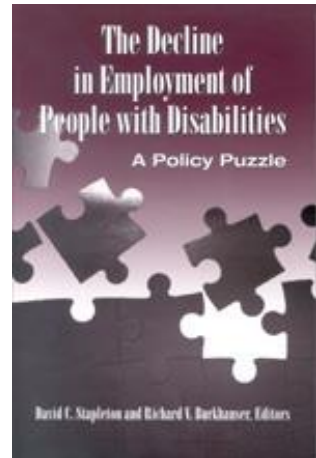

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10

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During the 1990s, the Social Security Disability Insurance (SSDI) program grew rapidly. In 2000, the program provided cash and medical benefits to 5 million working-aged (18–64) adults with impairments that, according to eligibility criteria, prevent them from working. The SSDI rolls grew 67 percent from 1990, over five times faster than the working-aged population.¹ Because SSDI beneficiaries are essentially precluded from working as a precondition of benefits, this growth is consistent with the decline in the employment rate for people with disabilities, documented by Burkhauser, Houtenville, and Wittenburg (Chapter 2).

Based on findings by Bound and Waidmann (2002) and Autor and Duggan (2003), we conclude that the growth in the number of recipients can largely be attributed to two program changes: a period of liberalization in eligibility criteria, beginning in 1984, and a gradual increase in program generosity for low-wage workers. These changes interacted with the recession of the early 1990s to increase SSDI rolls while simultaneously decreasing labor force participation. Moreover, the findings suggest that these changes were the impetus for labor force withdrawal, rather than a result of people with disabilities withdrawing from the labor market for some other reason and turning to the SSDI program as a safety net.

Because virtually any factor that would reduce the employment rate for people with disabilities would also increase SSDI participation, a key question is whether it was a change in the SSDI program, rather than another factor, that caused the employment rate to decline. The work of Autor and Duggan (2003) and Bound and Waidmann (2002) reviewed in this chapter offer a wealth of evidence to suggest the causal relationship. The two sets of authors take different empirical approaches, but together provide strong support for the hypothesis that the changes in SSDI led to the decline in employment.

We will review the following findings, among others, to support this argument.

- Over the past three decades, the number of people receiving SSDI benefits has been responsive to changes in eligibility criteria and program generosity, and the trend in SSDI rolls closely tracks the employment rate of the insured population with disabilities (Bound and Waidmann 2002).
- The types of impairments for people with disabilities who increasingly report that they are unable to work are the same impairments that were most affected by SSDI eligibility expansions (Bound and Waidmann 2002).
- Workers without high school degrees, whose potential SSDI benefits are closest to their earnings, were more likely than workers in other educational groups to drop out of the labor force after the 1984 liberalizations (Autor and Duggan 2003).
- Based on state data, we can account for the entire rise in the fraction of the working-aged population that reports work limitations and is out of work by the rise in the fraction receiving SSDI benefits during the 1990s (Bound and Waidmann 2002).
- Low-wage workers who become unemployed were more likely to drop out of the labor force and apply for SSDI after the 1984 eligibility expansion than they were before the expansion (Autor and Duggan 2003).

This chapter is divided into three parts. The first section provides background on recent trends in employment rates, the SSDI program, and the historical context of recent expansions in eligibility and benefits. It also outlines a theoretical model of the decision to apply for ben-

efits. The next section describes findings from the two papers, before discussing implications in the final section.

BACKGROUND

Trends in Employment Rates

As described in Chapter 2, the employment rate of men with disabilities, like that of other working-aged men, declined during the recession of 1990. However, unlike that of men without disabilities, the employment rate of men with disabilities continued to decline through the economic expansion of the mid and late 1990s.

Among women, employment rates were flat during the recession, but as the economic expansion took hold, the employment rate of women without disabilities continued its long historical growth. For women with work limitations, there is no such growth, and perhaps even some decline, in the employment rate.

Together, this implies that for both men and women, the employment rate of people with disabilities was falling relative to that of people without disabilities during the economic expansion of the mid and late 1990s. Rather than narrowing the employment gap, people with disabilities lost ground.

These trends are not simply an artifact of changes in the Current Population Survey (CPS); they are apparent in analyses using the Survey of Income and Program Participation (SIPP) and the National Health Interview Survey (NHIS) as well (see Burkhauser, Houtenville, and Wittenburg, Chapter 2). Nor is the trend merely a reflection of changing population demographics (See Houtenville and Daly, Chapter 3).

Social Security's Disability Programs

The Social Security Administration (SSA) provides cash benefits to people with disabilities under two programs: the SSDI program and the Supplemental Security Income (SSI) program. The medical requirements for eligibility are the same under both programs, and the same process is used to determine if a person's impairment meets the

criteria. Eligibility for SSDI is based on prior work under Social Security, while SSI disability payments are means tested.

For SSDI, benefits are based on the worker's past earnings and are paid to the worker with disabilities and, in limited instances, to his or her dependent family members. To qualify, a worker must have worked in jobs covered by Social Security. The exact work requirement varies by age but, generally, a worker must have worked one-half of the ten years prior to disability onset.²

An SSDI beneficiary whose income (after counting SSDI benefits) and assets fall below SSI limits is eligible to receive SSI benefits in addition. In 2000, 4.8 million beneficiaries received SSDI benefits only, 1.1 million received both SSDI and SSI; and 3.4 million received SSI only (SSA 2001).

There is a five-month, postwork waiting period before SSDI eligibility can begin. Beneficiaries receive Medicare benefits after 24 months of SSDI eligibility. For SSI, benefits can begin immediately after work ends. Almost all SSI recipients are eligible for Medicaid, and in most states eligibility is automatic.

For both programs, the disability must be expected to last at least a year or result in death. The claimant must pass a strict definition of work disability defined as an "inability to engage in any substantial gainful activity (SGA)."³ Whether an individual meets the definition is not always straightforward. State Disability Determination Services (DDS) determine if the claimant's impairment is "severe" and if the claimant has "residual functional capacity" to engage in any type of work, in an often complicated and lengthy process. Claims denied by the state can be, and often are, appealed to SSA's administrative law judges. In 2001, fewer than 56 percent of claims were allowed.⁴ Periodically, beneficiaries undergo a "continuing disability review" (CDR) to determine if their impairment has improved sufficiently to enable the beneficiary to engage in SGA.

The evidence we present in this chapter focuses on SSDI program beneficiaries. Although the number of SSI-only beneficiaries of working age has also grown more rapidly than the working-aged population, SSI beneficiaries who are not SSDI beneficiaries are much less likely than SSDI beneficiaries to have substantial work experience. As a result, from a theoretical perspective, the relationship between declin-

ing employment rates and SSI alone is much less clear than the relationship between employment rates and SSDI.

Changes in Eligibility and Benefits: Expansions and Retrenchments in Historical Context

The SSDI program has undergone almost continuous change from its inception in 1956 (SSA 1986). From 1956 through the mid 1970s, Congress expanded eligibility for disability benefits dramatically and increased benefit levels. Originally, benefits were provided only for disability-insured workers between ages 50 and 65 with an inability to engage in SGA “by reason of any medically determinable physical or mental impairment which can be expected to result in death or to be of long-continued and indefinite duration.” The 1957 regulations added consideration of such nonmedical factors as “the individual’s education, training, and work experience” (SSA 1986).

In 1960, the minimum age requirement was removed, and in 1965 “long-continued and indefinite duration” was replaced with “expected to last for a continuous period of not less than 12 months.” In 1967, concerned that the definition of disability had eroded, Congress directed SSA to “to reemphasize the predominant importance of medical factors in the disability determination.” The Social Security amendments of 1967 added language to the definition to make it clear that a claimant may be found disabled, “only if his physical or mental impairment or impairments are of such severity that he is not only unable to do his previous work but cannot, considering his age, education, and work experience, engage in any other kind of substantial gainful work which exists in the national economy, regardless of whether such work exists in the immediate area in which he lives, or whether a specific job vacancy exists for him, or whether he would be hired if he applied for work” (SSA 1986).

In 1972, the waiting period from the end of work to the beginning of benefit payments was reduced from six to five months. In addition, the introduction of the SSI program, which replaced a wide variety of state programs, had the effect of eliminating the work history requirement for those without significant assets or other sources of income. The 1972 amendments also first provided Medicare and Medicaid protection for SSDI and SSI beneficiaries, respectively (SSA 1986).

During the early and mid 1970s, the size of the program increased dramatically, giving rise to concerns that expansion of eligibility and benefits encouraged persons with impairments to stop working and apply for benefits, and that the program was attracting individuals with nonsevere impairments.

Between 1975 and 1979, several proposals for disability reform legislation were introduced in Congress. At the same time, SSA tightened the disability determination process, making it more difficult to get benefits; initial acceptance rates declined from about one in two applications to one in three. Legislative activities intensified in 1979, culminating in the enactment of the Social Security Disability Amendments of 1980 (Mashaw and Reno 1996).

The 1980 amendments included a more stringent maximum family benefit calculation; greater work incentives for SSDI and SSI beneficiaries with disabilities; and increased authority for the Secretary of Health and Human Services to establish, through regulations, performance standards and administrative procedures to be met by the states, including the authority to overturn state allowances (Mashaw and Reno 1996).

The 1980 amendments also required SSA to conduct CDRs of all beneficiaries at least once every three years to certify their continuing eligibility. This replaced the practice of conducting CDRs only in selected cases in which the individual's condition was expected to improve or the individual had returned to work.

The 1980 amendments created a massive and highly controversial workload for SSA. Widespread concern over the effect the reviews and subsequent terminations were having on beneficiaries prompted more than two dozen congressional hearings. Questions were raised about the criteria for selecting cases for review, the effects that the enormous workload was having on the quality of adjudications, the adequacy of the medical evidence used in CDRs, and the standards applied in making such determinations. Concerns were also expressed that the criteria for establishing disability based on a mental impairment were too restrictive. During this period, federal courts were also issuing decisions requiring use of a medical improvement standard in CDRs and consistent application of particular standards (Mashaw and Reno 1996).

In 1984, Congress loosened the reins again, largely to address what were widely regarded as excesses in the benefit terminations of the

early 1980s and to increase national uniformity in the program. Most of the major provisions of the 1984 Disability Benefits Reform Act involved the statutory standards for evaluating disability. The act made it harder to terminate a beneficiary, gave more weight to the assessments of the applicant's or beneficiary's physician ("source evidence"), and broadened the list of conditions considered to be disabling, most notably making it easier for persons with psychiatric impairments and chronic pain to qualify for benefits. In addition, the 1984 act provided that the combined effect of all of a person's impairments must be considered in determining eligibility, even if no single impairment qualifies as "severe." In subsequent years, further legislative changes and a series of court decisions gave additional weight to source evidence, thus expanding the de facto definition of disability for the SSDI and SSI programs (Mashaw and Reno 1996).

Replacement Rates

While regulations were directly affecting eligibility, an unintended consequence of the formula for computing benefits was also evolving. As Autor and Duggan (2003) explain, the effective replacement rate (the ratio of disability income to prior earnings) for low-skilled workers rose through the 1980s and 1990s.

Disability benefits are indexed to the mean wage in the economy. Given the increasing disparity between high- and low-wage jobs during the 1980s, most low-wage workers experienced lower than average wage increases. As a result, potential SSDI benefits increased faster than wages for this segment of the economy.

Examining the benefit formula illustrates this process. The formula starts with the calculation of the beneficiary's Average Indexed Monthly Earnings (AIME), which is essentially the worker's average wages over his or her work career indexed by national wage growth to account for wage inflation. In 2002, the Primary Insurance Amount (PIA), which is the monthly Social Security benefit for the worker, after rounding to the next lowest dollar, equals:

- 90 percent of the first \$592 in AIME
- + 32 percent of the amount between \$592 and \$3,567
- + 15 percent of the amount exceeding \$3,567.

The amounts of \$592 and \$3,567 are referred to as “bend points.” The average wage growth in the economy is used not only to index the individual’s monthly earnings but also to rescale these bend points.

Because the bend points rise each year with the average nominal wage, workers who would have had wage growth below this average have a larger fraction of the lost wage income replaced at 90 percent rather than 32 percent. In addition, because past earnings are inflated by national average wage growth to compute the AIME, this same worker’s AIME is greater than it would be had past earnings been the growth rate of their own wages. These factors increase the effective replacement rate for individuals in the low end of the earnings distribution.

The actual value of SSDI is not limited to the cash benefit. All SSDI recipients (after a waiting period) receive Medicare coverage, one-fifth also receive SSI cash benefits, and many beneficiaries have dependents who receive cash benefits based on the worker’s disability.⁵ Autor and Duggan (2003) find that, although Medicare significantly increases the value of benefits, SSI does not affect the replacement rate even for recipients in the tenth percentile of the earnings distribution for workers.⁶ They do not consider the influence of dependent benefits.

The replacement rate, with or without including the value of Medicare, is higher and has increased most dramatically for those at the low end of the earnings distribution (Table 10.1). In 1999, male workers aged 55–61 were able to replace 73 percent of their earnings with disability income, an increase from 52 percent in 1979, or a 21 percentage point increase. If we include the value of the associated Medicare benefits in the numerator of the replacement rate, and comparably add fringe benefits to the denominator, the increase is from 67 percent in 1979 to 104 percent in 1999, a 37 percentage point increase. By contrast, workers in this age group who were in the ninetieth earnings percentile saw an increase of only 4 percentage points (from 20 percent to 24 percent without Medicare, and from 19 percent to 23 percent with Medicare).⁷

Decision to Apply for Benefits

Autor and Duggan (2003) outline a model of the decision to apply for disability benefits in which the individual weighs his or her per-

Table 10.1 Potential SSDI Income as a Percent of Current Earnings for Nonelderly Males at Various Percentiles of the Wage Distribution, 1979 and 1999

Age	Earnings percentile	Cash income replacement rate (%)		Adding in-kind medicare benefit ^a	
		1979	1999	1979	1999
55-61	10	52	74	67	104
	25	45	54	48	63
	50	37	47	36	47
	75	27	32	26	31
	90	20	24	19	23
50-54	10	47	57	61	81
	25	41	47	44	55
	50	34	41	33	42
	75	26	32	25	31
	90	19	23	18	22
40-49	10	48	53	61	80
	25	41	45	44	55
	50	34	41	33	42
	75	26	33	25	32
	90	20	26	19	25
30-39	10	46	54	59	84
	25	41	46	44	58
	50	36	41	35	44
	75	29	36	27	35
	90	23	28	21	27

^a Includes average Medicare expenditures and adjusts for average percentile-specific fringe benefits.

SOURCE: Autor and Duggan (2003). Reprinted with permission from the *Quarterly Journal of Economics* 2003, p. 165.

ceived chance of being awarded benefits and the value of those benefits against the net value of working. The net value is the wage minus the “disutility of effort,” which is larger for people in poorer health.

An employed person must choose between working and applying for benefits. If the worker chooses to apply for benefits, he or she must first exit employment (either voluntarily or involuntarily) and wait five months before benefit eligibility begins. Further, the application process might take much longer than five months, even if benefits are ulti-

mately awarded retroactively. This is a risky alternative because the applicant must forgo earnings, and there is a probability (based on the severity of the person's condition) that the individual will be denied benefits. Workers choosing this option are likely to have a low net value of working (either because of low wages or ill health) and are also likely to have severe work limitations.

An individual who might not choose to leave a job to apply for benefits might choose to apply in the event of an involuntary job loss. This is a key point in the Autor-Duggan model. If the worker is not employed and does not expect to be employed for an extended period of time, the opportunity cost of lost earnings during application is substantially reduced or eliminated. In this case, the individual compares the value of benefits (accounting for the probability of actually being approved) and the net wage of a new job (accounting for the odds of reemployment). People who lose their jobs involuntarily not only have a lower opportunity cost, they likely can expect to earn less in another job, if they find one, thereby raising the attractiveness of disability income.

Autor and Duggan (2003) refer to this second group as "conditional" applicants. They hypothesize that deteriorating labor market conditions in the recession of the early 1990s coupled with the post-1984 eligibility expansions greatly expanded the pool of potential conditional applicants, and increases in the value of benefits, especially for those with low past earnings, made application more attractive to those in this pool.

FINDINGS

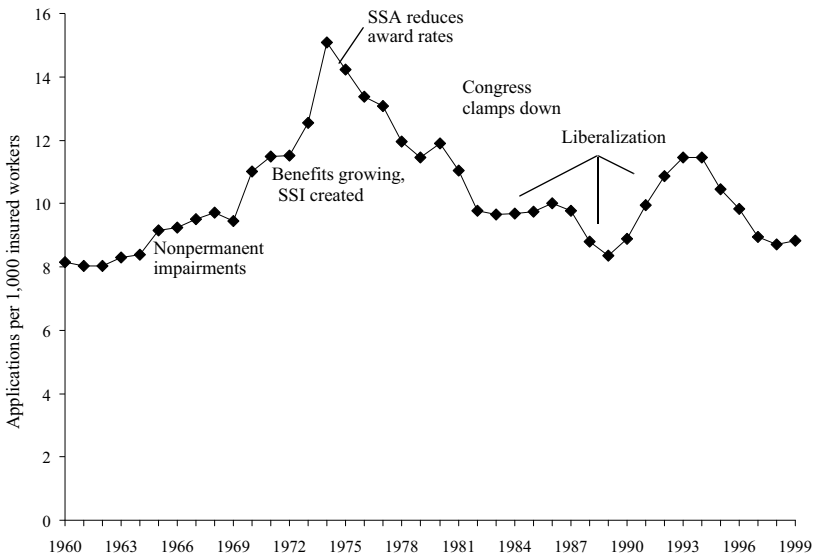
The Number of DI Beneficiaries Is Responsiveness to Changes in Eligibility Criteria and Program Generosity

The decision model implies that individuals are more likely to apply for benefits if they think that their chances of being approved are high. This result is seen clearly in SSDI trends during the past three decades. During this period, applications and awards seem to mirror changes in eligibility standards.

SSA administrative data for men and women of all ages show a sharp growth in the number of applications per 1,000 insured workers between 1960 and 1974 (Figure 10.1). Awards per 1,000 insured follow the same pattern. The allowance rate—the percentage of applicants who are awarded benefits—stayed relatively constant during this period. This is a bit surprising. We would expect that an increasing number of applicants would include a greater number of marginal cases and result in more denials. The fact that the allowance rate remained constant suggests that the disability determination process was, de facto, relaxing the eligibility criteria (Bound and Waidmann 2002).

After the administrative and legislative tightening beginning in 1974 and culminating with the 1980 amendments, applications fell off sharply (Figure 10.1); the allowance rate declined and the number of new awards plummeted.

Figure 10.1 Applications Respond to Program Changes



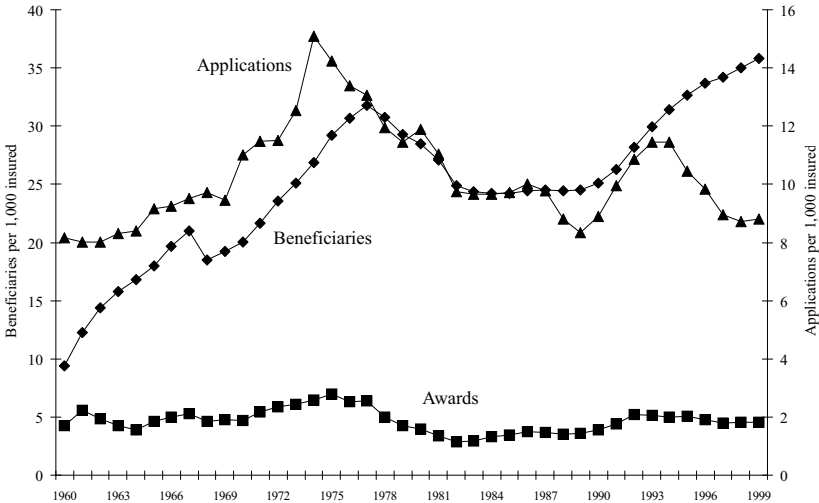
NOTE: Application data prior to 1982 adjusted using a consistent series on medical determinations (see Bound and Waidmann 2002).

SOURCE: U.S. Social Security Administration (various years). Reprinted with permission from the *Journal of Human Resources* 2002, p. 235.

After the liberalization in 1984, applications started to increase, but then declined again from 1987 to 1989 during the economic expansion. From 1990 to 1994, applications rose dramatically and then dropped in the latter half of the decade (Figure 10.1). The number of awards held steady as the allowance rate climbed from 1984 to 1999. The fact that the allowance rate climbed suggests another de facto expansion of eligibility standards. This is even more suggestive given the shifting profile of new applicants; they tend to be younger and more likely to suffer from mental impairments and musculoskeletal disorders than applicants in earlier years (Rupp and Scott 1998).

The number of beneficiaries per 1,000 insured grew substantially during the first period of program expansion, fell during the 1980s retrenchment, then began growing rapidly starting in 1990 and continuing through 1999 (Figure 10.2). The accumulation in the late 1990s

Figure 10.2 SSDI Applications, Awards, and Beneficiaries



NOTE: Application data prior to 1982 adjusted using a consistent series on medical determinations (see Bound and Waidmann 2002).

SOURCE: U.S. Social Security Administration (various years), U.S. Department of Health and Social Services (various years), U.S. House of Representatives, Committee on Ways and Means (various years).

shows that fewer people were leaving the rolls than entering. Because being reclassified as retired or dying are the main reasons people exit the rolls (very few return to work), the growth in beneficiaries reflects the fact that newer beneficiaries tend to be younger and have lower mortality rates.

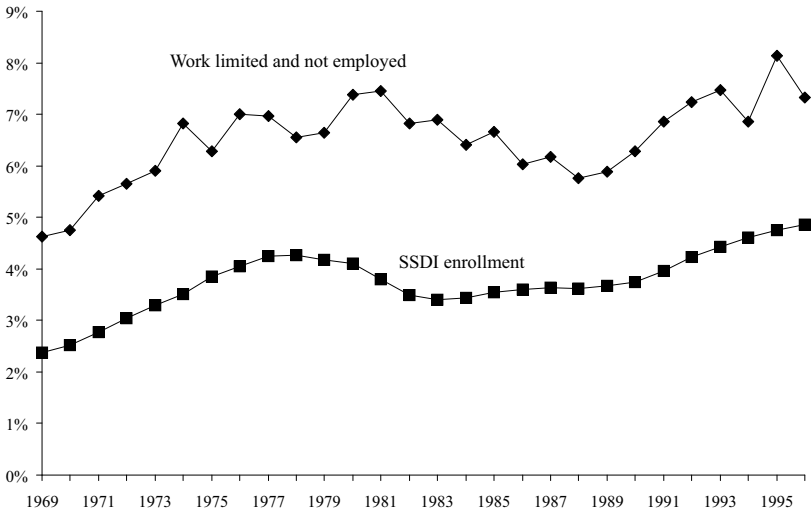
One critique of the hypothesis that eligibility expansions led to the decline in employment rates in the 1990s is that the timing is wrong. Although the 1984 legislation initiated the most recent eligibility expansion, the real increase in applications did not occur until 1990. There are, however, clear explanations for the delayed impact. One is that implementation of expanded criteria took many years, through revised listings for mental impairments in 1985 and numerous court decisions and regulatory changes in later years. Another is that it took time for potential applicants and their advocates to understand the changes fully. Perhaps most important, many newly eligible workers were likely conditional applicants, who stayed in the workforce during the economic expansion of the late 1980s, but applied when they lost their jobs in the recession of the early 1990s. These reasons for delay have made it easy to miss the role that eligibility expansions have likely played in the employment rate decline.

Trend in SSDI Beneficiaries Tracks the Employment Rate of People with Disabilities

Whatever the cause, clearly there has been a large increase in SSDI beneficiaries. The more salient question for this volume is whether this increase is reflected in the employment rate of people with disabilities. Using the NHIS, Bound and Waidmann (2002) compute the fraction of persons out of work and reporting work limitations. Because of major redesigns to the NHIS in 1982 and 1997, the analysis is restricted to the 1969–1996 period for men and 1982–1996 for women.⁸

The fraction of persons out of work and reporting work limitations corresponds well to the trends in the fraction receiving SSDI, especially for men. Findings are similar, but less clear, for women, reflecting the underlying growth in labor force participation for women. Figure 10.3, based on data from the NHIS, is limited to men aged 45–54, but the same patterns hold true for men of other ages. During periods when SSDI enrollment was expanding rapidly, the fraction of men

Figure 10.3 Work Limited and Not Employed and SSDI Enrollment (Men, aged 45–54) as a Percent of Population, 1969–1996



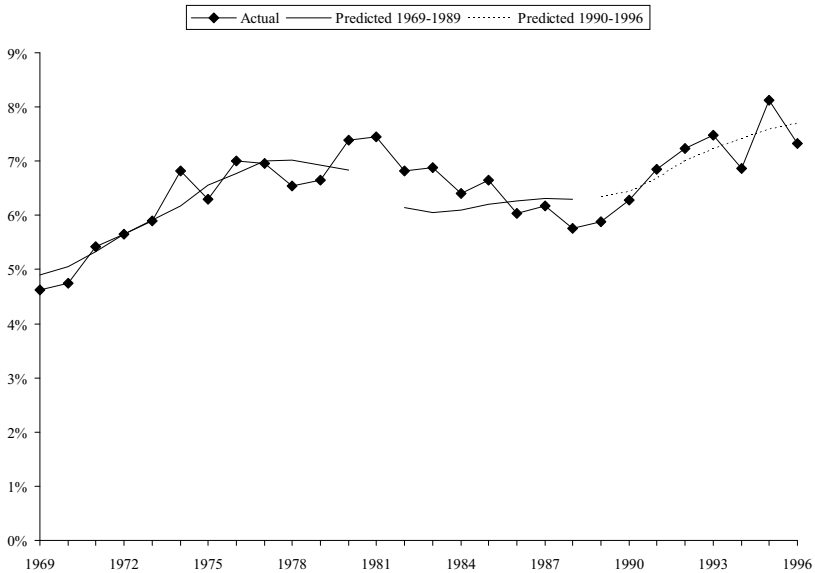
SOURCE: U.S. Social Security Administration (various years) and Bound and Waidmann calculations from National Health Interview Survey (various years).

identified as work-limited and not employed rose. During the late 1970s and early 1980s, when the size of the SSDI population shrank, so did the fraction of men out of work and identified as having work limitations. What is more, the size of the changes in these proportions are very similar, indicating an almost one to one correspondence between the numbers moving onto SSDI and the numbers showing up in the work limited and not employed category.

Bound and Waidmann (2002) develop a simple econometric model to predict the fraction of men who are work-limited and not employed from the fraction receiving SSDI benefits, using data from 1969 to 1989. Based on the estimates from this earlier period and SSDI data from 1990 to 1996, they forecast the fraction limited and not employed from 1990 to 1996.

Figure 10.4 shows the NHIS estimates and the Bound and Waidmann (2002) forecasts for men aged 45–54. The forecast is very close

Figure 10.4 Fraction of Men (Aged 45–54) with Work Limitations and Fraction Predicted by SSDI Enrollment 1969–1996



NOTE: The gap in the “predicted 1969–1989” line reflects the fact that SSA has never reported the number of SSDI beneficiaries for calendar year 1981. As a result, no prediction is possible.

SOURCE: U.S. Social Security Administration (various years) and Bound and Waidmann calculations from National Health Interview Survey (various years).

to the actual trend in the fraction of men who are work-limited and not employed. Estimates based on the other two age groups of men (30–44 and 55–59) also yield a very close fit (not shown in figure). Thus, we can account for recent trends in employment of men with work limitations by simply looking at historical trends in SSDI enrollment.⁹ Although this tight relationship does not prove that SSDI program expansions caused the decline in the employment rate, we wonder whether such a tight relationship would be observed if the cause of the employment rate decline were external to the SSDI program.

Types of Impairments Cited by People with Disabilities Who Are Not Working Correspond to Impairments Affected by Program Changes

In previous sections, we analyzed the employment of people with work limitations. However, as Kaye notes in Chapter 6, the employment rate decline is associated with an increase in the proportion of people with work limitations who say they are unable to work at all. Kaye argues that there has been an increase in the prevalence of those impairments that are associated with the inability to work. A more plausible explanation is that this increase reflects a change in SSDI eligibility criteria.

A large fraction of the increase in the number of people identified as work-limited who also report that they are unable to work at all can be accounted for by an increase in the number of men and women reporting psychiatric or musculoskeletal impairments. These impairments represent an increasing proportion of SSDI beneficiaries. These are also the impairments that were most affected by the SSDI liberalizations, beginning with the Disability Benefits Reform Act of 1984 and continuing in the 1990s. We argue that these liberalizations increased the likelihood that individuals with psychiatric and musculoskeletal impairments would be SSDI-eligible. As a result, they are more likely to leave the labor force and report that they are unable to work at all.

The NHIS asked persons who reported a work limitation to identify the main cause of that limitation. Table 10.2 shows that, for younger men (aged 30–44), the increased prevalence of disabling mental and musculoskeletal conditions accounts for more than 60 percent of the total increase between 1983 and 1996. For older men (aged 45–59), these conditions account for approximately 90 percent of the overall increase. Among younger women, the increased prevalence of mental and musculoskeletal disabilities accounts for 72 percent of the overall increase. For older women, although the overall prevalence of work limitations increased only slightly, the prevalence of work limitations caused by mental and musculoskeletal impairments increased dramatically, and work limitations from all other causes declined.

When we compare these trends to similarly defined trends in the primary impairments assigned to current SSDI beneficiaries in 1986

Table 10.2 Change in Fraction (per 1,000) of Men Unable to Work, by Cause, 1983–1996

	Men		Women	
	Change	% of total	Change	% of total
All conditions				
Aged 30–44	19.6	100.0	15.0	100.0
Aged 45–54	15.4	100.0	2.6	100.0
Aged 55–59	14.9	100.0	0.7	100.0
Mental conditions				
Aged 30–44	4.8	24.5	5.5	36.7
Aged 45–54	3.3	21.5	3.5	131.1
Aged 55–59	1.8	12.0	3.4	498.9
Musculoskeletal conditions				
Aged 30–44	7.4	37.6	5.3	35.5
Aged 45–54	10.6	68.7	4.2	157.7
Aged 55–59	11.6	77.8	7.6	1,108.9
All other conditions				
Aged 30–44	7.4	38.0	4.2	27.8
Aged 45–54	1.5	9.8	–5.0	–188.9
Aged 55–59	1.5	10.2	–10.4	–1,507.7

SOURCE: Authors' tabulation using the 1983–1996 National Health Interview Survey.

(the earliest year for which SSA provides this type of data) and 1996, we find that mental and musculoskeletal conditions account for 73 percent of the increase in the fraction of the population receiving SSDI benefits for younger men (aged 30–44) and the entire increase for older men (aged 55–59) (Table 10.3). For women, these sets of diagnoses account for between 63 percent and 68 percent of the growth in SSDI recipients.

States with Larger Increases in the Percent of Their Population Receiving DI Benefits Saw Larger Increases in the Fraction of People Who Have Limitations and Are Out of Work

Although SSDI is a federal program, there was considerable cross-state variation in the growth of its population during the 1990s. For example, between 1989 and 1999, Wisconsin saw growth of 28 percent in the fraction of the working-aged population receiving SSDI benefits,

Table 10.3 Change in Fraction (per 1,000) on SSDI, by Diagnostic Group, 1986–1996

	Men		Women	
	Change	% of total	Change	% of total
All conditions				
Aged 30–44	7.2	100.0	7.2	100.0
Aged 45–54	13.3	100.0	14.4	100.0
Aged 55–59	15.2	100.0	22.4	100.0
Mental conditions				
Aged 30–44	3.9	54.3	3.8	52.6
Aged 45–54	7.6	57.0	6.0	41.9
Aged 55–59	4.9	32.1	5.3	23.6
Musculoskeletal conditions				
Aged 30–44	1.4	18.9	1.1	15.6
Aged 45–54	3.7	28.0	3.7	25.8
Aged 55–59	11.1	72.8	8.9	39.6
All other conditions				
Aged 30–44	1.9	26.8	2.3	31.8
Aged 45–54	2.0	15.0	4.7	32.3
Aged 55–59	–0.8	–4.9	8.3	36.8

SOURCE: Authors' tabulation using Social Security Bulletin Annual Statistical Supplement, 1997, 1987.

while Alaska saw 123 percent growth. Some of this variation may be explained by the recession in the early 1990s, which had different effects on state economies.¹⁰ Local factors, such as cross-state differences in the administration of the DI award process, may also be a factor.

Bound and Waidmann (2002) capitalize on this variation to study the relationship between SSDI beneficiaries per capita and the fraction of the population identified as work-limited and not employed. They calculate the fraction of the 16–64-year-old population in each state receiving SSDI benefits from 1989 to 1999 using SSA administrative data and census population estimates. Using the CPS, they estimate the 16–64-year-old population in each state that was both work-limited and not employed.¹¹

Their results imply that the increase in the fraction of the working-aged population receiving SSDI benefits can account for the entire rise in the fraction of the population that reports a work limitation and is not employed (Bound and Waidmann 2002).

High School Dropouts Are More Likely to Leave the Labor Force in States with High SSDI Growth

In a similar vein, Autor and Duggan (2003) use state-level variation to model the change in labor force participation of high school dropouts as a function of changes in the supply of benefits (SSDI and SSI reciprocity), the average market wage, and other characteristics. Estimates were developed separately for the 1979–1984 period and the 1984–1998 period. Based on estimates for the 1979–1984 period, they found that a 1 percentage point increase in disability reciprocity is predicted to reduce the labor force participation of male high school dropouts (regardless of disability status) by 3.2 percentage points. Because high school dropouts compose almost 31 percent of the disability recipient population (SSA 2000), a far larger percentage than their share in the workforce, this is an important finding. Despite the fact that the program was contracting in the 1979–1984 period and expanding thereafter, Autor and Duggan find that the estimated relationship between employment rates and disability reciprocity levels is quite similar in the pre- and postreform eras. In other words, male high school dropouts were entering the labor force more rapidly in states with large reductions in the number of disability recipients during the retrenchment and leaving the labor force more rapidly in high disability growth states following the liberalization. This relationship between changes in disability recipients and changes in male labor force participation is much weaker for more educated workers, consistent with the fact that better educated workers are much less likely to receive SSDI benefits. Results for women were less precise, but again SSDI reciprocity is negatively related to the labor force participation of high school dropouts; no relationship is found for females with a high school education or greater.

Additional Empirical Results Suggest that Program Expansion, Not Some Other Factor, Induced the Increase in SSDI Enrollment and the Decline in the Employment Rate

The research described above uses state-level variation to show that growth in disability benefits closely tracks employment rate declines. Bound and Waidmann (2002) establish that movement of workers with disabilities onto the SSDI rolls aligns with the increase in the percentage of the population that is work-limited and not employed. Autor and Duggan (2003) demonstrate that the labor force participation of high school dropouts is related to disability income reciprocity.

Both empirical models predict employment as a function of SSDI reciprocity, but SSDI reciprocity is also a function of employment. Referring back to the theoretical model presented above, we can see that SSDI growth is driven by changes in both the supply of benefits and the demand for those benefits. The supply is defined by program characteristics (screening stringency and replacement rates). Demand—the number of people applying for benefits given screening stringency and replacement rates—is determined, in large part, by employment “shocks,” or factors that would influence employer willingness to hire. The challenge is to show that a shift in the supply of benefits (i.e., a program expansion) caused an increase in the number of working-aged people with disabilities who demanded benefits and, consequently, reduced the number working. To separate the supply of benefits from the demand for benefits, Autor and Duggan (2003) exploit state variation in the replacement rate; because the SSDI benefit formula is progressive but not indexed to regional wage levels, workers in low-wage states have significantly higher replacement rates than those in high-wage states.

The theoretical model predicts that changes in screening stringency will have a larger impact in high-replacement-rate states compared with states with low replacement rates. Intuitively, if the replacement rate is extremely low, few people would be affected by a change in screening stringency because only those with extremely low earnings or who find work extremely onerous would choose to apply under any condition. If, on the other hand, the replacement rate is very high, more people would find SSDI participation to be a reasonable alternative to

work, and would potentially respond to a program expansion. That is, for a substantial number of people with disabilities, the decision to apply will rest on individuals' perceived chance of getting benefits (i.e., screening stringency) and the generosity of benefits they would receive if their application were successful.¹²

Changes in Screening Stringency Have a Much Larger Impact on the Employment Rate in High-Replacement-Rate States than in Low-Replacement-Rate States

Autor and Duggan (2003) gauge the effect of the 1984 eligibility expansions by estimating the relative effect of screening stringency on the employment rate in high- and low-replacement-rate states before and after the 1984 liberalizations. The estimates indicate that the disability retrenchments during 1979–1984 increased the labor force participation of high school dropouts by 4.7 percentage points more in high-replacement-rate states than in low ones. The liberalization of the program after 1984 induced a similarly large, relative decrease in labor force participation in high-replacement-rate states compared with low-replacement-rate states. Although less precisely estimated, the data suggest that the labor force impact on female high school dropouts was about two-thirds as large. These data suggest that the eligibility stringency and the generosity of the program have an interactive effect on the labor force participation of low-skilled individuals, particularly high school dropouts.

Disability Program Applications Have Become Increasingly Sensitive to Employment Shocks

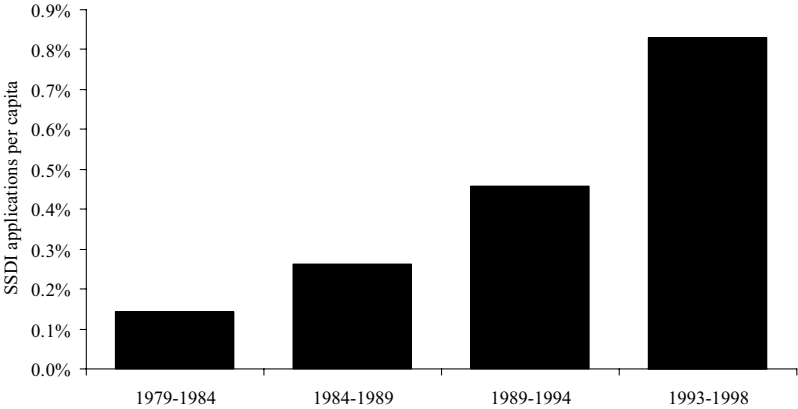
Autor and Duggan's (2003) model implies that eligibility expansions increase the sensitivity of SSDI entry and long-term labor force exit to an economic downturn. In the extreme, if eligibility is so stringent that anybody who can possibly work is denied with 100 percent probability, there would be no conditional applicants, and a downturn in the economy would have no impact on the number of beneficiaries. When large numbers of people who can work have some reasonable probability of being found eligible, a downturn in the economy will create many conditional applicants and have a substantial impact on

the number of beneficiaries. Autor and Duggan confirm that disability program applications have become increasingly sensitive to employment shocks.¹³ As Figure 10.5 indicates, for a given decline in the demand for labor, the increase in SSDI applicants per capita from 1993 to 1998 was almost seven times as large as the increase between 1979 and 1984.¹⁴ In other words, the expansion in eligibility greatly increased sensitivity of applications to economic shocks. As a result, the program attracted more conditional applicants after the 1984 expansions.

High School Dropouts Are More Likely to Exit the Labor Force after a Job Loss Than They Were before 1984

Autor and Duggan (2003) also show that the labor force participation of adults who do not have high school degrees (those most likely to be affected by disability program expansions) is much more sensitive to the demand for labor now than before the 1984 reforms. More specifically, they find that workers without high school degrees are 60 percent more likely to exit the labor force after a job loss in the post-1984 period than they were before 1984. The recent growth in the high

Figure 10.5 SSDI Application per Population for a One-Unit Demand Shock, 1978–1998

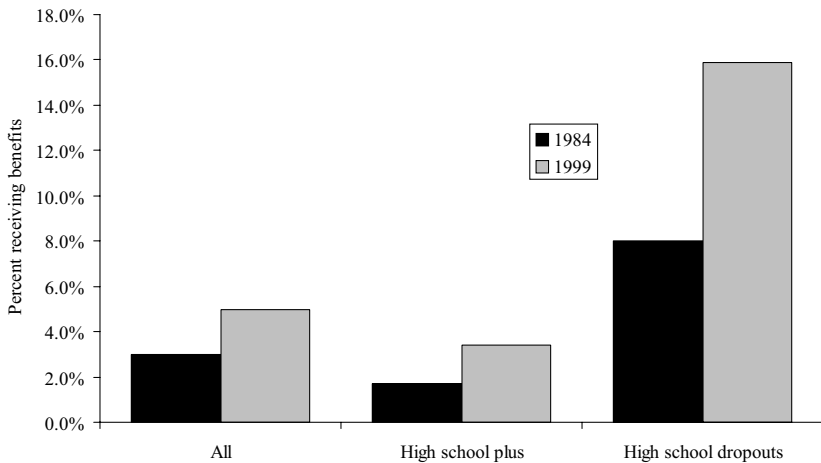


SOURCE: Calculations by Autor based on findings by Autor and Duggan (2003).

school dropout SSDI beneficiary population is consistent with this finding. In 1999, almost 60 percent of all nonelderly male adult high school dropouts who were not in the labor force were receiving either SSI or SSDI. Given that the population of nonelderly high school dropouts declined by 30 percent between 1984 and 1998, we would have predicted 550,000 fewer high school dropout recipients in 1998 than 1984. Instead the number rose by about 770,000. In fact, by 1998, more than one in seven high school dropouts were receiving either SSDI or SSI benefits (Figure 10.6).

Thus, the facts seem consistent with the hypothesis that SSDI expansions increased the sensitivity of labor force participation for low-skilled workers to economic downturns, thereby contributing to the employment rate decline. There is a second possible explanation for the finding that SSDI applications and labor force participation have become more sensitive to employment shocks, however. It is possible that, for other reasons, high school dropouts with disabilities who lose their jobs are finding it more difficult to find a new one, and are

Figure 10.6 Percent of Nonelderly Adults Aged 25–64 Receiving Disability Benefits,^a 1984 and 1999



^a Includes recipients of SSDI and SSI.

SOURCE: Calculations by Autor based on findings by Autor and Duggan (2003).

therefore more likely to apply for SSDI. Changes in required job skills could cause such a shift, although it seems likely that such a change would occur gradually over a long period. If the ADA discouraged employers from hiring people with disabilities, as others have argued (see DeLeire, Chapter 7, and Acemoglu and Angrist 2001), we would also expect to see increased sensitivity in both labor force exit and SSDI applications. The ADA could not, however, account for increases in the sensitivity of SSDI applications that occurred before 1990.

DISCUSSION

Clearly SSDI and employment are closely correlated. Although it is impossible to prove that SSDI expansions caused the employment rate decline rather than vice versa, we have presented a host of findings that are consistent with a causal relationship. In addition, other explanations of the employment rate decline do not fit the data nearly as well.

There is strong evidence that the eligibility expansions of 1984 increased the number of individuals applying for and receiving benefits. Prior to the 1984 expansions, there was a close, negative relationship between the employment rate of people with disabilities and the fraction of the population receiving SSDI. After 1984, there was a sharp increase in SSDI beneficiaries, and the eligibility expansions have been identified as a major cause. The SSDI expansion was matched by a parallel drop in the employment rate. This suggests that changes in SSDI were leading changes in the employment rate. Additional weight should be given to this evidence given the close correspondence between the growth in types of impairments of both people with disabilities who are not working and SSDI beneficiaries.

The evidence presented does not rule out the possibility that a factor other than SSDI liberalization is ultimately responsible for some of the observed labor force withdrawal, but among the competing explanations that have been put forward, SSDI liberalization seems the most compelling.

There is a growing literature suggesting that the ADA lowered the employment rate for people with disabilities by making employment

less available (see DeLeire, Chapter 7; Blanck, Schwochau, and Song, Chapter 9). If true, this decline in job opportunities could lead to an increase in the number of people applying for SSDI benefits. It seems unlikely, though, that we would see such a close correlation between SSDI and the employment rate over such a long period if SSDI did not play an important independent role. Moreover, the ADA explanation fails to account for four other findings:

- 1) The employment rate began declining between 1989 and 1990. The implementation of the ADA's antidiscrimination provisions did not occur until the middle of 1992.¹⁵
- 2) An increasing proportion of SSDI recipients have musculoskeletal and psychiatric disorders—the same impairments cited by people with disabilities who are most likely to say they are unable to work at all. We could argue that employers are most wary of such impairments, and thus may be disproportionately affected by employers' fear of lawsuits,¹⁶ but it is unclear why this would be the case.
- 3) Low-wage workers were more likely to drop out of the labor market than higher-wage workers, and the difference is greater in the 1990s than in the 1980s. To attribute these findings to the ADA, we would need to argue that employers are somehow more discouraged from hiring low-wage than high-wage workers. It is unclear why that would be the case.
- 4) If the ADA (or anything else reducing employment opportunities) pushed workers out of the labor market and toward applying for SSDI benefits, we might expect those with the most marginal disabilities to leave, and as a result, we would expect more rejected applications. However, this did not happen; award rates rose in the 1990s, which is consistent with a de facto expansion of eligibility.

Kaye (Chapter 6) presents an alternative theory that could explain the increasing number of applications coupled with a steady award rate. He argues that there has been an actual increase in the prevalence and severity of disabling conditions. Although we find this plausible, we find it hard to believe that it would have a sudden impact on

employment in 1990. If the increase in the prevalence and severity of disabilities was sparked in large part by the recession, we should have seen an equivalent decline in employment during the recession of the early 1980s. We did not see this employment rate decline, we argue, because SSA had so severely restricted the SSDI program that dropping out of the labor market and applying for benefits was not an option.

A rise in the SSDI rolls in and of itself is not necessarily a positive or negative development. Clearly, if the growth indicates that individuals with disabilities are “trapped” in a cycle of dependence that is antithetical to the goals of the ADA and the independent living movement, the growth is troubling. If, on the other hand, the growth is a result of providing an increasingly meaningful safety net to individuals who cannot fully participate in the labor market because of their impairment, the growth may be desirable.

Analysts differ sharply when discussing work disincentives associated with expanding eligibility or increasing benefits. Some have argued that these are signs that people with disabilities are simply choosing not to work when they are capable. Others take strong exception to this belief, and argue that such work disincentives are often overstated (see Bound and Waidmann 1992 for a review). We hold a third point of view: people with disabilities are very responsive to changes in the structure of the SSDI program, but this does not necessarily indicate an abuse of the system. The appropriateness of the policy should be judged by the marginal recipients—do they have profound impairments that generate significant economic and health insecurity? If so, why is it a bad thing if they choose to take advantage of a program that is designed to meet their needs? Nevertheless, the system may benefit from a modification that would address the needs of recipients without requiring them to withdraw from the labor force.

Some interpret the expansion of the program beginning with the 1984 liberalizations as unnecessarily large. However, the retrenchment in the 1980s brought widespread hardship and was successfully challenged in the courts. There is no reason to think that this period represents an “appropriate” level of benefit availability. If we look over the entire time period and adjust for increases in the number of people eligible for benefits (see Figure 10.3), the growth does not seem so dramatic.

Nevertheless, the current system clearly has a significant work disincentive. There are undoubtedly some SSDI beneficiaries who can work above substantial gainful activity (SGA) but choose not to because of the loss of benefits that would entail. Put differently, if they could keep their benefits and work above SGA, they would. The system prior to 2002 basically prohibited this option to the detriment of both the individual with a disability and society. The individual loses the income (and the buying power that accompanies income) while society loses productivity.

There might be an optimum solution that allows beneficiaries to offset some benefits with earnings. Indeed, SSA seems to recognize this possibility and is piloting several efforts to ameliorate the disincentives under the 1999 Ticket to Work and Work Incentives Improvement Act. A more flexible program could well have allowed people with disabilities to share in the economic expansion of the 1990s. The desirability of such a program, however, depends significantly on how well the disability screening process operates. If those with severely reduced capacity for work are not easily identifiable by medical screening, then it seems possible that large numbers of able-bodied persons would take advantage of the SSDI program while continuing to work. The magnitude of this problem is obviously reduced as the ability to screen out the able-bodied is increased (Waidmann et al. 2002). Assuming that a satisfactory screening mechanism exists, it is possible that a reformed SSDI program would mean that people with disabilities do not have to miss the benefits of future expansions.

Notes

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1. Based on Decennial Census. Ages 18–65.

2. In order to qualify for SSDI a worker needs 40 credits, 20 of which were earned in the 10 years prior to becoming disabled. A worker can earn up to four credits per year with the earnings needed for each credit changing annually (\$870 in 2002).
3. In 2002, an individual earning \$780 per month (\$1,300 if blind) is considered to be engaged in SGA.
4. Of the 1,988,425 determinations in fiscal year 2000, 38 percent were allowed at the initial level, 4.5 percent were allowed at reconsideration, 13 percent were allowed by administrative law judges, fewer than 1 percent were allowed by appeals council or federal court, 44 percent were denied.
5. In 1999, there was approximately one spouse or child dependent beneficiary for every three SSDI beneficiaries receiving benefits averaging \$220 per month (SSA 2000, Table 5.E2).
6. Autor and Duggan calculate that individuals at the tenth percentile of the earnings distribution for workers, if they were to receive SSDI, would have cash benefits above the SSI threshold. A worker with earnings in the tenth percentile of the distribution would have received SSDI income of \$592 in 1998 and \$280 in 1979, above the SSI maximums of \$480 and \$208 for those years. As a result, although SSI may be important at the first through fifth percentiles of the earnings distribution for workers, it does not affect the replacement rates used in the analysis.
7. The replacement rate equals the SSDI benefit divided by the expected wage. When including the value of the Medicare benefits in the numerator, Autor and Duggan (2003) include an estimate of the value of fringe benefits in the denominator. The value of fringe benefits is estimated separately for each earnings decile. In the seventy-fifth and ninetieth earnings percentile, the estimated value of fringe benefits was higher than the estimated value of the Medicare benefit, yielding a replacement rate lower than if fringe benefits and Medicare were excluded from the computation. Further, that the calculated replacement rate increases even a small amount for people at the ninetieth percentile of earnings distribution (whose wages grew more than the average wage increase in the economy) is a consequence of the calculation methodology. Earnings used for the SSA indexation increased 20 percent more than the average wages for males aged 25–61 in the CPS. This is because SSDI benefits are calculated only on earnings subject to FICA. Because the FICA payroll tax cap rose substantially relative to real earnings in 1979–1999, this caused the replacement rate for high-income worker to rise. It is important to note that, for high-income workers, the replacement rate rose because high-income workers were paying more in SSDI taxes, not because the benefit formula became more generous (see Autor and Duggan 2003).
8. Prior to 1982, only men were routinely asked about their ability to work. In 1997, the entire questionnaire was restructured, including the sequence of questions on work limitations.
9. This exercise would be less useful for women for several reasons. First, the match between SSDI trends and employment trends in the 1970s and 1980s is more complex, when other social forces were making women's employment more the norm than the exception. In the 1990s, the percent of women who were limited

and out of work and the fraction of women receiving SSDI benefits were similar to trends seen for men. One plausible explanation for why the relationship was not as strong in the earlier years is that women's weaker attachment to the labor force in those years meant that women were less likely to be SSDI insured. Thus, a growing SSDI program was less salient in an era in which relatively few were covered by the program.

10. See Rupp and Stapleton (1995).
11. By using a linear regression, they hold constant state fixed effects.
12. Autor and Duggan apply an instrumental variable approach to identify the relationship between SSDI and employment. We have omitted many details and recommend that interested readers see Autor and Duggan, 2003.
13. The employment rate is affected by both the supply of labor and the demand for labor where the supply may be affected by SSDI enrollment. To isolate the exogenous labor demand shock, Autor and Duggan exploit cross-state differences in industrial composition and national-level changes in employment to predict state employment. See Autor and Duggan 2003, for details.
14. There is a one-year overlap in the last two periods to maintain three-year intervals in each group.
15. Bound and Waidmann (2002) added year-effects to their state level models and found little evidence consistent with a negative ADA effect. After controlling for DI enrollment, there is one increase (of about 0.5 percent) in the fraction out of work two years after the ADA went into effect that diminishes over time. If anything we would expect the ADA's effect to cumulate over time as employers make new hiring decisions, and we would expect continued divergence after implementation.
16. Most ADA lawsuits are for firing or refusing to accommodate rather than failing to hire.

References

- Acemoglu, Daron, and Joshua Angrist. 2001. "Consequences of Employment Protection: The Case of the Americans with Disabilities Act." *Journal of Political Economy* 109(5): 915–956.
- Autor, David, and Mark Duggan. 2003. "The Rise in Disability Reciprocity and the Decline in Unemployment." *Quarterly Journal of Economics* 118(1): 157–205.
- Bound, John, and Timothy Waidmann. 1992. "Disability Transfers, Self-Reported Health, and the Labor Force Attachment of Older Men: Evidence from the Historical Record." *The Quarterly Journal of Economics* 107(4): 1393–1419.

- . 2002. "Accounting for Recent Declines in Employment Rates among the Working-Aged Disabled." *Journal of Human Resources* 37(2): 231–250.
- Mashaw, Jerry, and Virginia R. Reno. 1996. *The Environment of Disability Income Policy: Programs, People, History, and Context*. Washington, DC: National Academy of Social Insurance.
- Rupp, Kalman, and Charles G. Scott. 1998. "Determinants of Duration on the Disability Rolls and Program Trends." In *Growth in Disability Benefits: Explanations and Policy Implications*, Kalman Rupp and David C. Stapleton, eds. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, pp. 139–174.
- Rupp, Kalman, and David C. Stapleton. 1995. "Determinants of the Growth in the Social Security Administration's Disability Programs—An Overview." *Social Security Bulletin* 58(4): 43–70.
- Social Security Administration. 1986. "History of the Social Security Disability Programs." Washington, DC: SSA. Available at: <[http://www.ssa.gov/history/1986dib history.html](http://www.ssa.gov/history/1986dib%20history.html)>. Accessed: February 5, 2002.
- . 2000. "Annual Statistical Supplement, 2000." Washington, DC: SSA. Available at: <<http://www.ssa.gov/statistics/supplement/2000/sipp2000.pdf>>. Updated June 18, 2001. Accessed: June 12, 2002.
- . 2001. "Annual Statistical Report on the Social Security Disability Insurance Program, 2000." Washington, DC: SSA. Available at: <http://www.ssa.gov/statistics/di_asr/2000/index.html>. Posted: October 2, 2001. Accessed: March 12, 2002.
- Waidmann, Timothy, John Bound, and Austin Nichols. 2002. "Disability Benefits as Social Insurance: Tradeoffs between Screening Stringency and Benefit Generosity in Optimal Program Design." Paper presented at Social Security Administration Retirement Research Consortium Annual Conference, Washington, DC, May.

The Decline in Employment of People with Disabilities

A Policy Puzzle

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