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Curing the Dutch Disease: Lessons for United States Disability Policy

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Abstract

In the 1990s, the United States reformed welfare programs targeted on single mothers and dramatically reduced their benefit receipt while increasing their employment and economic well-being. Despite increasing calls to do the same for working age people with disabilities in the U.S., disability cash transfer program rolls continue to grow as their employment rates fall and their economic well-being stagnates. In contrast to the failure to reform United States disability policy, the Netherlands, once considered to have the most out of control disability program among OECD nations, initiated reforms in 2002 that have dramatically reduced their disability cash transfer rolls, while maintaining a strong but less generous social minimum safety net for all those who do not work.

Here we review disability program growth in the United States and the Netherlands, link it to changes in their disability policies and show that while difficult to achieve, fundamental disability reform is possible. We argue that shifts in SSI policies that focus on better integrating working age men and women with disabilities into the work force along the lines of those implemented for single mothers in the 1990s, together with SSDI program changes that better integrate private and public disability insurance programs along the lines of the reforms in the Netherlands, offer the best hope of improving their employment rates and economic well-being as well as reducing SSDI/SSI program growth.

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In the 1990s, United States public policy toward single mothers shifted based on the expectation that they should and would work, if given the proper incentives. As a result of Welfare Reform (The Personal Responsibility and Work Opportunity Reconciliation Act of 1996), Aid to Families with Dependent Children (ADFC) and Temporary Assistance for Needy Families (TANF) funds to single mothers who did not work fell along with caseloads. At the same time, and despite rhetoric to the contrary, public policies toward working age people with disabilities continued to be based on the expectation that they could not and thus would not work, even if given incentives to do so. As a result, Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI) funding increased along with caseloads.

A decade later and despite a dramatic *decline* in AFDC/TANF caseloads, the economic well-being of single mothers has risen substantially and is growing along with the economy. In contrast, and despite a dramatic *increase* in SSDI/SSI caseloads, the economic well-being of working age men and women with disabilities remained stagnant. These disparate trends in well-being for single mothers and people with disabilities mirror equally divergent trends in employment and earnings among these groups, with employment and earnings of single mothers rising rapidly while employment and earnings of men and women with disabilities have plummeted. We argue that these emerging differences between single mothers and people with disabilities reflect, in part, the incentives imbedded in the public policies directed towards them.

Outcomes aside, it is reasonable to wonder whether people with disabilities are truly different than single mothers—not able to work—and thus would not fare better if disability program incentives were reformed. To shed light on this question it is useful to look at the Netherlands, a country once considered to have the most out of control disability program among OECD nations. In 2002, the Dutch initiated a series of reforms to their national disability program that put work first, ahead of benefits, while maintaining a strong but less generous social minimum safety net for those who do not work. As a result, disability caseloads in the Netherlands fell significantly. Most importantly, participation in other

benefit programs did not increased, suggesting that individuals once on disability benefits are now maintaining themselves in the labor market.

In this paper we show how caseloads and expenditures for the major cash transfer programs in the United States have shifted since the Welfare Reforms of 1996 as working age men and women with disabilities have increasingly replaced single mothers as the major target of Federal government programs for those not expected to work. We then contrast the continuing increase in United States disability cash transfer program caseloads with the recent decline in disability caseloads in the Netherlands, link these patterns to changes in disability policies in the two countries and show that while difficult to achieve, fundamental disability reform is possible.

In light of these findings, we argue that changes in U.S. disability programs are desireable and possible. We suggest that shifts in SSI policies that focus on better integrating working age men and women with disabilities into the work force along the lines of those implemented for single mothers in the 1990s, together with SSDI program changes that better integrate private and public disability insurance programs along the lines of the Netherlands offer the best hope of improving employment rates and economic well-being among working age men and women with disabilities as well as reducing SSDI/SSI program growth.

Trends in United States Cash Transfer Programs

Table 1 provides the caseload and program costs for the four major cash transfer programs available to prime working age (aged 25-59) Americans.[1] Together these four programs provide the bulk of cash benefits to working age Americans who do not work. We show values for 1982, 1993, and 2004. We choose these three years because they approximate the trough years of the last two American business cycles (1982-1993 and 1993-2004) and hence best control for fluctuations in program costs that are

[1] We define working age from 25-59 to exclude transitory changes in work and income associated with movements from school to work and work to retirement.

business cycle related.[2] The first program in the table and arguably the most comprehensive is the Unemployment Insurance (UI) program. UI is a social insurance program that provides cash benefits to those who are involuntarily dismissed from a job in covered employment. Benefit levels are a function of the previous job's wages up to some pre-determined maximum. Benefits are limited to 26 weeks but can be extended when general or specific economic conditions warrant. Extensions are generally granted by Congress. Benefits have been extended in nearly every U.S. recession. (See: Anderson and Meyer 1993; Kruger and Meyer 2002 for a fuller discussion of this program and how it has changed over the period of this analysis.)

The next three programs are limited to individuals who meet the Social Security Administrations guidelines for disability. The first of these is Social Security Disability Insurance (SSDI), a social insurance program that provides cash transfers to working age men and women, based on their past labor earnings. Individuals who have contributed into the Social Security System sufficiently to be covered by SSDI and who demonstrate that they are unable to perform any substantial gainful activity because of a medical/functional limitation related condition can receive benefits. (See: Autor and Duggan 2006 for a fuller discussion of this program and how it has changed over the period of this analysis.)

The next two disability programs are Supplemental Security Income programs (SSI) for adults and children. The SSI-disabled adults programs is a categorical means tested welfare program that provides cash transfers to adults who meet the same substantial gainful activity test as SSDI but whose total family income and assets are below a certain maximum. The SSI-disabled children program, like the SSI-disability adults program, is a categorical means tested welfare program. But it provides cash transfers to the family of a child who meets a substantial gainful activity test similar to that of SSDI, if total income and assets of the child's family are below a certain maximum. (See: Daly and Burkhauser

[2] The starting and ending years of a business cycle are somewhat arbitrary. Rather than define them directly by changes in macroeconomic growth, we use troughs in income which will, in general, lag macroeconomic growth. Ordinarily business cycles are defined by peaks but as we do not have information on disability status in 1979, the beginning peak of the 1980s business cycle, we were forced to begin with a trough year. An additional advantage of using troughs for this paper is that 2004 is a more recent year since we don't yet know what will be the peak of the latest business cycle. Our findings are not sensitive to reasonable changes to the trough years we choose to compare.

2003for a fuller discussion of these programs and how they have changed over the period of this analysis.)

The primary cash welfare program in the United States was Aid to Families with Dependent Children (AFDC) and is now Temporary Assistance for Needy Families (TANF). AFDC/TANF is a categorical welfare program that provides income tested cash benefits to single mothers with dependent children. As we will discuss, in 1996 the AFDC program ended and was replaced with a fundamentally new program, TANF, as part of the more general Welfare Reforms of 1996 (The Personal Responsibility and Work Opportunity Reconciliation Act of 1996). (See: Blank 2002 and Moffitt 2003 for a fuller discussion of this program and how it has changed over the period of this analysis.)

In addition to cash transfers, recipients of disability and welfare benefits are also eligible for health benefits under Medicare and/or Medicaid. Medicare is available to those on SSDI after a two year waiting period. Medicaid is available immediately to SSI beneficiaries and was available immediately to AFDC beneficiaries, but now must be separately applied for by TANF beneficiaries. UI beneficiaries are usually not eligible for these programs.

In 1982, UI was the largest and most costly of these four cash transfer programs. UI caseloads were greater than AFDC caseloads and both were greater than the caseloads for the two disability programs—SSDI and SSI. Ten years later, in the business cycle trough year 1993, UI caseloads had declined substantially and were exceeded by AFDC, SSDI, and SSI adults. While part of the reordering of caseloads owed to the decline in UI, all of the other cash transfer programs grew considerably over the period.[3] Growth in AFDC and the disability programs was partially the result of program rule changes that made it easier to move onto each of these programs.

Rising AFDC caseloads and program costs as well as a general change in social expectations with respect to whether mothers, including single mothers, should and would work if given appropriate incentives, led to fundamental changes in the provision of cash benefits to single mothers. The TANF

[3] Part of the decline in UI caseloads from 1982 to 1993 owed to the less severe recession in 1993 than in 1982, which reduced unemployment claims more generally and lessened the number of claims extended past 26 weeks.

rules provide much stronger incentives for States to reduce their welfare rolls and get or keep single mothers working in the labor market. In contrast to the transformation of policy targeted on single mothers, the programs targeted toward people with disabilities were little changed. SSDI and SSI continue to provide cash benefits to those who do not work and we will argue do so in a way that encourages all parties to assist people with disabilities to apply for benefits without first exploring all possible avenues to work.

The results of these two very different approaches to the vulnerable subpopulations of single mothers and people with disabilities can be seen in the 2004 data in Table 1. Less than a decade after the 1996 reform of welfare, and in the trough of the 1990s business cycle, TANF caseloads were significantly lower than their 1993 levels. They were even below UI caseload levels and well below SSDI and SSI caseloads levels. In contrast, both SSDI and SSI caseloads were substantial larger than they had been in 1993. Program costs followed caseload patterns; SSDI was by far the most expensive, followed by UI, SSI, and then TANF.

The evolution of the effect of policy on the AFDC/TANF caseload and cost changes is clearly visible in Figure 1, which shows welfare caseloads over time. AFDC caseloads rose modestly between 1974 and 1989 but then rose substantially, peaking in 1994 before falling dramatically following welfare reform. The greatest drop was during 1996-2000, the period immediately following welfare reform and also during the major growth years of the 1990s business cycle. Since the 1990s business cycle peak year of 2000, and despite an overall weaker economy, caseloads have continued to fall modestly.

Again, a very different picture can be seen for disability caseloads. Figure 2 provides a time series of caseloads for SSDI and for both the SSI-disabled adults and the SSI-disabled children programs. SSDI caseloads grew substantially in the 1970s before falling in the early 1980s. Caseload growth was modest over 1984-1989 before rising substantially thereafter. SSI-disabled adults program growth was also substantial since its start in 1974, with the greatest growth over 1984-1996 and more modest growth since then. The SSI-disabled children program had much less growth until 1989 when the Supreme Court decided the case of *Sullivan v. Zebley*. The court ruling required the broader eligibility criteria used for

SSI-disabled adults to also be used for SSI-disabled children. This led to rapid program growth until 1996 when as part of welfare reform the eligibility criteria for SSI-disabled children was decoupled from the one used for SSI-disabled adults and tightened. (For a more detailed analysis of caseload growth in SSDI see Bound and Burkhauser, 1999; for a more detailed analysis of SSI caseload growth see Daly and Burkhauser, 2003).

In 1982 both UI and AFDC had greater caseloads than SSDI or SSI. By 2004, the low point of the 1990s business cycle, Welfare Reform and an unwillingness to extend UI benefits for the longer term unemployed led to much lower caseloads than in 1982. In contrast, in 2004 SSDI and SSI both had substantially greater caseloads as these two disability based programs became the most expensive cash transfer programs targeted at those not expected to work in the United States.

The differential trends in caseloads and program costs for the vulnerable populations of single mothers and people with disabilities underscore the effects that program design and incentives have on benefit receipt. In what follows, we show that these choices can also lead to substantial differences in economic well-being in unintended ways.

Changes in Economic Well-being Among Single Mothers and Men and Women with Disabilities

Table 1 showed a waning role for benefits among single mothers and the growing role of benefits for working age men and women with disabilities. In what follows, we show how these two trends have played out in the outcomes for these vulnerable groups.

Specifically, we examine changes in median size-adjusted household income and employment for never married single mothers and working age men and women with disabilities. We choose never married single mothers because they represent a very vulnerable group that has been disproportionately represented, relative to their population proportion, in the AFDC/TANF caseloads.[4] Moreover, consistent with their lower earnings, they generally are thought to have had lower educational attainment, fewer skills, and less work experience than both the average working age person and other single mothers. As

[4] See Moffitt and Ver Ploeg (2001) for a detailed breakdown of the marital statuses of AFDC recipients.

such, they are the most difficult among single mothers to integrate back into the labor market. We compare their pre- and post-welfare reform economic well-being to that of people with disabilities.

Driven primarily by a substantial increase in employment, the economic well-being of single mothers is higher today than it was before welfare reform. Working age people with disabilities have not fared as well. The substantial increase in SSDI and SSI cash transfer benefits going to working age men and women with disabilities over the past decade was almost entirely offset by declines in their work effort. As a result their economic well-being stagnated over this period and the gap between their economic well-being and the well-being of persons living in working households grew.

Figure 3 compares trends in median household size-adjusted income for working age single mothers and men and women with disabilities with the overall working age population and working age individuals living in working and non-working households (for the income values underlying these trends see Appendix Table 1A).[5] Not surprisingly the median incomes of our three vulnerable groups lie between the median incomes of all working age individuals living in working and non-working households. The incomes of all groups have fluctuated over time. In 1982 the real income of the median working age man with a disability was $18,594 about half way between the median income of those living and not living in a working household and well below $30,302, the median of all working age people. The median income of women with disabilities in 1982 was $16,852 somewhat below that of men with disabilities and the median income of single mothers even lower at $14,185 and much closer to that of the median of those in non-working households.

The median income of both men and women with disabilities was flat over the 1980s business cycle falling slightly to $18,065 and $16,517, respectively, by 1993 before they both rose somewhat over the 1990s business cycle to $19,845 and $18,572, respectively, in 2004. This is a very similar pattern to that of the median person in a non-working household over the period. In contrast, during this time, the median income of all working age persons increased to $34,111 in 1993 and to $37,739 in 2004. So by

[5] Working households are those in which the total number of hours worked by all members is at least 200. In keeping with the literature we adjust income for household size throughout our analysis. The details of this adjustment are provided in the Data Appendix.

the end of the period, the median incomes of both men and women with disabilities were much closer to the median income of those living in non-working households than to the median income of those living in working households.

A very different experience is observed for single mothers. The median income of single mothers rose slightly to $15,812 in 1993 and then rose dramatically to $20,281 in 2004 with most of the increase coming between 1996 and 2000. Hence, the median income of single mothers which was closest to the median income of those living in non-working households in 1982 was by 2004 greater than the median income of men and women with disabilities. Since then, the median incomes of all groups have been relatively flat.

To get a better sense of the income changes experienced by each of these subgroups over time, Figure 4 plots each group's median income normalized to 1982. That is, we divide median income in each year by its value in 1982 and multiply it by 100 to show its growth from 1982 to any given year. This allows us to easily compare changes in income across groups. The growth in median income for all working age people has varied with the business cycle, rising in expansions and falling during contractions. Comparing trough to trough (1982 to 1993) their median income grew by 12.6 percent and over the trough years 1982 to 2004 it increased by 24.5 percent. Growth patterns in median income of men and women with disabilities are much lower. Between 1982 and 1993 both men and women with disabilities experienced negative growth; over the period their median incomes declined to 97.1 and 98.0 percent, respectively of what they had been in 1982. Over the entire period 1982 to 2004 their incomes grew more slowly than average, increasing by 6.7 and 10.2 percent respectively. In contrast, the growth patterns of single mothers were much different. Real median income increased by 11.5 percent between 1982 and 1993, only slightly below average. Following welfare reform and in the heat of the 1990s expansion, single mothers experienced very rapid gains in income, boosting their gains over the entire period to well above those of all working age people—43 percent from 1982 to 2004.

Figure 5 provides additional evidence of the relationship between growth in employment and increased income. It provides the employment rates of the entire working age population and the

employment rates of the subsets of this population who are single mothers, and men and women with disabilities. The vast majority of the working age population works. While there is some variation within business cycles there is less across business cycles, with 77.5 percent employed in 1982, 81.4 percent employed in 1993 and 81.0 percent employed in 2004. All three of our vulnerable populations have lower yearly employment rates. Single mothers consistently have employment rates above those of men or women with disabilities. But there was little movement in their employment rates which increased only slightly from 66.0 in 1982 to 70.0 in 1993. Over this same period the employment rate of men with disabilities drifted downward from 41.0 percent to 36.0 percent and the employment rate of women with disabilities rose slightly from 27.6 percent to 31.9 percent. But beginning in 1993 and especially between 1996 and 2000 the employment rates of single mothers grew substantially and since 1998 they are very near the overall average for the working age population and reached 79.5 percent in 2004. In contrast, the employment rates of both men and women with disabilities drifted downward after 1993 and were at 27.0 and 25.0, respectively, in 2004.

It is the rise in the employment of single mothers that accounts for the rise in their economic well-being despite the dramatic decrease in AFDC/TANF caseloads and expenditures over this period shown in Table 1. It is the decline in the employment of working age men and women with disabilities that accounts for the stagnation in their economic well-being over this period despite the dramatic increase in SSDI/SSI caseloads and expenditures over this period.

Path to Disability Benefits in the United States

To understand the factors driving growth in benefit receipt and declines in employment among working age men and women with disabilities it is important to consider the environment that individuals with a health shock operate within. All major industrialized nations provide some form of insurance against the onset of a health condition that limits or prevents work. In general, these insurance policies involve complex networks of public and private programs that blend accommodation, rehabilitation, and return to work goals with last resort cash transfers once it is determined that work life is over. Balancing

the goals of encouraging work and providing earnings insurance is difficult. Inevitably the balance struck affects system design, which in turn influences the behavior of workers and employers as they respond to a health shock. Hence, growth in disability program rolls reflects both the underlying health of the population and the decisions that individuals and employers make when a health shock occurs. To get a better understanding of the mechanisms that have resulted in U.S. disability programs, we consider how agents (employees, employers, private insurance companies, and government providers) interact and react to such health shocks. Since the actors and paths for those moving onto SSDI are different from those considering SSI, we examine these programs separately.

SSDI: from work to disability benefits.

Figure 6, panel A shows how workers who have a sufficient work history to be covered by SSDI make these decisions and their implications for SSDI caseloads. First and foremost, the decision to stay in the workforce versus seeking long-term private insurance or applying for SSDI will depend on the health shock and its impact on one's functional abilities. But health is not the only factor that matters. Many workers' decisions will also depend on the social environment they face. Hence the greater the worker's likelihood of being offered accommodation and rehabilitation, the greater the likelihood that the worker will try to continue on the job or return to work. Likewise, the greater the worker's future wage earnings, the more likely the worker will try to continue working.[6] But just as environmental factors can encourage a focus on work following a health shock, these factors can also discourage future work. For example, the higher the likelihood that the worker will be accepted onto long-term private disability insurance rolls or onto the SSDI rolls, the more likely the worker is to abandon the labor market and apply for such benefits. And, the more of the worker's future wage earnings these programs' benefits replace, the more likely the workers is to apply for them.

[6]Several factors affect future earnings. Future wage earnings are greater: the younger the worker and the more years of work that lay ahead; the greater the wage rate; and the less likely that the worker will experience future unemployment. Workers who are not employed at the time of a health shock are generally less likely to try to return to work since their future wage earnings, other things equal, are lower than workers who are employed at the time of their health shock.

This is all simply to say that social insurance has the same potential "moral hazard" problem as private insurance. The greater the protection insurance provides against a bad outcome, the more likely that that bad outcome will occur. Hence those who have fire insurance are more likely to experience a fire and those who are protected against loss of earnings following a health shock are more likely not to work after such a shock. But having said this, it is also true that the houses of most people who have fire insurance do not burn down and most workers who experience a work limitation do not transform themselves into candidates for SSDI benefits, since the health-based criteria for eligibility are not trivial. Nonetheless, workers with a disability who are having difficulty with their current jobs or who are no longer working will be influenced by the relative rewards provided by disability benefits in deciding whether to try to remain in the labor force or apply for SSDI benefits. For some portion of this population, the length of time they continue on the job depends on the social institutions that are in place at the onset of their disability as well as their specific health/functional limitation problems. (For a review of this literature, see: Bound and Burkhauser (1999) and Stapleton and Burkhauser (2003). Additional research since then includes: Autor and Duggan 2003, 2006)

Most studies of the behavioral consequences of disability policies have focused on how workers respond to the inevitable "moral hazard" of social insurance but employers' behavior is also affected by how social insurance is designed. Figure 6, panel B provides a useful way to think about how employers will react to one of their workers' health shock. That is, how they weigh the costs and benefits of providing such a worker accommodation and/or rehabilitation to delay an exit from employment or encourage a return to work versus encouraging them to move onto private disability insurance and eventually apply for SSDI benefits.

First and foremost, employers' decisions will depend on the health shock and its impact on their worker's functional abilities. In making these judgments, they will consider a variety of factors including the costs of providing accommodation and rehabilitation relative to paying for disability transfers and finding a replacement worker. The lower the accommodation costs and the higher the probability that they will be successful, the more likely an employer is to provide them. The more that the worker

receiving benefits (workers' compensation, short- and, long-term private insurance, and public disability) affects insurance premiums, the more likely an employer is to invest in bringing that worker back to work following a health shock. And, the more expensive it is to replace that worker, the more likely it is that an employer will invest in returning a worker who experiences a health shock back to work.

To understand how all the incentives discussed in Figure 6, panels A and B influence applications for SSDI it is useful to consider the path that leads Americans with disabilities to apply for benefits. Once a disability begins to affect their ability to work, important work-related decisions often must be made both by workers and their employers. For some, work is immediately impossible under any conditions. But for others, interventions can delay their movement out of the work force. If the disability is the result of a work-related incident, then the worker and employer are subject to State Workers' Compensation (WC) rules which provide short-term cash benefits to workers and influence the decisions of employers and employees with respect to accommodation, rehabilitation, and return to work versus the provision of cash benefits.

Most United States employers use private insurance providers to evaluate their employees in this regard from the beginning of a disability's onset. Because WC is experienced rated and hence the additional costs of providing WC benefits to their workers are ultimately borne by employers, employers will make appropriate decisions with respect to the provision of accommodation and rehabilitation that lead a worker to return to work. Likewise, because WC benefits are less than their wages, especially for higher wage earners, workers will have an incentive to try to return to work.

But not all workers will return to work after a temporary period of WC benefits. When the employer also provides long-term private disability insurance, which is also experience rated, these same economic incentives lead, from the moment a functional limitation begins to impact on work performance, to more appropriate decisions in the trade-off between accommodation, rehabilitation and return to work versus the payment of long-term disability benefits. Private sector insurance providers are the agents who from the beginning make these case management decisions.

However, because SSDI is not experience rated and hence employers do not directly bear the additional costs when their workers move onto the SSDI rolls, employers and their insurance agents will not take these additional costs into consideration in making their decisions about accommodation, rehabilitation and return to work and will invest less in these activities than appropriate as well as actively aid those workers who they determine are eligible for private long-term disability benefits to move onto the SSDI rolls.

For the majority of such workers who are not able to perform any substantial gainful activity and meet SSDI eligibility standards, this help is appropriate. But when these workers could work and do not meet eligibility standards, or more likely, if these workers could have worked, if given the appropriate mix of accommodation and rehabilitation, these employers' actions inappropriately increase SSDI caseloads and shift the costs of long-term disability benefits from the firm and employee to the SSDI program.

Once again, because permanent private disability benefits as well as SSDI benefits are less than their wage earnings, especially for higher wage earners, workers will have an incentive to try to return to work. But to the degree that private insurers provide less accommodation and rehabilitation than appropriate and assist workers in their efforts to get onto the SSDI rolls, workers will be more likely to focus on this path of permanent exit from employment than try to return to work.

When the disability is based on a non-work related condition, short-term cash payments are only guaranteed in seven States in the United States. Nevertheless most firms, even when not mandated to do so, provide their employees with sick days and vacation days that initially offset lost wages due to a disability. Far fewer firms provide long-term disability insurance. But those firms that do offer such benefits are incentivized to act along the same lines as discussed above. Because SSDI is not experience rated, these firms and their workers will under-invest in accommodation and rehabilitation and hence put additional pressure on the SSDI program.

But for the majority of United States workers whose employers do not provide private disability insurance, their only option for long-term disability cash transfers, unless they have purchased long-term

disability insurance on their own, is SSDI. Such workers, when they use up their sickness and vacation days, must return to work. If they do not and they are dismissed from their job, they will be eligible for unemployment benefits but these benefits are temporary. Note however, even for these workers, it is in their firms' interest to provide some accommodation, since replacing them, especially if they have special skills that are unique to the firm, will result in additional costs in hiring and training a new worker. This may also be the case, if their poor treatment by the firm affects workplace morale and the firm's reputation. In addition, the Americans with Disabilities Act of 1990 requires firms to provide reasonable accommodation for workers with disabilities.

But once again, for this majority of American workers, because SSDI is not experience rated, their employers will not directly face any of the added cost of moving one of their workers onto the SSDI program and no agent will be assigned to manage their case in a way that provides the appropriate mix of accommodation and rehabilitation relative to long-term disability transfers. Rather it is primarily left to the worker to make the decision on whether to continue to pursue employment or focus on getting on the SSDI program, once their UI benefits are exhausted.

Most workers who experience a health shock on the job that limits their ability to work are able to continue on the job. For them SSDI may be inevitable but the movement onto the rolls can be delayed depending on the social institutions they face. In addition to their health condition they will also consider how likely it is that they will be accepted onto the program if they apply—the SSDI allowance rate; the level of benefits that they will receive if they are found eligible—the SSDI replacement rate; their future labor earnings if they continue to try to remain in the labor force; and their likelihood of receiving accommodation. And the amount of accommodation they receive will in turn depend on the costs employers bear for providing it versus yjr increase in experience rate premiums they must pay for workers' compensation, short- and long-term private disability insurance, and SSDI.

SSI- Disabled Adults: another path to disability benefits

Figure 7, panels A and B provide similar decision trees for potential candidates for the SSI-disabled adults program and for the state agencies with which they interact. While the SSDI and SSI–disabled adults programs share the same medical standards for eligibility, they focus on two very different populations. As discussed above, SSDI primarily provides insurance against lost earnings for workers with an established work history and its monthly benefits are progressive so that they replace a larger share of the monthly wage earnings of lower wage workers. Hence for most workers who meet the medical test and the earnings history test for SSDI benefits, the maximum benefit they could receive from the SSI-disabled adults program will be below their SSDI benefit. Furthermore, each dollar of SSI benefits is cut, dollar for dollar, for each dollar of SSDI benefit they receive and SSI also has a low asset limit. So while some SSDI beneficiaries do receive SSI-disabled adults program benefits, this is a relatively small population.

As such, most working age people who are potential candidates for the SSI-disabled adults program have little or no work history either because they are young or they are older but have a weak educational background and few marketable job skills. Thus for this potentially eligible population, having a work limitation is only one of the factors preventing them from working. It is likely that their low job skills make their potential wages low and their unemployment rates high even if costless accommodation were provided to offset their disabilities. Less than 30 percent of SSI-disabled adult beneficiaries were working at the time of onset of their disability. (Bound, Burkhauser, and Nichols, 2003) So, for them, the issue is, given very weak job market skills, how do they manage some minimum level of economic well-being. Those who are working face the same employment-related issues discussed above (see the work path route in Figure 7, panel A). However, they are much more likely to be employed by a firm without private disability insurance; less likely to be candidates for accommodation and rehabilitation by their employer, since they on average have shorter work histories with the firm and are less costly to replace; and they are also less likely to have overall work histories that make them eligible for SSDI benefit consideration. But like SSDI-covered workers they will also weigh

the advantages of a continued struggle in the labor market relative to, in their case, application for SSI-disabled adult benefits. Since SSI benefits also offer immediate access to Medicaid, movement onto the rolls can be an attractive path for some of these workers.

But the overwhelming majority of SSI-disabled adult applicants do not even have this tenuous tie to an employer. Over 50 percent are already receiving means tested government transfer program benefits at the time they apply for SSI-disabled adult benefits. They also do not have a strong private network of income security. Only 33 percent are married. And less than 20 percent of applicants report that their spouse has labor earnings. (Bound, Burkhauser, and Nichols, 2003) For these individuals, the decision to apply for SSI-disabled adults benefits is affected by the severity of their health shock along with environmental factors such as the probability of getting or continuing on welfare benefits, the probability of getting onto SSI, and the replacement rate of SSI benefits relative to the income network of welfare benefits, family support, and potential future earnings (non-work path in Figure 7, panel A).

Hence in many senses this working age, mostly single, low skilled and poor population is closer to the general welfare population (primarily single mothers in the U.S.) than to the SSDI population. The similarities of the welfare and SSI-disabled adult population make it important to consider the potential interactions between the two programs (AFDC/TANF and SSI) for both individuals and state administrators. As in the case of SSDI, disincentives to provide accommodation and rehabilitation and return to work again arise, but now they do so with respect to State behavior rather than firm behavior (Figure 7, panel B). What remains a common outcome however is the potential for overuse of a no-work benefit program that was intended to be a path of last resort.

To see how welfare reform can affect SSI-disabled adults program applications it is useful to think about how TANF works. Welfare Reform transformed public support for single mothers by time limiting TANF benefits and subsidizing work via the Earned Income Tax Credit and other pro-work policies. But welfare reform also transformed the behavior of States, giving them far more control over their own welfare budgets while enforcing Federal guidelines about work first incentives. A major feature of Welfare Reform was the devolution of Federal funds to the States via block grants with

relatively few mandates on their use, as long as they were broadly targeted on the poor. Even more important, in doing so, in establishing the size of these block grants and how they would change over time, the Federal government effectively promises States it would continue to provide the same real level of welfare funding they were receiving in 1996 even if AFDC/TANF expenses fell, which as we saw in Table 1 happened.

The States use part of these extra funds for work based programs targeted at single mothers but they also are able to use them for more general State programs targeted at their low income population. But the key point from the perspective of the States is that these block grant payments shift the entire burden of paying for the marginal poor person in their State on them with one major exception—SSI.

The logic of this block grants system is that it allows States to retain all the savings from moving members of their welfare population into employment. In this way it is in the State's interest to focus more resources on work-based programs. The substantial increase in the employment of single mothers after 1996 was in part the result of the increased work incentives that single mothers faced. But it was also caused by the increased interest of States in getting them into employment.

However, one inevitable consequence of Welfare Reform was that it gave states an incentive to move their most difficult to employ working age population onto the SSI-disabled adults program. The reason for this behavior is that States are not "experienced rated" based on the number of their poor that they help onto SSI. Like employers who face none of the marginal costs of moving their workers onto SSDI, States provide less accommodation, rehabilitation, and training for working age people with disabilities than they would, if they were responsible for the long-term last resort SSI payments to this non-working population.

SSDI/SSI: the problems of determining eligibility

The influences described in Figures 6 and 7 imply that the disability cash transfer caseloads of any country will depend not only on the underlying health/functional limitations of its working age population but also on the social institutions in place following the onset of a disability. As we have seen,

exits from the work force in the United States during prime working ages via SSDI and SSI have grown over the business cycles of the 1980s and 1990s, despite little evidence that the underlying health conditions of working age people have gotten worse.(See Stapleton and Burkhauser 2003 and Houtenville, Stapleton, Weathers, and Burkhauser, forthcoming for reviews of the literature on changes in the prevalence and severity of disability among the working age population). Rather, it is public policies that are a more likely cause of these changes. Historically there has been great concern that the disability cash transfer system could experience rapid growth in caseloads and expenditures with no underlying change in health.[7]

At the core of this concern is the difficulty of establishing rules and administrative procedures to determine who among those who apply for benefits should receive them. It is much harder for a disability insurance program than for a retirement program to do so since age, while an arbitrary measure of inability to work, is at least relatively easy to verify. Disability is a complex concept that has both health- and work-related components that make it far more difficult to conceptualize or verify. The core of the problem is that while it is easy to verify that a person is not employed, it is far more difficult to clearly and consistently determine the reason for this lack of employment and establish that the health-related reasons are sufficiently related to the lack of employment to justify entry onto the disability rolls. One easy way to screen for benefits is to require a waiting period between the onset of the condition and eligibility for benefits, and to record how much the person is actually working during this period. SSDI/SSI have a five-month waiting period that serves this purpose and is consistent with its aim to be a program of last resort for working age people with disabilities. But even after five months, there can be many reasons why someone is not employed and not all of them are related to health at their core.

So, either a private physician or a physician employed by the system must determine the seriousness of the health condition with respect to the person's ability to work. Doctors can evaluate

[7] Such concerns were partially responsible for the long delay between the establishment of the United States Social Security Old-Age and Survivors program in the 1930s and the creation of SSDI in the late 1950s and of SSI in the early 1970s.

health conditions as they relate to a norm, but there is no unambiguous way to relate health condition to one's ability to work. There is plenty of evidence that persons with a severe functional limitation—blindness, deafness, quadriplegia etc. – can and do work, in part because their employers provide some accommodation, in part because it is in their economic interests to do so, but for many, because ultimately they possess that internal drive to do so. Alternatively, there is evidence that those with much less severe functional limitations are not successful candidates for accommodation and rehabilitation not only because it is less in their economic interest to do so, but also because they lack that same internal drive. Hence, it is hard to predict a specific individual's ability to work based on medical or functional norms and it is especially difficult to verify the norm that should be chosen and to consistently apply it. For all these reasons it is difficult in such a system to establish unambiguous tests for eligibility and it is difficult for disability gatekeepers to unambiguously use a test to establish eligibility. Under such circumstances, factors other than health (e.g., general economic conditions, tightening of eligibility standards in other programs such as welfare) can influence the decision. As a result, disability gatekeepers have much greater discretion in carrying out established criteria than do those who make decisions related to retirement programs.

The United States has a multi-tier evaluation system that is federally financed and whose policies and procedures are established at the national level. But these policies and procedures are administered by the States. After establishing that a person has a sufficient work history to be eligible for coverage and that he/she not working and has not worked for at least five months following the onset of disability, they evaluate the applicant's condition based on a set of medical listing and functional limitations. Certain conditions are more difficult to norm than others. Mental conditions and musculoskeletal conditions are the most difficult to consistently determine and leave the most room for gatekeeper discretion. For applicants who do not meet this test for benefit eligibility the system offers a less stringent test based on the individual's vocational characteristics—age, education level, type of jobs held, etc—that make it more likely that older, less educated and blue collar workers will be eligible. The use of this more generous criterion for eligibility provides additional gatekeeper discretion in cases that are close calls on medical

grounds alone. In addition, the United States has an appeals process that at its Administrative Law Judge stage allows the applicant to be represented by counsel and bring in expert witnesses. This added level of evaluation allows for even more discretion by gatekeepers on close calls. And it provides an opportunity for private insurers, in the case of SSDI, and states, in the case of SSI, to offer additional legal assistance to applicants on their rolls, to aid them in moving onto SSDI and SSI. Those who are rejected at this stage are permitted to reapply anew at a later date.

As with private disability insurance coverage, a public disability insurance system has to make decisions as to whether cash transfers or rehabilitation services should be provided. However, in the United States, as discussed above, there is little or no coordination between those who provide accommodation, rehabilitation, and return to work services earlier in the disability process and SSDI. But even at the point that SSDI begins to evaluate eligibility for cash transfers, no evaluations with respect to rehabilitation services are considered. Such services are administered by an entirely different group of gatekeepers in the United States with little or no coordination between them and the gatekeepers who administer the disability transfer system. Hence there is little or no coordination between short-term disability transfer payment schemes currently mandated in seven States and SSDI/SSI. Nor is there coordination between WC programs and SSDI/SSI or between private employers' decisions with respect to provision of accommodation and/or private short- and long-term benefits and SSDI/SSI.

All of these factors then enter into the way that front-line disability gatekeepers respond to applicants and to the voices of those at higher levels of administrative responsibility who are attempting to control the overall flow of people into the system. In periods of economic downturn, the number of workers who leave their jobs rises and applications to transfer programs increase. In the United States, with generous disability benefits relative to other alternatives, tremendous pressure is put on the disability system to provide income to those workers. The pressure may lead to a specific easing of the rules or simply to a change in the interpretation of the rules. These are exactly the kind of pressures that can lead to disability transfer benefits being provided to those whose reasons for not working would make them

more logical candidates for longer term unemployment benefits, more general welfare programs or greater rehabilitation efforts.

Trends in Disability Caseloads per Worker

Figure 8 compares caseload growth in these two major United States disability transfer programs with caseload growth in the country whose disability transfer system has been most commonly regarded as "out of control" among OECD nations—The Netherlands.(This figure is an extension of one found in Aarts, Burkhauser, and De Jong,1998) As we will discuss later, the Netherlands faced many of the same pressure points described earlier for the United States, although with far greater intensity. Major reforms in the Dutch disability system in 2002 appear to have eased many of these pressure points and caseloads per worker have declined. Later we will look more closely at these reforms and consider how they might inform the debate regarding U.S. disability policy.

For now, we use Figure 8 to compare the trends in U.S. and Dutch caseloads. The figure reports the levels and trends in the number of the working age people receiving disability transfer benefits per 1,000 employed persons for the U.S. and the Netherlands. Because ultimately a country's workers provide the resources made available through government disability transfers, this is a useful measure of the relative burden of the disability transfer population on the working population in a given country. While it is only one means of approximating the importance of disability policies across countries, it nonetheless nicely captures the dramatic differences that policies make in the levels and trends in their disability caseload per worker ratio across time. Underlying this comparison is the notion that differences over time in caseloads across countries are more likely to be related to differences in policies than to differences in health.

The caseload per worker ratio has always been greater in the Netherlands than in the United States but on average both have grown substantially since 1970. But while the United States increases mainly occurred in the 1970s with a relatively level period in the 1980s and then relatively rapid growth thereafter, in the Netherlands growth was extremely rapid in the 1970s and early 1980s before coming

down in steps in 1987, 1994 and most recently in 2002. The reforms in the 2002-2006 period in the Netherlands together with the continuing rise in caseloads per worker in the United States since the 1980s appear well on the way to bringing caseload per worker in the Netherlands below these of the United States in the near future. A more careful look at the trends in the United States suggest that policy changes are likely responsible for these caseload per worker ratio changes over time.

Since its start in 1957 the SSDI program has grown substantially relative to the working population as has the SSI program since its start in 1974. Despite its strict eligibility criterion that provides benefits only to those "unable to perform any gainful activity", the 1970s were a time of substantial growth in the United States disability population. First, and most importantly because in 1974 SSI provided a minimum guaranteed income to adults with disabilities as well as to the families of children with disabilities. But SSDI also grew substantially over the 1970s. One reason for the increase in SSDI caseloads over this period was that Congress changed the SSDI benefit calculation so that the net replacement rate for a disabled worker with median earnings increased from 35 percent at the start of the 1970s to 49 percent at the end, with the great majority of that increase occurring in the early 1970s.

But another, more important reason for the increase in both SSDI and SSI was that the strict health criterion used to determine eligibility for both programs was liberalized in the early 1970s by the increasing use of an individual's vocational characteristics in that determination. This allowed market conditions to enter into the determination, and fringe workers--those who were older, less educated, and with a history of physical labor and, hence, less likely to be employed as their health worsened--were more likely to be ruled eligible.

Growth in those transfer programs slowed in the second half of the decade. The disability program population peaked in 1978 and actually fell over the next five years because of the substantial tightening of eligibility standards--especially the reduced use of vocational characteristics--under the Carter administration and the major reevaluations of already eligible recipients in the early years of the Reagan administration. Thus, despite the most serious economic downturn since the 1930s in 1982 and the pressure that it put on the disability system, disability rolls were 10 percent lower in 1983 than in

1980. The widespread reevaluation of those already on the disability rolls ended in 1983 as first the courts and then Congress restricted the power of the Social Security Administration to reevaluate beneficiaries. The tightening of standards resulted in a noticeable decline in the ratio of disability caseloads per 1000 workers in 1981 and 1982. But their subsequent easing led to a substantial increase in this ratio as the country moved into recession after 1989, and this increase continues to this day. SSI program changes in 1996 temporarily reduced the growth in this ratio but since 1997 the United State disability caseload per 1,000 workers has increased from around 62 to 88 per 1,000 in 2006.

One reason for this as can be seen in Figure 9 is that the use of vocational characteristics that slowed in the early 1980s has tripled since 1983 so that the majority of SSDI judgments are now based on this more nuanced labor market conditions argument because the severity of the health conditions do not warrant a positive decision on their own merits.

Another likely cause of disability program growth is seen in the shift in the impairment classifications among initial awardees. As can be seen in Figure 10 not only has the caseload per worker ratio been steadily rising since 1985 and with it increased use of the vocational characteristic criterion but there has been a marked shift in the type of health condition on which awards have been made. Since 1981 mental conditions have increased from 10 percent to 25 percent in 2001 before trailing off slightly to 23 percent in 2006 as a percent of new SSDI awards and musculoskeletal conditions increasing from 16 percent to around 27 percent over the same period. In 2006 these two conditions accounted for one-half of all new SSDI awards. As discussed above, these two conditions are the most difficult to evaluate with respect to eligibility for disability benefits. While part of the reason for the rise in mental conditions is related to the change in the standards used to determine eligibility in 1985 (note the spike in 1986 as those denied in past years were first accepted onto the program in that year) the rest is related to changes in the actions of disability gatekeepers including Administrative Law Judges in their more generous interpretations of eligibility under these criteria over time. A final potential source of program growth is the number of cases that reach the Administrative Law Judge level. Since 1977 requests of this type have tripled. See Figure 11.

Another reason for concern over this increase in disability caseloads per worker is related to the actions of states since the passage of Welfare Reform. As discussed above, states have a new incentive to move their General Assistance and AFDC/TANF population onto the SSI rolls. Bound, Kossoudji, and Ricart-Moes (1998) suggest that this is exactly what happened in Michigan when their General Assistance program was cut. Stapleton et al. (1998); Livermore, Stapleton, and Zeuschner (1998) show that at the gatekeeper level there is a movement from General Assistance and to a lesser extent from AFDC/TANF onto the SSI rolls.

Business cycles also affect the application and acceptance rates of SSDI/SSI programs. Over the business cycle peak to trough years—1989 and 1992—the caseload per worker ratio rose substantially in the United States. This was also the case over the business cycle peak to trough years 2000-2004. However this does not have to be the case. As can also be seen in Figure 8, the caseload per worker ratio fell over the peak to through years of 1979-1992. Stapleton et al. (1998) find that application and acceptance for SSDI benefits both rose over the 1989-1991 recession years. But over what was the most serious recession covered in Figure 8 shows that while applications increased, this did not result in additions to the rolls since the gatekeepers were signaled by Congress and the administration to resist. None of these ebbs and flows in application and acceptance rates can be explained by changes in underlying United States health conditions.

Today many of the factors synonymous with increased program participation that lead to the last failed attempt to control SSDI and SSI programs growth in the late 1970s and early 1980s are now in play. The use of vocational criteria by successful applicants is much higher than in the 1970s, as are the percentages of those receiving benefits based on the most difficult medical conditions to objectively verify—mental illness and musculoskeletal conditions. In addition, an increasing number of applications are being decided at the later stage of the determination process—the Administrative Law Judge stage—where it is possible for applicants to be represented by counsel—and the decisions presumably are less clear cut. And a new force has been added to these factors; the Welfare Reforms of 1996 have encouraged States to move their welfare population onto the SSI rolls and hence shift the costs of

supporting them to the Federal government. In doing so, they add to the costs that private insurance firms already are shifting to the Federal government when they, acting as agents both for employers and their workers, help the firm's disabled workers onto SSDI. Given the failure to achieve program reform in the early 1980s and the loosening in program eligibility standards that has resulted since then, is it realistic to believe that disability policy reforms are possible?

To answer this question we now turn to the Netherlands whose disability caseload per worker ratio has varied even more than that of the United States over the last three decades. A brief history of Dutch disability policy changes over this period shows how important they have been in affecting the size of their disability transfer population and offers some clues as to how United States policy might be changed.

Path to Disability Benefits in the Netherlands

The disability system in the Netherlands like the United States contains both a social insurance program that protects workers against lost labor earnings and a program that provides a social minimum for disabled adults with little or no work history. A separate social minimum scheme for the disabled self-employed (WAZ) was stopped in 2004. Their social insurance program (WAO/WIA) provides cash transfers to working age men and women based on lost labor earnings. They have no separate Workers' Compensation program. Rather they have a longer term disability transfer program that together with sickness benefits that all private firms must offer to their workers provides a comprehensive system of both partial and total disability benefits to workers regardless of how or where their disability occurred. They also have a categorical disability-based welfare program (Wajong) that unlike the general welfare scheme is not means tested. This program then is similar to the SSI-disabled adults program in that it targets men and women whose disabilities occurred prior to their entrance into the labor force and are severe enough that they have not been employed in full time employment as adults.

Like the U.S. disability system, the Dutch have struggled to find a consistent way to establish disability eligibility rules and to consistently administer them in order to achieve the appropriate mix of

accommodation, rehabilitation and cash transfers for their working age population with disabilities. The result of this struggle has been a disability system whose protection against lost wage earnings has always been more generous than that of the United States and one that has been susceptible to substantial increases in caseload over time. Figure 12 traces the rapid rise in both their social insurance and welfare caseloads between 1976 and 2007.In the 1970s the Dutch disability insurance benefits and caseloads grew dramatically and their disability system was universally seen as out of control. Its first level of protection against income loss from work is its sickness benefit (The Dutch universal short-term disability system). At that time these payments replaced 80 percent of net of tax wage earnings for up to one year, but most employees (90 percent) and all civil servants had the rest of net of tax earnings replaced by collective bargaining agreements with their employers. Employees who were still receiving those benefits after one year were then evaluated to estimate their "residual earnings capacity." If they had a chronic condition that caused a reduction in their capacity to perform work commensurate with their job training and work history, they were eligible for disability benefits. Those judged partially disabled were eligible for partial benefits; the minimum degree of impairment for eligibility was 15 percent. In the 1970s replacement rates ranged from 9 percent of before-tax earnings to 80 percent for the fully disabled.

To determine the level of disability benefits it was necessary to determine which jobs were commensurate with the worker's current health-impaired job skills. But this estimate is only that, and will diverge from actual earnings if the partially disabled person is not employed in such a "theoretical" job. In that case, it is difficult to disentangle lack of earnings or employment due to the health condition from that due to general market conditions, discrimination, or an unwillingness to work.

What caused the enormous increase in Dutch caseload per 1,000 workers in the 1970s seen in Figure 8, however, was an article in the Disability Insurance Act that required that "labor market consideration" be part of the final determination of partial benefits. Unless proven to the contrary by the disability gatekeepers, it was assumed that lack of employment by a partially disabled worker was the result of discriminatory behavior. As a result, the ensuing administrative practice was that unemployed partially disabled persons were treated as if they were fully disabled. That interpretation of the law made

assessing theoretical earnings capacity unnecessary since a minimum impairment of 15 percent was sufficient to entitle a person to full benefits.

The relative generosity of the system increased for another reason in the 1970s. While the 80 percent cap on after-tax wage earnings remained in place over that period, the after-tax replacement rate rose because disability recipients did not pay social security taxes on their benefits. These social security taxes were raised substantially in the 1970s; in large part because of the surge in disability benefit payments so that while the average real after-tax wages of workers rose by only 7 percent, they grew by 16 percent for the average disability beneficiary over the decade. These increases in eligibility and in generosity of the system had a profound effect on the size of the disability transfer population. It nearly tripled over the decade.

The serious recession of the early 1980s and the growing costs of the disability system put enormous pressure on the Dutch government to reduce the growth of disability transfers. Reforms initiated between 1982 and 1987 were to be the first of three major efforts to regain control of the Dutch disability transfer system over the next two decades. By 1985 a series of cuts in the before-tax replacement rate had effectively lowered it from 80 to 70 percent of earnings for both new entrants and current beneficiaries. The cumulative effect of those cuts was a reduction of almost 25 percent in the net real transfer income of disabled workers over the first five years of the decade relative to a drop of 10 percent in net earnings of workers who remained in the workforce. For the median worker after-tax replacement rates dropped from 87 percent at the end of the 1970s to 70 percent at the end of the 1980s. But that did not totally halt system growth, and after sustained public debate, the Dutch parliament passed additional disability amendments that became effective in 1987. The most important was the abolition of the labor market consideration rule. But as we can see in Figure 8, while these reforms reduced the ratio of beneficiaries per 1000 workers somewhat over this period, it was still greater than 100 per 1000 workers in 1987, compared to around 40 for the United States, and far greater than at the start of the 1970s.

Despite the legal ban on including labor market considerations in their disability assessments, disability adjudicators still tended to either grant or deny full benefits. Denial rates remained quite low suggesting that the legal change did not stop the de facto use of labor market considerations in the adjudication process. So after 1988, the disability caseload per worker ratio again began to grow until 1994 when another set of reforms was put in place. (See: Aarts and DeJong, 1992, and Aarts, Burkhauser and DeJong, 1992, for a fuller discussion of this early period of disability policy in the Netherlands discussed above.)

The 1994 reforms included a further tightening of eligibility criteria. The concept of "commensurate" employment was broadened to include all generally accepted jobs that are compatible with one's residual capacities irrespective of former vocational status, work history, and education. In addition, the causal relationship between impairment and disablement had to now be objectively assessable. And finally, disability benefit status was limited to a maximum of five years at which point it had to be reassessed. Benefit levels were also cut after a certain period on the program depending on one's age at the onset of disability. Most provocatively, a review of the disability status of current beneficiaries who were younger than age 45 was also implemented and these reviews were based on the new and more stringent eligibility criteria.

In addition, for the first time firms were made responsible for the first six weeks of sick pay. The introduction of this type of privatization of the disability system was unprecedented in the Netherlands and it was the first serious attempt of Dutch disability policy to encourage firms to provide more accommodation, rehabilitation, and return to work for their employees as an alternative to simply pushing them onto the disability transfer rolls. The mandate for firms to bear the full responsibility for sick pay was extended from six weeks to one year in 1996. As can be seen in Figure 8 the result of this set of reforms, and most especially the reviews of current beneficiaries, was a marked decline in the disability caseload per worker ratio between 1993 and 1997 to slightly below 100 for the first time since 1977. But the decline in this ratio stopped and by 2001 it had once again climbed to over 100 beneficiaries per 1000

workers. (See Aarts, Burkhauser and De Jong, 1996, 1998 and Marin, Prinz and Queisser, 2004 for fuller discussions of disability policy in the Netherlands over this period.).

It was at this point that the third and most dramatic set of reforms in the Dutch disability system began to occur. By 2006, a new disability insurance scheme—WIA—had replaced the old WAO scheme, that had been in place since 1967. Foremost among the reforms was the extension of the mandate that firms (including small employers) bear full responsibility for sick pay from one year to two years. This resulted in firms to an even greater extent turning to private sector insurance for protection. But their burden was somewhat eased by limiting the maximum benefit to 85 percent of gross wage, a reduction from the previous 100 percent. Now workers are considered for possible eligibility for the longer-term disability system only after two years of sickness benefits. During these first two years, employers must allow workers receiving sickness benefits to continue with the firm. Employers can only dismiss employees who refuse to collaborate with a reasonable work resumption plan. But there are also a set of proscribed rehabilitation and accommodation activities that the firm (via an insurance provider or private occupational health agency) must provide to try to either retain the employee or find alternative employment for him/her during these two years. DI Benefit claims are only admissible if they are accompanied by a report containing an assessment as to why the plan has not (yet) resulted in work resumption.. The claim is not processed if the report is delayed, incomplete, or if it is clear that the rehabilitation efforts were insufficient. Depending on the seriousness of the negligence the case worker can return the reintegration report and give the employer the opportunity to complete the reintegration report or the case worker can start a sanction procedure against the employer. In 2007 about 14 percent of DI-claims were penalized.

Determination of benefits was also dramatically reformed. The previous all encompassing disability benefits scheme was split into two separate programs. The first provides benefits to those judged to have a non-recoverable loss of earnings capacity of at least 80 percent. They are now eligible for full and permanent disability benefits, replacing 75 percent of gross earnings (with a cap on covered earnings of 46,200 Euros per year in 2008). The second provides benefits to those judged to have a loss of

earnings capacity between 35 and 80 percent. They are now eligible for partial and temporary full benefits. Partial beneficiaries can receive up to 70 percent of gross earnings. But this will vary depending on actual work behavior with significant incentives now built in to encourage beneficiaries to work to their estimated earnings capacity.

All employers now pay for the full and permanent disability program via a uniform pay-as-you-go premium rate. Employers also pay to fund the publicly run partial disability program but can opt out of it by enrolling their workers with a private insurer. Whether they decide to stay in the publicly run partial disability program or opt out and seek a private insurer, employers now pay experience rated premiums. Experience rated premiums cover the first ten years of partial disability benefit receipt. After those first ten years, benefits are covered by the uniform pay-as-you-go rates that also cover the fully and permanently disabled and the stock of current beneficiaries under the old system. The current Dutch government has put full privatization of the partial benefit program on its agenda. If this plan gets through all Dutch employers, irrespective of their size, are made responsible for benefit payment over a maximum of twelve years (two years sickness and ten years partial disability). This long risk period increases the potential gains by firms of providing effective accommodation and rehabilitation.

Those who were on the disability rolls and under the age of 45 at the time these reforms were made were reevaluated based on the new and stricter eligibility rules. For instance, a 100 percent loss of earnings capacity is now limited to those institutionalized or incapable of performing regular activities of daily living independently. (See De Jong 2008 for a fuller discussion of disability policy in the Netherlands over this period.)

As can be seen in Figure 8, the result of this far more integrated disability system, which forces individual employers to directly bear the cost of disability transfers for the first two years and hence be more willing to offer and accept workplace accommodation and rehabilitation, and has strongly reduced the accessibility and generosity of the D.I. scheme for employees has been a dramatic decline in the disability caseload per worker ratio in the Netherlands since 2001. In 2006 the ratio was 86, its lowest value since 1976. This is all the more remarkable since these disability caseloads also include the

categorical disability welfare population (Wajong) which as can be seen in Figure 12 grew substantially over this period.

The Wajong program provides a flat benefit at the social minimum level, financed out of general revenue, but unlike the more general social minimum welfare program it is not means tested. Eligible youth are entitled to benefits beginning at age 18. At the end of 2006, this program had about 156,000 beneficiaries. Almost all beneficiaries are judged to be fully disabled, not so much because they have no earnings capacity but because their earning capacity is lower than the relatively high minimum hourly wage rate in the Netherlands. Hence, while they may be fully capable of doing productive work in the labor market, employers do not hire them, because all employees must be paid the statutory minimum wage. At the current inflow rates, the Wajong program is estimated to grow to 300,000 beneficiaries by 2030 when the program will be fully "mature."

The increases in the Wajong program reflect a general trend to *medicalize* behavioral difficulties and abnormalities of children. All Dutch programs offering provisions for children and youngsters with functional limitations, like special schools, supplemental child care benefits, mental health care for youths, are surging. But the growth is limited to certain diagnostic groups: psychiatric and neurological disorders (autism, ADHD, PDD-NOS, learning difficulties). Medical specialists and gatekeepers of these programs find it difficult to accurately assess the work and learning capacities of these young people, and to counsel appropriately towards paid employment. Because they have little guidance with respect to how to eventually enter the workforce and no special programs exist to allow them to work at below minimum wage rates, the vast majority of such children are likely to end up on the Wajong program rather than using their productive capacities' in the labor force (Suijker, CPB, 2007).

What is especially noteworthy about Figure 8 is the stark difference between the trends in this ratio since 2001 in the United States and the Netherlands. While the ratio has been dramatically declining in the Netherlands, it has been substantially increasing in the United States. In 2006 the United States caseload per worker ratio was 77. Hence, what was once a dramatic difference in this ratio between these

two countries in the 1980s with the Netherland's ratio at 120 and the United States' ratio at 40 has shrunk to a difference of less than 10.

It is now evident that the dramatic drop that has occurred in Dutch disability caseloads was driven almost entirely by the transition, beginning in 2002, out of the old WAO program and into the new WIA program. What is less clear is whether as a result of this transformation in policy working age men and women with disabilities are now on other government transfer programs or are at work. There is no equivalent to the Current Population Survey in the Netherlands that would allow us to track the employment and economic well-being of the working age population with and without disabilities before and after this change in policy. However, Figure 13, the Dutch analogue to Table 1 for the United States, provides some evidence that this disability policy change did not simply shift people off the disability rolls and onto the unemployment or general welfare rolls.

Figure 13 tracks caseloads for the major Dutch cash transfer programs for working age people who do not work in the Netherlands—disability, unemployment insurance, and social assistance—from 1969-2007. These caseload numbers are made comparable by transforming them into full year recipient amounts. We have already discussed the rapid rise in the disability caseload and it decline since 2003. But what Figure 13 shows is that social assistance hit a peak in 1985 and has, with some fluctuations based on the business cycle been declining ever since. The same is true with respect to the unemployment insurance caseload. However, in this case, business cycle fluctuations are even more pronounced. Thus Figure 13 shows that caseloads for all three programs have fallen since 2003. The conclusion, therefore, is that there is no evidence that the Dutch disability population has simply moved from the disability program to general social assistance or unemployment insurance.

This conclusion is reinforced by the trend depicted in Figure 14, where the numbers in Figure 13 are summed and divided by the work force, measured in full year equivalents. It shows how the Dutch welfare state grew in the 1969-1980 period. The recession of the early 1980s induced both a surge in unemployment and social assistance benefits, and a decrease in employment rates. Since 1985 in additions to disability reforms, reforms in social assistance and unemployment insurance have led to a fall

in the caseload per 1000 workers ratio of 330 in 1985 to 190 in 2007, the lowest point for this ratio since 1979.

One final piece of evidence comes from an ongoing longitudinal study of a cohort of employees who went on sickness leave. Based on the first two waves—at 9 months and at 18 months following their first receiving sickness benefits - 46 percent of those who were still on the sickness rolls at nine months are fully back to work at 18 months. Under the old WAO rules few of those who were on sickness benefits for more than 9 months returned to work. These early results suggest that a large (but as yet unknown) share of those that entered the disability benefit system before is now returning to work. But a smaller share "disappears", they don't return to work but they also don't show up on any benefit schemes.

Disability policy in the Netherlands in the 1970s offered access to full and permanent disability benefits that made it possible for those with as little as a 15 percent loss in earnings capacity to receive benefits close to their net of taxes labor earnings. And funding for this program allowed firms to avoid all of the additional costs of dismissing these "fully" disabled workers for entry onto the disability rolls when they were seen as redundant by the firm. The Dutch labor unions were content with such a policy, since in periods of slack economic growth this disability system offered "long-term unemployment protection" to their members and the Dutch government was content because by placing these workers on the disability program it kept unemployment rates down. But the growth of such a system and its impact on employment rates became so great that it was not sustainable. It has taken almost three decades but the Dutch now have a much more integrated disability system where initial decisions with respect to accommodation, rehabilitation and return to work are almost entirely handled by the private sector and it is only after two years that long-term disability benefits provided by the government become available. This brief history of Dutch disability policy shows that the working age population on the disability rolls is quite sensitive to the incentives the system gives to employers and employees.

Learning from the Dutch Disease

In the Netherlands policy changes explain the rise and fall in its disability rolls relative to the United States. Disability policies in the Netherlands and in the United States were most similar in the 1970s, and not surprisingly, they both experienced considerable growth in their caseload per worker ratios over this period. Although the United States started the 1970s with a substantially lower caseload per worker ratio than in the Netherlands, as a result of major increases in SSDI benefits, the creation of SSI, and the increased use of vocational characteristics to determine eligibility in both programs, the United States caseload per worker ratio doubled by the end of the decade.

Given their policy experiences in the 1970s, it is not surprising that cries for disability reform were heard in both countries in the 1980s. Both governments significantly reduced the growth in their systems during these difficult economic times but at very different levels. It took three waves of reforms in the Netherlands before their disability caseload per 1,000 workers fell substantially below 100 and near mid-1970s levels.

United States disability policy reforms started by the Carter administration and vigorously pursued by the Reagan administration were extremely controversial, especially since much of it took place during the major recession of 1982. Removing from the rolls those who are capable of doing some gainful activities might comply with the law but, it was argued, put an enormous burden on the households of impaired workers who may have poor job skills, be near retirement age, or have lost their jobs and be on the outer fringes of the labor market even in good times. Because such workers are likely to be the hardest hit by recession, it was argued that this policy forced the least able in society to bear the greatest burden of the recession.

In hindsight, and with the success of welfare reform targeted on single mothers, the counterargument to this point of view is that in the long run the best government programs targeted at working age men and women with disabilities are not more access to cash transfers that discourage work but a stronger economy that provides work for all who are willing and able to work. And, a set of

disability policies that encouraged working age men and women with disabilities to remain connected to the workforce rather than one dominated by cash transfer policies would be most effective in allowing them to enjoy the fruits of economic growth.

In the United States, the political decision was made to rescind the reforms requiring greater scrutiny of applicants as well as the controversial reevaluation of beneficiaries via continuing disability reviews. But rather than then focusing attention on how to keep workers with disabilities in the labor force and encouraging those on the rolls to move back into the labor force, the criteria for removing beneficiaries were made more difficult by requiring the agency to demonstrate a medical improvement, while the criteria for those with mental conditions to come onto SSDI and SSI were relaxed in 1985 by changing the medical listings for demonstrating a mental illness.

The consequence of these reactions to a failed disability policy reform was that an exit from the SSDI or SSI rolls because of an improvement in a beneficiary's health became a rare event. In addition, mental illness has become the most often cited of the medical conditions of new entrants onto the disability rolls. And as Figure 8 shows, caseloads per 1,000 workers in 2006 are nearing 80, twice the level before the system expansion policy changes of the mid-1980s.

But what have been the consequences of these SSDI and SSI program policy expansions on working age people with disabilities more generally since 1982? As we saw in Table 1, caseloads and program costs for both SSDI and SSI have increased substantially since 1982 and now overshadowed UI and TANF as the major sources of cash transfers for those of working age who are not working. And, an increasing share of working age men and women with disabilities now receive these cash benefits. But along with these changes have come a decline in their labor earnings and in their employment rates. So the economic well-being of the median man or woman with disabilities has stagnated since 1982.

In contrast, welfare reform in 1996 reduced AFDC/TANF caseloads while at the same time increased the employment and economic well-being of the median single mother who now shares in the economic growth of those of working age living in working households. This suggests that at best these

policy reactions to the failed disability reforms of the 1980s were a mixed blessing to the very population they were meant to protect.

A Vision for United States Disability Policy Reform

Over the last two decades a series of policy reforms in the Netherlands began to cut back the policy excesses of the 1970s as its disability system became more of an alternative to long-term unemployment insurance or general welfare programs. In doing so, the Dutch disability system has better integrated its private and public components. Employers and employees now face more of the direct additional costs of providing cash transfers to workers following the onset of a disability and hence firms are more likely to provide a more reasonable mix of accommodation, rehabilitation, and return to work services to such workers. They have also reduced the replacement rates of workers who go onto these programs to give them greater incentives to return to work. By doing so, they have reduced their long-term disability rolls. And they have done so at a time when both their unemployment insurance rolls and their social assistance rolls were falling. So, they are not simply transferring those who were on the disability rolls to these other social programs. Early results suggests that an increasing share of those on sickness benefits are returning to work rather than moving onto the longer term disabilities rolls.

Their most recent reforms have placed much more reliance on the private sector to allocate private resources toward greater accommodation and rehabilitation. Today their long-term disability rolls are now approaching United States caseload per worker levels and heading lower. In considering alternative policy reforms to reduce United States SSDI and SSI caseloads and better integrate working age men and women with disabilities into the workforce it is useful to look at the success of the Netherlands with respect to their disability insurance system and the success of Welfare Reform in the United States with respect to the welfare population.

What follows is not intended to be a detailed blueprint for specific United States disability policy reforms. Instead it should be taken as a guidebook for the types of innovations that could create for Americans with disabilities what single mothers attained after welfare reform and what Dutch men and

women with disabilities have begun to experience—the opportunity to be integrated into the labor market and take advantage of growth in the national economy.

SSDI Policy Reforms.

Disability policy reforms in the 1980s primarily focused on reducing SSDI rolls by removing those who no longer met the medical listings. This is the most controversial and least effective mechanism for reducing SSDI rolls and for increasing the employment of working age people with disabilities. A far more effective mechanism for reducing the rolls is to slow the movement onto those rolls by working age men and women following the onset of their disability. The Netherlands moved in this direction by mandating that all firms provide the first two years of protection against lost earnings caused by a disability. This effectively required private firms to contract with private insurance agents to manage accommodation, rehabilitation, and returns to work efforts and assured a more rational allocation of these services relative to the provision of long-term disability cash benefits.

While this type of mandate is unlikely to be adopted in the United States, it is important that firms and workers more clearly recognize the additional burden their behavior currently places on the SSDI system. Because employers incur no additional costs when their workers go onto the SSDI rolls, they do not recognize this real cost when they make their decisions with respect to accommodation, rehabilitation and return to work efforts.

One way to make employers recognize these added costs is to experience rate SSDI employer taxes, either by raising the tax on firms whose workers come on to the system at above average rates or lowering the SSDI taxes of firms whose workers come onto the system at below average rates. Alternatively, employers who provided some set of short-term private disability insurance for their workers and whose private insurance agents cooperate with SSDI gatekeepers in managing their cases could be granted a reduction in their SSDI tax rates and firms that did not offer such private insurance could be charged a higher SSDI tax rate. Each of these reforms would insure that employers would be

more likely to provide greater accommodation and rehabilitation to their workers following the onset of a disability.

This same kind of fundamental policy reform was behind the transformation of Dutch disability policy in 2002. By requiring employers and workers to more directly face the funding costs of long run disability transfer payments, Dutch workers who experience the onset of a disability are now receiving a more effective mix of accommodation, rehabilitation, and return to work services. Private insurance agents are now case managing workers at an earlier point following the onset of a disability. And workers now have a greater willingness to take advantage of these services and remain on the job because their long-term benefits are not quite as generous.

SSI-Disabled Adults Program Policy Reforms.

The success of Welfare Reform demonstrates how public policy can change the behavior and economic well-being of a population, even one with limited job experience and lower than average education and skills. A similar case can be made for SSI-disabled adults. As shown in Figure 7 however, the incentives for both individuals and states need to change to move towards this outcome. An obvious starting place would be to borrow from the lessons of welfare reform and devolve the decision making on the SSI-disabled adults program to the states, funded by block grants from the Federal government. Doing so would remove the incentive for states to cost-shift by moving the most difficult to employ low-income adults to the Federal SSI program.

SSI is fundamentally a welfare program for low skilled workers living in low income families who also happen to have a health condition. By treating SSI funds the same as TANF funds and giving states the flexibility to spend funds across programs as they choose, states would have greater incentives to invest in more work-oriented assistance for their low income populations, even those with disabilities. While some of these disabled adults would be single mothers and hence candidates for all the specific work programs now available to them, the rest would still be provided with cash transfers but within the

context of attempting to return them to work before moving them onto a permanent transfer program for those not expected to work.

Why might this work? As noted earlier, state welfare agencies now have over a decade of experience in moving welfare mothers and other welfare clients into the work force. Because SSI–disabled adults program costs were not directly borne by the States, it was in their interest to provide fewer accommodation, rehabilitation, and return to work efforts on this part of their welfare population than to others in that population. But we know that a significant minority of those currently on the SSI-disabled adults program can work, since they are already doing so. Under current rules, having once demonstrated that they were incapable of substantial gainful activity to get onto the SSI-disabled adults program they then were permitted to work without fear of being reevaluated as not disabled.

Although a change from the last 30 years, we argue that it makes sense to consider the SSI-eligible population as a special subset of the low income population. Apart from their extra needs related to health, the SSI-disabled adults population looks like the single mother and other general assistance populations in the state. If states are granted block grants to be used for all of these populations, we are likely to see more experimentation and work-oriented programs including rehabilitation, job training, and accommodation efforts focused on these individuals.

Although this plan primarily focuses on transferring money and control to the states, we also suggest that the Federal government consider expanding the Earned Income Tax Credit to cover this population at levels commensurate with single mothers.

By doing so, the Federal government would fundamentally change its program mix to one that better subsidizes the work of poor men and women with disabilities in a much more direct way. These program reforms would better integrate this welfare population under the general welfare case management system of States. It would provide important signals to these workers with disabilities that work pays and to States that it is in their interest to facilitate this transformation to work just as they now do for single mothers.

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Data Appendix

CPS sample definitions

The sample we use includes all individuals in the March CPS data who do not have a household member in the military and who are not residing in group quarters. Working age individuals refer to all individuals between the ages of 25 and 59 inclusive. The working age population is often defined as persons aged 18 to 64 in published statistics. We use a narrower definition because of the large number of persons aged 18 to 24 whose primary activity is education and the large number of persons aged 60 to 64 who are retired. The "All Individuals" sample is restricted to individuals over the age of 15 whenever disability status is a variable of interest as the work limitations question is not asked of individuals under 15 years of age. Unless otherwise indicated, the sample used in all tables and figures is the working age sample.

In most cases, households in the CPS contain one family. For households that contain multiple families related by blood or marriage, we treat sub-families as separate families for the identification of family structure. Single mothers are defined as women who have never been married and who are subfamily heads who live with own never married child(ren) under 18. This accounts for important changes in living arrangements such as the rise in multi-generational families living in the same household, such as single mothers living with their own parents.
As noted by London (1998), prior to 1984 the CPS surveys did not properly account for the household relationships of children living in multi-generational households, producing an undercount of the number of single mothers due to misidentification of those who live with their parents. To reduce the impact of undercounting this key family type in the early portion of our sample, we applied London's correction to the pre-1984 data. If there is a child in the household classified as "other relative of head" and a woman that meets London's criteria (fifteen years older than the child and unmarried), then the woman will also be considered a single mother.

An individual is considered disabled if he/she has "a health problem or a disability which prevents work or which limits the kind or amount of work" he/she can do. While the use of a work limitation variable to capture the working age population with disabilities is controversial, the CPS is the only dataset that provides a consistent set of questions that allows long-term evaluations of this population. Hence it has been widely uaws in the economics literature to determine the employment and economic well-being of working age people with disabilities. See for example: Acemoglu and Angrist 2001; Autor and Duggan 2003; Bound and Waidmann 2002; Burkhauser, Daly, and Houtenville 2001, Burkhauser, Daly, Houtenville, and Nargis 2002, Burkhauser, Houtenville, and Rovba 2005; Daly and Burkhauser 2003; Houtenville and Burkhauser 2005; Hotchkiss 2003; Hotchkiss 2004; Jolls and Prescott 2005.

The vulnerable populations compared in this paper are: never married single mothers, men with disabilities, and women with disabilities. Disabled single mothers are double counted, being included in both the single mothers and the women with disabilities groups.

Table A1 shows that disabled single mothers only make up a very small proportion of the working age population and their number has grown steadily with no sudden jump around 1996. In addition, the percentage of single mothers who are disabled has remained fairly stable over time.

CPS household income measures, household size adjustment

Household income is the sum of income for each household member age 15 and older in the household unit. Negative household income values are recorded as $1.

It should be noted that income statistics in the CPS refer to receipts during the preceding calendar year, while demographic characteristics, such as age and family or household composition, and work limitation status, are as of the survey date. Therefore, those who just became disabled during the survey year may be reporting their current disability status while reporting income for the previous year when they were not work limited, potentially biasing our measure of the income for the disabled upwards.

The income of the family/household does not include amounts received by people who were members during all or part of the income year if these people no longer resided in the family/household at the time of interview. However, the CPS collects income data for people who are current residents but did not reside in the household during the income year.

All income values are calculated using the extended cell-mean series to adjust for topcoding. This series extends the Census provided cell means back to 1975. See Larrimore, Burkhauser, Feng, Zayatz (2008) for details on the series. Income is adjusted for inflation using an Urban Consumer Price Index (CPI-U) estimated by the BLS. Unless otherwise indicated, all incomes reported are pre-tax, post-transfer income adjusted for household size and adjusted for inflation to 2006 dollars.

To determine size-adjusted household income of each individual in the household, the total household income is divided by the square root of the number of household members. This is a standard way of controlling for differences in household size in the economic well-being literature. It assumes that the income needed to achieve a level of economic well-being is lower for those who live in the same household than it is to live in separate households. That is, by sharing housing and other resources, less income is needed to achieve a certain level of economic well-being. See Burkhauser, Smeeding, and Merz (1996) for a discussion of the sensitivity of measures of economic well-being to changes in this measure of returns to scale.

Household working status and individual employment status

An individual is considered to be living in a working household if the total number of hours worked by all members of the household in the previous year exceeds 200 hours.

An individual is considered employed if he/she has worked at least 200 hours during the previous year. The employment rate is the percentage of individuals who were employed.

Measuring program caseloads

UI caseloads data are obtained from Handbook 394 of the US Department of Labor Employment and Training Administration and are defined as the weekly average number of insured unemployed.

SSDI caseloads data on disabled workers are obtained from the Social Security Administration's Office of the Chief Actuary. The numbers are based on the number of beneficiaries on the program on December 31 of the report year. By definition, a disabled-worker beneficiary worked in covered employment long enough to be insured and had been working recently in covered employment prior to disability onset. They are all under the full retirement age (FRA), as they are automatically transferred to the retirement program when they reach FRA.

SSI caseloads data are obtained from Table 3 of the 2006 SSI Annual Statistical Report, which tabulates recipients of federally administered payments. The numbers are based on the number of recipients on the program in December. We define SSI children as the recipients of federally administered payments who are under the age of 18 and SSI adults as those who are between 18 and 64.

AFDC/TANF caseloads data are obtained from Table 9.G1 of the SSA's 2005 Annual Statistical Supplement.

Medicare caseloads include all enrollees under the age of 65 (who must be disabled and/or have End Stage Renal Disease in order to qualify) and include both Hospital Insurance (HI) and Supplementary Medical Insurance (SMI) enrollees. The data come from Centers for Medicare & Medicaid Services, Office of Information Services. For 2004, the data are from the 100 percent Denominator File; for years prior to 2004 a 5-percent sample was used. Data for each year reflect information recorded in the Health Insurance Master File or Enrollment Database through March of the year following the report year.

Medicaid caseloads data are only available by basis of eligibility, but not by age group. The numbers reported in this paper include all low income disabled recipients, regardless of age, so both disabled children under 18 and disabled elderly over 65 are included. They are obtained from the Health Care Financing Review's 2008 Statistical Supplement, which reports data from the Centers for Medicare & Medicaid Services.

Dutch disability caseloads data for employees and the self-employed come from Centraal Planbureau (CPB) and Statistics Netherlands. Data on the disability program for handicapped youth (Wajong) come from UWV (National Social Insurance Institute).

Data on Dutch social assistance and unemployment insurance caseloads are also obtained from Centraal Planbureau (CPB). The social assistance program (WWB) in the Netherlands is analogous to AFDC/TANF in the United States in that it is a means-tested social safety administered by municipalities, and since 2004, it is paid for by block grants to municipalities. The unemployment insurance program (WW) in the Netherlands is administered by UWV (National Social Insurance Institute) and provides wage-related benefits to insured employees for 3 months to 38 months, depending on work history.

Estimating program costs

UI program cost combines both federal and states' shares of benefits and administrative costs. States pay for regular benefits and a share of Extended Benefits, while the federal government only pays for a share of Extended Benefits. Extended Benefits are only available to workers who have exhausted regular unemployment insurance benefits during periods of high unemployment. Data on regular state benefits (both taxable and reimbursable) and total extended benefits are obtained from Handbook 394 of the US Department of Labor Employment and Training Administration. Data on UI administrative grants are obtained from Federal Unemployment Tax Act (FUTA) Reports from the Department of Labor's Office of Workforce Security.

SSDI program costs include benefit payments to disabled workers and their dependents and administrative expenses. Data on benefit payments are obtained from the SSA's Office of the Chief Actuary and do not reflect adjustments that were made for earlier periods. An alternative source of data on benefit payments is the 2006 Annual Statistical Report on the Social Security Disability Insurance Program (Table 3). Using that source, annual benefit payments can be calculated by multiplying the total monthly benefits paid by 12. The data from the two sources do not match exactly. Data from the first source are reported in this paper.

Data on administrative expenses are also obtained from the SSA's Office of the Chief Actuary.

SSI program costs are borne by both the federal government and state governments. Federal costs include federal benefit payments, administrative costs and costs of beneficiary services. Payments data by age group are available from the 2008 Annual Report of the SSI Program (Table IV.C2). Administrative costs, also obtained from the 2008 Annual Report of the SSI Program (Table IV.E1), are allocated to SSI-disabled adults and SSI-disabled children according to their caseloads shares. The costs of beneficiary services, such as Vocational Rehabilitation and the Ticket to Work Program, are all allocated to SSI-disabled adults.

State costs include state supplementation payments that are either federally administered or state administered. For federally administered state payments, the data are obtained from the 2007 Annual Report of the SSI Program (Table IV.C4); for state administered payments, the data are obtained from the 2004 SSI Annual Statistical Report (Table 14). Data on state supplementation is available by eligibility category (aged, disabled, and blind), but not by age group. The disabled and blind categories include beneficiaries over the age of 65 who are blind or disabled, so the total state payments to the disabled and blind are an overestimate of the combined total state payments to SSI-disabled adults and SSI-disabled children.

Lacking data on state payments by age group, state supplementation for the disabled under 65 (i.e. SSI-disabled children and SSI-disabled adults combined) can be estimated by multiplying the total amount of state payments by the proportion of disabled recipients of federally administered payments who are under the age of 65. This estimation is based on the following assumptions: (1) the proportion of disabled recipients under the age of 65 is the same for recipients of federally administered payments and recipients of state payments; and (2) the state payments for the disabled under the age of 65 is the same as or very similar to the payments for the disabled over 65. As it is unclear whether these assumptions are satisfied, this paper reports the actual state payments to the disabled and blind instead of the estimated payments to those under the age of 65.

AFDC/TANF program costs are shared by the federal government and state governments. Federal and states' costs are reported separately, and each includes both payments and administrative costs. Data on all four components of total program costs are available from the US Department of Health and Human Services, Administration for Children and Families.

Medicare costs for the disabled are defined as the total HI and SMI expenditures for disabled enrollees, including both benefit payments and administrative expenses. Data on total expenditures on disabled enrollees only is not available, but data on program payments is available by type of entitlement (aged vs. disabled). Total expenditures on disabled enrollees are estimated by multiplying total expenditures on all enrollees by the proportion of program payments paid for disabled enrollees. Data on program payments are obtained from the Centers for Medicare & Medicaid Services, Office of Information Services. Data on total expenditures come from the 2005 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds (Tables III.B4 and III.C1), and analogous tables from earlier annual reports.

Medicaid costs are defined as medical vendor payments spent on all disabled recipients (including those under 18 and those over 65) and do not include administrative expenses. Data on vendor payments by eligibility category are obtained from the 2005 Annual Statistical Supplement (Table 8.E2), which reports data from HCFA-Form 2082 for the years before 1998 and data from the Medicaid Statistical Information System from 1998 onwards.

Caseload per worker ratio

To calculate the number of beneficiaries per 1000 workers, we use the "economically active population" as defined by the International Labour Organization as the denominator for both the US and the Dutch series. The economically active population comprises "all persons of either sex who furnish the supply of labor for the production of goods and services during a specified time-reference period."

The total number of disability beneficiaries in the United States aged 15-64 is the sum of SSDI workers aged 15-64, SSI-disabled adults aged 18-64, and SSI-disabled children aged 15-18.

The total number of disability beneficiaries in the Netherlands aged 15-64 is the sum of beneficiaries under employee insurance for long-term disability (WAO/WIA), beneficiaries under the Self-employed Persons Disability Benefits Act (WAZ), and beneficiaries of assistance for handicapped young persons (Wajong). The combination of beneficiaries under WAO/WIA and WAZ make up the disability-based social insurance caseloads, while Wajong beneficiaries make up the disability-based welfare caseloads.

Total cash transfer program caseloads in the Netherlands is the sum of caseloads of disability-based programs (WAO/WIA/WAZ/Wajong), the means-tested social assistance program (WWB), and unemployment insurance (WW).

Table A1 Unweighted sample sizes for the working age population

Year	Disabled single mothers	All single mothers	Total working age population
1980	25	244	76843
1981	23	276	69671
1982	22	355	70403
1983	30	385	70312
1984	37	400	71079
1985	39	407	70167
1986	38	449	69775
1987	40	452	70458
1988	31	412	65578
1989	40	552	72175
1990	46	595	72619
1991	46	580	71982
1992	59	633	71692
1993	59	659	69668
1994	58	590	69645
1995	41	559	60828
1996	64	638	61782
1997	52	645	62167
1998	45	621	62660
1999	56	655	63420
2000	59	606	61267
2001	101	1248	102387
2002	116	1282	101938
2003	116	1252	100339
2004	131	1281	98755
2005	124	1250	97994
2006	118	1307	97348

Table 1. Caseloads and program costs of transfer programs in three trough years of the business cycle

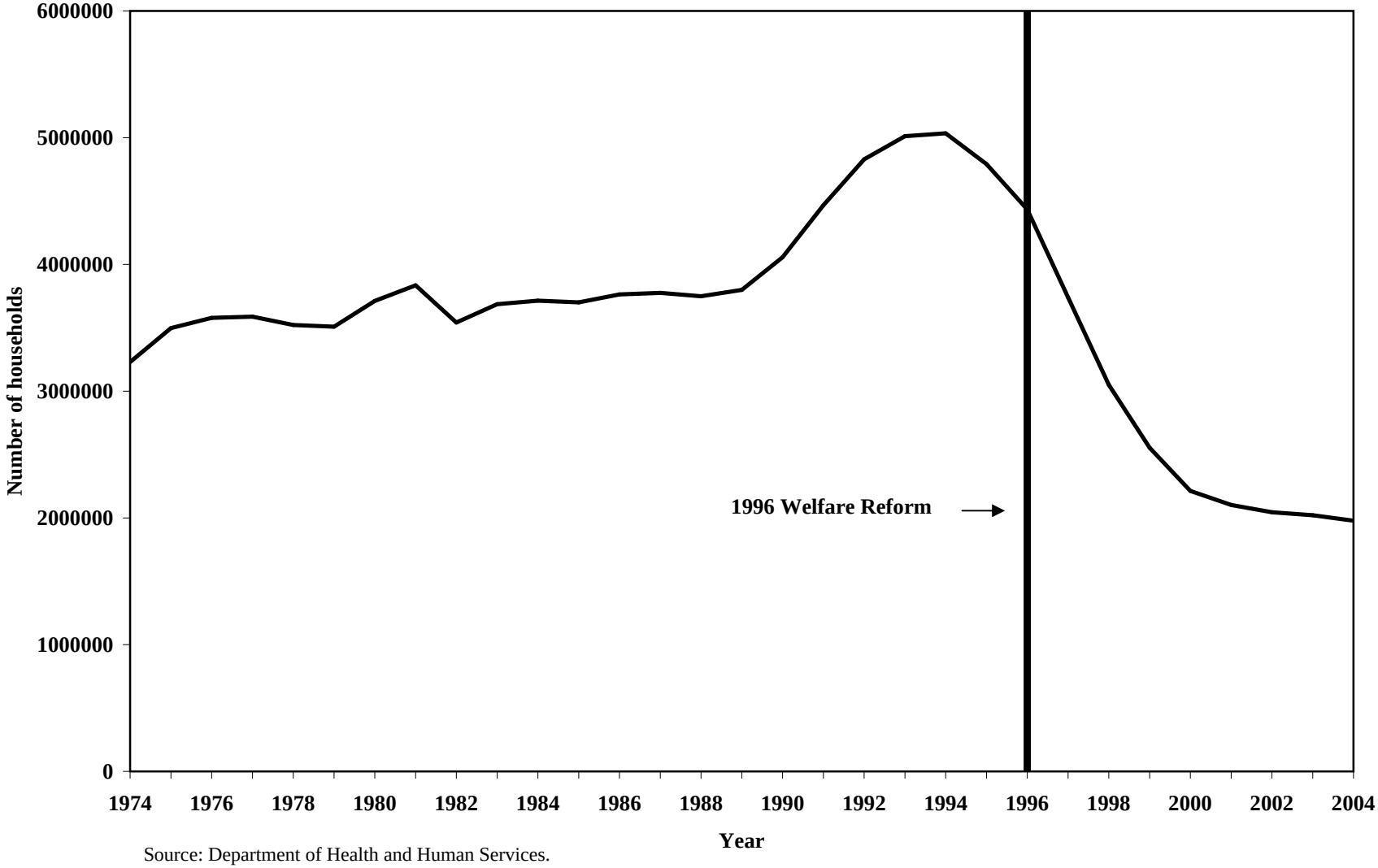
	Caseloads			Program Costs					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	1982	1993	2004	1982		1993		2004	
				federal	state	federal	state	federal	state
Employment-based									
UI	4.059	2.751	2.950	54.582		33.786		39.569	
Disability									
SSDI	2.604	3.726	6.198	37.909	N/A	49.654	N/A	85.924	N/A
SSI-disabled adults	1.655	3.148	4.017	8.371	--	18.418	3.301	24.213	3.301
SSI-disabled children	0.192	0.723	0.993	1.137		5.577		6.746	
Welfare									
AFDC/TANF	3.542	5.012	1.978	16.493	14.404	19.251	15.992	15.390	9.980
Non-cash health									
Medicare	--	4.151	6.401	14.602	N/A	26.099	N/A	54.445	N/A
Medicaid	2.891	5.016	7.933	--		54.010		119.319	

Notes:
All caseload figures in millions.
All costs measured in billions of 2006 dollars.
Medicare 1993 disabled caseload data not available; substituted with data from 1994.

Sources:

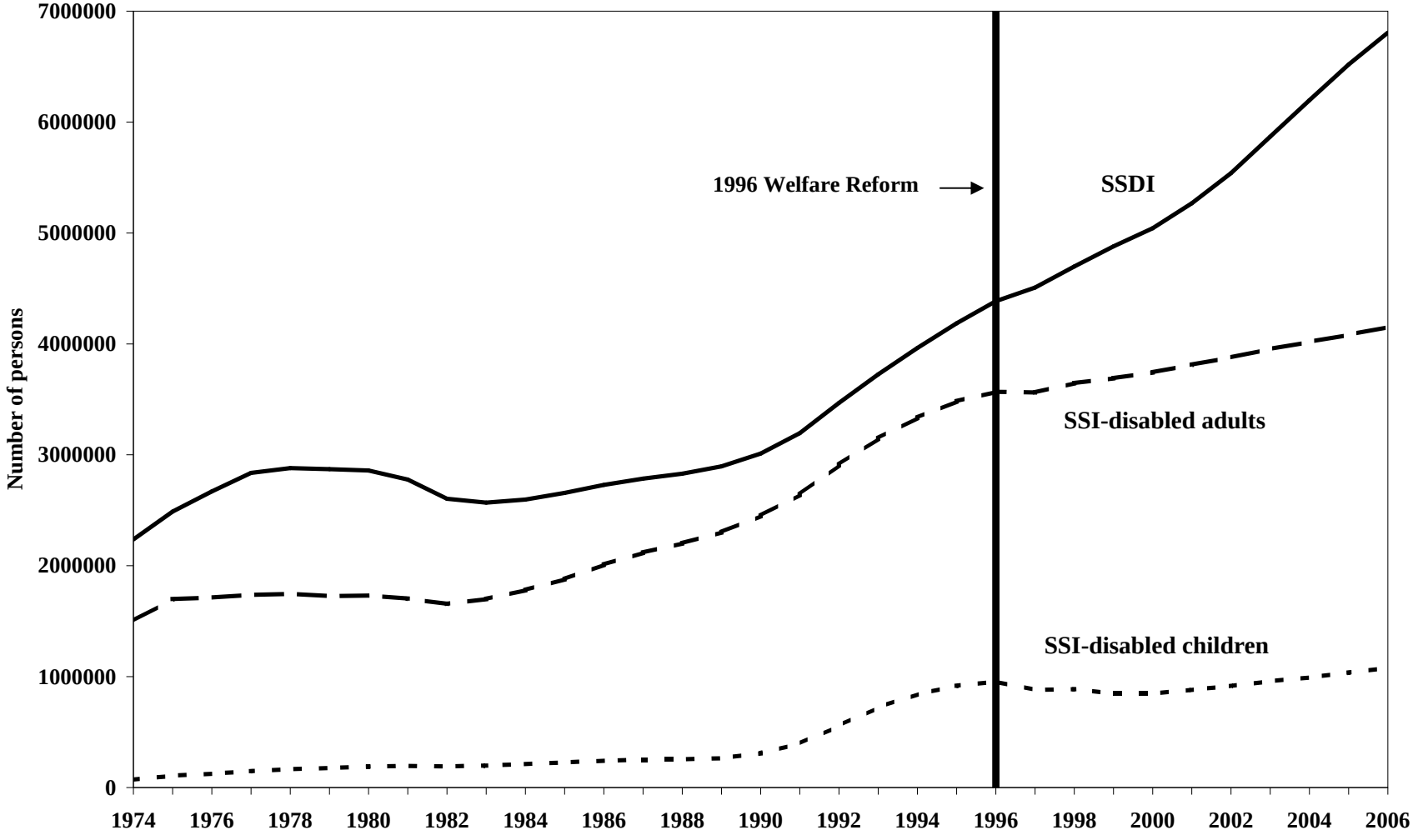
UI	US Department of Labor: ET Financial Handbook 394; FUTA Reports.
SSDI	Social Security Administration, Office of the Chief Actuary, Statistical Tables.
SSI	Social Security Administration, Supplemental Security Record (Characteristic Extract Record format), 100 percent data.
	Social Security Administration, Office of Financial Management, Division of Finance.
	2008 Annual Report of the SSI Program.
AFDC/TANF	US Department of Health and Human Services, Administration for Children and Families, Office of Program Systems.
Medicare/Medicaid	Centers for Medicare & Medicaid Services, Office of Information Services.

Figure 1. AFDC/TANF benefit roll populations by year



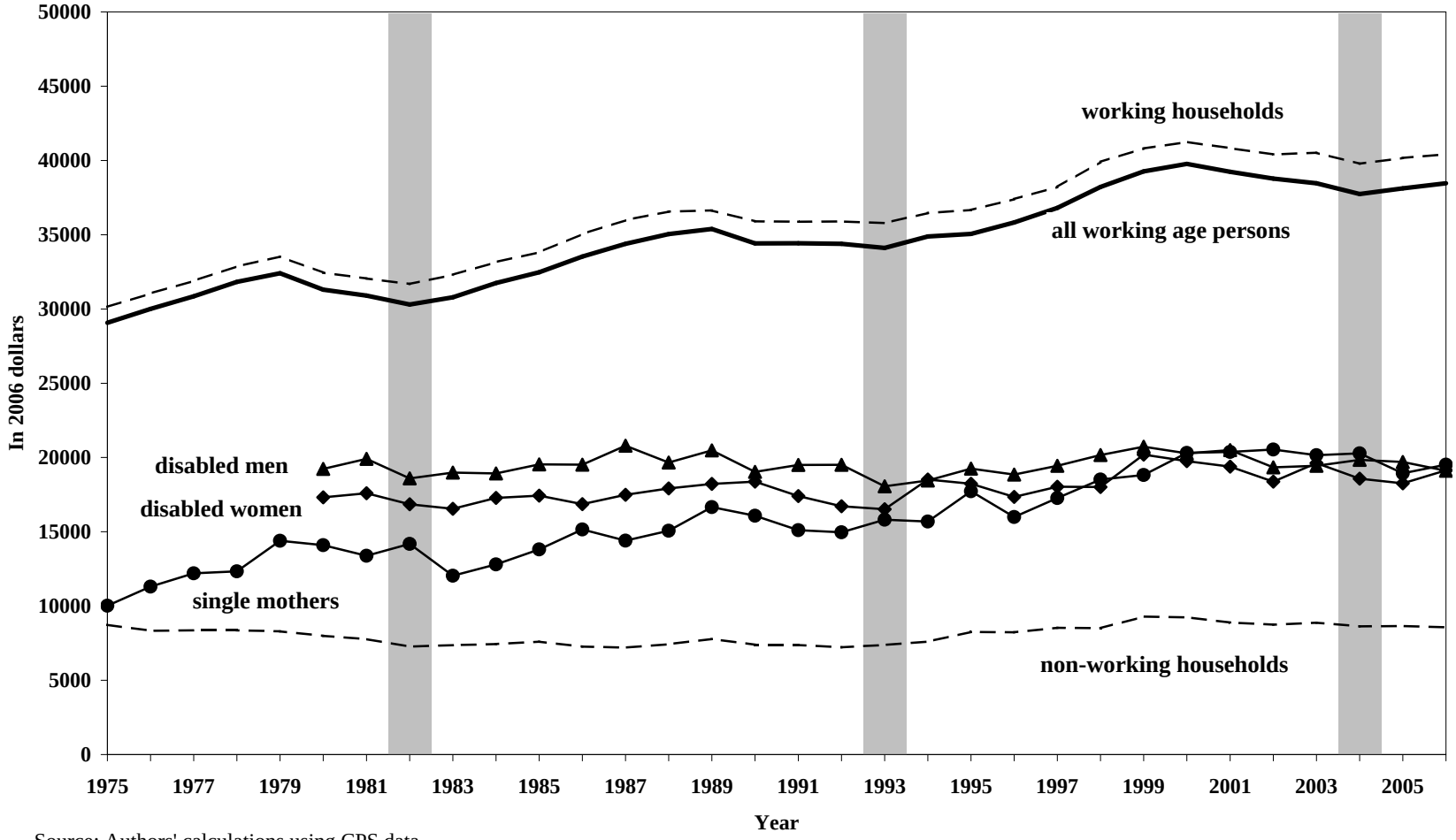
Source: Department of Health and Human Services.

Figure 2. SSDI, SSI-disabled adults, and SSI-disabled children benefit roll populations by year



Source: Social Security Administration.

Figure 3. Trends in median size-adjusted household income for vulnerable working age persons



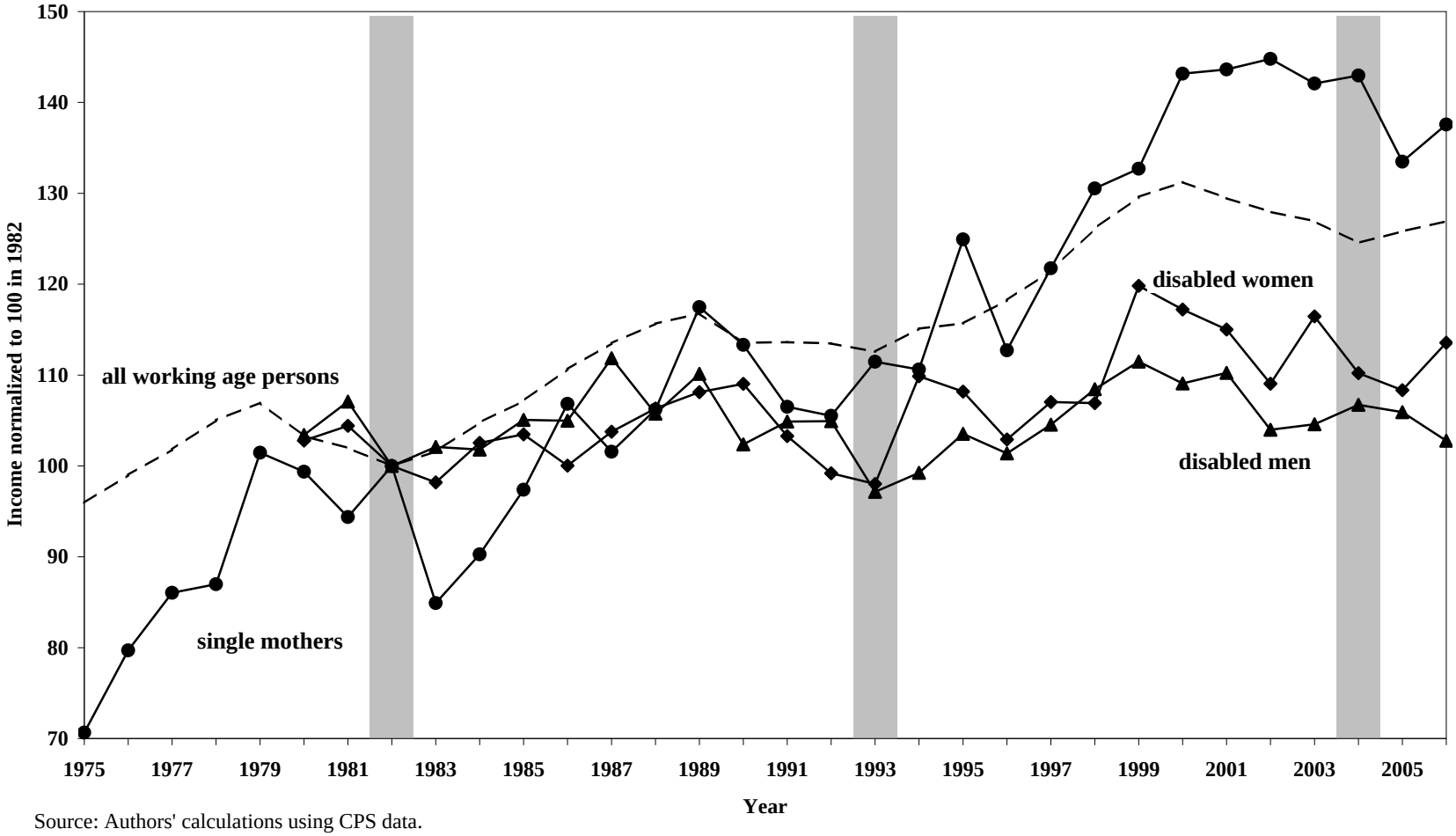
Source: Authors' calculations using CPS data.

Appendix Table 1A. Trends in median size-adjuste household income for vulnerable working age persons

	All working age	In working HH	In non-working HH	Single mothers	Men with disabilities	Women with Disabilities
1975	29,072	30,137	8,735	10,023		
1976	30,002	31,041	8,334	11,306		
1977	30,849	31,888	8,366	12,205		
1978	31,823	32,864	8,361	12,338		
1979	32,408	33,535	8,300	14,391		
1980	31,299	32,442	7,989	14,094	19,228	17,321
1981	30,901	32,057	7,772	13,387	19,910	17,596
1982	30,302	31,679	7,264	14,185	18,594	16,852
1983	30,784	32,302	7,362	12,043	18,984	16,546
1984	31,749	33,162	7,438	12,805	18,927	17,279
1985	32,474	33,818	7,599	13,813	19,536	17,436
1986	33,530	35,049	7,266	15,154	19,519	16,858
1987	34,390	35,975	7,203	14,406	20,797	17,488
1988	35,046	36,562	7,432	15,065	19,662	17,916
1989	35,388	36,635	7,781	16,664	20,477	18,220
1990	34,412	35,904	7,388	16,076	19,034	18,373
1991	34,427	35,876	7,375	15,108	19,500	17,405
1992	34,386	35,891	7,219	14,968	19,509	16,717
1993	34,111	35,790	7,387	15,812	18,065	16,517
1994	34,880	36,468	7,605	15,691	18,454	18,516
1995	35,053	36,663	8,262	17,723	19,250	18,231
1996	35,829	37,396	8,234	15,990	18,851	17,342
1997	36,811	38,214	8,535	17,271	19,439	18,037
1998	38,216	39,902	8,505	18,518	20,164	18,017
1999	39,269	40,805	9,286	18,824	20,729	20,190
2000	39,768	41,246	9,235	20,309	20,283	19,754
2001	39,233	40,823	8,883	20,374	20,498	19,383
2002	38,778	40,403	8,742	20,540	19,333	18,377
2003	38,462	40,517	8,876	20,155	19,445	19,625
2004	37,739	39,777	8,627	20,281	19,845	18,572
2005	38,125	40,166	8,653	18,934	19,695	18,257
2006	38,460	40,415	8,574	19,514	19,109	19,136

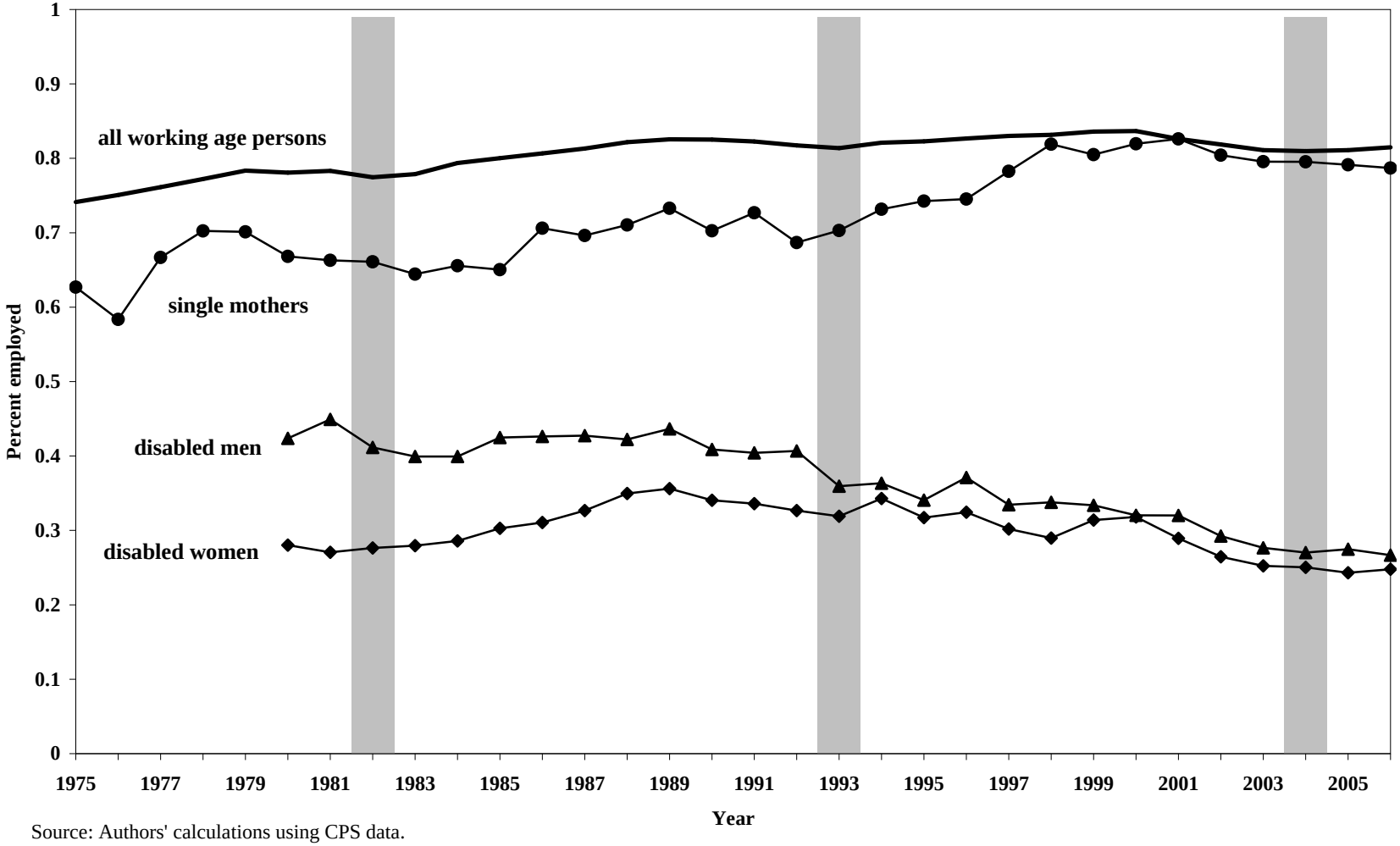
Source: Authors' calculations using CPS data.

Figure 4. Changes in income of the median vulnerable working age person



Source: Authors' calculations using CPS data.

Figure 5. Employment rates for vulnerable populations



Source: Authors' calculations using CPS data.

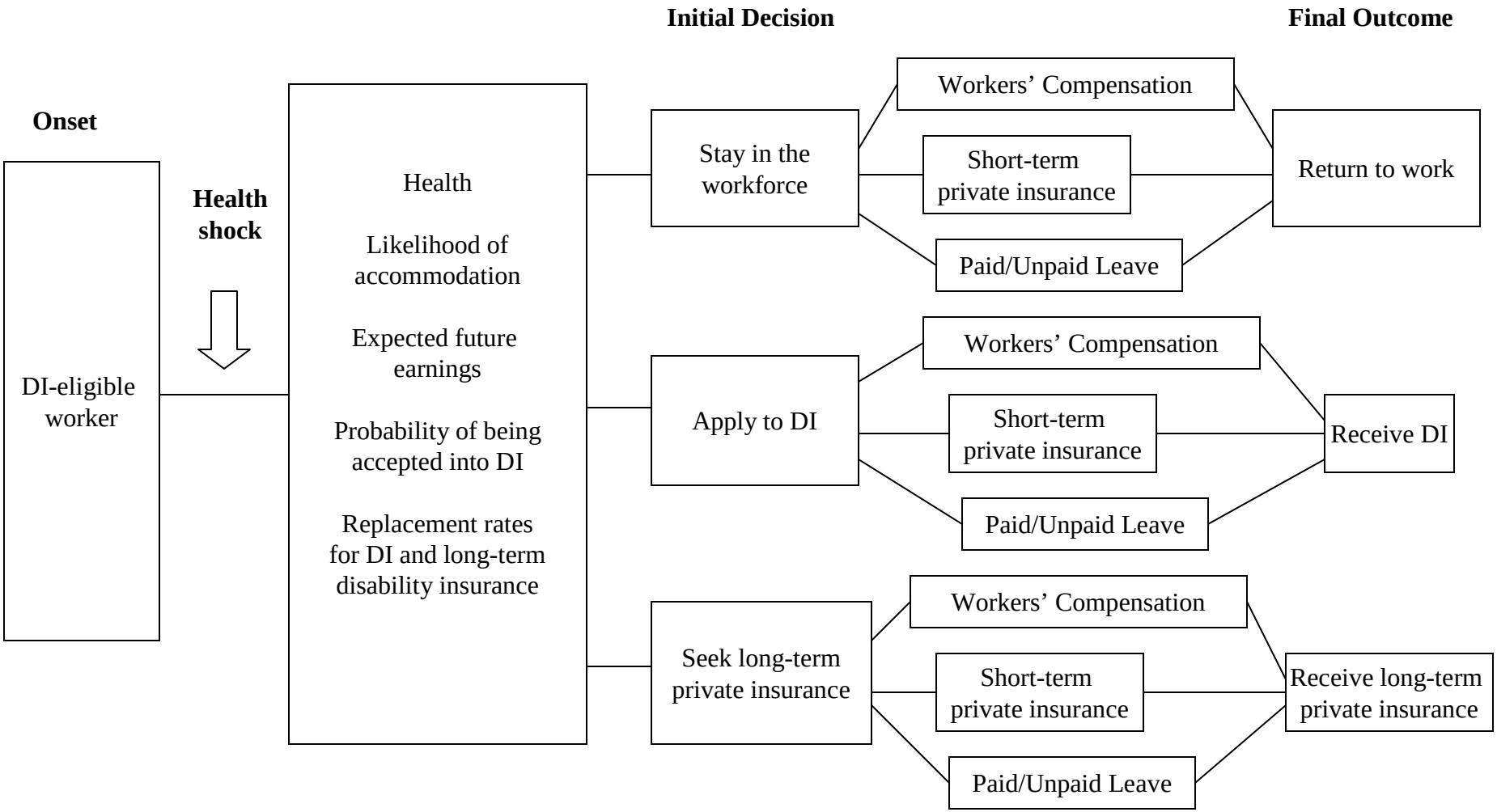


Figure 6, Panel A. Decision tree for workers reacting to the onset of a disability that might make them eligible for DI benefits

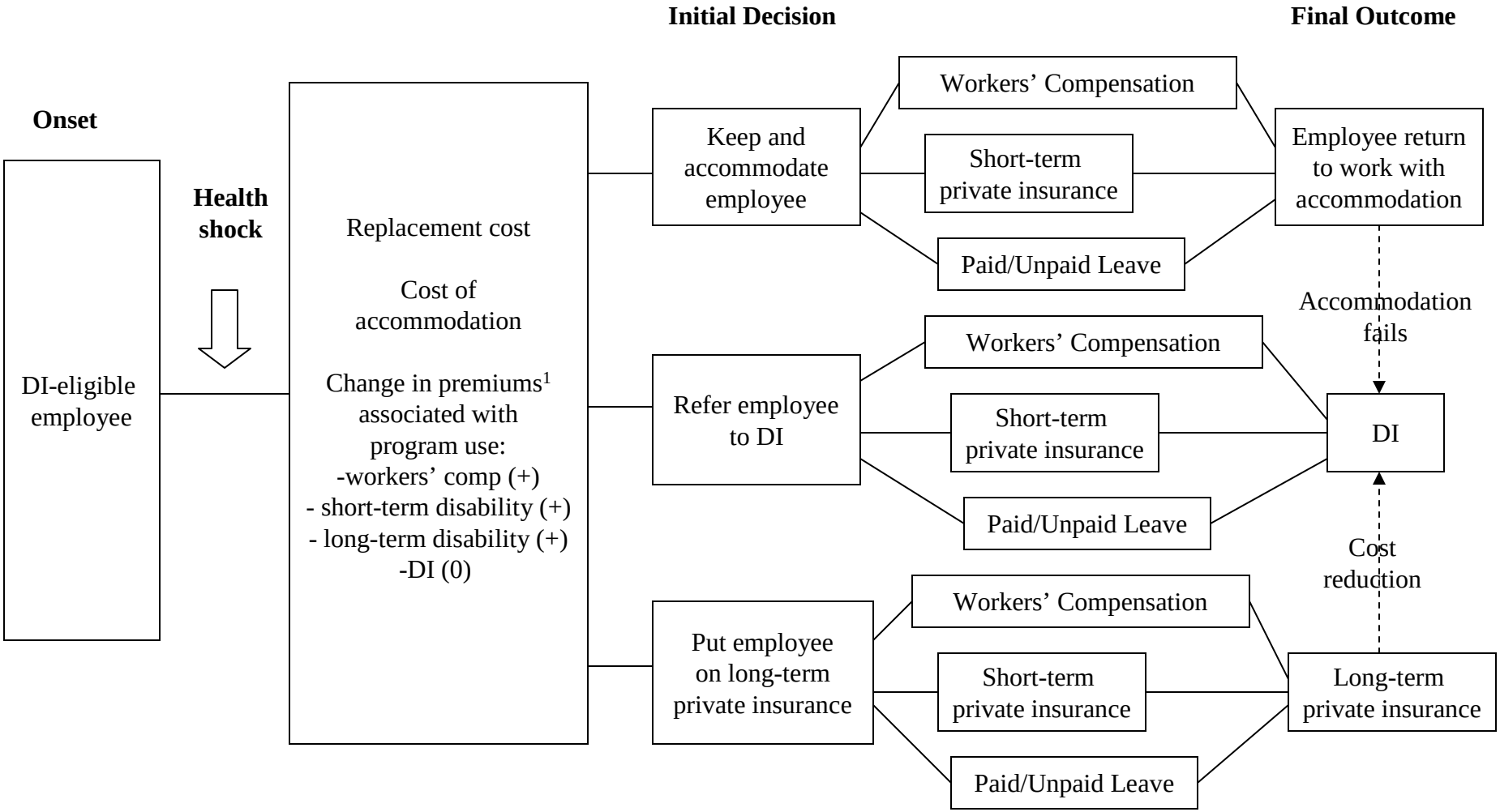


Figure 6, Panel B. Decision tree for employers/insurers reacting to the onset of an employee's disability

1. Change in premiums is commonly known as experience rating.

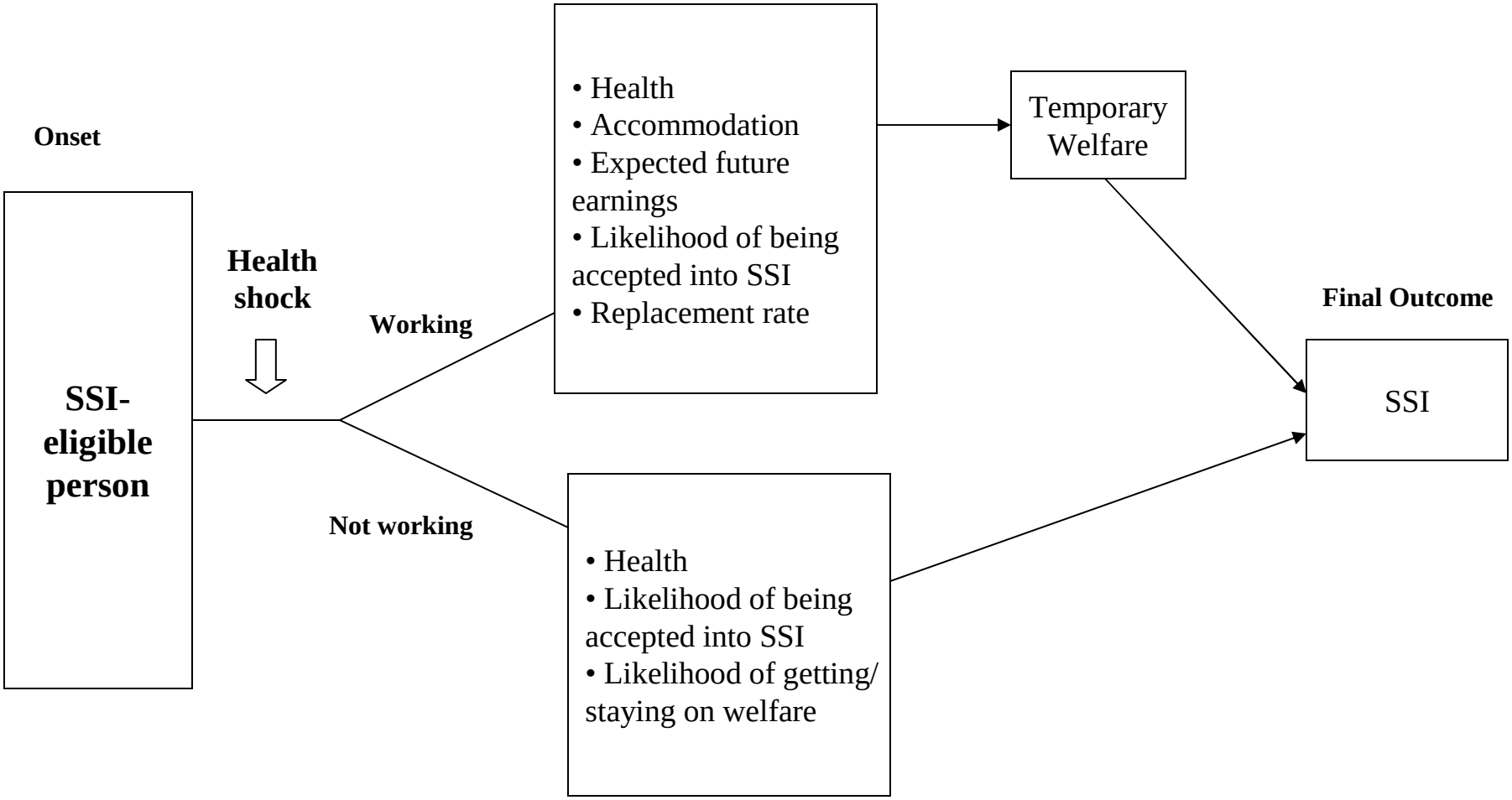


Figure 7, Panel A. Decision tree for SSI-eligible persons reacting to the onset of disability

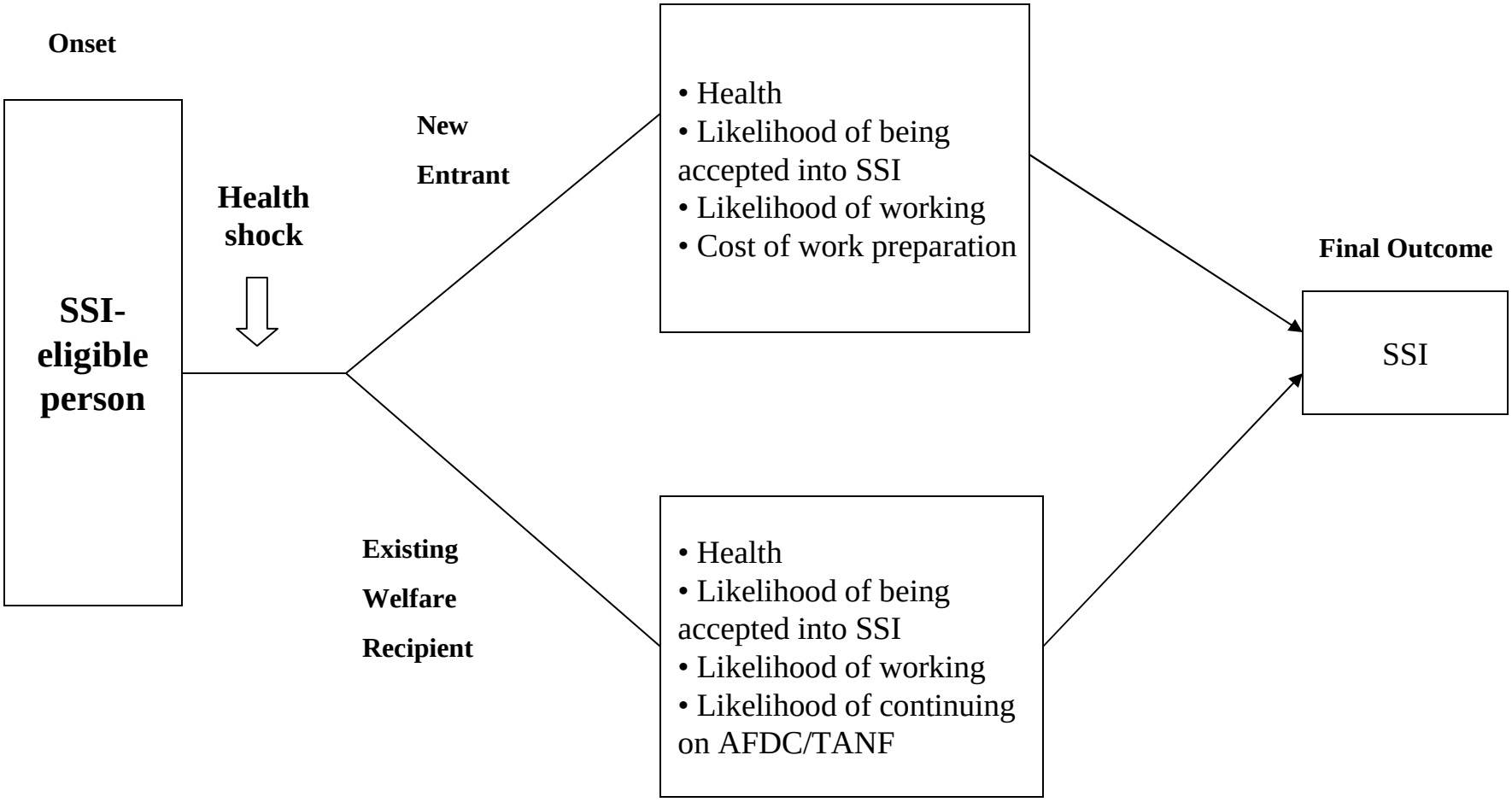


Figure 7, Panel B. Decision tree for states reacting to the onset of disability for a poor/near poor adult who may be eligible for SSI

Figure 8. US DI/SSI and Dutch disability beneficiaries per 1000 workers aged 15-64

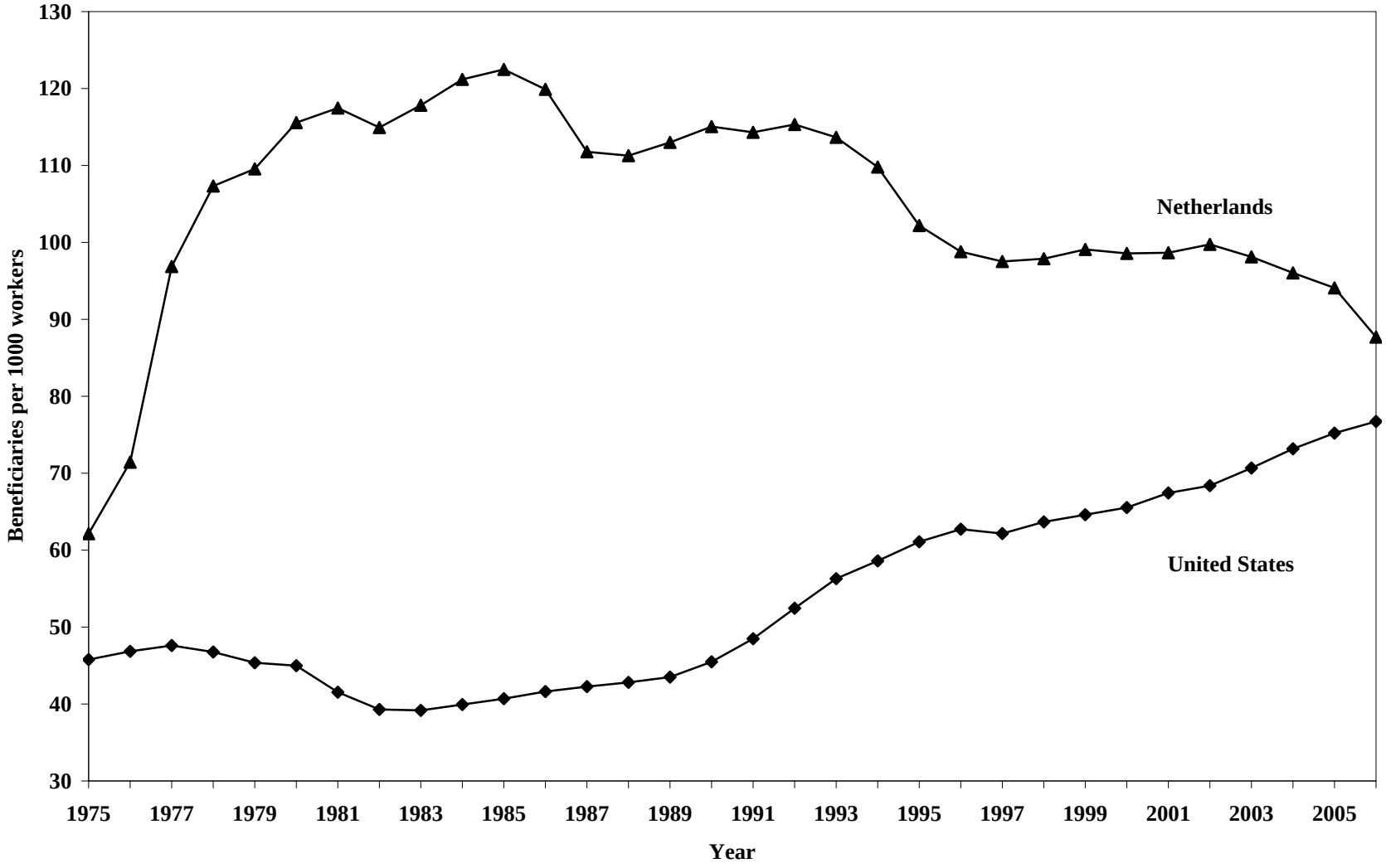
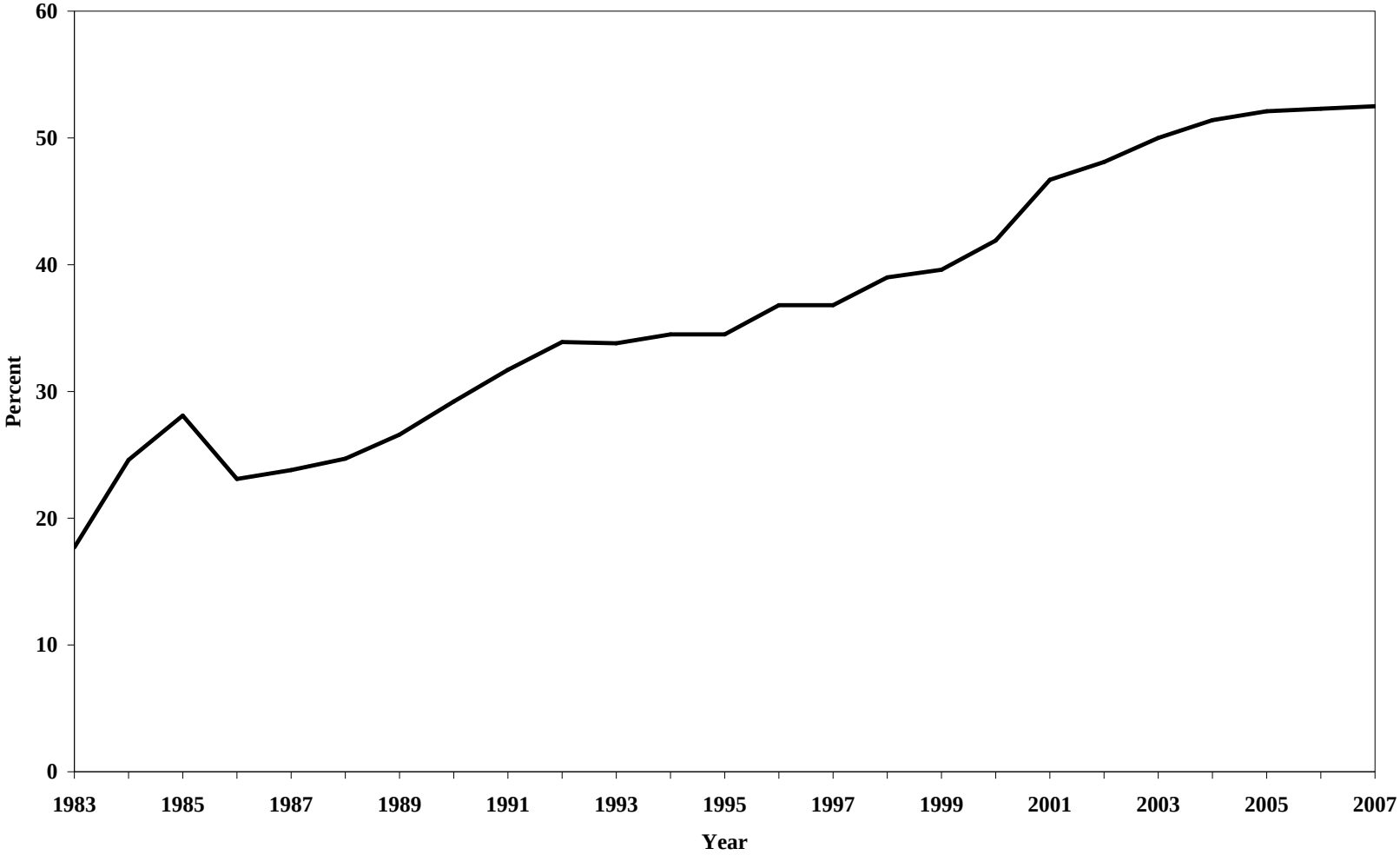
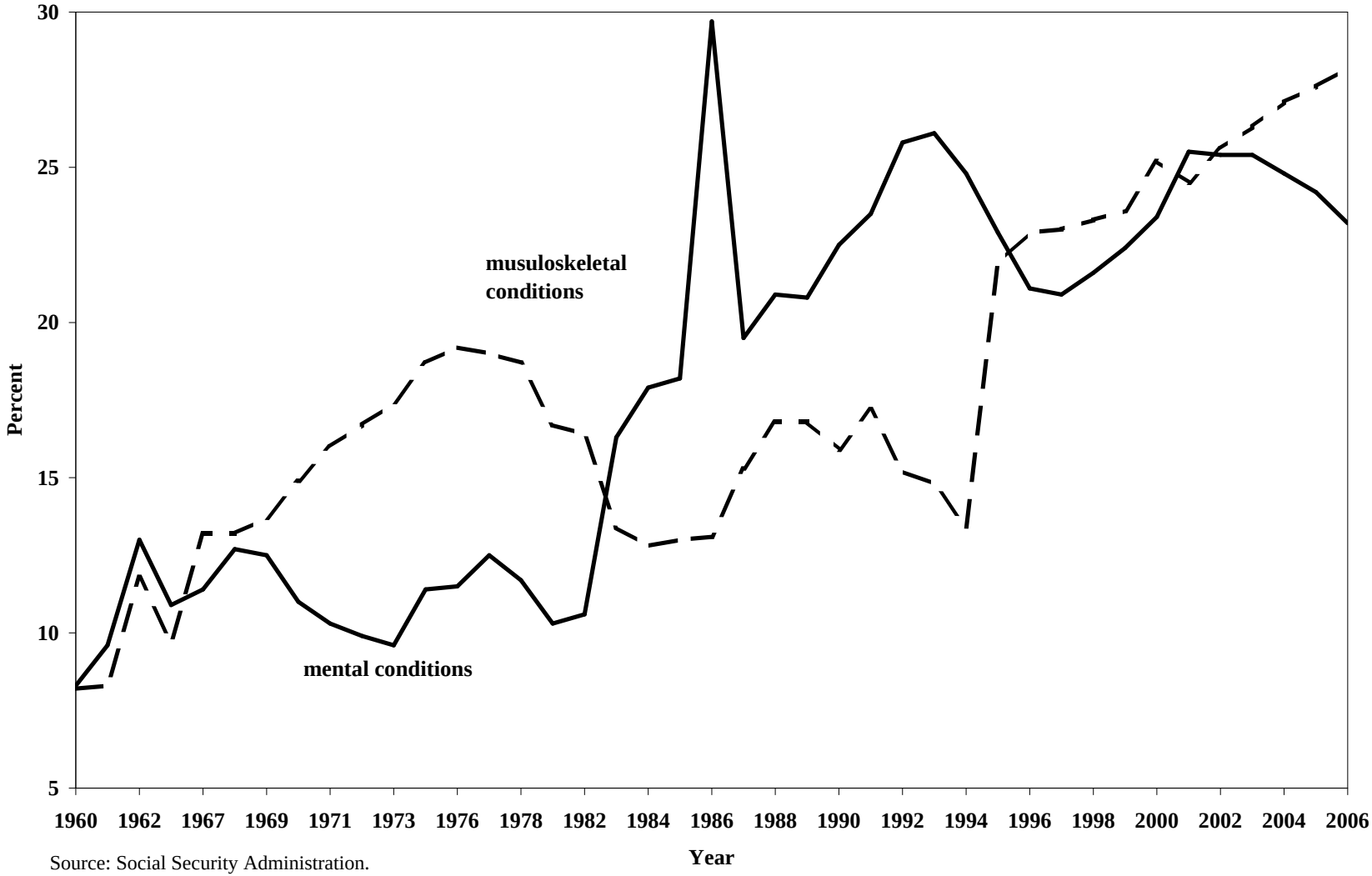


Figure 9. Percent of DI vocational awards at DDS



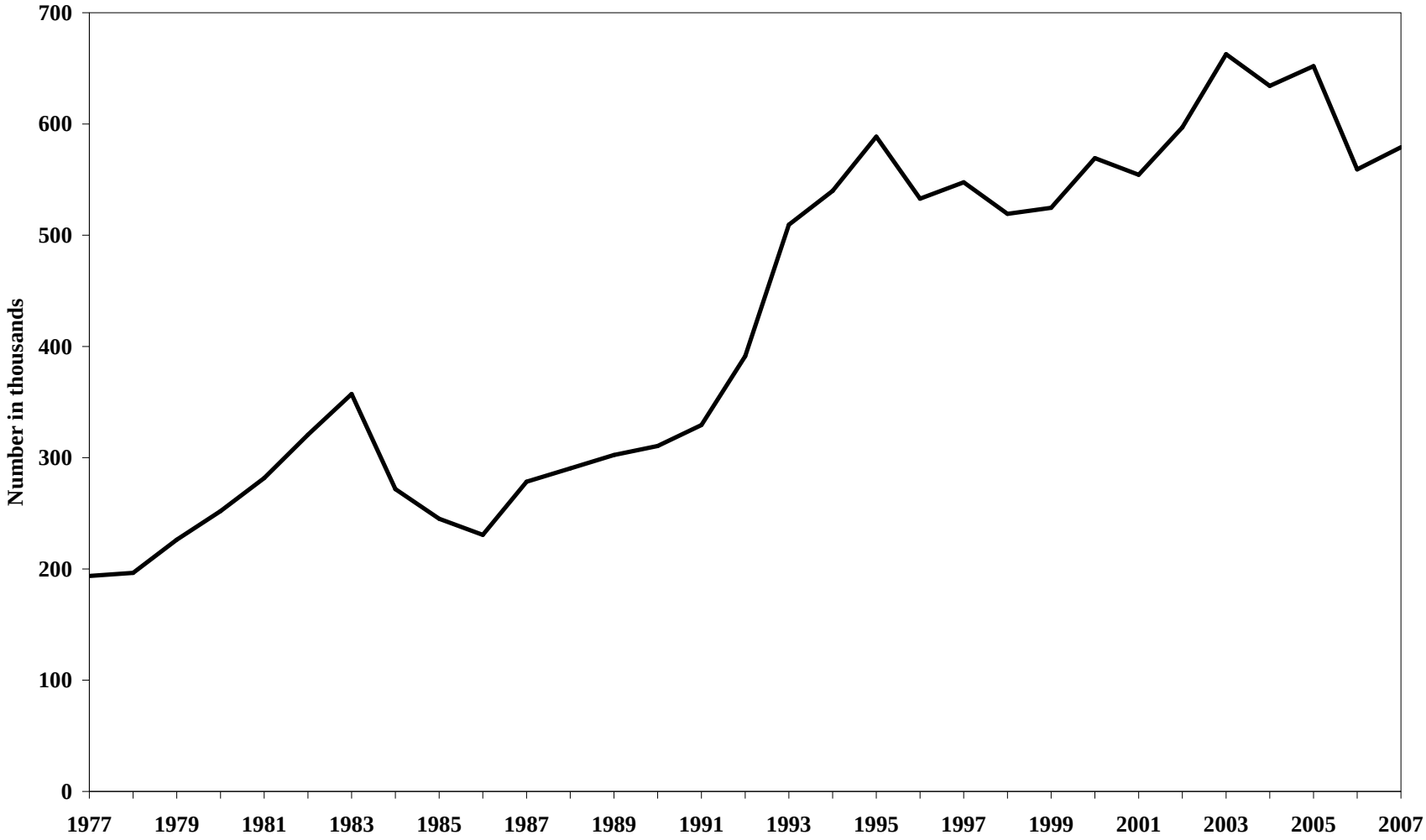
Source: Social Security Administration, Office of Disability Programs; updated for 2005-07 by phone, Susan David, 1/11/08

Figure 10. Percentage of DI awards for mental and musculoskeletal conditions



Source: Social Security Administration.

Figure 11. Number of ALJ hearings requested



Sources: 1977-84: "Staff Data and Materials related to the Social Security Act Disability Programs", Committee on Finance, United States Senate, September 1983, Committee Print S.Prt. 98-93, p. 35. 1985-2005: Key Workload Indicator Reports.

Figure 12. Dutch disability-based social insurance and welfare caseloads

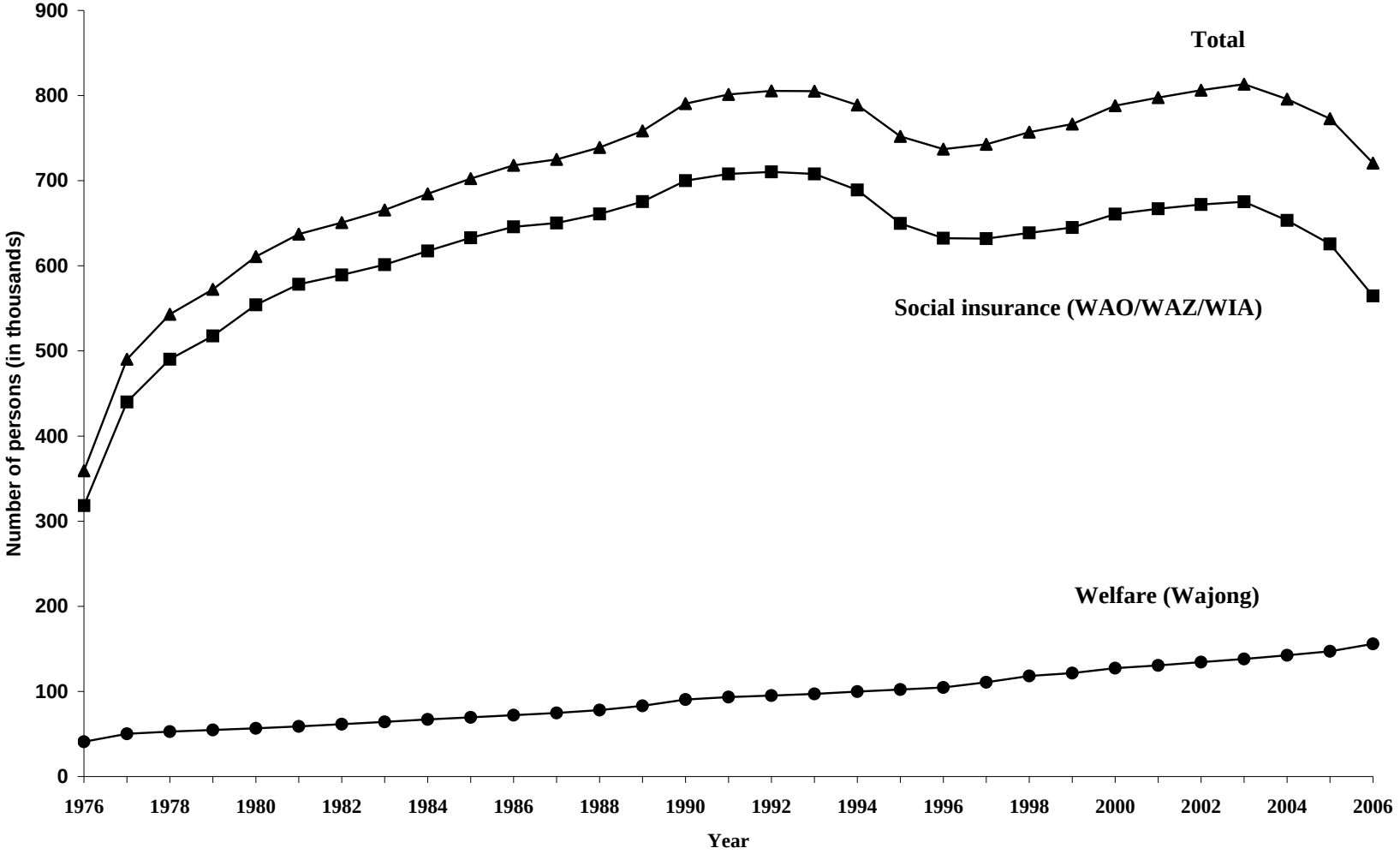


Figure 13. Caseloads of Dutch cash transfer programs

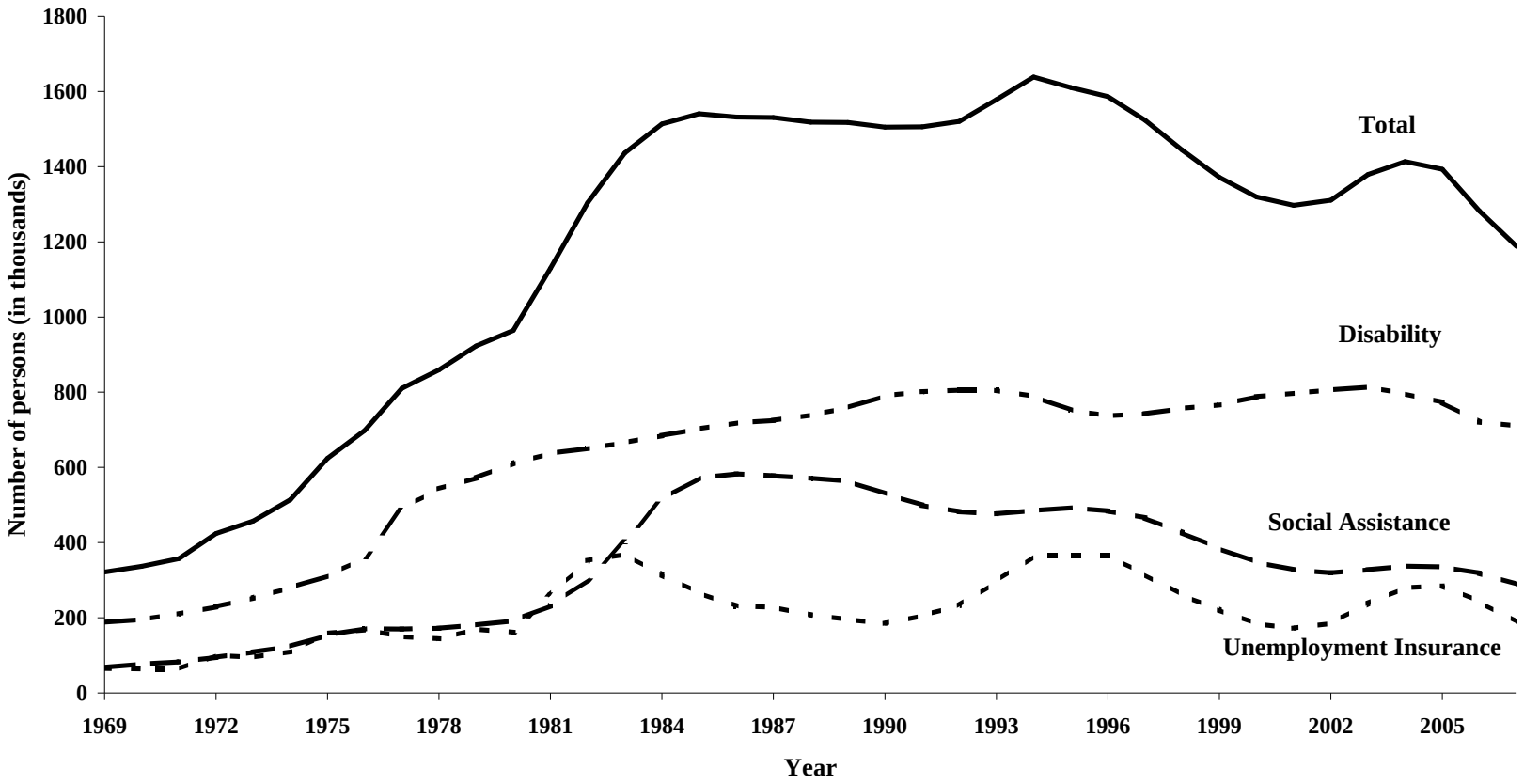


Figure 14. Total Dutch working age transfer caseloads per 1000 workers