

Burkhauser, Richard V.; Daly, Mary C.

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A Comparison of German and American People with Disabilities

Results from the German Socio-Economic Panel

by Richard V. Burkhauser and Mary C. Daly¹

All modern industrial societies attempt to ameliorate the consequences of work related health impairments on the earning capacity and economic well-being of their citizens. In the United States is done both through transfer programs that replace lost earnings (Social Security Disability Insurance) or provide an income tested floor (Supplemental Security Income) and through employment centered programs that either attempt to offset the effects of an impairment (Vocational Rehabilitation) or encourage employers to hire people with disabilities (job subsidies, quotas, or mandated accommodation).

Historically United States disability policy has been dominated by transfer programs and, to a much lesser extent, rehabilitation. There has been very little direct intervention into the job market on behalf of people with disabilities. European countries, in general, have been much more willing to make re-employment a major policy goal of their disability programs. And they have been willing to directly intervene in the labor market through quotas or direct job creation in order to achieve this goal.

In Sweden, for instance, only those who are judged unable to be rehabilitated are allowed onto the disability transfer rolls. And government-provided jobs are made available to people with disabilities who are not employed in the private sector. Germany does not directly create jobs for people with disabilities but it does have a mandated quota system that requires all enterprises (private and public) to employ workers with handicaps. (For a fuller discussion of the disability system in Germany and Sweden, see: Burkhauser and Hirvonen, 1989).

In 1990 the United States moved closer to this two-pronged European approach to transfers and employment protection by enacting the Americans with Disabilities Act (ADA). The ADA requires private sector employers to make reasonable efforts, through accommodation, to employ persons with disabilities. In this paper, we use longitudinal data to compare the economic well-being and employment status of people with disabilities in the United States and Germany. Because Germany combines transfers with employment support to mitigate the risk of economic loss following a disabling health impairment, it offers a first glimpse of what such a mixed program might offer to Americans with disabilities. We first compare results from cross-sectional estimates of the prevalence of disability and its effect on economic well-being in Germany with the results of comparable measures for the United States. We then move beyond simple cross-sections to trace the changes in economic well-being following disability for a sample of individuals in Germany. In each of these analyses we pay particular attention to older working age people (aged 45 to 59) since they face the highest risk of suffering a disabling change in health.

The Impact of Disability in the United States

People with disabilities in the United States live in households that are significantly worse off than other households. This is in large part due to a drop in wage earnings associated with disability. Burkhauser, Haveman, and Wolfe (1993), using data from the Current Population Survey found that in 1987, men with disabilities earned less than one-half of the wages of men without disabilities. These lost wage earnings were offset to some degree by the receipt of greater government

transfers and by the greater wage earnings of other household members. But their household income was still only three-quarters that of men without disabilities. The decline in the wage earnings of men with disabilities is a two decade phenomenon. The real wage earnings of such men have fallen by nearly 40 percent since 1972 and their family income has fallen by over 10 percent.

¹ All-University Gerontology Center, Maxwell School of Citizenship and Public Affairs, Syracuse University, New York/USA.

In part, this is a result of a long-term decline in the labor force participation of men with disabilities. U.S. Bureau of Census estimates find that the labor force participation rates of men with disabilities fell by 15 percent between 1981 and 1988 while the rate for men without disabilities remained constant (U.S. Bureau of Census, 1989). For men 45 to 64, the picture was even bleaker. In 1988 only 39 percent of men aged 45 to 54 and 21 percent of men aged 55 to 64 with a work disability were in the labor force. These numbers compare with a 97 percent participation rate for other men aged 45 to 54 and an 81 percent participation rate for other men aged 55 to 64.

This dismal employment trend was in large part responsible for the enactment of the ADA. Unfortunately, to date little evidence exists that the mandates imposed by the ADA will in fact, increase the wage earnings of people with disabilities².

It will be some time before we are able to track the consequences of the ADA on the employment and economic well-being of the people with disabilities in the United States³. But we can get some impression of the consequences of programs that directly intervene in the labor market on behalf of workers with disabilities by looking at the experiences of Germany.

German Disability Policy

Disability insurance in Germany is provided through different components of the social insurance system. A disabled worker may receive benefits from the statutory pension system, the public health system, the unemployment insurance system, or the worker's accident insurance system. Civil servants, low-income individuals and those without a work history receive benefits from institutions administering transfer programs. In addition to direct transfers the German government administers a quota system for public and private employers and engages in job re-training and rehabilitation activities.

The route to disability benefits for the vast majority of German workers begins with the sickness benefit program which fully replaces wages for up to six weeks after the onset of a sickness or following an accident⁴. Benefits are paid by the employer. For workers whose health problems continue beyond the six week period, the public health insurance system replaces approximately 85 percent of their regular wage⁵. These benefits can be paid for up to 18 months per health condition. Once they have expired the condition is assumed to be permanent and the individual becomes the responsibility of the disability pension system (Sadowski and Frick, 1992; Jacobs, Kohli, and Rein, 1991; Pfaff and Huber, 1984).

The disability pension system is divided into two categories: occupational (partial) disability and general (full) disability. Prior to 1969 the distinction between these categories was purely medical. An individual was considered occupationally disabled if his health prevented him

from working full-time or if his health reduced his current earning capacity below 50 percent of that of an equally skilled person. General disability status was reserved for those who were medically determined to be unable to earn a regular income at any job. Two decisions by the Federal Social Court, in 1968 and 1976, blurred the distinction between these two categories. The effect of these decisions was to make individuals who are able to work part-time but unable to find part-time jobs eligible for general disability benefits. The extension of general disability benefits to the unemployed who are partially disabled has led to a substantial reduction in the population receiving partial disability benefits and a equivalent growth in the general disability population⁶. (see Burkhauser and Hirvonen (1989) for a fuller discussion)

In 1985 the eligibility requirements for a disability pension were tightened. Previous to this ruling all persons who had contributed into the system for five years were eligible for a disability pension⁷. This enabled German housewives who had not worked in the labor market for many years to seek disability benefits as a type of pre-retirement pension. The 1985 legislation tightened disability eligibility rules by requiring all applicants to have worked at least three of the last five years. This change in the law was not

² Burkhauser, Butler, and Kim (1992) using data from the 1978 Survey of Disability and Work, provide some evidence that men who are accommodated on their job following a work impairment stay on the job longer than those not accommodated. Burkhauser and Daly (1992) using preliminary data from the new Health and Retirement Survey find similar results. But both of these studies which looked at accommodation practice prior to the passage of the ADA found that only about one in four workers were accommodated by their employer. Burkhauser (1990) suggest that enforcement of the ADA may not dramatically increase accommodation, and Burkhauser, Haveman, and Wolfe (1993) suggests that accommodation may miss the "doubly disabled" whose poorer education and job skills make them among the most vulnerable within the population with disabilities.

³ The new Health and Retirement Survey began following a cohort of men and women aged 51 to 61 in 1992. The first wave of that data is now available. It will be possible with that data to evaluate the accommodation experience of this group as it ages over the decade.

⁴ The statutory pension system covers approximately 75 percent of the German workforce, including the self-employed. Those who are not covered receive benefits through independent insurance systems organized on their behalf. This group includes farmers, miners, and civil servants (Jacobs, Kohli, and Rein, 1991).

⁵ Estimates of the replacement rate are between 80 percent (Sadowski and Frick, 1992) and 90 percent (Jacobs, Kohli, and Rein, 1991).

⁶ Between 1972 and 1984 the number of new disability pensioners aged 55 to 59 as a percent of all persons aged 55 to 59 grew from 2.3 percent to 3.4 percent for men and from 1.3 percent to 3.3 percent for women as persons in this age group substituted a disability pension for longterm unemployment (Jacobs, Kohli, and Rein, 1991).

⁷ Contribution periods are periods during which contributions have been paid or substitute periods which can include periods of military service, captivity or since 1986, periods of childrearing (counted as one period per child).

retroactively applied however, so most women who were awarded disability benefits prior to the 1987 ruling continue to receive them.

The goal of the German system is to provide early detection, rehabilitation, job retraining and employment whenever possible and to award transfers only when other mechanisms fail. Toward the aim of promoting employment, the government administers a quota system mandating all public and private enterprises to employ a handicapped worker for every 16 employees about 6 percent of their workforce. A fine of 200 DM per month per unfilled quota position is charged to employers who do not comply. This is a rather small fine (approximately \$125) and only 19 percent of employers fulfilled their quotas in 1990. The average quota in that year was only 4.5 percent⁸.

Data and Methods

The data for our study is taken from the German Socio-Economic Panel (GSOEP). The GSOEP began in 1984 with a sample of 6,000 households, representing a disproportionate number of non-German "guestworkers". The GSOEP currently contains data on approximately 6,000 households and nearly 14,500 individuals. Although the GSOEP now includes data on the former East Germany, we will restrict our analysis to survey year 1987 and thus to the old Federal Republic of Germany (West Germany). We conduct our analysis over all GSOEP participants aged 16 to 59. For a more complete discussion of these data, see Wagner, Burkhauser, and Behringer (1995).

The GSOEP can be weighted to be a nationally representative sample of the German population. We use the appropriate sample weights for the relevant year in all cross-sectional tabulations of percentages and population values. We leave our multi-period calculations of economic well-being unweighted since the sample weights are not designed to provide a representative sample of those with disabilities.

Disability is a dynamic status. It varies with both the health of the individual and the socio-economic environment in which the person lives. This confounds attempts to objectively measure it and to clearly categorize individuals as disabled or not disabled. These difficulties are exacerbated when we attempt to create objective measures for cross-national comparisons. We define those with disabilities using two criteria: a self-reported, health-related work limitation and/or an official recognition of disability status denoted by the receipt of transfers from a government program targeted on those with disabilities. Or health-related work limitation requires the respondent to report a health impairment and be working fewer than 35 hours per week. Our official recognition criteria requires that an individual receive benefits intended to offset the income effects of disability. These criteria are similar to those used by Burkhauser, Haveman, and Wolfe (1993). Because we want to separate disability from early retirement we limit our

sample to those aged 16 to 59. The exact specifications of these criteria for each country are provided in Appendix A.

We make cross-national comparisons of the economic well-being of persons with disabilities by looking at the relative position of those with disabilities to all others in the country. We measure relative economic status for those with disabilities using household post-tax and transfer income and its components. Because we are interested in examining the after government relative position of those with disabilities we focus on net of taxes household income rather than the more common pre-tax, post transfer measure used in the United States. We compute household income by summing all sources of income received by each household member. We assume that household income is distributed equally among its members.

In our analysis we adjust household income to reflect family-size differences by applying an equivalence scale. Since there is no universally accepted equivalence scale (see Buhmann, Rainwater, Schmaus, and Smeeding, 1988 for a discussion of the sensitivity of different equivalence scales in cross-national comparisons), we select the one used by the U.S. Bureau of the Census to set poverty thresholds and apply it to Germany. The United States equivalence scale values are reported in Appendix B. Although we use household income to measure economic well-being the unit of analysis in our study is the individual.

We separate our sample into men and women for our analyses. In most cases the underlying labor force experiences of men and women are sufficiently different that combining these categories distorts our picture of the "average" person with disabilities. We also divide our sample into two age categories, those aged 16 to 44, and those aged 45 to 59. The prevalence of disability begins to increase at about age 45 (U.S. Bureau of Census, 1989). It is also this older age group that is least likely to be able to adapt to a decline in health with a change in employment without the assistance of government programs. Therefore they are likely to be most economically vulnerable following the onset of a health impairment. Throughout our analysis we will compare the experiences of these two age groups.

Results

Table 1 compares disability prevalence in Germany with an equivalently defined population in the U.S. in 1987. The percentages suggest that men in both countries are equally likely to be disabled. However, German women are more likely to report being disabled than are U.S. women. From these simple percentages we cannot determine whether this difference captures a difference in the true percentage of German women who suffer from a disabling health impairment or whether it is an artifact of Germany's disability

⁸ Although they did not fulfill their quota, 44 percent of the employers employed some officially recognized people with disabilities. The remaining 37 percent employed no persons with disabilities (See Sadowski and Frick, 1992).

Table 1

**Prevalence of Disability in the Working-Age Population
(Aged 16 to 59) and the likelihood of Receiving Government Transfers
in the United States and the Federal Republic of Germany, 1987¹⁾**
(percentages)

	United States	Germany
Male		
percent with disabilities	9.9	10.5
percent receiving transfers ²⁾	65.0	72.0
Female		
percent with disabilities	8.0	10.8
percent receiving transfers ²⁾	54.0	77.0
Total		
percent with disabilities	8.9	10.7
percent receiving transfers ²⁾	60.0	74.0

¹⁾ United States estimates are taken from Burkhauser, Haveman, and Wolfe (1993), and Haveman and Wolfe (1990). German estimates are our own calculations based on the German Socio-Economic Panel applying the same definition of disability status applied for the United States calculations. See Appendix A for a discussion of the criteria for defining disability. — ²⁾ Transfer income includes all non-private transfers and is not limited to transfers based on disability status.

pension system which, as we discussed above, has been especially generous to women.

In the United States men are much more likely to receive disability transfers than women because women are less likely to satisfy the current work requirement in the United States disability insurance system. But this has not historically been the case in Germany. As we discussed, prior to 1985 there was no such test for German disability benefits. This in part, explains the higher rate for German women.

Table 2 shows large differences between the relative economic well-being of persons with disabilities in the United States and those in Germany. In the United States,

the mean wage earnings of men with disabilities were only one-half those of men without disabilities. In contrast, the mean earnings of German men with disabilities were nearly three-quarters those of other men. This disparity in wage earnings is partially offset by the relatively higher proportion of mean transfer income received by men with disabilities in the United States. But transfer income does not completely offset lost wage earnings. This is demonstrated by the fact that the mean household income of men with disabilities in the United States is only 75 percent that of other men. In Germany this ratio is much higher. The mean household income of men with disabilities is almost 90 percent of the mean household income of men without disabilities.

Table 2

Economic Well-Being of Men with Disabilities in the United States and the Federal Republic of Germany, 1987

	United States ¹⁾ (in thousands of 1991 Dollars)	Germany (in thousands of 1991 DM)
Real Wage Earnings		
Amount (mean)	13.6	31.5
As a proportion of those not disabled	.49	.74
Real Transfers		
Amount (mean)	7.7	7.6
As a proportion of those not disabled	4.1	2.2
Real Household Income		
Amount (mean)	34.4	52.3
As a proportion of those not disabled	.75	.88

¹⁾ United States numbers are adapted from Burkhauser, Haveman, and Wolfe (1993). — ²⁾ Authors' calculations based on cross-sectional data from the German Socio-Economic Panel (Income Year 1987).

Table 3

Poverty among Persons with and without Disabilities in the Federal Republic of Germany, 1987¹⁾

	Cases	Before Government (percentage)	After Government (percentage)
Men			
With disabilities	378	24.3	13.7
Without disabilities	3621	7.7	4.7
Relative Risk ²⁾		3.2	2.9
Aged 16 to 44			
With disabilities	143	29.8	16.4
Without disabilities	2569	8.5	5.6
Relative Risk ²⁾		3.5	2.9
Aged 45 to 59			
With disabilities	235	21.3	12.2
Without disabilities	1052	5.8	2.8
Relative Risk ²⁾		3.7	4.4
Women			
With disabilities	385	31.6	13.9
Without disabilities	3488	11.6	8.3
Relative Risk ²⁾		2.7	1.7
Aged 16 to 44			
With disabilities	156	29.1	15.8
Without disabilities	2523	12.0	10.0
Relative Risk ²⁾		2.4	1.6
Aged 45 to 59			
With disabilities	229	33.1	12.8
Without disabilities	965	10.6	4.4
Relative Risk ²⁾		3.1	2.9

1) Before government poverty is defined as having pre-tax and transfer household income below 50 percent of the population median of before government income. After government poverty is equivalently defined as having post-tax, post-transfer household income below 50 percent of the median after government income. The median value defines the level below which 50 percent of the observations fall. — 2) The relative risk equals the poverty rate of persons with disabilities divided by rate of persons without disabilities.

Clearly German men with disabilities have a much stronger connection to the labor market than American men with disabilities. And this is true despite the fact that a greater percentage of German men with disabilities are receiving transfers (see Table 1). Such a result must in large part be a consequence of the German quota system. Yet before we conclude that the German system is a panacea for the economic well-being of people with disabilities, it is useful to look at the economic well-being of the entire German population with disabilities.

Table 3 provides separate samples of men and women in Germany and compares the differences in the income effects of a health impairment across sex and age. This table compares the poverty incidence in the population with disabilities with the poverty in the rest of the population. The definition of poverty we use is a relative one⁹. We find that men and women of all ages with disabilities are much more likely to be in poverty prior to receiving government transfers than are persons without disabilities. After transfers and taxes have been included, poverty rates fall

substantially but men with disabilities still have a poverty rate of nearly 14 percent¹⁰. This is almost three times the poverty rate of men without disabilities. The after government poverty rate of women with disabilities is about the same as that of men with disabilities. But the added risk of poverty is lower since all women are more likely to be in poverty than men. Older men and women with disabilities

⁹ Because we want to examine the effects of government on the economic well-being of persons with disabilities we calculate before-government poverty as the percentage of persons with before-government income of less than 50 percent of the before-government population median. The after-government poverty population includes the number of persons who have post-tax, post transfer household incomes below 50 percent of the after government population median.

¹⁰ Before Government income is measured by subtracting all government transfers from gross household income. It ignores the influence of quotas on wage income and makes the strong assumption that behavior would not change in the absence of government. This is obvious only an approximation of what will actually occur.

have higher risks of poverty relative to other people their age then do younger people with disabilities.

These single period estimates of the risk of poverty for a person with disabilities in Germany show that even with substantial transfer and employment programs, the population with disabilities still faces a substantially higher risk of poverty than the rest of the population. But such cross-sectional values cannot disentangle whether this is because poor people are more likely to become disabled or because nonpoor people fall into poverty following their disability.

Table 4 allows us to separate these two explanations by providing a before and after look at the level of economic well-being of persons who suffer a disabling health impairment. The table reports the value of the median after government household income the year before and the year following the onset of a disability. It also reports the median value¹¹ of each income source for those two periods. Medians are calculated for those who were not classified as disabled in the period denoted "one year

¹¹ The median value defines the level below which 50 percent of the observations fall.

Table 4

**Median Changes in Economic Well-Being of Persons with Disabilities
One Year Prior and One Year After the Disabling Event in the Federal Republic of Germany**

	One Year Before (median) ^{1),2)}	One Year After (median) ^{1),2)}	Percentage Change
Men			
Own Wage Earnings	18,004	14,227	-21
Earnings of Other Household Members	13,424	13,768	3
Transfer Income	441	987	124
Other Income	554	582	5
Household Income	28,290	28,369	0
Aged 16-44			
Own Wage Earnings	15,877	13,294	-16
Earnings of Other Household Members	10,618	11,853	12
Transfer Income	481	820	71
Other Income	831	585	-30
Household Income	27,546	27,373	0
Aged 45-59			
Own Wage Earnings	23,546	17,859	-24
Earnings of Other Household Members	13,790	13,864	0
Transfer Income	213	949	346
Other Income	284	448	58
Household Income	30,476	29,950	-2
Women			
Own Wage Earnings	3403	1105	-68
Earnings of Other Household Members	24,801	25,660	4
Transfer Income	836	1,837	120
Other Income	757	587	-22
Household Income	26,359	27,184	3
Aged 16-44			
Own Wage Earnings	3,269	2,638	-19
Earnings of Other Household Members	22,791	25,893	14
Transfer Income	908	1,121	23
Other Income	684	510	-25
Household Income	24,537	26,228	7
Aged 45-59			
Own Wage Earnings	6,227	0	-
Earnings of Other Household Members	25,605	23,894	-7
Transfer Income	448	5,163	1052
Other Income	811	688	-15
Household Income	28,441	28,253	0

¹⁾ Medians include zero values and represent the median value in each income category. — ²⁾ Medians are unweighted.

before" but became disabled in the next period. Individuals who acquired their disability before the age of 16 or after the age of 59 are excluded from the sample. Those who did not receive income from a particular source were assigned a value of zero and included in the calculation of the medians. The reported medians reflect the median value of each category.

For men, a disability significantly influences all of their income sources but on balance has no effect on overall household economic well-being. The drop in median wage income following a health impairment is offset by increases in other income sources. But this general finding masks important differences between age groups. The drop in wage earnings is much more severe for older men. And transfer income plays a much greater role in ameliorating lost wage income for these workers than it does for younger workers. Finally, the family members of younger workers increase their earnings following a disability while those of older workers do not adjust. The effect on total household income, however, is approximately the same for both. This

suggests that disability policy overall in Germany has about the same impact on younger and older men with disabilities. But that the quota system may play a more important role for younger men with disabilities and a much smaller role for older men.

For women, differences between the age groups are even more pronounced. Women who suffer a disability at older ages, like men, experience almost no change in household income. Their wage income falls as does the wage income of members of their household, but substantial transfer income offsets these declines. Younger women have different outcomes. Their wage earnings fall while increases in their transfer income do not match those of men or older women. Still their household income actually rises do in large part to the increased work effort of other family members.

In Table 5 we calculate the per year risk of a fall into poverty following the onset of a disability. We follow a sample of individuals who were not poor at the onset of their disability and calculate both the conditional per year risk of

Table 5

The Risk of a Fall into Poverty following the onset of Disability in Germany

	Interval in Years	Entered Interval	Attrition or Censored Observations	Fell into Poverty During Interval	Proportion Falling into Poverty ^{1),2)}	Cumulative Proportion in Poverty in Year t ³⁾
	(1)	(2)	(3)	(4)	(5)	(6)
Men	0-1	272	0	16	5.9	5.9
	1-2	256	70	21	9.5	15.6
	2-3	165	66	14	10.6	25.0
	3-4	85	33	6	8.8	30.4
Aged 16-44	0-1	130	0	11	8.5	8.5
	1-2	119	29	7	6.7	15.5
	2-3	83	29	10	14.6	27.7
	3-4	44	22	2	6.1	33.3
Aged 45-59	0-1	142	0	5	3.5	3.5
	1-2	137	41	14	12.0	15.6
	2-3	82	37	4	6.3	22.3
	3-4	41	11	4	11.3	27.7
Women	0-1	349	0	16	4.6	4.6
	1-2	333	63	26	8.6	13.2
	2-3	244	81	14	6.9	20.2
	3-4	149	81	3	2.8	24.9
Aged 16-44	0-1	180	0	8	4.4	4.4
	1-2	172	33	16	10.3	14.7
	2-3	123	40	6	5.8	20.9
	3-4	77	37	2	3.4	25.6
Aged 45-59	0-1	169	0	8	4.7	4.7
	1-2	161	30	10	6.8	11.7
	2-3	121	41	8	8.0	19.5
	3-4	72	44	1	2.0	24.2

1) Poverty is defined as having after government income of less than 50 percent of the post-tax, post-transfer median income for the appropriate year. — 2) Column (5) = Column (4) / (Column (2) — .5(Column (3))). — 3) Column (6) = \sum (Column (4) at time t) / Column (2) at interval 0-1 — .5 \sum (Column (3) at time t).

a fall into poverty and the cumulative risk of eventual poverty following a disability. This table shows that the cross-sectional estimates of poverty for men with disabilities understates the eventual risk that an individual will fall into poverty following a disability. We find that approximately 33 percent of men who suffer a health impairment at ages 16 to 44 and 28 percent of men who do so at ages 45 to 59 have dropped into poverty after four years. For women the numbers are 26 and 24 percent respectively.

Employer provided sickness benefits and national health insurance appear to control short-term economic losses during the first year of a health problem. For instance, for men the risk of a fall into poverty is only about 6 percent. And these benefits also appear to protect other age groups against initial falls into poverty. But the risk of poverty rises for all age groups in subsequent years. Based on these results we do not yet know whether these falls into poverty are transitional or whether they persist. However, these results suggest that the very successful initial effect of the German system may not continue in the longer run.

Discussion

All modern industrial societies maintain social programs to protect and assist workers who develop health impairments that reduce their earning capacity. In addition, many nations have implemented employment support programs to keep such workers in the labor market. In this paper we have examined the economic well-being of persons with disabilities in Germany and compared them with their counterparts in the United States. We find that, on average, the economic well-being of persons with

disabilities in Germany is closer to the rest of the German population than is the case in the United States. This is in large part due to the higher relative wage earnings of the German population with disabilities. But we also find that not all groups in Germany are equally protected. Poverty rates among the disabled are almost three times that of the rest of the population. And the relative risk of poverty is highest among men aged 45 to 59. In addition, we have seen that the risk of poverty increases over time. In all age and sex groups the likelihood of a drop into poverty rises in the second year following a change in health, after initial sickness benefits have run out.

Further analysis in this area is needed to disentangle the effects of the transfer and employment components of disability support. And to describe their differential effects on older and younger age groups. Most important, additional longitudinal analysis is required to see whether these programs provide permanent or transitory protection against losses in economic well-being following a disabling health impairment.

This initial look at the effects of the German disability system leads us to conclude that persons with disabilities in Germany appear better protected against losses in economic well-being than those in the United States. But even in Germany, substantial disability poverty remains. This suggests that even in a country where median losses due to the onset of a health impairment are very slight, the tail of the distribution may still be seriously affected. Thus, even if the ADA proves to dramatically improve the earnings level of the average person with disabilities, a significant sub-group of this population may need substantial transfer assistance.

Appendix A

Program Participation and Health Limitation Criteria Based on the Current Population Survey (CPS) and the German Socio-Economic Panel (GSOEP)

CPS Criteria for Disability Status

(adopted from Burkhauser, Haveman, and Wolfe 1993)

A person is considered disabled if he or she fulfills one or more of the following criteria:

1. **Health-Constrained Work:** Works fewer than 35 hours per week and reason for part-time work = own illness or reason for part-year work = own illness, or have job, but not working and reason not working = own illness.
2. **Employment Status:** Employment status or major activity = unable to work.
3. **Benefit Receipt:** Receives social security or rail road retirement benefits, is not in school, is between 19 and 59, and is not a widow with a dependent child; or receives Supplemental Security Income; or receives workers' compensation; or receives veteran's disability benefits, is a veteran, and is not in school.

GSOEP Criteria for Disability Status (1984-1989)

A person is considered disabled if he or she fulfills one or more of the following criteria:

1. **Health-Constrained Work:** Ranks health between 0-2 on a 10 point scale and works fewer than 35 hours per week. The question which produces this variable asks, "How satisfied are you with the following aspects of your life? (Health) Completely satisfied = 10. Completely Dissatisfied = 0. If your feelings are mixed, provide a rating somewhere in between."
2. **Employment Status:** Not currently in the labor force and reason terminated last job = disabled in profession; disabled in market work; other health reasons.

3. **Benefit Receipt:** Receives Social Insurance — Worker's Pension, Miner's Union, Civil Servant's War Victim's, or Worker's Accident Benefits — for disability.
4. **Official Disability Assessment:** Officially classified as being of reduced earning capacity or severely disabled.

Appendix B

U.S. Equivalence Weights for Adjusting Household Income

Household Size ^{1), 2)}	Weight
Single person	1
Couple	1.29
Couple plus child	1.55
Couple plus 2 children	1.95
Couple plus 3 children	2.29
Couple plus 4 children	2.57
Couple plus 5 children	2.88
Couple plus 6 children	3.16
Couple plus 7 children	3.87

¹⁾ The equivalence weights for the United States are derived from the Census poverty thresholds. (see Poverty in the United States 1990, Current Population Reports, Series P-60, No. 175, United States Department of Commerce, Bureau of the Census, Washington, DC, August 1991.) — ²⁾ Equivalence weights for alternative family compositions are not shown here but were included in the calculations of equivalent income.

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