990s and then fell back to 2.4 percent in the mid-2000s. The taxes and transfers in Sweden, however, were much more effective at raising households above the 40 percent threshold. Over the decades between 1.3 and 2.5 percent of Swedish households remained below the 40 percent threshold after paying taxes and receiving transfers, compared with much higher shares in the 10.1 to 11.8 percent range in the U.S.

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 after taxes and transfers in U.S. dollars of an equivalent person in households in the year 2000 for various countries.[21] In the top part of the distribution the American income at the 90 percent level was $51,300, much higher than $27,000 in Sweden.[22] At the lower end at the 10th percentile, the U.S. income of $9,500 was only $200 more than the Swedish income.

The holes in the safety net in the U.S. led to worse outcomes for people below the 10th percentile in the income distribution in the United States than in Sweden . Smeeding (2005) noted that a significant share of children in one-parent households fared much worse than the 10th percentile comparison suggests. The OECD (2008, pp. 35-39) made a comparison of *average* incomes per person in the 2005 in households below the 10th percentile, which includes the people ranked from 0 to 9.99 percent. The U.S. average of around $5,800 was much lower than the Swedish average of around $9,600. The Americans faced much lower consumption taxes, but the difference of about 15-20 percentage points would not be enough to offset the difference in incomes.

Child poverty has been a much more significant problem in the U.S. than in Sweden. Smeeding and Thevenot (2016, pp. s68-9) find that the share of children in poverty in the U.S.

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[21] Disposable income in the study included 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 were capital gains, imputed rents, home production or in-kind income. Also no account was taken for indirect taxes like consumption taxes, or the benefits from public spending on social goods like healthcare, education or most housing subsidies. He adjusted the values for purchasing power parity, and the usual caveats about the problems with purchasing power parity apply. The total household income measure was then divided by the number of "equivalent" people in the household, which adjusts for different consumption levels by men, women, and children.

[22] 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.

was 20 percent in 1975, peaked near 25 percent in the late 1980s and then fell to around 20 percent again in 2005-2012. Sweden's rate was only 2.5 percent in 1975, stayed flat until 1996 and then rose to 5 percent in 2005 and around 8 to 10 percent in 2012. He suggests that the rise in Sweden came from an increase in number of single parents, a decrease in public income support for low-income families with children, and the immigration of refugee families. The poverty level for migrant families from 12% in 2000 to 20% in 2012, even though the share of children with foreign backgrounds increased only slightly to about 14 percent of all families with children. Both countries have spent substantially less on children than on elderly. Sweden's ratio of family benefits to elderly benefits was around 0.65 in 1991 but fell to around 0.44 in 1998, which is substantially higher than the ratio of the U.S. which rose from 0.15 in 1983 to 0.2 in the 1990s (Ozawa 2004).

Conclusions

My goal has been to document the history of social welfare institutions and spending in the U.S. and Sweden from the early 1900s through the 20th century. Like nearly every developed nation, both countries spent very little on social welfare in the early 20th century, and both countries expanded their spending to levels of more than 22 percent relative to GDP in the modern era. Both countries provide means-tested benefits to households with low income, but the lion's share of the rise in social welfare takes the form of social insurance in which the employer and the worker, to a lesser extent, pays into a program that provides benefits during retirement or when adverse health events or income loss occurs. The major institutional difference between the two countries arises because in Sweden the employer and worker payments primarily finance government social welfare programs, while in the U.S. the employer pays a much more substantial share to market firms that provide insurance and retirement

benefits to their workers. The Swedish government programs tend to provide benefits to workers at all income levels, while some U.S. government programs are universal and others are targeted at low income people. Meanwhile, the Swedish tax system collects much more in taxes from lower income households than the U.S. system does.

Most people have the perception that Sweden spends a large amount more as a percentage relative to GDP than the U.S. on social welfare because many studies and the press focus on comparisons of programs where governments control the finances. Once the employers' voluntary and government-required private programs are added together, the gap between the two countries narrows a great deal. The countries also have quite different tax systems with Sweden collecting direct taxes on their recipient's benefits that exceed 25 percent compared with rates of 5 to 15 percent in the U.S. The Swedish recipients then pay taxes on purchases of goods and services that are roughly 25 percent compared with around 6 percent in the U.S. Finally, the U.S. provides tax breaks for having children and for social welfare activities. Once the taxation is netted out, the U.S. net social welfare spending relative to GDP over the past 20 years has been the roughly the same or higher than in Sweden.

The histories of social welfare in various categories document how the programs dealt with problems of adverse selection and moral hazard. They also show that there is extensive path dependence in how the institutions developed. The path to government health insurance in Sweden was eased because local governments controlled hospitals in the late 1800s in Sweden, while the U.S. reliance on employer-provided health insurance was driven by a combination of opposition to government health insurance by physicians and by federal tax policy during World War II and in the 1950s. Differences in birth rates influenced the differences in expansions of

family policies, while a tradition of strong unions in Sweden led to an unemployment insurance system operated largely by unions.

In the final analysis the U.S. relies more heavily on employers and market institutions to provide social welfare benefits.[23] The much higher tax rates in Sweden leads to a final income distribution after taxes and transfers that limits the share of people with high incomes but at the same time insures that relatively few households are at very low incomes. Even though the U.S. system focuses on providing benefits to low income people, the system is more complex and the takeup rates for eligible households are substantially lower. Thus, the U.S. system had led to a more porous safety net than the Swedish system.

[23]The description of the U.S. social welfare system is based on national averages. The U.S. has about 30 times the population of Sweden and therefore runs a federal system with 50 states and Washington, D.C. and a large number of local governments. The responsibility for poverty and social welfare programs into the 1930s was based in state and local governments and the state governments maintain a great deal of control over benefit levels. As a result, the U.S. on many dimensions has at least 51 social welfare programs with a great deal of variation that is discussed extensively in Fishback (2020).

Table 1

Public and Private Social Welfare Expenditures and Average Direct Tax Rates on Benefits in the U.S. and Sweden in 2003

	Public		Mandatory Private		Voluntary Private		Average Tax Rate on Benefits	
	U.S.	Sweden	U.S.	Sweden	U.S.	Sweden	U.S.	Sweden
Total	15.8	28.0	0.4	0.5	9.7	2.1		
Old Age	5.1	9.1	na	na	3.6	1.7	5.2/14.8[1]	28.6[2]
Survivors	0.8	0.6	na	na	nr	nr		28.3
Incapacity	1.0	5.5	0.2	0.5	0.0	0.3		27.7/30.8[3]
Related								
Health	6.6	6.3	0.2	na	6.0	0.1		
Family	0.8	3.1	na	na	nr	nr		30.8[4]
Active Labor	0.2	1.1	na	na	nr	nr		29.6[5]
Market								
Unemployment	0.5	1.1	na	na	nr	nr	12.1	28.7
Housing	0.3	0.5	na	na	nr	nr		
Other	0.6	0.6	na	na	0.0	0.1		

Sources: Spending as a percentage of GDP comes from the OECD.Stat data set at OECD (2022s). Average tax rates are from OECD (2007, pp. 78-80).

[1]Average tax rates on benefits in the U.S. for old age pensions were 5.2 percent for social security and 14.8 for pension and IRA distributions.

[2]Average tax rates in Sweden for old age pensions for public, early retirement and private.

[3]Average rates for disability pensions were 27.7, injury and sickness payments 30.8.

[4]The rate is for family benefits, maternity and parental leave, and sole parent benefits.

[5]Rate is for training benefits.

Table 2
Average Earnings, Benefits, and Taxes Paid in U.S. Dollars for Married Manufacturing Production Workers with 2 Children and No Spousal Income in the U.S. and Sweden in Nominal U.S. Dollars in 2000

		U.S.		Sweden	
		Earnings & Taxes in U.S. $	% of Employer Private and Govt. Costs (line 22)	Earnings & Taxes in U.S. $	% of Employer Private and Govt. Costs (line 22)
1	Gross Earnings	$33,129	77.3	$28,775	72.3
2	Worker Income Taxes paid to Central and State and Local Governments	2,239	5.2	7,696	19.3
3	Worker Payroll Tax Payments for Social Welfare	2,534	5.9	2,009	5.1
4	Employer Payroll Tax Payments for Social Welfare	2,842	6.6	9,473	23.8
5	Cash Transfer Child Allowance	0	0.0	-2,227	-5.6
6	Total Government Taxes Minus Cash Transfers (2+3+4+5)	7,615	17.8	16,950	42.6
			0.0		0.0
11	Employer-Provided Private Social Welfare Benefits	5,476	12.8	1,525	3.8
12	Employer-Required Private Injury Insurance Payments	1,411	3.3	0	0.0
21	Employer Private Costs = (1+11+12)	40,017	93.4	30,300	76.2
22	Employer Private and Government Costs= (1+11+12+4)	42,859	100.0	39,773	100.0
31	Disposable Income After Income Tax and Employer Private and Public Contributions (22-12-11-5-4-3-2)	28,356	66.2	21,298	53.5

Sources: Data on average manufacturing earnings of production workers and taxation come from OECD.Stat data set at OECD (2022t). The gross earnings include overtime and supplemental pay. Descriptions of how the calculations were made for the year 2000 can be found in OECD (2002). In the U.S. the earnings are the average annual earnings of manufacturing workers for the entire U.S. The tax parameters use Detroit, Michigan for state and local income taxes. The Swedish amounts in kroner were converted to U.S. dollars using the exchange rate of 9.16 kroner to the dollar in 2000. Using purchasing power parity the rate was 9.66 kroner to the dollar, and the Swedish amounts in dollars would be lower by 5.52 percent (OECD 2002, p. 403). Both sites were referenced on 10/7/2021 and 1/4/2022. In 2000 the

Swedish worker payments to social welfare programs were 7 percent of earnings for pensions, while the American workers contributed 6.2 percent for old age, survivors, and disability insurance (OASDI) and 1.45 percent for old age health insurance (Medicare) (OECD 2002, pp. 367, 391). In 2000 the Swedish employer payroll taxes covered the retirement pension (10.21% of manufacturing worker earnings), survivors' pension (1.70%), parental insurance (2.2%), health insurance (8.5%), labor market (5.84), occupational health (1.38), and a general wage tax (3.09) (OECD 2000, p. 367). The American employer payroll taxes include pensions and disability insurance (OASDI 6.2 % of manufacturing worker earnings), elderly health insurance (Medicare 1.45%), and unemployment insurance (2.54%) (OECD 2002, 391 and OECD tax data set). In the U.S. workers' compensation insurance for workplace accidents is required but is not part of employer payroll taxes except in a handful of states with monopoly state insurance funds. It is not included in the OECD estimates. Workers' compensation insurance payments by employers were 4.26 percent relative to average blue collar earnings in March 2000 (U.S. Bureau of Labor Statistics 2000, p. 6). The March 2000 cost to U.S. employers of providing private benefits as a percentage of average earnings, overtime, and supplemental pay was 16.53 percent, composed of sick pay (0.76%), life, health, and disability insurance (10.91%), retirement (5.49%) and other (0.04%) (U.S. Bureau of Labor Statistics 2000, p. 6). U.S. workers could pay extra and supplement these benefits. The value of vacation and holiday pay (7% relative to average earnings in the U.S.) is not included in the U.S. benefits because this would not be considered a social welfare benefit. The OECD (2002, p. 361) estimates that Swedish employers contributed an additional 5.3 percent of wage earnings in 2000 for private social welfare type schemes. The OECD (2002, p. 385) provided some U.S. information on pension, health, and life employer schemes for 1993, but we used the Bureau of Labor Statistics (2000, p.6) information because it was more complete. Employer Private Costs= Gross Earnings + Employer Private Social Welfare Benefits and Required Injury insurance (1+11+12), Employer Private and Government Costs =Gross Earnings + Employer Private Social Welfare Benefits and Injury insurance + Employer Social Payroll Tax Payments (1+11+12+4).

Table 3
Labor Tax Wedges for Different Types of Workers

			Gross Income in U.S. Dollars		Average Tax Wedge, Pct.			Marginal Tax Wedge, Pct.		
Marital Status	Chil-dren	Income % of Avg. Wage	US	Swe	US	Swe	Swe -US	US	Swe	Swe - US
Single	2	67%	22,197	19,258	10.7	20.1	9.7	49.5	53.6	4.1
Single	0	67%	22,197	19,258	29.6	48.6	19.0	34.6	53.6	19.0
Single	0	100%	33,129	28,744	30.8	50.1	19.3	34.6	64.6	30.0
Married	2	Head 100%, spouse 0%	33,129	28,744	21.2	44.3	22.9	35.4	64.6	31.2
Single	0	167%	55,325	48,002	37.1	55.7	18.6	46.6	66.4	19.8
Married	0	Head 100%, spouse 67%	55,325	48,002	30.5	49.5	19.0	34.6/ 34.6	64.6/ 53.6	30.0/ 19.0
Married	2	Head 100%, spouse 67%	55,325	48,002	26.9	46.0	19.1	34.6/ 34.6	64.6/ 53.6	30.0/ 19.0
Married	2	Head 100%, spouse 100%	66,258	57,488	28.8	47.2	18.4	46.6/ 46.6	64.6/ 64.6	20.0/ 20.0

Sources: Data come from OECD.Stat Data set for Taxing Wages-Comparative Tables (OECD 2022t). Descriptions of how the calculations are made for the year 2000 can be found in OECD (2002). The Swedish amounts in kroner were converted to U.S. dollars using the exchange rate of 9.16 kroner to the dollar (OECD 2002,p. 403). Both sites were referenced on 10/7/2021. The labor tax wedge is the sum of income taxes, social insurance contributions by the worker and employers minus cash transfers. The average tax rate is the labor wedge as a percentage of the sum of gross income plus employer contributions to social insurance. The marginal tax rate is the share of gross income plus employer contributions to social insurance that go to the wedge from adding another dollar in gross income. In the U.S. the earnings are the average annual earnings of manufacturing workers for the U.S. as a whole. The tax parameters use Detroit, Michigan for state and local income taxes.

Table 4
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
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 for poverty measures on July 17, 2009. The 40 percent of median income threshold does not change in the comparisons. Adjustments have not been made for indirect taxes on consumption of the individuals.

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