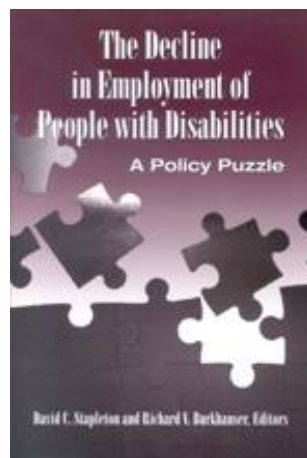

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Does the Definition Affect the Outcome?

Employment Trends under Alternative Measures of Disability

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Has the Americans with Disabilities Act (ADA) affected the employment of people with disabilities? It was passed with hopes that outlawing disability discrimination and increasing workplace accessibility would increase job opportunities for people with disabilities, much as the Civil Rights Act improved economic outcomes for African-Americans (Donohue and Heckman 1991). As is often the case when new employment legislation is passed, detractors claimed that the legislation was an unwarranted encroachment on employer autonomy and would be counterproductive, possibly hurting the employment of people with disabilities owing to employer fears over lawsuits, concerns about accommodation costs, and lost productivity from complicated regulations (Epstein 1992; Janofsky 1993; Vassel 1994).

Assessing the economic effects of legislation is a tricky matter because there are always other economic or policy changes that may be affecting the outcomes of interest. Furthermore, the legislation itself often has accompanying effects that need to be taken into account (e.g., induced entry into the target population, or interactions with other programs). Assessing the effects of disability legislation is especially complicated given the difficult issue of defining the target population. The ADA offers protections to individuals with a “physical or mental impairment that substantially limits one or more . . . major life activi-

ties,” or a record of such an impairment or being regarded as having such an impairment. In addition, Title I of the ADA offers protection against employment discrimination only to those who are “qualified” for employment positions. Ideally, all of these criteria would be measured in a straightforward way with little room for ambiguity, allowing employers, employees, job applicants, and researchers to know who is entitled to ADA protection. This, of course, is not the case—there is considerable room for disagreement over who has a disability. The disability population includes, at a minimum, nearly 8 million Americans who have been certified by the federal government as eligible for disability income (although most of these people would not be covered by Title I of the ADA because they are not “qualified” for employment). As an upper bound estimate, 53 million Americans of all ages report some type of functional or activity limitation or mental condition (McNeil 2001); when limited to those of working age, about one-fifth of Americans have an impairment or chronic health condition (see Burkhauser and coauthors, Chapter 2), although it is likely that many of these impairments do not “substantially” limit major life activities, preventing individuals from meeting the ADA criteria for coverage. Although ambiguity persists over who is covered, the courts have increasingly narrowed the ADA’s definition and restricted the number of people who are covered (Lee 2003).

With such uncertainty over who is covered, how can the effects of the ADA be assessed? Given the evolution in the courts of the ADA’s definition of disability, it is not surprising that there is no data set with a consistent measure of ADA coverage. Most studies have used the work-limitation measure, which is based on a reported health condition “limiting the kind or amount of work” one can do. An advantage of this question is that it has been asked in a fairly consistent way over time, in the National Health Interview Survey (NHIS), Current Population Survey (CPS), and Survey of Income and Program Participation (SIPP). Using this measure, DeLeire (2000) and Acemoglu and Angrist (2001) find a decline in employment following the ADA of people reporting work limitations, and Burkhauser and coauthors (Chapter 2) find that employment either decreased (among men) or was roughly stable (among women) throughout the 1990s. As will be discussed below, however, this measure has several limitations in assessing ADA coverage and the effects of the act, particularly in that it does not cover limi-

tations in major life activities other than working, and in that it may be answered differently over time.

Study of the ADA's effects is also greatly complicated by the role of public disability income, and of possible differential effects of business cycles on people with disabilities. The Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI) programs provide income and health insurance to people with disabilities who are unable to engage in "substantial gainful activity," and the potential loss of such income and health insurance gives recipients strong disincentives for returning to work. The SSDI program expanded substantially in the 1990s, very likely playing a major role in the employment of people with disabilities (see Chapter 10). Researchers in this area have recognized that studies of the ADA must take into account the rise in disability income reciprocity in the 1990s. In addition, workers with disabilities may have an especially procyclical employment pattern, being the first to be laid off in a recession and the last to be hired when conditions improve. This pattern holds true for African-Americans, another group with a history of substantial employment discrimination (Cherry and Rodgers 2000). The ADA was passed just before the economy entered a recession; therefore, any differential effects of recessions provide another competing explanation for the employment patterns of people with disabilities following the ADA.

In this chapter, we first review problems in defining and measuring disability, focusing on potential problems with the work limitation measure that has been the basis for most studies. The second section describes alternative measures of disability and what they reveal about compositional changes among those reporting work limitations at the time the ADA was being implemented. The third section reviews results from studies of employment of people with disabilities, looking at both employment patterns at the time of the ADA's implementation, and employment trends since that time. These results highlight the importance not only of disability income but also the reported ability to work; therefore, we briefly summarize efforts to validate that measure. Following a discussion of whether the employment of people with disabilities is procyclical, we present our conclusions.

PROBLEMS IN DEFINING AND MEASURING DISABILITY

No matter how disability is measured, people with disabilities are found to have low employment rates (whether using measures of work limitation, or specific impairments and other activity limitations) (see Burkhauser and coauthors, Chapter 2). In addition, longitudinal estimates show that employment declines after disability onset (see, for example, Burkhauser and Daly 1996; Krueger and Kruse 1995). These low employment rates are because of both high reservation wages associated with many disabilities (reflecting time and energy constraints, and the availability of disability income that is conditioned on not working), and low market wages, which can reflect both reduced productivity and employer discrimination. Reflecting some of these same factors, people with disabilities who do obtain employment are much more likely than nondisabled workers to be in contingent and part-time jobs, which are associated with low levels of pay and job security (Schur and Kruse 2001).

A main goal of the ADA was to expand job opportunities and raise the market wage for people with disabilities by eliminating the discriminatory component of wage differentials and increasing workplace accessibility. In addition, the substantial public attention to the ADA may have created an incentive for some employers to hire people with disabilities as a way of generating goodwill among customers and employees by showcasing a commitment to the goals of the ADA (which would tend to favor hiring people with very visible disabilities, such as wheelchair users). As noted, however, it has been argued that the law may have had a negative effect on employer demand for people with disabilities because of concerns about the costs of accommodations and potential lawsuits from terminated employees (Acemoglu and Angrist 2001). Acemoglu and Angrist also point out that fear of litigation could lead employers to hire more people with disabilities to avoid potential lawsuits from rejected applicants; however, layoffs are more likely to lead to lawsuits given that employees generally have greater stakes in existing jobs than do applicants in potential jobs.

A major problem in studying the employment impact of the ADA, as noted, is determining who is covered. The ADA protects only those who have a “physical or mental impairment that substantially limits

one or more . . . major life activities,” or have a record of, or are regarded as having, such an impairment. Whether an impairment does, in fact, substantially limit a major life activity depends not only on the definitions of “substantially” and “major life activity,” but also on the person’s environment and other characteristics. For example, in one major life activity—working—a wheelchair user may not be limited when working in an accessible law office, but would be substantially limited when performing many manual jobs or working in an inaccessible office. Also, a college graduate with a physical impairment may have many job opportunities, while a high school dropout with the same impairment may be substantially limited in finding employment. The variety of impairments, skills, personal characteristics, and environments in which major life activities are performed, and the question of whether limitations are “substantial,” leave room for considerable ambiguity over who has a disability. Estimating employment trends is further complicated by the fact that disability is a fairly fluid category; not only do people’s medical conditions deteriorate or improve, but environments and life circumstances change in ways that affect disability. For example, the increased availability of corrective technologies can mitigate the effects of an impairment, and increased workplace accessibility can remove barriers to working. Such developments may cause people to no longer consider themselves to be substantially limited in a major life activity.

The Work-Limitation Measure

The debate over the employment effects of the ADA has centered on results that use the work-limitation measure, based on a self-report of whether one has a health condition that prevents work or limits the kind or amount of work one can do. Burkhauser and coauthors (Chapter 2) show that about 8 percent of the working-aged population (varying between 7.3 percent and 8.9 percent) reported a work limitation in the March CPS during the past two decades. The employment levels of people reporting work limitations, relative to those without work limitations, declined around the time that the ADA passed and took effect, according to three studies. These studies use a difference-in-differences approach, which examines the difference over time in the difference in employment levels between working-aged people with and

without work limitations, controlling for other personal characteristics. DeLeire (2000), using the work disability supplements of SIPP, finds a decline in the relative employment of people reporting a work limitation in 1990, which he attributes to the ADA given that it was passed and signed in July 1990. Acemoglu and Angrist (2001) use the work-limitation measure from the March CPS, and Kruse and Schur (2003) use this measure from the disability supplements of the SIPP, both finding that the relative average weeks worked by people reporting work limitations dropped in 1993, after the ADA took full effect in July 1992.

One difficulty that immediately presents itself in efforts to attribute these declines to the ADA is the difference in timing. Contrary to DeLeire, Acemoglu and Angrist find no relative decline in 1990 when the ADA was passed, while contrary to Acemoglu and Angrist, DeLeire's results indicate no significant decline in 1992 when the ADA was taking effect.¹ Although it is debatable whether the most relevant date for any changes in employer behavior should be the date of the act's passage or the full implementation date two years later, the disparate findings between the studies raise the question of whether the ADA was, in fact, playing a role in these results, or whether other idiosyncrasies of the measure and data sets were at work.

Apart from this, there are four potential difficulties in using the work-limitation measure to study employment trends, as we discuss in Kruse and Schur (2003). Each of these concerns changes in the composition of people reporting work limitations that may cause the measured trends to be misleading. First, Kirchner (1996) notes that the work-limitation measure may be affected by the success of the ADA in making workplaces more accessible, as people who obtain jobs would no longer say they are limited in the ability to work. This could particularly affect people with less severe disabilities, who are easily accommodated, removing them from the group reporting work limitations and leaving a higher concentration of people with more severe disabilities and employment problems in that population. This could cause measured employment of people with work limitations to decline as the ADA increases job opportunities among people with disabilities (measured broadly).

A second potential problem noted by Kirchner (1996), Schwochau and Blanck (2000, 2003), and Blanck, Schwochau, and Song (Chapter

9) is that many people reporting a work limitation may not be covered by Title I of the ADA, either because they are not qualified for work even with accommodations (removing them from Title I protection), or because they have impairments that do not substantially limit a major life activity (removing them from any ADA protection). Just as it may be overinclusive, the work-limitation measure is also underinclusive of ADA coverage in that it does not capture impairments that do not limit work but substantially limit other major life activities. The ADA's Title I protections may be just as (or even more) important for these individuals, who may face employer discrimination even though they believe their health conditions do not limit their capability for work. (It is noteworthy that many plaintiffs sue employers claiming nonwork disabilities, although it is possible they would still report having a work limitation on a survey.) The over- and underinclusiveness of the work-limitation measure makes it a very unreliable indicator both of the ADA-covered population at any one point in time and of changes in that population over time.

A third potential problem of the work-limitation measure concerns the historical stigma attached to disability (see, for example, U.S. Commission on Civil Rights 1983), which may cause people to underreport any type of disability. One of the major goals of the disability rights movement has been to eradicate the stigma attached to disability (Hahn 1985, 1987). Many policies and programs designed for people with disabilities over the years have been based on a paternalistic, charitable model, creating a "social construction" of people with disabilities as second-class citizens (Schneider and Ingram 1993). The rights-based approach of the ADA may have contributed to a new social construction of disability that reflects greater respect for and influence of people with disabilities. Perceptions of increased social acceptability and rights may have encouraged more people to identify themselves as having a disability following the ADA. It is plausible that this effect was greatest among those who were suffering the greatest stigma owing to a lack of employment, and thus increased reports of work limitation would lower the associated employment rate.

This last example relates to a fourth potential problem of the work-limitation measure, which is that the likelihood of reporting a disability may be intertwined with employment status (Currie and Madrian 1999). Among people with the same medical conditions, functional

limitations, and other characteristics, those who are not employed may be more likely to say they have a work limitation as a way of justifying their lack of employment (referred to as the “justification hypothesis”) (Baker et al. 2001). Those who obtain jobs may become less likely to cite a work limitation even if they have the same impairments and medical conditions as before (and, in fact, it can be argued that a work limitation may rightfully disappear when a new job provides an environment in which the impairment or condition no longer limits one’s ability to work). It is especially likely that employment status will affect subjective measures, such as a self-reported work limitation. Baker et al. (2001) have found this to be true even for objective measures; their comparison of self-reports and medical records found that objective health problems are more likely to be overreported by non-employed than by employed individuals.

As a result of these potential limitations, there could be compositional changes among people reporting work limitations that cause misleading trends in employment. Compositional changes are especially likely when the size of the group reporting work limitations is changing, but are very possible even when the size is stable. For example, a decrease in reports of work limitation owing to increased workplace accessibility may be counterbalanced by an increase in reports among nonemployed people who no longer fear the stigma of disability and would like to assert ADA coverage. Tight labor markets may also cause a decrease in reports of work limitation among people who gain jobs, but an increase in reports of work limitation among those who lose jobs and other nonemployed people in an effort to save face and to justify their lack of employment. This could result in an apparent worsening employment trend among those reporting work limitation even as labor markets grow tighter and more people with disabilities (measured broadly) are obtaining jobs.

Alternative Measures of Disability

What about other measures of disability? Are there measures that follow the ADA definition more closely, enabling a more reliable assessment of employment trends in the ADA-covered population? The Equal Employment Opportunity Commission (EEOC) regulations say that the “major life activities” referred to in the ADA’s disability

definition include functions such as “caring for oneself, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.” Although it is arguable whether several of these limitations are properly seen as disabilities, the EEOC regulations indicate that such limitations are likely to be used by judges as criteria for ADA coverage.² Also, it is undoubtedly true that each of these limitations would be regarded by most members of society as constituting a disability, given that most facilities and societal institutions have been set up assuming these basic abilities.

In Kruse and Schur (2003), we explore alternative disability definitions, using data from the SIPP disability supplements to create 14 measures of disability. The three basic measures are of work limitation, any functional or activity of daily living (ADL) limitation, and severe functional or ADL limitations. Functional and ADL limitations encompass difficulties in basic physical functions (seeing, hearing, walking, speaking, climbing stairs, and lifting and carrying) or in performing basic daily activities (such as eating, taking a bath, or getting around inside or outside the home). Severe limitations represent an inability to do a functional activity at all, or a need for help with an ADL.³ The functional and ADL measures arguably capture ADA coverage better than the work-limitation measure given the wording of the EEOC regulations. (Again, it should be noted that Title I of the ADA is relevant to people with any type of disability given that employers may discriminate on the basis of a nonwork disability. It should also be noted that measuring those with any functional or ADL limitation is probably overinclusive, because some of these individuals would not be substantially limited.)

Because Title I of the ADA only protects people who are “qualified” for employment, we created three additional measures of disability that subtracted those who claim an inability to work from the three basic measures. Similarly, because disability income can play a major role in discouraging employment, we created three measures that subtracted disability income recipients from the three basic measures. Finally, we created three measures that subtracted both disability income recipients and those claiming an inability to work from the three basic measures (leaving people who may be considered “available to work,” as described by McNeil 2000), and an additional two measures that subtracted all people reporting work limitations from the

functional and ADL limitation measures. These 14 measures are listed in Table 8.1.

As discussed, changes over time in the work limitation measure may reflect a variety of factors that cause estimated employment trends to be misleading. Similar factors may be at work on other measures as well; for example, if the stigma associated with disability has decreased, people may become more likely to report functional limitations. Also, just as lack of employment may increase the likelihood of reporting a work limitation, a perceived lack of good employment prospects may increase the likelihood of reporting that one's health

Table 8.1 Alternative Disability Measures and Employment Change

Disability measure	Percent of working-aged population, 1991	Employment rate change as ADA implemented, 1991–93
1. Work limitation	10.4	–
2. Any functional/ADL limitations	12.6	0
3. Severe functional/ADL limitations	4.5	0
No SSI/SSDI and has:		
4. Work limitation	8.5	0
5. Any functional/ADL limitations	10.9	+
6. Severe functional/ADL limitations	3.3	+
Health condition does not prevent working and has:		
7. Work limitation	6.4	0
8. Any functional/ADL limitations	9.2	+
9. Severe functional/ADL limitations	2.3	+
No SSI/SSDI, health condition does not prevent working, and has:		
10. Work limitation	6.1	0
11. Any functional/ADL limitations	8.9	+
12. Severe functional/ADL limitations	2.1	+
No work limitation and has:		
13. Any functional/ADL limitations	5.4	+
14. Severe functional/ADL limitations	1.1	+

NOTE: – and + are negative and positive changes significant at the 95% level; 0 indicates change is not significant at 95% level. Results are based on difference-in-difference comparisons of employment changes among people without disabilities, controlling for demographic characteristics.

condition makes one unable to work. Although all the measures may be subject to such influences, those based on disability income and functional and ADL limitations are probably less affected because these measures are less subjective than judgments of whether a health condition limits or prevents work.

Arguments could be made in favor of any of these measures; however, we suggest that the best measure of ADA coverage is the one including those who have severe functional and ADL limitations (who are most likely to be substantially limited in a major life activity) and who claim an ability to work (thereby being qualified for employment). Some validation of the ability-to-work measure—concluding that it does measure changes in underlying health conditions that affect ability to work—will be reported (based on Chapter 6). Using these data, we address the questions of whether there was compositional change among those reporting work limitations during the early 1990s, and whether employment trends differed by definition of disability as the ADA was being implemented.

Were There Compositional Changes among Those Reporting Work Limitations?

Did the population reporting work limitations change in some important ways as the ADA was being passed and implemented? If so, could these compositional changes account for the relative decrease in employment of people reporting work limitations at the time?

Both DeLeire (1997) and Acemoglu and Angrist (2001) discount compositional changes as an explanation for their results. DeLeire examines whether there was increased reporting of impairments that are difficult to detect following the ADA and found that, among people reporting work limitations, there was no relative increase in reported mental impairments and bad backs (which are often difficult to verify). A compositional change is, however, suggested in his finding of a relative decrease in the most easily detected impairments (missing limbs, paralysis, blindness, and deafness); in addition, it is very possible that compositional changes may have occurred along other dimensions or in the severity of impairments reported. Acemoglu and Angrist use a matched CPS sample between March 1993 and March 1994, examining changes in reported weeks worked in the previous year to deter-

mine whether employment fell among a constant sample reporting work limitations in both years. Because the previous years were 1992 and 1993, a decline could be taken as evidence that employment declined as a result of implementation of the ADA. There is a serious problem with this method, however, in the disjuncture between the timing of the measurement of disability and of employment. There will naturally be a decline in average weeks worked using this method, given that some of the individuals reporting a work limitation in March 1993 and 1994 would have worked many weeks in 1992 prior to the onset of a disability. We find that 42 percent of workers who report a work limitation in a CPS March supplement during the 1992–2000 period did not report one in the previous March, indicating that many of the people reporting a work limitation spent much of the prior year without a disability (although measurement error also plays some role in accounting for the change in reports). As a result of this methodological problem, there is a decline in employment for all matched samples in the 1981–2000 period, with no larger decline in 1992–1993 than in other years.⁴ Therefore, this method does not rule out the possibility that compositional change was a factor in the relative employment decline of people reporting work limitations.

Comparing reports of work limitation with reports of functional and ADL limitations, we find evidence strongly suggesting that compositional change was occurring among those reporting work limitations during the time the ADA was being implemented. The SIPP data show a significant increase in the percentage of people reporting work limitations between 1991 and 1993 (from 10.4 percent to 10.9 percent, consistent with CPS data reported by Burkhauser and coauthors in Chapter 2) (Kruse and Schur 2003). More important, among those reporting a work limitation, there was a statistically significant 2.8 percentage point increase in those reporting any of the measured functional or ADL limitations (from 68.5 percent to 71.2 percent), and a statistically significant 5.2 percentage point increase in those reporting severe functional or ADL limitations (from 32.7 percent to 37.9 percent). The increases were particularly strong in the percentages reporting they had difficulty walking one-fourth of a mile (4.5 percentage point increase) and those having difficulty with ADLs inside the home (7.2 percentage point increase), but the increases were also positive and significant across many other conditions.

It is also important to note that the 0.5 percentage point increase in reports of work limitation among all working-aged people was more than accounted for by significant increases in reports of receiving disability income (0.8 percentage point increase) and being prevented from working by one's health condition (0.6 percentage point increase). The increase in disability income was spurred by changes in SSDI program rules in the early 1990s, which relaxed the eligibility criteria and the use of continuing disability reviews (see Chapter 10). In addition, there was a significant tightening of eligibility for workers' compensation in many states (Spieler and Burton 1998), which probably led many workers who were injured on the job to apply for SSDI income, claiming an inability to work in order to qualify.

These findings clearly suggest compositional changes among people with work limitations in the direction of more severe limitations, reflecting either objectively more severe conditions or an increased willingness to cite such conditions to justify obtaining disability income or ADA coverage.

ESTIMATES OF EMPLOYMENT PATTERNS AND TRENDS

Employment Patterns as the ADA Was Being Implemented

Do these apparent compositional changes among people reporting work limitations make a difference in estimated employment trends? Using the work limitation measure in SIPP data, we find, as do Acemoglu and Angrist (2001), that there was a relative employment decline for people reporting work limitations between 1991 and 1993 (Kruse and Schur 2003). We also find, however, that there were nonsignificant, relative employment increases among people reporting any, or severe, functional and ADL limitations, and among people reporting work limitations but an ability to work. The basic results are summarized in Table 8.1.

Most strikingly, there were significant increases over this period in the relative employment of people with any or severe functional and ADL limitations who do not receive disability income, and among those with functional and ADL limitations reporting they were able to

work. Among those covered by the arguably best measure of ADA protection (having severe functional and ADL limitations that do not prevent work), there is a strongly significant, relative employment increase of 5.9 percentage points in weeks worked from 1991 to 1993. It is unlikely that compositional shifts accounted for this result, given that there was no change in the percentage of the population covered by this measure. In addition, although Burkhauser and coauthors (Chapter 2) show that overall employment trends were more negative for men than for women with disabilities during the 1990s, we found that the pattern of results among our alternative disability measures during the 1991–1993 period was quite similar for men and women with disabilities.

The difference in employment trends among disability measures raises strong caution about the conclusions of DeLeire (2000) and Acemoglu and Angrist (2001) that the ADA caused a decline in employment among people with disabilities. The relative employment decline among people reporting work limitations at that time is fully accounted for by an increase in reports of disability income and an inability to work. DeLeire and Acemoglu and Angrist attempt to discount the role of disability income in various ways, but they do not address the issue of inability to work or other disability definitions.⁵

Employment Trends, Disability Income, and Reported Ability to Work During the 1990s

There was no overall employment growth among people with disabilities in the 1990s, according to Burkhauser and coauthors in Chapter 2, using several basic disability measures—work limitation, housework limitation, and other activity limitations.⁶ The potential importance of disability income is indicated by the evidence of Bound and Waidmann (2000, p. 1) (see Goodman and Waidmann, Chapter 10, for a review), which “suggests that the expansion of [disability income] during the 1990s played a central role in accounting for the decline in the employment of the disabled during this decade.”⁷

The lack of employment growth among people with disabilities in the 1990s is also statistically linked to increased reports of inability to work. Consistent with our findings, Kaye (Chapter 6), Burkhauser and coauthors (Chapter 2), and Louis Harris and Associates (2000) found

increased employment among people who report work limitations with an ability to work. An important question is how to interpret reports of inability to work. Do these reports indicate severe impairments that truly make productive work impossible, or do they reflect the social environment? As examples of the latter possibility, people may have an incentive to report an inability to work to qualify for disability income, or may in fact be qualified for jobs but cannot obtain them owing to employers' fears of lawsuits or reluctance to make accommodations. If this is the case, the rising employment rates among those reporting work limitations with an ability to work may be very misleading, as those who cannot obtain jobs become more likely to say they are unable to work.

Some validation of the inability-to-work measure is provided by Kaye (Chapter 6), who analyzes National Health Interview Survey data. He finds that those reporting an inability to work, relative to those reporting a work limitation with an ability to work, are more than six times as likely to report poor health (31.4 percent compared with 5.4 percent), and have much higher averages of restricted activity days, bed days, need for personal assistance, and functional limitations. In addition, he finds that the growth in reports of inability to work during the 1990s is strongly linked to measures of worsened health and increases in functional limitations and need for help with daily activities. Just as the social environment can influence reports of work limitation (as discussed earlier), it is also possible that it influences self-reports of overall health, restricted activity days, need for assistance, and functional limitations. This evidence nonetheless provides some support for the idea that self-reported inability to work indicates a high likelihood of not being "qualified" for employment (i.e., unable to perform a job even with reasonable accommodations), such that one is not protected by Title I of the ADA. Consequently, the rising employment rate among people with disabilities who are able to work may represent real improvement in job opportunities among the ADA-covered population.

Employment Patterns across the Business Cycle

Apart from definitional issues and disability income, do business cycles help explain employment patterns among people with disabili-

ties? Business cycles may, as noted, have different effects on the employment of people with disabilities, much as they seem to have different effects for African-Americans. Burkhauser et al. (2002) find that this may have been true in the 1980s, but not the 1990s. Among men with work limitations, employment decreased more in the 1980–1982 downturn, and increased more in the 1982–1989 growth period, than among their nondisabled counterparts. In the 1990s, however, their relative employment decreased in the 1989–1992 downturn, but continued to be worse in the 1992–1999 growth period. We explored different sensitivity to business cycles by using variation among states in labor market tightness, and found mixed results, which are sensitive to the issue of disability income. Measuring labor market tightness using state unemployment rates during the 1995–1999 period, we found that a 1 percentage point change in the unemployment rate is linked with only a 0.07 percentage point change in employment of people reporting work limitations, compared with changes of 0.98 percentage points among those without work limitations, and 1.83 percentage points among African-Americans in general (Schur and Kruse 2001). When excluding disability income recipients, however, the change is 1.18 percentage points among people with work limitations, indicating that they have somewhat greater sensitivity to labor market conditions than do people without disabilities. Similarly, in our examination of employment patterns in the early 1990s during a recession, people with disabilities appeared to have especially low employment levels when state unemployment rates were higher, indicating greater sensitivity to the 1991–1992 recession. This was particularly true among those with any functional or ADL limitation who did not receive disability income (Kruse and Schur 2003). Accounting for this extra sensitivity, however, made no noteworthy difference in the estimated overall employment trends of people with disabilities as the ADA was being implemented (there remained a 1991–1993 decline in employment of people reporting work limitations, and an increase in employment using several of the functional and ADL limitation measures). Also, the booming economy of the late 1990s did not appear to increase the overall employment of people with disabilities, countering the idea that their employment is especially aided by a tight labor market (Burkhauser et al. 2002, Chapter 2).⁸ Disability income and reported

ability to work remain more important factors in helping explain the overall employment trends among people with disabilities.

CONCLUSION

Assessing the employment effects of the ADA is very difficult because of problems in defining who is covered, and accounting for the effects of disability income. Although studies using the work-limitation measure appear to show worsening employment among people with disabilities since the ADA was passed, this measure has been criticized on a number of grounds, both for being over- and underinclusive of those covered by the ADA, and for being particularly sensitive to compositional changes related to employment status.

Disability measures do, in fact, make a difference in estimated employment patterns surrounding the implementation of the ADA, interjecting a strong caveat in interpretations that the ADA is harming employment of people with disabilities. In contrast to findings of decreased employment of people reporting work limitations as the ADA was being implemented, we found increased employment among people reporting functional and ADL limitations who do not receive disability income, or who report the ability to work. The greatest increase occurred among those who are arguably most likely to be covered by the ADA: people with severe functional or ADL limitations who report the ability to work. The employment declines among people reporting work limitations are linked to several indicators of compositional change in this population.

Disability income and the reported ability to work are important factors not only in estimates of employment patterns at the time the ADA was implemented, but also in subsequent employment trends during the 1990s. The rise in disability income reciprocity statistically accounts for the declining overall employment of people reporting work limitations, and employment rates have actually improved among people with disabilities who report the ability to work. Although it is possible that the ADA played a negative role here (causing decreased job opportunities that led to increases in disability income reciprocity or reports of inability to work), this interpretation is weakened by the

fact that changed program rules were instrumental in the growth of reciprocity during the 1990s (see Chapter 10), and by the validation of the inability-to-work measure based on other indicators of increased disability severity (see Chapter 6).

These results indicate a need for continual attention to disability definitions and measures. The current efforts of the federal government to develop better measures of disability should provide a stronger basis for estimating disability employment trends and the effects of public policies (Kruse and Hale 2003). Apart from these efforts, it would be valuable for researchers to closely examine what leads people to report work limitations, and whether these people are likely to be covered by the ADA. In particular, following the research of Baker et al. (2001), it would be useful to examine how employment status affects reports of work limitation as well as of more objective measures; that disability measures are intertwined with employment status creates thorny problems in estimating employment rates and trends among people with disabilities. An ideal research project would follow individuals over time, independently recording medical conditions and impairments, as well as self-reported work limitation status and ability to work, as people gain and lose jobs and labor markets become tighter and looser. Although such an ideal study is unlikely, there may be many ways in which creative researchers can disentangle employment status and disability measures. Such research would greatly help us better understand the effects of labor market conditions, public policies, and workplace accommodations on the employment prospects of people with disabilities, and lead to informed public policies that can enhance their employment prospects.

Notes

This chapter is based on a presentation at the Employment and Disability Policy Institute sponsored by Cornell University in Washington, DC, in October 2001. Helpful comments have been made by David Stapleton and Richard Burkhauser.

1. The SIPP disability supplements did not include the work-limitation measure before 1990; therefore, we were unable to assess changes before and after 1990 in our study.
2. Difficulty with several of these activities, such as walking, seeing, and hearing, would be regarded as functional limitations rather than disabilities in most disabil-

ity models (Altman 2001). In the standard paradigm, functional limitations become disabilities only if they cause a limitation in a major life activity, such as working, education, family life, or recreation.

3. Burkhauser and coauthors (Chapter 2) present an “other activities” limitation measure using SIPP data on difficulties with activities of daily living, but do not include difficulties in walking, seeing, hearing, speaking, climbing stairs, and lifting or carrying.
4. Based on computations by the authors and Andrew Houtenville, Cornell University.
5. DeLeire (2000) notes that disability income reciprocity did not change substantially between 1990 and 1991 when he found a relative employment drop, while Acemoglu and Angrist (2001) using several methods to address this issue, conclude that it does not account for the 1992–1993 employment drop among workers aged 21–39, although it may help account for the drop among men aged 40–58 (there was no significant drop among women aged 40–58). Acemoglu and Angrist also employ other methods to examine the effects of the ADA, including comparisons by firm size (given that firms with fewer than 15 employees are not covered by the ADA) and between states with different levels of ADA charge rates. The 1992–1993 drop in employment was slightly, but nonsignificantly, larger in medium-sized (24–99) than small (>15) firms among men aged 21–39, but the apparent employment drop was just as large in small firms relative to medium-sized and large firms for women aged 21–39 and men aged 40–58, which provides little support for the idea that ADA protections were causing declining employment. Similarly, there is only weak evidence from state-level EEOC employer charge rates, which are not significantly associated with the relative employment levels of any of these groups when accounting for the endogeneity of charge rates using instrumental variables.
6. We analyze data only during the 1990–1994 period when the ADA was being implemented because the placement of the work-limitation and ability-to-work questions in the 1997 and 1999 SIPP disability supplements was changed in a way that seriously threatens comparisons. In these latter years, the two questions were asked in the core survey following questions about employment status, rather than in the disability supplement following questions about functional and ADL limitations. Perhaps not surprisingly, the reports of work limitation fell by more than 2 percentage points from 1994 to 1999, while CPS data show reports of work limitation to have slightly increased over this period (Burkhauser et al., Chapter 2). This strongly indicates that answers to the SIPP work-limitation question were affected by the placement of the question. Estimates using the 1997 and 1999 SIPP data show a dramatic decline in measured percentage of weeks worked among people reporting work limitations in these two years relative to the 1990–1994 results. Although this may reflect some employment decline among those reporting work limitations when using a consistent measure, it is also apparent that the changed question placement made a big difference, presumably because the stigma of reporting a work limitation (particularly among employed people)

was lower after they had just revealed functional/ADL limitations in the 1990–1994 supplements. The very different prevalence and effect sizes stemming from the changed placement of the work-limitation question show that estimates of disability employment trends are sensitive to the wording and context of the disability measure, often confounding the measures with employment status.

7. In addition, Autor and Duggan (2003) find that the expansion of public disability income in the 1990s lowered the overall unemployment rate by two-thirds of a percentage point, as low-skilled people were more likely to gain disability income and take themselves out of the labor market.
8. As noted earlier, reports of work limitation are likely to be intertwined with employment status, and it is even possible that a booming economy will lead to a lower measured employment rate of people reporting work limitations, as newly employed people no longer report work limitations, and job losers and other non-employed people become more likely to cite work limitations to justify their lack of employment.

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A Policy Puzzle

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