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In This Special Issue on Disability Beneficiaries:

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Articles

Employment of Individuals in the Social Security Disability Programs

by Paul O'Leary, Gina A. Livermore, and David C. Stapleton*

The articles in this special issue present findings from research on the employment and work-related activities of individuals receiving benefits through the Social Security Disability Insurance and Supplemental Security Income programs, and on the factors that hinder their efforts to work at levels that lead to exiting the disability rolls. This article introduces the other articles, highlights their important findings, and discusses the implications for ongoing efforts to increase the earnings and self-sufficiency of these beneficiaries, such as the Ticket to Work program and the Benefit Offset National Demonstration.

Introduction

The Social Security Disability Insurance (DI) and Supplemental Security Income (SSI) programs provide cash assistance to approximately 12 million working-age individuals (age 18 to full retirement age). All have demonstrated an inability to work at substantial levels (as determined by earnings amount, hours worked, and nature of work) due to a long-term, medically determinable impairment; most also receive public health insurance by virtue of their beneficiary status. Both programs have features designed to support the work attempts of beneficiaries with disabilities. Historically, such provisions have focused on allowing beneficiaries to keep more of their cash benefits and retain eligibility for public health insurance as their earnings increased.

In 1999, Congress passed the Ticket to Work and Work Incentives Improvement Act (Ticket Act). The central provision of the Ticket Act was the Ticket to Work (TTW) program, which greatly expanded the types of organizations that the Social Security Administration (SSA) would pay to support beneficiaries' employment efforts, and thereby offer beneficiaries more access to employment services. When enacted, the Ticket Act was viewed as landmark legislation that could greatly improve employment outcomes for SSI and DI beneficiaries. Combined with the Americans with Disabilities Act of 1990, the Ticket Act was believed to have finally addressed the most important barriers preventing disability beneficiaries from reaching their employment goals (Pear 1998).

TTW was designed on the premise that many individuals receiving disability cash benefits under the SSI and the DI programs wanted to work, but were hindered by limited access to employment services and a lack of incentives for service providers to encourage long-term earnings at a level that would suspend or terminate disability benefits. TTW attempted to address these issues by providing beneficiaries with performance-based vouchers (tickets) for employment services. These vouchers could be used to obtain services from a wide range of providers within a market-driven system. A key feature of the original TTW

Selected Abbreviations

DI	Disability Insurance
EN	employment network
SGA	substantial gainful activity
SSA	Social Security Administration
SSI	Supplemental Security Income

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Selected Abbreviations—*Continued*

Ticket Act	Ticket to Work and Work Incentives Improvement Act of 1999
TTW	Ticket to Work
VR	vocational rehabilitation

payment system was that it rewarded providers that accepted beneficiaries' tickets with up to 60 monthly payments, but only for those months when a beneficiary received no cash SSI or DI benefits because of earnings. In this way, the program attempted to align the incentives of employment service providers with those of SSA and beneficiaries attempting to exit the disability rolls via work.[1, 2] Although the provider payment schedules under TTW were significantly modified in 2008 to shift payments to the front end of the process and increase the parity between the total payments possible for SSI and DI participants, the underlying tenets of the program remained intact.[3]

The Disability Policy Panel, convened by the National Academy of Social Insurance, conceived the performance-based reimbursement and expanded beneficiary-choice features of TTW in 1993 (Mashaw and Reno 1996). The new program was developed in the context of the data available at the time. Unfortunately, statistics on employment and program exits due to earnings for disability beneficiaries in the early 1990s were less than complete. As Berkowitz (2003) noted, the data gave little indication of the effectiveness of the existing system for providing employment supports to beneficiaries:

> It does not appear that beneficiaries are coming off the rolls in large numbers due to the efforts of rehabilitation experts. It is true that the numbers are clouded, and SSA has done little to publicize the number of persons who have left the rolls due to medical recovery as compared with those who have left as a result of receiving return-to-work services. This situation results in part from the difficulty in distinguishing the two groups and in part from the lack of attention to any stringent evaluation plan designed to determine if the system has indeed produced trust fund savings.

Notwithstanding the limited information regarding who would use the program and how they would use it, TTW was designed with a market-based approach. Instead of detailing a complex program structure that specifies which services are provided to whom, TTW relies on the market to determine such decisions. It is up to the service providers and their beneficiary clients to negotiate the needed services and supports, and to implement them when both parties believe there is a reasonable chance of success. As such, TTW places minimal restrictions on who can participate and what are allowable "services" under the program. Congress also gave SSA considerable discretion to modify the program as it developed. The Ticket Act required SSA to conduct a thorough evaluation of the program and to submit periodic reports to Congress to ensure that more complete data on TTW participant work activities and successes would be captured.

SSA implemented TTW beginning in 2002. To meet the congressional mandate, SSA contracted with an independent evaluator to develop a comprehensive data system and track the program's progress. The ongoing evaluation has explored the activities and outcomes of the TTW program through analyses of administrative data, interviews with SSA staff and contractors operating TTW, and more than 25,000 interviews with Social Security disability beneficiaries conducted in the first three rounds of the National Beneficiary Survey (NBS). To date, five evaluation reports have been produced.[4] The TTW evaluation has documented significant interest in employment among nearly one-half of disability beneficiaries. Although there have been many positive developments, SSA's evaluator has found neither a measurable increase in client earnings nor a decline in disability benefit receipt that can be attributed to TTW. Thus, despite continued interest in work among beneficiaries and new opportunities for employment assistance under TTW, significant changes in the proportion of beneficiaries who discontinue disability benefits because of work have not occurred.

Given that TTW has not reached its objectives, it is likely that changing the current program, or replacing TTW with an alternative program or system of supports, will be proposed. As policymakers consider what to do next with work supports for disability beneficiaries, the data resources and analyses conducted for the TTW evaluation will provide them with more complete information on work-related activities for such beneficiaries than was available when TTW was first conceived.

The articles in this issue are drawn primarily from the 2010 TTW evaluation report and provide more expansive information than has been previously available on SSI and DI beneficiaries' work aspirations,

the challenges they face in meeting their employment goals, and the varying degrees of success they have attained. The articles follow three basic themes of inquiry. The first assesses the main premise of TTW—that beneficiaries are trying to work and potentially earn enough to leave the disability rolls, but need help in attaining skills, finding jobs, and maintaining supports as they foray into the job market. The second uses data from the NBS to better understand the challenges and experiences beneficiaries encounter as they attempt to reduce their dependence on Social Security cash benefits through work. The third examines the variation in beneficiary employment statistics observed across states and over time, to assess the premise that factors beyond a beneficiary's personal and disability characteristics influence employment outcomes.

To put these articles into perspective, the next section briefly describes both the work incentive programs offered to Social Security disability beneficiaries and the statistics on beneficiary work activities currently available from published sources.[5] It also highlights how this issue's articles contribute to the existing body of research and statistics.

Disability Program Work Incentives and SSA Employment Statistics

The SSI and DI programs have different work incentives. SSI payments are not affected by the first $65 in earned income per month (or $85 if there is no unearned income), after which SSI payments are reduced by $1 for each $2 earned. Special provisions, named for their Social Security Act section numbers, enable working recipients to retain SSI eligibility under certain circumstances. Section 1619(a) enables recipients who earn more than the substantial gainful activity (SGA) level[6] to continue receiving SSI payments until the $1-for-$2 calculation brings their cash payment to zero. At that point, SSI recipients enter section 1619(b) status, which allows them to continue to receive Medicaid coverage provided they are still disabled and meet all other eligibility criteria.

In the DI program, work does not immediately affect cash benefits. A trial work period of 9 months (not necessarily consecutive) allows beneficiaries to earn any amount and still receive full benefits. If earnings exceed the trial work level in a given month,[7] it is recorded as a trial work month. When 9 months are so recorded, DI beneficiaries enter the extended period of eligibility. After a 3-month grace period, cash benefits are suspended for any months during the extended period in which earnings exceed the SGA level. Once the grace period and the first 36 months of the extended period have been completed, benefits are terminated in the first month of SGA.[8]

SSA does not actually track SSI terminations due to work—technically, the agency does not terminate cash benefits for SSI recipients specifically because of their work activity. If a recipient's earnings, either alone or in combination with other income, make the individual ineligible for SSI cash payments, then those payments are suspended and the recipient enters section 1619(b) status. Medicaid eligibility can continue indefinitely as long as the SSI recipient continues to meet SSA's medical eligibility requirements. These individuals continue to appear on SSA's rolls in suspended SSI payment status for as long as this Medicaid eligibility continues. SSI recipients who remain in suspended status for 12 continuous months are technically considered terminated once they exceed their state's 1619(b) threshold, but no change in status is reflected in the SSA data. In all cases except death, SSA will record termination status for these individuals only if they attempt to restart cash benefits. At that point, SSA determines that their previous SSI eligibility terminated, and a new application is required. If a former recipient's income falls enough to restart benefits before 12 consecutive months have elapsed, he or she reenters current-payment status.

Cross-Sectional Statistics

Although SSA data systems do not record SSI payments terminated specifically because of earnings, there are ways to approximate the number of such terminations using data in published reports. For example, Table 1 shows the number of SSI recipients in 1619(b) status. Participation rose from 0.74 percent in 1987 to 2.23 percent in 2000, before dropping back to 1.80 percent in 2003, then rising again in subsequent years. These figures overstate the number of recipients entering 1619(b) status each year because recipients can remain in this status for long periods. To estimate a lower bound, we can use the annual increase in 1619(b) participation (averaging about 0.06 percent during 1998–2006). The actual number entering 1619(b) status is likely to be larger because people leave 1619(b) status for various reasons, including death, returning to cash payments, not using Medicaid services and, rarely, for earning amounts exceeding the state 1619(b) threshold. Alternatively, the proportion of recipients whose SSI payments were suspended for income has been about 10 percent annually since 1994, and the percentage terminated

Table 1.
SSI working-age recipients, section 1619(b) participants, and payment suspensions and terminations, 1987–2009

Year	Number of recipients aged 18–64	Section 1619(b) participants [a]		Suspended for excess income (age 18–64 only)		Terminated for excess income (age 18–64 only)	
		Number	Percent	Number	Percent	Number	Percent
1987	2,118,710	15,632	0.74	--	--	--	--
1988	2,202,714	15,625	0.71	--	--	--	--
1989	2,301,926	18,254	0.79	--	--	--	--
1990	2,449,897	23,517	0.96	--	--	--	--
1991	2,641,524	27,264	1.03	--	--	--	--
1992	2,910,016	31,649	1.09	--	--	--	--
1993	3,148,413	35,299	1.12	--	--	--	--
1994	3,335,255	40,683	1.22	313,600	9.40	--	--
1995	3,482,256	47,002	1.35	348,300	10.00	--	--
1996	3,568,393	51,905	1.45	327,600	9.18	--	--
1997	3,561,625	57,089	1.60	317,100	8.90	--	--
1998	3,646,020	59,542	1.63	324,100	8.89	220,100	6.04
1999	3,690,970	69,265	1.88	323,800	8.77	221,300	6.00
2000	3,744,022	83,572	2.23	340,600	9.10	228,200	6.10
2001	3,811,494	76,455	2.01	353,300	9.27	229,300	6.02
2002	3,877,752	82,177	2.12	375,100	9.67	254,800	6.57
2003	3,953,248	71,097	1.80	363,700	9.20	253,100	6.40
2004	4,017,108	73,681	1.83	392,800	9.78	278,050	6.92
2005	4,082,870	78,205	1.92	392,840	9.62	290,006	7.10
2006	4,152,130	89,350	2.15	391,737	9.43	272,946	6.57
2007	4,221,920	97,551	2.31	399,877	9.47	258,701	6.13
2008	4,333,096	99,482	2.30	438,447	10.12	262,551	6.06
2009	4,451,288	91,534	2.06	468,793	10.53	292,731	6.58

SOURCE: SSA, *SSI Annual Statistical Report,* various years 2002–2009.

NOTE: -- = not available.

a. Includes blind participants. Of the 91,534 participants in December 2009, 1,589 were blind.

for income has varied between about 6 percent and 7 percent since 1998. However, for most SSI recipients suspended or terminated for income, the action is a result of excess unearned income or the income of somebody responsible for providing partial support (a "deemor"—usually a spouse or parent), rather than due to their own earnings. SSA estimates that only about 8 percent of terminations involve a recipient's earned income. If this 8 percent figure has been stable over time, it is suggested that terminations due to own earnings would be about 0.5 percent over the years observed in Table 1, with no perceptible change since TTW implementation.

There are similar issues with historical DI data. SSA began reporting DI terminations due to work *or* medical recovery shortly after the program was enacted in 1955.[9] Because work recoveries were mixed with medical recoveries, the continuing disability review (CDR) process affected the termination statistics and the percentages tended to fluctuate in response to year-to-year changes in SSA policy and funding for conducting CDRs (Table 2). In the early 1980s, for example, with more funding and a greater emphasis on CDRs, recoveries tended to increase. Conversely, in the late 1980s, when emphasis on CDRs declined, the recoveries tended to fall (Newcomb, Payne, and Waid 2003). SSA began to publish statistics specifically on DI suspensions and terminations that result from SGA earnings beginning in 2001. As Table 2 shows, since the implementation of TTW in 2002, little has changed in terms of DI benefit suspensions or terminations due to earnings, and both have hovered around 0.5 percent.

Longitudinal Statistics

Although cross-sectional statistics such as those shown in Tables 1 and 2 are useful in tracking trends

Table 2.
Disabled-worker DI beneficiaries, benefits terminated because of medical recovery, and benefits suspended and terminated because of SGA, 1980–2009

Year	Number of disabled-worker beneficiaries	Benefits terminated because of medical recovery (%)	Suspended because of SGA		Terminated because of SGA	
			Number	Percent	Number	Percent
1980	2,858,680	2.85	--	--	--	--
1981	2,776,519	4.09	--	--	--	--
1982	2,603,599	5.93	--	--	--	--
1983	2,569,029	4.74	--	--	--	--
1984	2,596,516	2.13	--	--	--	--
1985	2,656,638	0.86	--	--	--	--
1986	2,728,463	0.85	--	--	--	--
1987	2,785,859	1.32	--	--	--	--
1988	2,821,070	1.30	--	--	--	--
1989	2,886,590	1.05	--	--	--	--
1990	3,011,130	0.99	--	--	--	--
1991	3,198,610	0.83	--	--	--	--
1992	3,473,330	0.86	--	--	--	--
1993	3,729,330	0.79	--	--	--	--
1994	3,966,590	0.90	--	--	--	--
1995	4,186,720	1.11	--	--	--	--
1996	4,386,040	1.13	--	--	--	--
1997	4,505,760	2.27	--	--	--	--
1998	4,697,010	1.07	--	--	--	--
1999	4,873,560	1.16	--	--	--	--
2000	5,035,840	1.34	--	--	--	--
2001	5,268,039	1.24	31,437	0.60	29,000	0.55
2002	5,539,597	1.14	29,501	0.53	29,165	0.53
2003	5,868,541	0.98	25,780	0.44	27,926	0.48
2004	6,197,385	0.98	23,709	0.38	28,613	0.46
2005	6,519,001	--	27,713	0.43	36,263	0.56
2006	6,806,918	--	33,613	0.49	36,242	0.53
2007	7,098,723	--	37,701	0.53	33,381	0.47
2008	7,426,691	--	38,209	0.51	37,711	0.51
2009	7,788,013	--	35,244	0.45	32,445	0.42

SOURCES: SSA, *Annual Statistical Report on the Social Security Disability Insurance Program,* 2001–2009; Zayatz (2005).

NOTE: -- = not available.

over time, the transition to work is dynamic. Researchers have long recognized the value of longitudinal statistics in examining work-related activities. Over the years, they have developed useful dynamic analyses of transition-to-work activities, including SSA's ground-breaking longitudinal study of DI beneficiaries in the 1980s and early 1990s (Muller 1992). Other studies have taken more limited looks at beneficiary employment over long periods (Newcomb, Payne, and Waid 2003). Although these studies make significant contributions, they predate TTW, tend to be of limited scope, or are based on relatively small samples of SSI or DI beneficiaries. Further, these earlier studies generally rely on self-reported earnings of SSI and DI beneficiaries, and thus may suffer from varying degrees of reporting bias. Overall, published information on the work activities of SSI and DI beneficiaries is better than it was in the early 1990s, when TTW was first conceived, but not tremendously so, and many limitations for policy analysis and evaluation remain.

The articles in this issue address the information gaps by providing more recent and complete data on the static and dynamic employment activities of SSI and DI beneficiaries. To accomplish this, these studies rely on data from the NBS, Social Security

administrative records, and matched data from the Internal Revenue Service and the Education Department's Rehabilitation Services Administration. In developing these broad-based statistics, the hope is to shed additional light on why the benefit termination figures remain so small when so many beneficiaries report a desire to work.

The primary contribution of the studies presented in this issue is the breadth of the reported statistics. The articles do not use particularly sophisticated techniques, and in many cases they focus on presenting simple descriptive statistics. They consider SSI and DI equally, span many years, and use consistent definitions tailored to measure transition-to-work activity. The indicator for leaving the disability rolls because of work used in several of the studies provides a good example. This indicator is defined consistently for all three categories of beneficiaries receiving SSA disability benefits: SSI-only disability recipients, DI-only beneficiaries, and beneficiaries concurrently receiving both SSI and DI. It specifically identifies benefit status with respect to earnings on a month-to-month basis for all months from 1996 forward and mimics the status necessary to trigger service-provider payments under the TTW program, where a beneficiary must have cash benefits discontinued specifically because of work in a given month.[10] This status is indicated for the periods before and after TTW for all beneficiaries, regardless of their TTW participation status. For each month, this constructed variable indicates whether benefits are currently being paid, suspended specifically because of earnings, terminated specifically because of earnings, or not currently paid for reasons other than earnings, such as retirement, death, or medical recovery. Most of the employment statistics are from administrative sources—including Internal Revenue Service earnings data—that are not subject to the limited scope of survey data and are far less subject to the errors and biases of self-reported information. Further, in most cases, the statistics are based on the full population of SSI and DI beneficiaries, rather than statistical samples. Although somewhat pedantic, the articles focus on providing a broad and solid set of baseline statistics that cover a full range of employment-related activities undertaken by beneficiaries, both at specific times and over extended periods. We expect that future research will build on the metrics constructed for these analyses and extend the baseline information presented here.

These articles find that, over time, a great deal of work activity goes on behind the simple annual statistics on payments withheld or benefits terminated because of work. This is not to say that the TTW program has been more successful than previously reported. Rather, the findings suggest that such simple annual statistics are only part of the story, and that to understand the effectiveness of programs like TTW, it is important to examine a broader range of transition-to-work activities and outcomes.

The following sections briefly introduce the articles in this issue, arranged according to three emergent themes of their findings: employment success for Social Security beneficiaries varies widely across states; many beneficiaries work, but very few sustain long-term employment; and many factors contribute to the inability of beneficiaries to achieve long-term employment. We then conclude with a discussion of some of the important implications of the findings.

Variation in Employment Outcomes Across States and Over Time

Economic theory and evidence from previous studies suggest that a wide range of policies and other environmental factors can significantly affect employment and program participation for individuals with disabilities. In "Employment among SSA Disability Program Beneficiaries: 1996–2007," Mamun, Wittenburg, O'Leary, and Gregory present cross-sectional employment statistics by state and over time. The findings show employment rates that ranged from 7 percent in West Virginia to 23 percent in North Dakota. This large state-level variation remains after controlling for observable differences in beneficiary characteristics, including demographics and impairments. This implies that sources of employment variation unaccounted for in the analysis drive these differences. These other sources of employment variation may include local labor market conditions and state-specific programs and policies (such as Medicaid programs, vocational rehabilitation programs, accessible public transportation, and other state or local employment supports) and unobserved individual characteristics that differ by state (such as general health status within the state or cultural differences that affect employment for individuals with disabilities). The authors also find that state employment rates generally persist over time. This latter finding suggests either that few changes occurred in the state-level policy environment over the 12 years studied, or the changes that did occur had little effect on employment for disability beneficiaries, possibly because they were overwhelmed by other factors. Additional research

will be needed to sort out the degree to which policy changes can affect employment rates beyond social and labor market factors.

Longitudinal Statistics on Occurrence and Duration of Disability Beneficiary Employment

Several of the articles in this issue present longitudinal statistics that describe beneficiary behavior over long periods. They show that the percentage of disability beneficiaries who eventually work enough to have their benefits suspended or terminated is much higher than SSA's published statistics based on a single month or year might suggest. The statistics differ because they measure different things. For example, in "Longitudinal Statistics on Work Activity and Use of Employment Supports for New Social Security Disability Insurance Beneficiaries," Liu and Stapleton measure the percentage of DI participants whose benefits are terminated because of work with a longitudinal statistic (3.7 percent) that accounts for all who entered DI in 1996 and eventually terminated as of 2006, whereas SSA's published statistic (0.53 percent) counts only the proportion of existing beneficiaries whose benefits were terminated during 2006 (Table 2). Researchers have long recognized the difference between the two types of statistics and their interpretations (for example, Muller 1992). The published DI termination statistic is far lower than the longitudinal statistic because the base of the published statistic includes all those who have not left the rolls for work or any other reason in the past (often for many years), while the numerator includes only those whose benefits were terminated for work in the current year. By contrast, the base of the longitudinal statistic includes only those who received their first DI award in a specified year and the numerator includes those in that group whose benefits were terminated in any year since award. Although Liu and Stapleton consider only DI awardees here, similar analysis for SSI is under way.

Longitudinal statistics on the duration of individual beneficiaries' employment and of any resulting benefit suspension or termination are critical to evaluating TTW's effectiveness, but have until now been in short supply. The statistics presented in several of this issue's articles show that large shares of those who find work fail to achieve and sustain earnings sufficient to suspend or terminate their benefits. Among the minority whose benefits are suspended or terminated for work, many remain in that status for at least several years, but many others quickly return to payment status.

In "Social Security Disability Beneficiaries with Work-Related Goals and Expectations," Livermore describes the prevalence and the characteristics of beneficiaries likely to pursue work, and presents their employment and benefit receipt outcomes over a 4-year period (2004–2007). She finds that about 40 percent of beneficiaries had work-related goals and expectations. Of these, half were actively pursuing their goals when interviewed, and over the next 4 years, 45 percent worked and 10 percent had their benefits suspended or terminated because of work in at least 1 month. Those with employment goals differed from others in that they were more likely to be DI-only beneficiaries, younger, healthier, and more educated; they also had been on the disability rolls a shorter period and had lower Social Security and non–Social Security benefit amounts. With other characteristics held constant, DI-only beneficiaries were more likely to have work-related goals and expectations than were SSI-only or concurrent beneficiaries. Other findings of this study are consistent with the hypothesis that some DI beneficiaries restrain their earnings to avoid "falling off the benefit cliff"—losing all of their benefits because their earnings exceed the maximum allowed by the program. DI-only status and having high benefit amounts were significant negative predictors of leaving the disability benefit rolls because of work, after controlling for other characteristics.

In "Disability Benefits Suspended and Terminated because of Work," Schimmel and Stapleton examine the extent to which DI and SSI benefits are suspended or terminated because of work over a 5-year period (2002–2006). They find that, in each year, less than 1 percent of beneficiaries had their benefits suspended or terminated because of work for the first time. The percentage was much larger, however, once those whose benefits were also suspended or terminated for work in earlier years were counted. The authors also found that TTW participants are more likely than other disability beneficiaries to have their benefits suspended or terminated for work, and for longer periods. However, because a small proportion of disability beneficiaries participate in TTW, a large majority of beneficiaries whose benefits are suspended or terminated for work are not TTW participants. Another important finding is that TTW participants generated outcome payments for their service providers in less than half of the months in which they were off the disability rolls for work. In the vast majority of these

cases, the proximate cause was that the provider did not file a claim for payment.

In "Longitudinal Statistics on Work Activity and Use of Employment Supports for New Social Security Disability Insurance Beneficiaries," Liu and Stapleton examine the employment and benefit outcomes of the 1996 cohort of new DI beneficiaries from 1996 through 2006. They find that 28 percent returned to work over the 10-year period following the award year, and nearly 7 percent had their benefits either suspended or terminated for at least 1 month because of work, including 3.7 percent whose benefits were eventually terminated for work. Many whose benefits were terminated for work eventually returned to the disability rolls—about one-quarter had done so within the period. Several other interesting findings emerge for the 1996 award cohort. Most of those whose benefits were suspended or terminated for work did not obtain services from a state vocational rehabilitation (VR) agency or a TTW employment network (EN). For a large majority of these individuals, the first benefit suspension occurred within 5 years of DI award; terminations for work occurred later because of DI work incentives. The one-quarter of beneficiaries who were younger than age 40 at the time of award returned to work and had their benefits suspended or terminated for work much more frequently than those who were older.

Factors Affecting the Ability to Sustain High Earnings

The longer-term perspective on employment provided by several of the articles indicates that many beneficiaries with work-related goals and expectations are successful in attaining employment, but many fail to sustain that success for very long. Understanding the factors that hamper long-term employment success and cause former beneficiaries to return to the disability rolls is critical to developing effective disability beneficiary employment policies and supports.

In "Longitudinal Outcomes of an Early Cohort of Ticket to Work Participants," Livermore and Roche follow a group of early TTW participants for several years to assess changes in their service use, health status, employment, and income. Although TTW participants are not representative of all beneficiaries who attempt to work and exit the disability rolls, the findings suggest some factors that might thwart the long-term success of beneficiary employment attempts. In particular, poor health appears to negatively affect both service use and employment. This is somewhat surprising because TTW participants are a very select group of beneficiaries. Despite relatively better health and very high employment rates, their health status is characterized by high year-to-year instability. About 60 percent of TTW participants who worked during a 3-year period left at least one job, and poor health was the reason cited most frequently. Other reasons, such as finding a job that was temporary, being fired or laid off, and dissatisfaction with specific job features were also frequently cited. The authors also found substantial year-to-year income instability among TTW participants, perhaps caused by unstable employment and the adjustment of Social Security and non–Social Security benefits in response to earnings changes. Individuals with earnings, even unstable earnings, were significantly less likely to be in poverty than those without.

Implications

The findings of the articles presented in this issue offer a variety of perspectives on the employment activities of SSI and DI beneficiaries, indicating that rather large proportions are interested in pursuing employment and that their work goals and expectations are not unrealistic. However, the findings also point to the challenges that beneficiaries face when they find work, which often result in either a failure to leave the disability rolls because of work or only a brief exit. The findings regarding TTW participants suggest that many beneficiaries attempting to work have unstable health, job opportunity, and income situations. Perhaps those who exit the rolls for work without assistance from a VR agency or EN are in more stable circumstances than those who obtain such assistance. Those who seek services to support their work efforts are often in unstable circumstances, some of which may be caused by employment. For example, changes in earnings can affect eligibility for benefits, potentially leading to income instability and changes in living arrangements; also, the physical and mental rigors of employment might exacerbate existing health conditions. Clearly, such factors can negatively affect the continued motivation or ability to work.

SSA has introduced TTW provider payment systems under which providers receive full payment only if the beneficiary exits the disability rolls for work and remains off the rolls for an extended period. The fact that ENs did not file claims for outcome payments in many of the months during which their clients were off the rolls for work suggests that providers did not

maintain long-term connections with many of their clients, despite the incentive to do so.

TTW regulatory changes implemented in July 2008 addressed incentives for providers to maintain a long-term relationship with their beneficiary clients in two significant ways. First, they substantially increased the monthly payment amount for providers serving DI beneficiaries, but shortened their duration from 60 months to 36. Second, the new Partnership Plus feature created incentives for state VR agencies to provide initial return-to-work services under the pre-TTW payment system and then partner with an EN to provide longer-term supports. These regulatory changes may lead to longer-term support for beneficiaries as they work and leave the disability rolls—support that might help address the many challenges that eventually cause employment spells to end.

The findings point to two other major challenges of developing new policies and programs to increase the number of successful work attempts and the share of working beneficiaries who leave and remain off the disability rolls. The first is that such policies and programs may lead to substantially greater expenditures. Future expansion of the number of TTW users is likely to mean providing VR or EN services for some beneficiaries who would have left the disability rolls even without receiving such services. Offsetting reductions in benefit costs for such users will materialize only if they spend more time off the rolls than they otherwise would have. Similarly, if DI beneficiaries are offered a $1-for-$2 benefit offset for earnings above the SGA amount—a feature of the Benefit Offset National Demonstration (BOND)—many of those beneficiaries who would have their benefits suspended or terminated for work under current law will continue to receive partial benefits.

Second, no matter what policies or programs SSA implements, success will depend on numerous environmental factors beyond the agency's control: employer interest in hiring beneficiaries, beneficiary access to health care, local transportation, personal and family circumstances, and work incentives associated with non–Social Security programs. SSA has strong interest in environmental changes that would improve employment outcomes, but cannot affect such changes on its own. This interest has been reinforced by rapid growth in the number of beneficiaries since the 2008 recession, and the projected exhaustion of the DI trust fund in 2018 (Board of Trustees 2010).

The different employment environments and levels of success for Social Security beneficiaries seen across states suggest that employment policies matter. It therefore seems prudent for SSA to continue implementing and evaluating initiatives to help disability beneficiaries attain long-term employment. However, if environmental factors such as the local labor market and social or cultural norms play a dominant role in state employment variation, then future policy changes that attempt to influence employment outcomes will also need to address these environmental factors to achieve the desired results. To examine different types of barriers to beneficiary employment, SSA is conducting a number of demonstrations, including BOND, the Youth Transition Demonstration, the Accelerated Benefits Demonstration, and the Mental Health Treatment Study. As SSA implements and evaluates these programs, care should be taken to consider more than just the demographic and disability characteristics of participants. SSA should also consider local policy, social, and labor market factors. As findings from these demonstrations and the TTW evaluation continue to emerge, policymakers will have better information with which to craft policy changes to help individuals with disabilities increase their own well-being through work, sustain long-term employment, and become more self-sufficient.

Notes

[1] For a discussion of how TTW affects the incentives for service providers and beneficiaries, see Stapleton and Livermore (2003) and Huynh and O'Leary (2003).

[2] Under TTW, SSA also makes payments to service providers as the beneficiary reaches employment milestones on the way to benefit suspension. To reduce barriers to employment, the Ticket Act also eliminated SSA disability reassessments triggered by work activity, and extended Medicare coverage and access to Medicaid for beneficiaries who work.

[3] For a description of these changes, see Stapleton and others (2008, Chapter 9).

[4] The TTW evaluation reports are available at http://www.socialsecurity.gov/disabilityresearch/research.htm#Ticket.

[5] For a detailed discussion of the available information on the work activities of Social Security disability beneficiaries prior to TTW, see Newcomb, Payne, and Waid (2003).

[6] The monthly SGA thresholds for 2011 are $1,000 for nonblind disability beneficiaries and $1,640 for those who are blind.

[7] The monthly trial work threshold for 2011 is $720 for both blind and nonblind disability beneficiaries.

[8] The extended period of eligibility continues after the 36th month if the beneficiary does not engage in SGA or

if benefits are not terminated for another reason. For a full discussion of these and other work incentives, see SSA (2011).

[9] This statistic first appeared in 1957 when 52 of 16,131 DI beneficiaries (0.32 percent) had their cash benefits terminated because of "recovery of disabled person." In subsequent years, a footnote was added to clarify that recovery meant a "disabled person [had] ceased to meet medical standards for disability or continued to meet medical standards but engaged in substantial gainful activity" (HEW 1957, Table 63).

[10] Although the indicator for leaving the disability rolls because of earnings does not specifically incorporate external earnings data from a state's unemployment insurance system or the Internal Revenue Service, the measure has been validated against these sources and found to be very accurate at identifying beneficiaries in suspended or terminated status who are earning at levels above SGA.

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Employment among Social Security Disability Program Beneficiaries, 1996–2007

by Arif Mamun, Paul O'Leary, David C. Wittenburg, and Jesse Gregory*

We use linked administrative data from program and earnings records to summarize the 2007 employment rates of Social Security disability program beneficiaries at the national and state levels, as well as changes in employment since 1996. The findings provide new information on the employment activities of beneficiaries that should be useful in assessing current agency policies and providing benchmarks for ongoing demonstration projects and future return-to-work initiatives. The overall employment rate—which we define as annual earnings over $1,000—was 12 percent in 2007. Substantial variation exists within the population. Disability Insurance beneficiaries and those younger than age 40 were much more likely to work relative to other Social Security beneficiaries. Additionally, substantial regional variation exists across states; employment rates ranged from 7 percent (West Virginia) to 23 percent (North Dakota). Moreover, we find that the employment rates among beneficiaries were sensitive to the business cycle and persistent over time.

Introduction

In recent years, there has been increasing interest in identifying interventions to promote employment for the more than 10 million working-age individuals with disabilities who receive cash benefits from the Social Security Administration's (SSA's) Disability Insurance (DI) and Supplemental Security Income (SSI) disability programs. Declining employment rates of individuals with disabilities and the increasing number of people who receive disability cash benefits drive the need for identifying such strategies.

A key challenge in developing interventions to promote employment among disability program beneficiaries[1] is that the beneficiaries might have access to varying levels of support, particularly across states. For example, there is substantial variation in the eligibility requirements and generosity of state programs that support individuals with disabilities, such as Medicaid and state vocational rehabilitation programs. Additionally, the economic environment varies across states, which could affect decisions regarding work and program participation. An important first step in designing policies to support employment of people with disabilities is to understand how employment varies by state.[2]

However, there is very limited empirical evidence on the employment outcomes of disability beneficiaries in most available survey and administrative data

Selected Abbreviations

DI	Disability Insurance
MEF	Master Earnings File
SGA	substantial gainful activity
SSA	Social Security Administration
SSI	Supplemental Security Income
TRF	Ticket Research File
TTW	Ticket to Work

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sources. Survey data generally include limited information on DI and SSI program status, while Social Security administrative records only include information on earnings that is necessary to calculate a benefit amount (for example, program administrative records for both DI and SSI exclude certain types of income disregarded in the calculation of benefits). This lack of information represents a major barrier to understanding whether any progress is being made in achieving the broader policy objectives of promoting employment among disability beneficiaries.

This article addresses the gap in the literature that currently exists by examining the variation in employment rates of DI and SSI beneficiaries over time and across states using a consistent measure of earnings from administrative data. It also examines the extent to which observable beneficiary demographic and disability characteristics can explain the variation in employment rates. We use linked administrative data from program records on DI and SSI participation and earnings records from the Master Earnings File (MEF) to summarize the 2007 employment rates of Social Security disability beneficiaries at the national and state levels, as well as changes in employment since 1996. The linked database enables us to construct an employment measure that can be consistently applied to both SSI and DI beneficiaries across multiple years. We chose 2007 because it was the most recent year for which complete annual earnings information was available. The available program data provide information on cross sections of working-age individuals who received benefits since 1996, including the more than 10 million beneficiaries who received SSI and/or DI benefits in 2007. We first present national-level estimates of employment and then assess whether variations in employment rates exist for subgroups of beneficiaries across program titles, demographic traits, impairment conditions, and states. Next, we examine changes in employment rates from 1996 through 2007 at the national and state levels. The main text provides an overall summary of findings; the appendices include more detailed employment rates for key subgroups, especially at the state level, which are comparable with program statistics produced by SSA in its ongoing publications, such as the *Annual Statistical Supplement*.

The findings provide new information on the employment activities of SSI and DI beneficiaries that should be useful in assessing current SSA policies and providing benchmarks for ongoing demonstration projects and future return-to-work initiatives. We define beneficiaries with annual earnings exceeding $1,000 as employed;[3] under this definition of employment, the overall employment rate of Social Security disability beneficiaries was 12 percent in 2007. Substantial variation in employment rates exists within the population. DI-only beneficiaries and those younger than age 40 were much more likely to work relative to other beneficiaries. Additionally, substantial regional variation exists, as Northern Plains and Midwestern states tended to have higher employment rates and Southern states tended to have lower rates. Across states, employment rates ranged from 7 percent (West Virginia) to 23 percent (North Dakota). We also find that state-level employment rates for beneficiaries were persistent over time. Employment rates were sensitive to the business cycle, with the overall rate for all disability beneficiaries varying from 11 percent to 13 percent since 1996.

The overall employment rates for SSI and DI beneficiaries are low relative to the general population. This is not surprising given the program eligibility requirements for SSI and DI. The substantial variation that exists within subgroups, however, underscores the potential value of the data for informing SSA policies. For example, holding individual demographic and disability characteristics constant, the substantial employment variation across states suggests that economic and policy differences may explain why some states have much stronger employment outcomes relative to other states. However, the fact that employment rates by state are generally persistent over time means either the states' economies and policies changed little over the 12-year study period, or the changes that occurred had little effect on employment of beneficiaries with disabilities.

Social Security Disability Programs and Recent Employment Initiatives and Estimates

Disability programs covered under Social Security include DI and SSI. DI is a social insurance program designed to replace the loss of wages of adult workers with disabilities, and SSI is an income-maintenance program for low-income working-age adults and children with disabilities.[4] The eligibility rules for DI and SSI will quite likely lead to differences in the employment outcomes across those programs even in the absence of differences in program rules. To qualify for DI, beneficiaries must have a work history, whereas to qualify for SSI, recipients must meet income and

asset criteria. One important implication is that DI beneficiaries tend to be older and have a work history compared with SSI recipients.

Both programs use the same administrative disability assessment process to determine whether an applicant—

1. Has a medically determined impairment that has lasted or is expected to last for at least 12 months or result in death.
2. Was unable to engage in substantial gainful activity (SGA), which was defined as the ability to earn more than $900 per month in 2007 for all nonblind disability applicants and $1,500 per month for blind disability applicants.

The process of establishing eligibility has important implications for employment of beneficiaries because both programs place strong emphasis on proving an inability to work above SGA to become eligible for benefits. Applicants must provide SSA with extensive medical and, in some cases, vocational documentation about their impairment. The typical application process is also long. According to the Social Security Advisory Board (2006), initial disability determinations on average take 120 days. However, most initial determinations are rejected, and a substantial portion of those determinations is appealed, which can lengthen the application process up to several years for some beneficiaries.

Despite the long application process, there is a strong incentive for many individuals with disabilities to apply for benefits, which provide an important source of income, as well as access to medical coverage. SSI recipients (in most states) are categorically eligible for Medicaid; most DI beneficiaries must serve a 2-year waiting period to become eligible for Medicare. Although there are eligibility and coverage differences between Medicare and Medicaid, both provide an important source of health care coverage to offset potentially expensive medical costs. For those with high health care needs, the medical benefits provided under these programs can be more valuable in dollar terms than the actual cash benefits from DI and SSI.

The DI and SSI work rules differ in important ways that have implications for employment while receiving benefits. In the DI program, individuals are permitted to work and earn over $640 for up to 9 months without losing eligibility for DI cash benefits. This 9-month period is referred to as the trial work period (TWP).[5] After completing the TWP, beneficiaries enter a 36-month extended period of eligibility (EPE). Except for a 3-month grace period, individuals who earn more than the SGA level in any month during the EPE face a cash cliff in which they lose their entire cash benefit for that month (but remain eligible for Medicare). After completing the EPE, DI cash benefits are terminated in the first month when earnings are above the SGA level. In the SSI program, earnings greater than $65 per month reduce SSI payments by $1 for every $2 of earnings.[6] Hence, unlike the DI cash cliff, SSI payments are reduced gradually as earnings rise. Provisions in the SSI program (sections 1619a and b) allow participants to earn more than the SGA level and remain eligible for SSI and Medicaid even after SSI cash payments cease because of earnings (for more details, see SSA (2011)).

The programmatic rules for continuing eligibility create potential work disincentives for both DI and SSI beneficiaries (Stapleton and others 2006). First, both DI and SSI beneficiaries maintain their eligibility as long as they meet SSA's disability criteria. The process of proving an inability to work to gain access to benefits can lead to persistently low expectations for work in the future and can cause participants to feel dependent on the DI and SSI programs. Second, low expectations for work can influence the expectations of staff who administer the programs and the rehabilitation providers who give employment supports to those populations. Third, DI and SSI beneficiaries risk both the loss of cash benefits and health care coverage for excess earnings, though the rules differ across DI and SSI.[7] Although both programs include the incentives noted above that allow beneficiaries to work and retain benefits, substantial disincentives remain. For example, the $1-for-$2 offset for SSI amounts to an implicit 50 percent tax on earnings.

Recent Employment Initiatives from SSA

In recent years, there has been an increasing emphasis on promoting return-to-work outcomes of Social Security beneficiaries with disabilities. The largest of those efforts started in 1999 when policymakers implemented the Ticket to Work (TTW) program. A major emphasis of TTW was to expand return-to-work services for DI and SSI beneficiaries. Prior to TTW, virtually all such publicly financed services were provided through state vocational rehabilitation agencies. The new program gives beneficiaries more choices for obtaining services and offers employment-support service providers new financial incentives to serve beneficiaries effectively.

SSA has also conducted several demonstration projects designed to promote employment outcomes of different subgroups of DI and SSI beneficiaries, including those who are without health care coverage, younger, working, or those with mental impairments. These interventions include the Accelerated Benefits demonstration, which provided immediate health benefits (rather than serving the 2-year Medicare waiting period) and employment supports, when appropriate, to newly entitled DI beneficiaries who were selected for the study; the Benefit Offset National Demonstration, which tests a $1-for-$2 benefit offset above SGA for DI beneficiaries; the Mental Health Treatment Study, which provided mental health treatments (pharmaceutical and psychotherapeutic) and employment supports that were not covered by other insurance for DI study participants; and the Youth Transition Demonstration, which provides intensive employment supports and benefits counseling to increase employment among youth and young adults with disabilities. For more information on these initiatives, see Rangarajan and others (2008).

Recent Employment Estimates

Although SSA provides a variety of employment estimates through its statistical publications, the estimates in those publications are limited. The lack of empirical estimates for employment among beneficiaries with disabilities is primarily driven by the limited information on work in the underlying Social Security administrative data. One problem is that statistics on work and earnings are based on the information reported to SSA by beneficiaries. Such information may not be accurate if beneficiaries do not properly report their work and earnings in a timely manner. SSA uses Internal Revenue Service information and other data to identify beneficiaries who may have failed to fully report their work and earnings, but those enforcement activities occur with considerable lag, and so they only identify work activities well after occurrence. For work and earnings data that were reported, there may be additional lags in processing and recording the information by SSA staff because of workload constraints. The administrative reporting lags are particularly relevant to the DI program because changes in earnings often do not have an immediate effect on monthly benefits, reducing the need for immediate data entry. For example, because of the trial work period, DI beneficiaries can work above the monthly threshold level ($640 per month in 2007) for up to 9 months in a 60-month period before DI cash benefits would be affected. With competing workload priorities in SSA field offices, the recording of DI work may be delayed in favor of more pressing administrative demands. SSI earnings, however, immediately affect benefit levels, so there is a strong need to record SSI earnings in a timely fashion. Such differences in administrative requirements in part explain why many of the published statistics differ for the two programs. For example, SSI statistics include earnings levels for working recipients, but DI statistics do not.

Beyond SSA's regular statistical publications, the evaluation reports for the TTW program have provided additional data on work and earnings for Social Security beneficiaries that are uniform across the two programs. Those reports rely on administrative data, as well as a nationally representative survey of SSI disability recipients and DI beneficiaries—the National Beneficiary Survey (NBS)—which was conducted in three annual waves from 2004 through 2006. The analysis of the administrative data has focused primarily on the characteristics and employment experiences of beneficiaries participating in the TTW program, although the survey data provided a wealth of information on employment outcomes for all Social Security beneficiaries. Livermore, Stapleton, and Roche (2009), for example, used the NBS data to show that 13 percent of all Social Security disability beneficiaries worked during the previous year, with slightly higher rates of employment for DI and concurrent beneficiaries (13 percent and 15 percent, respectively) in comparison with SSI disability recipients (11 percent). The higher rates of employment among DI beneficiaries are not surprising given the differences in program eligibility requirements and program rules related to employment. The authors also found that beneficiaries who worked while still receiving benefits averaged 22 hours of work per week at an average wage of $6.38 per hour and earnings of $637 per month. Working beneficiaries were also more likely to work for extended periods, with an average tenure of 46 months.

Although some information exists on employment of Social Security beneficiaries, important gaps in knowledge remain on how employment rates vary across beneficiary subgroups and trends over time. For example, there are only limited data (primarily from TTW reports) on beneficiary employment by age and impairment subgroups and no information on employment of DI beneficiaries at the state level over time.

This article helps fill that gap by taking advantage of the linked administrative data, which was not available previously. Because of the need for a large sample to analyze employment outcomes for subgroups of disability beneficiaries, the administrative data enabled us to estimate the employment rates for various subgroups, by state of residence, which is not available in the literature.

Data and Methodology

Our approach addresses the limited information available on the employment experiences of Social Security disability program beneficiaries. In this section we describe the administrative data used in the analysis, the sample selection criteria and definitions, as well as our approach to generating the employment estimates.

Administrative Records from the Ticket Research File and Master Earnings File

We use linked program and earnings data to construct employment statistics for the full population of working-age beneficiaries receiving disability benefits from 1996 through 2007. We identify program participants using SSA's administrative data from the Ticket Research File (TRF), which was originally constructed to analyze the effect of the TTW program. The TRF contains current and historical data on approximately 21 million Social Security beneficiaries aged 18–64 who participated in the SSI disability and/or DI programs at any time between January 1996 and December 2007. The data are housed on the mainframe computer at SSA's data center and are available on a restricted basis. Hildebrand and others (2009) provide full documentation on the TRF.

We use earnings data from SSA's Master Earnings File, which includes annual earnings data derived from tax reports.[8] We combine total Medicare wages and total Medicare self-employment earnings in the MEF to derive a measure of total earnings.[9] The employment and earnings statistics do not reflect the employment and earnings of those whose earnings are not reported to the Internal Revenue Service. Approximately 96 percent of the legally employed US workforce is in jobs subject to Social Security taxes.[10]

The linked data provide important analytic advantages for constructing consistent annual employment rates. The use of earnings data enables us to construct consistent measures of employment across the DI and SSI disability programs and across all states. Because TRF data include program information on all Social Security beneficiaries, we can use this information to construct population estimates. This is very useful in examining overall trends, as well as for constructing state-of-residence estimates.

Sample Selection and Definitions

For each cohort, we included only Social Security beneficiaries who were on the program rolls at least 1 full calendar year to avoid capturing employment from preaward jobs. Within the overall beneficiary population, we defined three mutually exclusive program title groups: DI-only (Title II), SSI-only (Title XVI), and concurrent (DI and SSI disability) beneficiaries. The determination of program title is made independently in each observation year. We assigned program status based on whether a person was in current-pay status for that program for at least 1 month of the observation year. We defined a concurrent beneficiary as someone who was in current-pay status for SSI with at least 1 month in current-pay status for DI in a year.[11]

In Table 1, we summarize the characteristics of the more than 10 million working-age adult disability beneficiaries covered under Social Security in 2007. Among those beneficiaries, 60 percent were DI-only, 29 percent were SSI-only, and 11 percent were concurrent beneficiaries. DI beneficiaries were predominantly male (54 percent), non-Hispanic white (72 percent), older than age 50 (67 percent), and received DI because of a physical impairment (such as a back disorder or "other" physical impairment). Conversely, SSI and concurrent beneficiaries were predominantly female (56 percent in each group), younger than age 50 (approximately 60 percent in each group), and had a mental health–related disorder (such as intellectual disability—formerly known as mental retardation, an affective disorder, or "other" psychiatric disorder). SSI and concurrent beneficiaries were about equally as likely to be Hispanic (10.9 percent and 9.8 percent) or non-Hispanic black (35.8 percent and 29.5 percent) as they were to be non-Hispanic white (51.4 percent and 59.1 percent). Across program groups, relative to SSI recipients, DI beneficiaries were more likely to be older and have a physical impairment.

We also summarize the caseload characteristics from the 1996 cohort to illustrate how the Social Security disability beneficiary population has changed since our initial period under analysis (Table 1). In 1996, there were 7 million disability beneficiaries, among whom 52 percent were DI-only, 36 percent

Table 1.
Characteristics of Social Security disability beneficiaries in 1996 and 2007 (in percent)

Characteristic	1996 beneficiaries				2007 beneficiaries			
	All	DI-only	SSI-only	Concurrent	All	DI-only	SSI-only	Concurrent
Number of beneficiaries (thousands)	7,021	3,668	2,521	831	10,156	6,104	2,925	1,126
Percentage in program groups	100.0	52.3	35.9	11.8	100.0	60.1	28.8	11.1
Sex								
Female	46.1	38.1	55.9	51.4	49.9	45.6	56.4	55.8
Male	53.3	61.6	42.8	48.5	50.0	54.3	43.1	44.1
Age group								
18–39	29.8	17.4	44.3	40.9	20.7	11.1	37.1	30.3
40–49	24.1	25.3	22.0	24.9	23.0	21.7	23.3	28.9
50–59	28.9	34.7	22.4	22.8	35.9	41.1	27.6	28.8
60–64	17.2	22.6	11.4	11.3	20.5	26.1	12.0	12.1
Race/ethnicity								
Hispanic	6.0	4.5	8.1	7.0	7.8	6.0	10.9	9.8
Non-Hispanic white	64.3	72.1	53.8	61.6	64.7	72.1	51.4	59.1
Non-Hispanic black	25.8	17.8	36.5	28.3	25.4	19.6	35.8	29.5
Other/missing	3.9	5.6	1.6	3.1	2.1	2.3	1.9	1.6
Disabling condition								
Affective disorders	8.5	9.2	7.0	10.5	14.1	13.9	13.7	16.3
Other psychiatric disorders	14.2	13.7	13.3	19.4	15.3	12.5	19.3	19.9
Intellectual disability	10.7	6.6	13.2	20.8	11.6	5.9	19.9	21.2
Back disorders	7.1	11.5	1.4	4.9	10.7	15.1	3.1	6.5
Other musculoskeletal disorders	6.1	8.8	2.6	4.9	8.4	11.0	4.0	5.7
Other physical disorders	36.9	48.8	19.1	38.2	34.9	41.3	23.3	30.2
Missing	16.5	1.4	43.4	1.3	5.0	0.3	16.7	0.3
Annual 2007 earnings distribution								
$0	82.7	81.1	84.6	84.0	83.1	80.5	87.4	86.3
$1–$1,000	8.4	7.5	9.1	10.4	4.8	4.5	5.1	5.7
Between $1,000–$5,000	6.7	8.1	5.2	5.0	5.6	6.3	4.3	5.5
Between $5,000–$10,000	1.6	2.2	1.0	0.5	3.6	4.7	1.9	1.8
Between $10,000–$20,000	0.5	0.8	0.1	0.1	2.0	2.6	1.2	0.7
More than $20,000	0.1	0.3	0.0	0.0	0.9	1.3	0.2	0.1
Summary employment measure								
Any employment with > $1,000 annual earnings	8.9	11.4	6.4	5.6	12.1	15.0	7.6	8.0

SOURCE: Authors' calculations based on SSA's 2007 TRF data linked to MEF data.

NOTES: Social Security disability beneficiaries include SSI and DI beneficiaries who were in current-pay status for at least 1 month in 2007 (1996) and had been receiving benefits from either program for at least 1 calendar year. DI-only beneficiaries include individuals who received DI benefits only; SSI-only disability recipients include individuals who received SSI disability benefits only; and concurrent beneficiaries include individuals who received both SSI disability and DI benefits. Earnings in 1996 are inflation adjusted to reflect 2007 dollars.

were SSI-only, and 12 percent were concurrent. Consistent with the findings cited earlier, DI-only beneficiaries tended be older, included more men, and had more physical impairments relative to the other subgroups. However, there were important compositional shifts in the overall caseload and within-program groups, as the 2007 cohort for each program group tended to include more women and older beneficiaries. This shift in caseload composition by sex and age for later cohorts is related to the aging of the baby boom cohort and the gradual increase over time in the number of women working, which is an important consideration in examining employment rates across cohorts.

In examining the employment characteristics of beneficiaries, we use a minimum annual earnings threshold of $1,000 to identify Social Security disability beneficiaries who had substantive employment experiences. For all years prior to 2007, we use the average wage index to adjust for inflation. Thus, a

beneficiary is considered to have been employed in a particular year when he or she had more than $1,000 (in 2007 dollars) of annual earnings in that year.

Based on this threshold, 12 percent of all beneficiaries were employed during 2007. Across program groups, the DI-only beneficiary employment rate (15 percent) was substantially higher than those for SSI-only and concurrent beneficiaries (8 percent for both groups). This is not surprising given the weaker employment histories that accompany SSI status by definition.

The earnings distribution in Table 1 illustrates the sensitivity of employment-rate estimates to the choice of earnings thresholds for all Social Security disability beneficiaries and the program groups. For example, if we had used the $0 threshold, 4.8 percent of beneficiaries would have earned between $1 and $1,000 in 2007, which would have increased the overall employment rate for beneficiaries to 17 percent. Conversely, if we had used an even higher earnings threshold—for example $5,000—we would have not counted the 5.6 percent of beneficiaries who earned between $1,000 and $5,000, which would have lowered the employment rate to 6.5 percent. The choice of threshold is very important for the employment estimates of program groups because DI beneficiaries have substantially higher earnings. For example, DI-only beneficiaries were almost three times more likely than those in the other program groups to earn more than $5,000 annually (9 percent for DI-only versus approximately 3 percent for SSI and concurrent beneficiaries).

The sensitivity of employment rates to the earnings threshold might in part explain some of the differences between our employment rates and those estimated in Livermore, Stapleton, and Roche (2009) using survey data. Although our overall disability beneficiary estimates are comparable (approximately 12 percent), we find larger differences across program groups than the other authors. It is likely that these earnings thresholds and some of the information that might be self-reported in a survey, but are not available in administrative records (such as earnings from sheltered workshops), explain most of the differences.

Approach to Producing Employment Estimates for the 2007 Beneficiary Cohort

We summarize the characteristics of the 2007 cohort and then generate employment estimates, using descriptive and multivariate methods, for the overall population and for program, demographic, impairment, and state subgroups. The descriptive analysis provides an employment rate for the overall population and each of the subgroups. We use a multivariate approach to assess whether differences observed in the descriptive analysis change when controlling for multiple factors. We also use a linear probability model to estimate the probability of whether a beneficiary was employed during 2007. That is, we fit the following equation—

$$Y_i = a + bX_i + cS_i + e_i$$

where Y_i is the employment outcome for individual i; X_i is the vector of characteristics of individual i, namely, sex, age, race/ethnicity, primary disabling conditions (broad categories), and duration since first eligibility for benefits; S_i is the vector of state dummy variables for each state; and e_i is the unobserved disturbance term for individual i.[12]

Employment Statistics for 2007

In this section, we examine changes in the national employment rates from 1996 through 2007 by program group as well as fluctuations in these rates, especially in respect to the business cycle. We conclude by assessing whether state differences in 1996 were similar to those in 2007.

Employment Rates: Highest for DI Beneficiaries and Younger Workers

In Table 2, we summarize the 2007 employment rates for beneficiary subgroups by sex, age group, primary disabling condition, and number of years since first eligibility. We present the overall employment rate within each subgroup, which can be compared with the national average, to assess whether certain subgroups were more likely to work relative to others.

In general, the largest subgroup differences were across program groups, age groups, and number of years since first eligibility. Beneficiaries who were DI-only, younger, and recent awardees (that is, those who entered the rolls within the 2005–2007 period) were substantially more likely to be working relative to their counterparts. These findings are consistent with those from the Ticket to Work evaluation (Stapleton and others 2008). Approximately 16 percent of beneficiaries who entered the program in the 2005–2007 period were working. Younger beneficiaries aged 18–39 had the highest employment rates (19 percent) in comparison with all other age groups. The large variation in employment rates between the younger and the older disability program beneficiaries differs from

the employment patterns in the general population, where employment rates are generally the same across younger and older groups. For instance, in 2007 the employment rates among the noninstitutionalized population for age groups 18–39 and 50–59 were 74.3 percent and 74.1 percent, respectively (Bureau of Labor Statistics 2008). While most younger and older beneficiaries in the DI program are out of the labor force, the job prospects for older beneficiaries are likely more limited compared with their younger counterparts. Within program subgroups (data not shown), beneficiaries aged 18–39 had the highest employment rates (the DI-only beneficiary employment rate was 27 percent; SSI and concurrent beneficiaries both had employment rates of approximately 15 percent).

Table 2.
Employment rates for all Social Security disability beneficiaries, by program groups and demographic characteristics, 2007 (in percent)

Characteristic	All beneficiaries
Number of beneficiaries (millions)	10,156
Percentage of beneficiaries	12.1
Program group	
DI-only	15.0
SSI-only	7.6
Concurrent	8.0
Sex	
Female	12.0
Male	12.2
Age group	
18–39	18.7
40–49	12.4
50–59	9.8
60–64	9.1
Primary disabling condition	
Affective disorders	12.3
Other psychiatric disorders	11.9
Intellectual disability	15.5
Back disorders	9.7
Other musculoskeletal disorders	11.4
Other physical disorders [a]	12.9
Missing	5.3
Years since first eligibility	
1–2	15.6
3–5	13.5
6–9	12.9
10 or more	10.2

SOURCE: Authors' calculations based on SSA's 2007 TRF data linked to MEF data.

NOTES: Social Security disability beneficiaries include SSI and DI beneficiaries who were in current-pay status for at least 1 month in 2007 and had been receiving benefits from either program for at least 1 calendar year. Beneficiaries are considered employed if they had at least $1,000 in earnings in 2007. DI-only beneficiaries include individuals who received DI benefits only; SSI-only disability recipients include individuals who received SSI disability benefits only; and concurrent beneficiaries include individuals who received both SSI disability and DI benefits.

a. Other physical disorders include the following body system impairments and diseases: diseases of the nervous system; diseases of the circulatory system; congenital anomalies; endocrine, nutritional, and metabolic diseases; injuries; diseases of the blood and blood-forming organs, digestive system, genitourinary system, respiratory system, skin, and subcutaneous tissue; human immunodeficiency virus (also called AIDS); and other diagnoses.

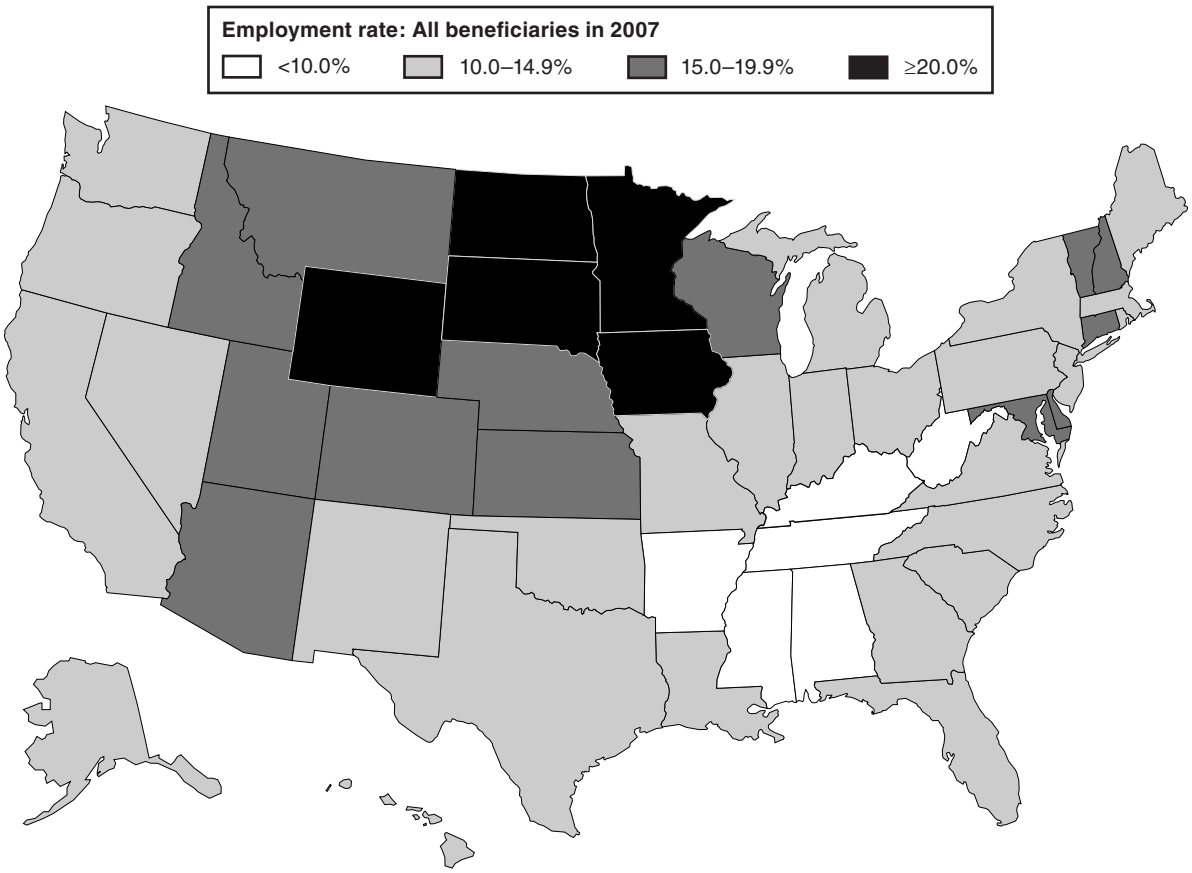
As Table 2 shows, there was limited variation in employment rates across primary disabling conditions, with the exception of intellectual disability.[13] Beneficiaries with intellectual disability as their primary disabling condition had an employment rate of 16 percent; for other conditions, employment rates varied between 10 percent (back disorders) and 13 percent (other physical disorders). Because intellectual disability is correlated with age, it is possible that part of these findings is driven by the younger age of beneficiaries in this impairment group. We will examine this issue in more detail later in the regression-adjusted analysis.

Employment Rates: Higher in Northern States

We find that Northern states have higher relative employment rates, especially in comparison with Southern states. In Chart 1, we summarize the geographic employment rates of Social Security disability beneficiaries using a map to examine variations in those rates by state and region. In the Appendix, Tables A-1 through A-4 provide detailed statistics on the state employment rates that are presented in the chart.

State employment rates ranged from 7 percent (West Virginia) to 23 percent (North Dakota), and there are strong regional differences. States in the Appalachian Mountains range (namely, West Virginia, Kentucky, Tennessee, Alabama, Mississippi, and Arkansas) had the lowest employment rates (between 7 and 10 percent) in the country; states in the Midwest and Rocky Mountains, and a few states in the Northeast, had higher employment rates (ranging from 15 to 23 percent). We also find similar state and regional patterns for different program groups across states, as employment rates were consistently lower among DI, SSI, and concurrent beneficiaries living in states in the Appalachian Mountains range (see the Appendix, Tables A-1 through A-4). The substantial differences in employment rates might reflect differences in the

Chart 1.
State-level employment rates for Social Security disability beneficiaries, 2007



SOURCE: Authors' calculations based on SSA's 2007 TRF data linked to MEF data.

NOTES: Social Security disability beneficiaries include the more than 10 million SSI and DI beneficiaries who were in current-pay status for at least 1 month in 2007 and had been receiving benefits from either program for at least 1 calendar year. Beneficiaries are considered employed if they earned at least $1,000 in 2007.

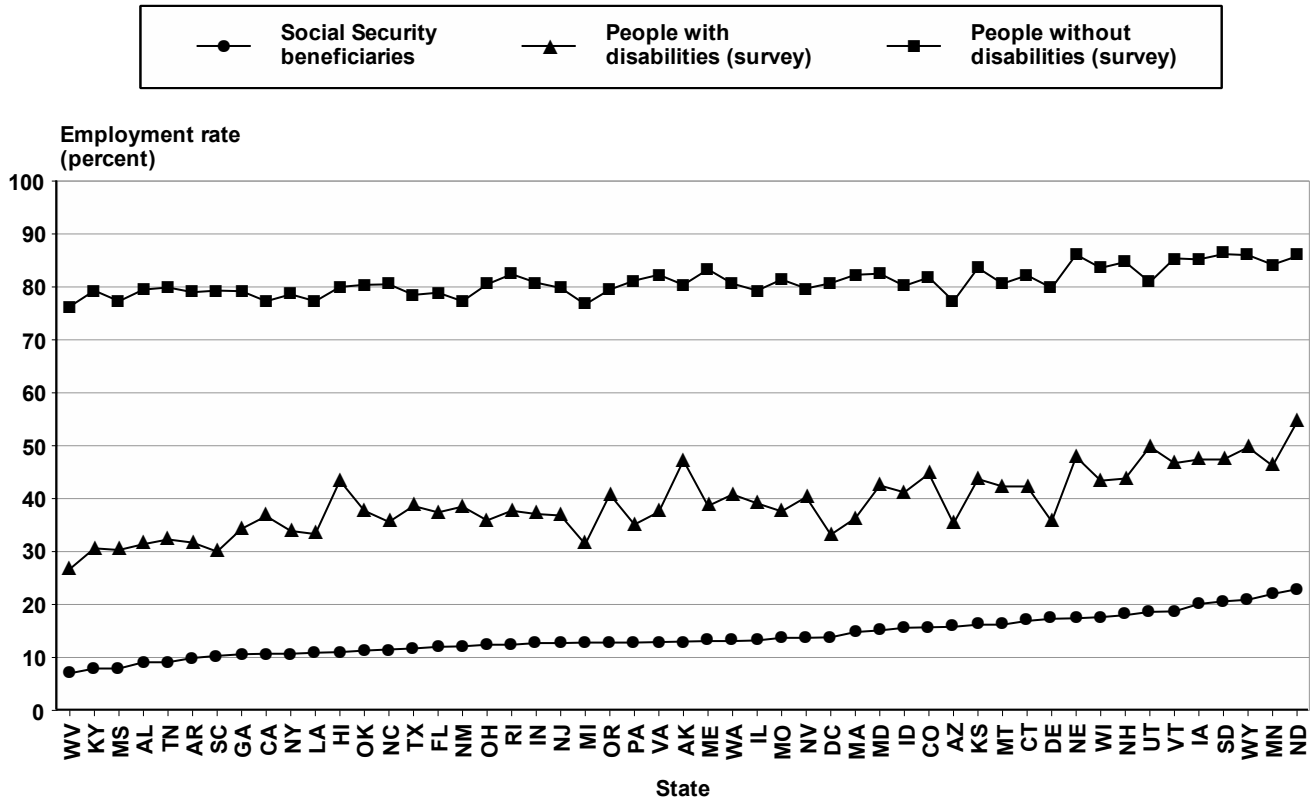
compositions of caseloads, as well as state differences in economic climate and policies.

Beneficiary Employment Rates at the State Level

Although Social Security beneficiary employment rates at the state-level mirror those for the broader population of individuals with disabilities, there are differences as compared with the nondisabled population. In Chart 2, we assess whether the variations in the employment rates of beneficiaries cited earlier reflect a potentially broader state trend in employment rates by comparing them with employment rates of people with and without disabilities, as measured in the American Community Survey (ACS). We use information from Bjelland, Erickson, and Lee (2008), who constructed annual employment rates for ACS respondents who self-reported a disability in 2007. In general, there is more variation across states in the employment rates of Social Security beneficiaries and individuals with disabilities relative to those without disabilities. This finding is expected given that most individuals without disabilities work in most states. For example, employment rates for individuals without disabilities range from 76 percent (West Virginia) to 86 percent (South Dakota).

In several states, particularly at the two ends of the distribution, the employment rates of Social Security beneficiaries follow a similar pattern to the general population. States with the highest beneficiary employment rates (North Dakota, Wyoming, and Minnesota) had relatively higher employment rates for individuals with and without disabilities. For example, North Dakota had the highest beneficiary

Chart 2.
Comparison of 2007 employment rates of Social Security disability beneficiaries with employment rates of people with and without disabilities, as measured in the American Community Survey



SOURCE: Social Security disability beneficiary data are based on authors' calculations using SSA's 2007 TRF data linked to MEF data. American Community Survey data are derived from Bjelland, Erickson, and Lee (2008).

NOTES: Social Security disability beneficiaries include the more than 10 million SSI and DI beneficiaries who were in current-pay status for at least 1 month in 2007 and had been receiving benefits from either program for at least 1 calendar year. Beneficiaries are considered employed if they earned at least $1,000 in 2007. The survey estimates of employment include the percentages of noninstitutionalized individuals with and without a disability, aged 18–64 of all races regardless of ethnicity, and of all education levels in the United States who were employed in 2007.

employment rate (23 percent), the highest employment rate for individuals with disabilities (55 percent), and the fourth-highest employment rate for individuals without disabilities (86 percent). Similarly, states with the lowest overall beneficiary employment rates (West Virginia, Mississippi, and Kentucky) had relatively lower employment rates in the broader populations. For example, West Virginia had the lowest employment rates for all three groups—Social Security beneficiaries (7 percent), individuals with disabilities (27 percent), and those without disabilities (76 percent).

However, a stronger relationship exists between the employment trends of Social Security beneficiaries and individuals with disabilities, particularly in states where the employment rate for individuals without disabilities is closer to the national average. For example, Utah had an average employment rate for individuals without disabilities (81 percent versus the national average of 80 percent), but had higher than national average rates for Social Security beneficiaries (19 percent versus the national average of 12 percent) and individuals with disabilities (50 percent versus the national average of 37 percent). Across all states, there was an 85 percent correlation between the employment rates of Social Security beneficiaries and individuals with disabilities and a 79 percent correlation between the rates of Social Security beneficiaries and individuals without disabilities.

The findings indicate that important variations exist in employment rates across states that might be related to broader state economic and policy conditions.

Although we cannot identify the factors driving these state differences, the large variation in employment rates for individuals with disabilities and Social Security beneficiaries in particular indicates that it is worthwhile to explore whether any state-specific policies targeting people with disabilities were contributing to these employment differences.

Estimated Employment Rate Differences

We find that our estimated employment-rate differences persist across subgroups, even after controlling for demographic characteristics, nature of impairment, and state of residence.

In Table 3, we present coefficient estimates from a linear probability model to examine whether the descriptive relationships cited earlier change substantively when controlling for multiple factors. The signs of the regression estimates were consistent with the raw differences across categories. However, the magnitude of the regression estimates for certain variables, especially DI and age, were larger than the raw differences, indicating that caseload composition

Table 3.
Coefficients from linear probability model regressions for state-level employment rates in 1996 and 2007, by selected characteristics

	1996		2007	
Characteristic	Coefficient	Standard error	Coefficient	Standard error
Program group (reference: SSI-only)				
DI-only	0.0831	0.0003	0.1174	0.0004
Concurrent	0.0032	0.0004	0.0124	0.0003
Sex (reference: male)				
Female	-0.0016	0.0002	0.0111	0.0002
Age group (reference: 50–59)				
18–39	0.1104	0.0003	0.1188	0.0003
40–49	0.0321	0.0003	0.0364	0.0003
60–64	-0.0081	0.0004	-0.0133	0.0003
Disabling condition (reference: other physical disorders and missing)				
Affective disorders and other psychiatric disorders	-0.0028	0.0003	-0.0055	0.0002
Intellectual disability	0.0486	0.0004	0.0273	0.0004
Back disorders and other musculoskeletal disorders	-0.0186	0.0004	-0.0212	0.0003
Race/ethnicity (reference: Non-Hispanic black)				
Hispanic	-0.0318	0.0006	-0.0287	0.0004
Non-Hispanic white	-0.0031	0.0003	-0.0213	0.0003
Other/missing	-0.0321	0.0005	-0.0315	0.0005
Years since first eligibility (reference: 6 or more years)				
0–2	0.0354	0.0003	0.0234	0.0003
3–5	0.0163	0.0003	0.005	0.0003
Missing	0.1193	0.0011	. . .	. . .
Intercept	0.0528	0.0035	0.0462	0.0026
State fixed effect (reference: Alaska)				
Alabama	-0.0657	0.0036	-0.0524	0.0026
Arizona	0.0046	0.0036	0.0171	0.0027
Arkansas	-0.0506	0.0036	-0.0447	0.0027
California	-0.0233	0.0035	-0.0074	0.0026
Colorado	0.0304	0.0036	0.0178	0.0027
Connecticut	0.0097	0.0037	0.0256	0.0027
Delaware	0.0155	0.0043	0.0201	0.0032
District of Columbia	-0.024	0.0042	-0.0006	0.0034
Florida	-0.0388	0.0035	-0.0197	0.0026
Georgia	-0.0439	0.0035	-0.0383	0.0026

(Continued)

Table 3.
Coefficients from linear probability model regressions for state-level employment rates in 1996 and 2007, by selected characteristics—*Continued*

Characteristic	1996		2007	
	Coefficient	Standard error	Coefficient	Standard error
Hawaii	-0.0299	0.0042	-0.0142	0.0031
Idaho	0.012	0.004	0.0138	0.003
Illinois	-0.0133	0.0035	-0.0118	0.0026
Indiana	-0.0007	0.0036	-0.0223	0.0026
Iowa	0.0565	0.0037	0.0561	0.0028
Kansas	0.0142	0.0037	0.0159	0.0028
Kentucky	-0.0704	0.0035	-0.0525	0.0026
Louisiana	-0.0532	0.0036	-0.0315	0.0026
Maine	-0.0256	0.0038	-0.0097	0.0028
Maryland	-0.0134	0.0036	0.0026	0.0027
Massachusetts	0.0017	0.0035	0.0138	0.0026
Michigan	0.015	0.0035	-0.0148	0.0026
Minnesota	0.0758	0.0036	0.0733	0.0027
Mississippi	-0.0654	0.0036	-0.0659	0.0027
Missouri	-0.0051	0.0036	-0.0077	0.0026
Montana	-0.0049	0.0041	0.0273	0.0031
Nebraska	0.0257	0.0039	0.0268	0.0029
Nevada	-0.0103	0.0039	-0.0062	0.0028
New Hampshire	0.0127	0.004	0.0249	0.003
New Jersey	-0.0291	0.0035	-0.0157	0.0026
New Mexico	-0.0183	0.0038	-0.0069	0.0028
New York	-0.0358	0.0035	-0.02	0.0026
North Carolina	-0.0335	0.0035	-0.0329	0.0026
North Dakota	0.0471	0.0045	0.0848	0.0036
Ohio	-0.0024	0.0035	-0.016	0.0026
Oklahoma	-0.0389	0.0036	-0.0269	0.0027
Oregon	-0.0004	0.0037	-0.0071	0.0027
Pennsylvania	-0.0345	0.0035	-0.0109	0.0026
Rhode Island	-0.0269	0.0039	-0.0106	0.003
South Carolina	-0.0434	0.0036	-0.0449	0.0026
South Dakota	0.0506	0.0043	0.0677	0.0034
Tennessee	-0.0485	0.0035	-0.0495	0.0026
Texas	-0.0372	0.0035	-0.0208	0.0026
Utah	0.0515	0.0039	0.037	0.003
Vermont	0.0064	0.0043	0.0486	0.0033
Virginia	-0.0402	0.0036	-0.0198	0.0026
Washington	-0.0072	0.0036	-0.005	0.0026
West Virginia	-0.0845	0.0036	-0.0613	0.0027
Wisconsin	0.0426	0.0036	0.0308	0.0027
Wyoming	0.0335	0.0048	0.0654	0.0038

SOURCE: Authors' calculations based on SSA's 2007 TRF data linked to 2007 MEF data.

NOTES: Social Security disability beneficiaries include the more than 10 million (7 million in 1996) SSI and DI beneficiaries who were in current-pay status for at least 1 month in 2007 (1996) and had been receiving benefits from either program for at least 1 calendar year. DI-only beneficiaries include individuals who received DI benefits only; SSI-only disability recipients include individuals who received SSI disability benefits only; and concurrent beneficiaries include individuals who received both SSI disability and DI benefits. Beneficiaries are considered employed if they had at least $1,000 in earnings in 2007 (1996). The dependent variable is equal to 1 if the beneficiary was employed during 2007 (1996); 0 otherwise. Earnings in 1996 are inflation adjusted to reflect 2007 dollars.

. . . = not applicable.

has important implications in examining employment rates of subgroups.[14] The highest-point estimates were for the DI-only program group and the group aged 18–39. Social Security beneficiaries with those characteristics were about 12 percentage points more likely to be employed than those in the comparison groups, which included SSI-only (compared with DI-only) and beneficiaries aged 50–59 (compared with those aged 18–39). These estimates were larger than those from the descriptive tabulations shown in Table 2, where the corresponding differences between DI-only beneficiaries and SSI-only recipients were 7 percentage points for the group aged 18–39 and 9 percentage points for the group aged 50–59.

In general, the employment rate differences across sex, impairment, race, and years from first eligibility were small and mirror the results from the descriptive analysis. There was only a 1 percentage point difference between male and female beneficiaries. The differences across impairments groups were larger, as beneficiaries with intellectual disability were 2 percentage points more likely to be employed, and those with back/musculoskeletal disorders were 2 percentage points less likely to be employed when compared with beneficiaries with other physical impairments. Finally, the number of years since first eligibility indicates that beneficiaries who were on the program rolls for 2 years or fewer are about 2 percentage points more likely to be employed than those who were on the rolls for more than 5 years. We also find that non-Hispanic blacks are 2 to 3 percent more likely to be employed when compared with all racial and ethnic groups.

We find the same general pattern when examining the state coefficients in Table 3 as that in the bivariate statistics. For example, the state coefficient for West Virginia's rate was 6 percentage points lower than that for the reference state (Alaska), and the coefficient for North Dakota was 8 percentage points higher. In total, the 14 percentage point difference between West Virginia and North Dakota was similar, but slightly lower than the (16 percentage point) difference noted in the descriptive analysis.

Employment Trends

Here we assess the trends in the national employment rates among Social Security disability beneficiaries from 1996 through 2007. We also discuss the changes in the state-level employment rates during the 1996–2007 period.

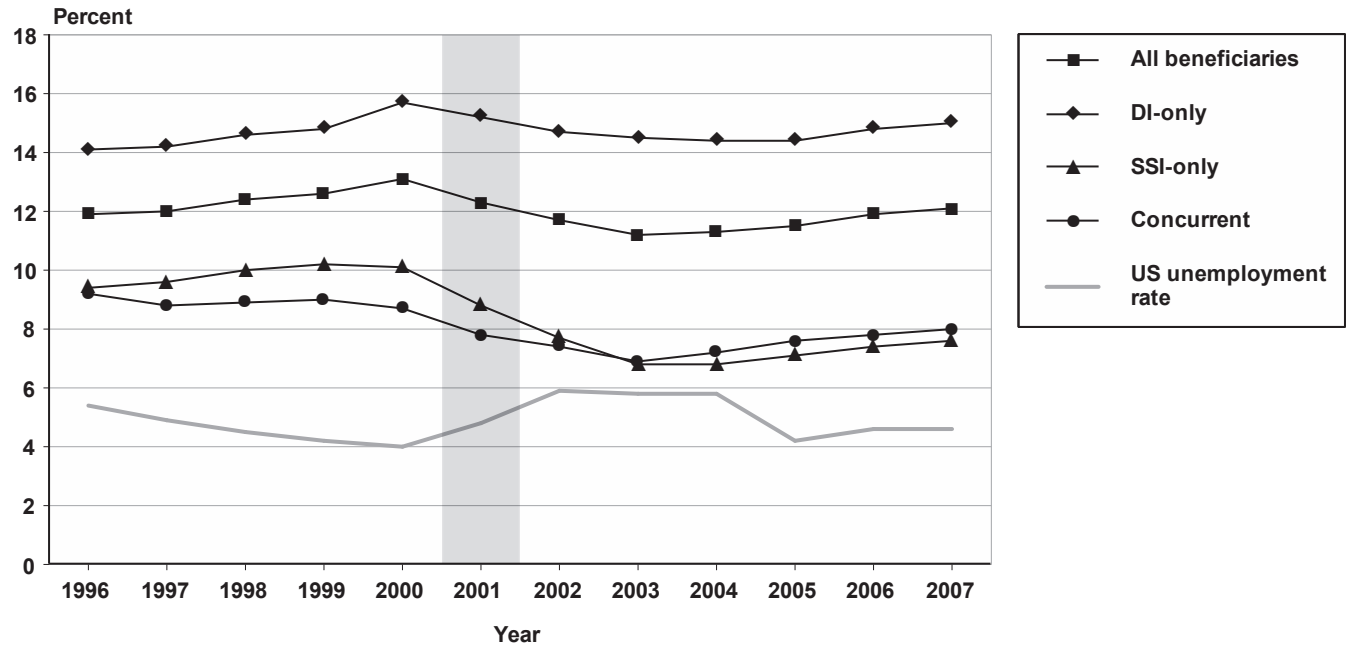
National Employment Rates

Trends in employment rates for all Social Security disability beneficiaries and each of the program groups since 1996 are shown in Chart 3. Each year, we create a cross section of beneficiaries using the same definitions used to construct the 2007 beneficiary estimates. We also include the unemployment rate to track the manner in which employment rates vary with the business cycle. The Appendix, Tables A-1 through A-4, includes a full summary of the data shown in the chart.

The patterns in Chart 3 indicate that the Social Security beneficiary rates and the rates for each of the program groups were sensitive to the business cycle. For all program groups, employment rates for beneficiaries increased in the late 1990s when unemployment rates were falling. However, employment rates began to fall with the 2001 recession (shown with the shaded vertical bar in the chart), and continued to fall in the next 3 years as unemployment rates remained relatively high. The decrease in employment was greater among SSI-only and concurrent beneficiaries than for DI-only beneficiaries. In 2005, with a stronger overall economy, employment rates for beneficiaries started to improve. By 2007, beneficiary employment rates were at 12 percent, approximately the same level as that in 1996. Within program groups, from 1996 through 2007, there was a slight increase in DI-only employment rates by 1 percentage point (from 14 percent to 15 percent), with slight decreases in the rates for SSI-only and concurrent beneficiaries (from 9 percent to 8 percent for both groups).[15] The findings indicate that the general employment rates of Social Security beneficiaries have been relatively consistent (between 11 and 13 percent) over time.

To illustrate the effects of a change in the business cycle on employment, in Chart 4 we present a scatter diagram with a regression line showing the relationship between the state employment rate among Social Security beneficiaries and the overall state unemployment rate during the economic downturn from 2000 to 2004.[16] During that period, state employment rates among beneficiaries were falling and overall state unemployment rates were rising. The regression line indicates a clear inverse relationship, as it shows that beneficiary employment fell by 0.7 percentage points for every 1.0 percentage point increase in unemployment. The experiences in Ohio, which was hit very hard by the recession during that period, illustrate the magnitude of this effect. From 2000 to 2004,

Chart 3.
Trends in national-level employment rates among Social Security disability beneficiaries, 1996–2007



SOURCES: Authors' calculations based on SSA's 2007 TRF data linked to MEF data. The US unemployment data is from the Geographic Profile of Employment and Unemployment, maintained by the Bureau of Labor Statistics at http://www.bls.gov/gps/#tables, and http://www.bls.gov/opub/gp/laugp.htm.

NOTES: Social Security disability beneficiaries include the more than 10 million SSI and DI beneficiaries who were in current-pay status for at least 1 month in 2007 and had been receiving benefits from either program for at least 1 calendar year. Beneficiaries are considered employed if they earned at least $1,000 in 2007. DI-only beneficiaries include individuals who received DI benefits only; SSI-only disability recipients include individuals who received SSI disability benefits only; and concurrent beneficiaries include individuals who received both SSI disability and DI benefits.

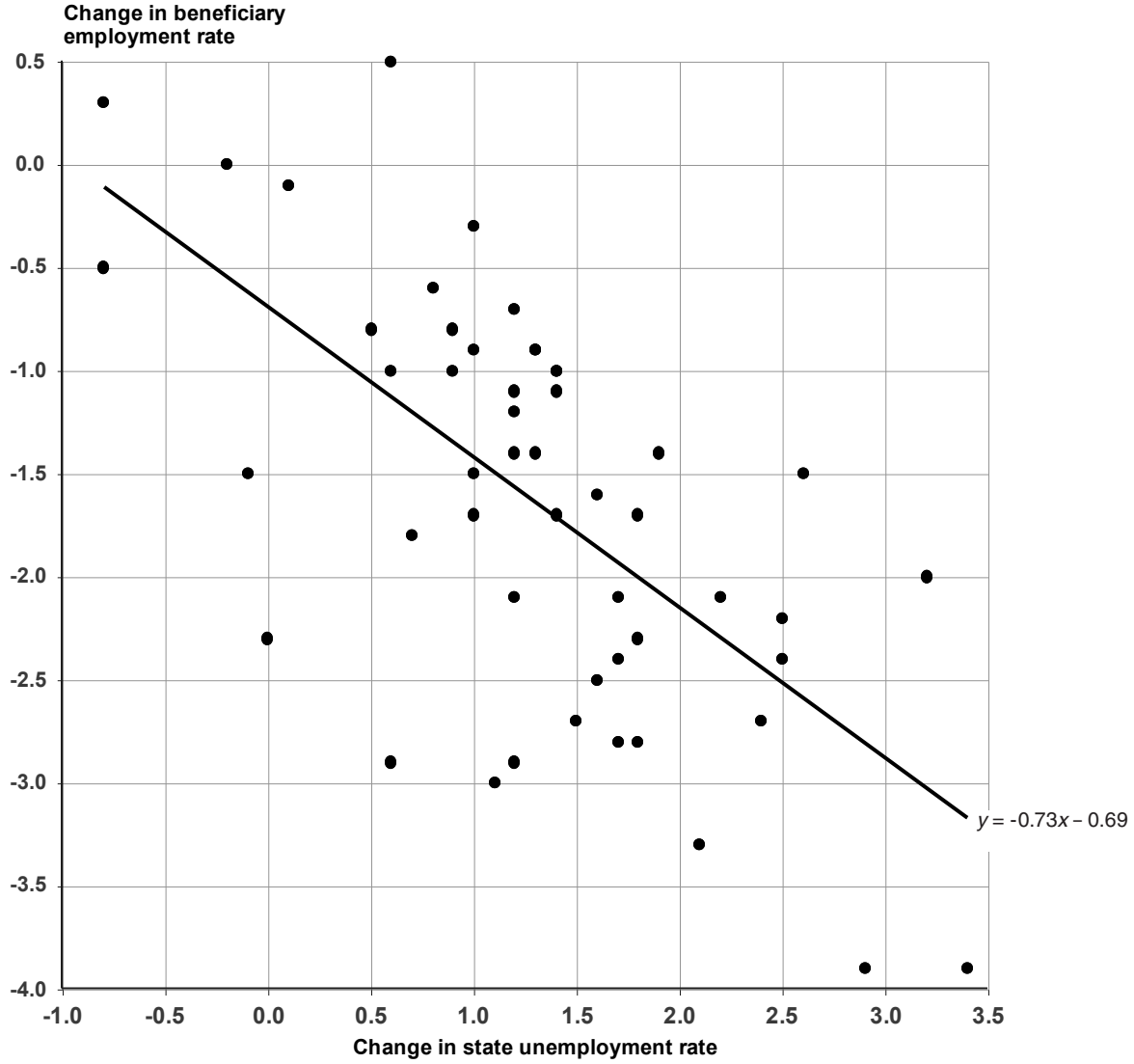
unemployment rates increased from 4 percent to 6.1 percent in Ohio; at the same time, Social Security beneficiary employment rates in the state fell from 16 percent to 13 percent.

State Differences in Employment Rates

In Table 4, we examine changes in the state Social Security beneficiary employment rates in 1996 and 2007 to assess whether state employment rates have changed substantively over time. There were changes in state employment rates during the 1996–2007 period, though the same regional patterns that existed in 2007 were also present in 1996. Some of the changes were large relative to the state employment rate in 1996. For example, Michigan's employment rate declined by 22 percent, while Vermont's rate increased by 25 percent. These relatively significant changes in employment rates over time suggest an area for further exploration to determine the extent to which state-specific policy changes and labor market conditions drive these trends. Despite these changes, the same general patterns noted earlier continue to be present across states: Northern states had relatively higher employment rates and Southern states had relatively lower rates. Hence, although there were some changes in state employment rates over time, there appears to be a strong persistent component across states that are driving these differences.

We further examine, using a multivariate model for 1996 and 2007, whether compositional changes explain the changes over time in state-level employment rates and find that the pattern of employment by state continued to be consistent over time (Chart 5). The state-of-residence coefficients represent the effect of residing in a particular state on beneficiaries' likelihood of employment while holding other demographic characteristics constant. Our findings indicate that for almost all of the states, the state-of-residence effects had the same direction—and in many cases the same magnitude—in 1996 and 2007. These estimates further underscore the effects of state-specific factors influencing employment

Chart 4.
State changes in Social Security disability beneficiary employment and changes in unemployment rates from 2000 to 2004



SOURCES: Authors' calculations based on SSA's 2007 TRF data linked to MEF data. Source for unemployment-rate data is available at http://www.bls.gov/lau/lastrk00.htm.

NOTES: Social Security disability beneficiaries include SSI and DI beneficiaries who were in current-pay status for at least 1 month in the observation years (from 2000 to 2004) and had been receiving benefits from either program for at least 1 calendar year. Data on employment rates by year is summarized in the Appendix.

outcomes and build on our earlier findings for the 2007 estimates by suggesting that persistent differences in policies, conditions, and unobserved individual characteristics were driving the differences in employment rates (as opposed to short-term changes in policies).

Finally, for reference, in the Appendix (Tables A-1 through A-4), we present a full set of descriptive tabulations for employment rates by state for all beneficiaries and the three program groups for all years under study. The findings confirm the general patterns discussed earlier in this article and provide additional useful context for state differences in employment rates, as well as changes over time. Equally important, the findings provide information on state employment rates over time that was previously unavailable and supplement the annual information on state characteristics included in current SSA publications.

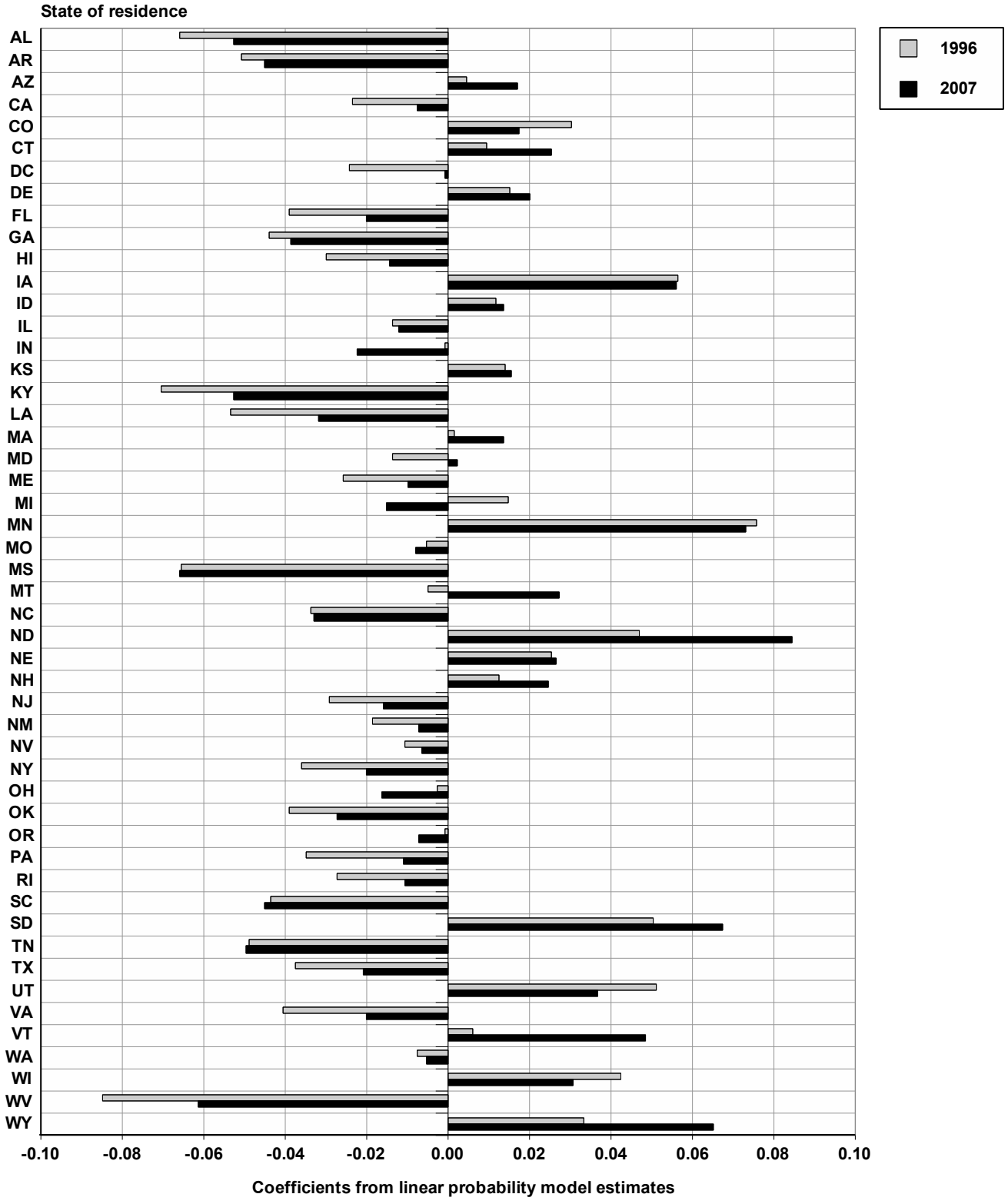
Table 4.
Comparison of state employment rates, 1996 and 2007

State	1996	2007	Difference	Percentage change
Alabama	7.7	9.1	1.4	18.2
Alaska	14.3	13.0	-1.3	-9.1
Arizona	14.6	15.8	1.2	8.2
Arkansas	9.3	9.9	0.6	6.5
California	9.9	10.7	0.8	8.1
Colorado	17.6	15.7	-1.9	-10.8
Connecticut	16.0	16.9	0.9	5.6
Delaware	16.9	17.3	0.4	2.4
District of Columbia	11.2	13.8	2.6	23.2
Florida	10.5	12.0	1.5	14.3
Georgia	9.9	10.6	0.7	7.1
Hawaii	9.5	11.0	1.5	15.8
Idaho	16.2	15.6	-0.6	-3.7
Illinois	13.3	13.2	-0.1	-0.8
Indiana	15.4	12.7	-2.7	-17.5
Iowa	21.1	20.1	-1.0	-4.7
Kansas	17.0	16.2	-0.8	-4.7
Kentucky	7.0	7.9	0.9	12.9
Louisiana	8.9	10.9	2.0	22.5
Maine	11.9	13.1	1.2	10.1
Maryland	13.4	15.1	1.7	12.7
Massachusetts	14.2	14.8	0.6	4.2
Michigan	16.4	12.8	-3.6	-22.0
Minnesota	23.1	22.0	-1.1	-4.8
Mississippi	7.7	7.9	0.2	2.6
Missouri	14.5	13.7	-0.8	-5.5
Montana	13.7	16.2	2.5	18.2
Nebraska	17.8	17.4	-0.4	-2.2
Nevada	13.6	13.7	0.1	0.7
New Hampshire	17.3	18.0	0.7	4.0
New Jersey	11.8	12.7	0.9	7.6
New Mexico	10.8	12.1	1.3	12.0
New York	9.8	10.7	0.9	9.2
North Carolina	11.4	11.5	0.1	0.9
North Dakota	19.6	22.9	3.3	16.8
Ohio	14.7	12.4	-2.3	-15.6
Oklahoma	10.3	11.3	1.0	9.7
Oregon	14.5	12.8	-1.7	-11.7
Pennsylvania	10.8	12.8	2.0	18.5
Rhode Island	11.5	12.4	0.9	7.8
South Carolina	10.3	10.3	0.0	0.0
South Dakota	19.3	20.6	1.3	6.7
Tennessee	9.5	9.1	-0.4	-4.2
Texas	10.1	11.7	1.6	15.8
Utah	20.6	18.6	-2.0	-9.7
Vermont	15.0	18.7	3.7	24.7
Virginia	10.8	12.9	2.1	19.4
Washington	13.5	13.1	-0.4	-3.0
West Virginia	5.8	7.0	1.2	20.7
Wisconsin	19.3	17.6	-1.7	-8.8
Wyoming	18.8	20.9	2.1	11.2

SOURCE: Authors' calculations based on SSA's 2007 TRF data linked to MEF data.

NOTES: For 2007, Social Security disability beneficiaries include the more than 10 million SSI and DI beneficiaries who were in current-pay status for at least 1 month in 2007 and had been receiving benefits from either program for at least 1 calendar year. Those beneficiaries are considered employed if they had at least $1,000 in earnings in 2007. For 1996, Social Security disability beneficiaries include the more than 7 million SSI and DI beneficiaries who were in current-pay status for at least 1 month in 1996 and had been receiving benefits from either program for at least 1 calendar year. Those beneficiaries are considered employed if they had at least $1,000 (in 2007 dollars, adjusted using the average wage index) in earnings in 1996.

Chart 5.
Comparison of state effects from state employment models for 1996 and 2007



SOURCE: Authors' calculations based on SSA's 2007 TRF data linked to MEF data.

NOTES: Coefficients on binary indicator variables for each state were taken from Table 3. States that seem to show data for 1 year actually have data for both 1996 and 2007; in these cases, state effects are so small (close to zero) that the bar is not visible on the chart.

Conclusions

Our findings for the overall employment rates provide important contextual information that should be considered in evaluating current and developing future return-to-work initiatives. The overall employment rate for Social Security disability beneficiaries in 2007 was 12 percent, although employment activity varies substantially across subgroups. Our multivariate findings indicate that substantial differences exist across age and program groups, as younger beneficiaries and those receiving DI-only were more likely to work relative to other Social Security disability beneficiaries. This finding is consistent with earlier findings from the TTW evaluation that younger beneficiaries and those who receive DI were more likely to use work supports and participate in the TTW program than other beneficiary groups (Stapleton and others 2008). The findings for DI beneficiaries are also consistent with the program eligibility rules that require applicants to have a substantial work history (and hence be more predisposed to work after receiving benefits) to qualify for benefits.

Results in this article also suggest that there was limited variation in employment rates by broad categories of impairment conditions. More research is needed to assess whether this variation exists within detailed categories of impairment (for example, within the mental impairment grouping, do employment rates vary across people with affective disorders, anxiety, or schizophrenia).

Our findings also indicate that employment rates of Social Security disability beneficiaries, although generally stable, fluctuate with the business cycle. Since 1996, the overall beneficiary employment rate has ranged between 11 and 13 percent, with lower rates during recessions and higher rates during economic expansions. This finding has important implications for ongoing return-to-work initiatives, such as TTW and several SSA demonstration projects. The TTW program rollout started near the trough of the 2001 business cycle, and several demonstrations started about the same time. TTW's new regulations were implemented near the beginning of the 2008–2009 recession, and it seems likely that SSA will launch the Benefit Offset National Demonstration project early in the recovery from the most recent recession. Hence, the business cycle could have a material effect on the impacts of these initiatives.

Finally, SSA and states can use the employment-rate statistics to target and monitor their efforts for improving employment at the state level and identify new approaches to providing supports. The substantial variation in state employment rates, which is consistent with broader trends in employment of individuals with disabilities, raises important questions about why those differences persist, even after controlling for beneficiary characteristics. For example, does the large variation in relative employment rates suggest a potential area for improving state programs for individuals with disabilities, by looking at the programs and policies of states that have relatively higher employment rates? SSA may detect progress toward reaching disability employment-rate goals or identifying a need to modify policies aimed at improving these rates, by tracking disability employment measures that have been consistently defined over time.

Appendix

For the 1996–2007 period, we present descriptive tabulations of employment rates by state for all Social Security disability beneficiaries (Table A-1) and the three program groups—DI-only, SSI-only, and concurrent beneficiaries (Tables A-2, A-3, and A-4, respectively).

Table A-1.
State-level employment rates for all Social Security disability beneficiaries, 1996–2007

State	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
All states	11.9	12.0	12.4	12.6	13.1	12.3	11.7	11.2	11.3	11.5	11.9	12.1
Alabama	7.7	7.9	8.2	8.2	8.3	7.7	7.2	7.2	7.5	8.0	8.7	9.1
Alaska	14.3	13.8	14.2	13.6	14.3	14.0	13.3	13.2	13.2	12.9	12.8	13.0
Arizona	14.6	14.7	15.0	15.1	15.8	15.1	14.4	14.2	14.3	14.8	15.6	15.8
Arkansas	9.3	9.5	9.6	9.9	10.2	9.5	9.0	8.9	9.1	9.3	9.6	9.9
California	9.9	10.2	10.5	10.8	11.3	10.9	10.2	9.8	9.9	10.1	10.5	10.7
Colorado	17.6	17.5	17.9	18.1	18.7	17.1	15.8	14.9	14.8	14.8	15.3	15.7
Connecticut	16.0	16.1	16.6	17.0	17.8	17.3	16.9	16.3	16.3	16.4	16.6	16.9
Delaware	16.9	17.8	18.8	18.9	19.8	18.5	18.0	17.0	16.9	16.9	17.1	17.3
District of Columbia	11.2	12.1	12.2	12.9	13.9	12.8	11.9	11.5	11.6	12.4	13.4	13.8
Florida	10.5	10.6	11.2	11.7	12.1	11.2	10.6	10.7	11.1	11.6	12.3	12.0
Georgia	9.9	9.8	10.2	10.7	11.0	10.1	9.5	9.4	9.6	9.7	10.2	10.6
Hawaii	9.5	9.2	9.0	9.0	9.5	9.4	9.0	9.4	9.8	10.1	10.8	11.0
Idaho	16.2	16.4	16.3	15.7	16.6	15.5	14.7	14.7	14.3	14.8	15.7	15.6
Illinois	13.3	13.3	13.7	14.2	14.5	13.3	12.3	12.4	12.4	12.5	12.9	13.2
Indiana	15.4	15.0	15.4	15.8	15.7	14.1	13.3	13.0	13.0	12.7	12.7	12.7
Iowa	21.1	21.2	22.0	22.3	22.5	21.2	20.1	19.7	19.7	20.0	20.1	20.1
Kansas	17.0	17.6	17.6	17.3	17.5	16.5	15.9	15.5	15.1	15.2	15.9	16.2
Kentucky	7.0	7.2	7.5	7.8	8.1	7.5	6.9	7.1	7.1	7.5	7.7	7.9
Louisiana	8.9	9.4	9.8	9.8	9.8	9.3	9.0	8.9	9.0	9.5	10.2	10.9
Maine	11.9	11.9	12.4	13.0	14.1	13.3	13.0	13.3	13.2	13.1	13.1	13.1
Maryland	13.4	13.6	14.2	14.9	15.6	14.7	14.2	13.9	13.8	14.3	15.0	15.1
Massachusetts	14.2	14.6	15.0	15.6	16.4	15.4	14.3	14.0	14.0	14.1	14.5	14.8
Michigan	16.4	16.1	16.7	17.2	17.3	15.6	14.5	13.7	13.4	13.2	13.1	12.8
Minnesota	23.1	22.7	23.1	23.6	24.4	23.2	21.9	21.9	21.7	22.0	21.9	22.0
Mississippi	7.7	7.9	8.2	8.4	8.3	7.4	7.3	7.2	7.3	7.4	7.7	7.9
Missouri	14.5	14.7	15.0	15.4	15.8	14.7	14.1	13.8	13.6	13.5	13.6	13.7
Montana	13.7	13.8	13.8	13.9	14.9	14.5	14.0	14.2	14.4	15.3	15.2	16.2
Nebraska	17.8	17.8	18.3	18.7	19.4	18.0	16.8	16.6	16.4	16.7	16.6	17.4
Nevada	13.6	13.1	13.0	13.3	14.1	13.1	12.3	12.0	12.6	13.2	13.9	13.7
New Hampshire	17.3	18.0	18.2	18.7	20.0	18.8	17.6	17.5	17.9	18.0	18.1	18.0
New Jersey	11.8	12.1	12.6	13.0	13.4	12.7	12.2	12.0	12.2	12.3	12.6	12.7
New Mexico	10.8	10.6	10.8	11.0	11.7	11.3	11.2	11.0	11.1	11.1	11.7	12.1
New York	9.8	10.0	10.2	10.5	11.0	10.4	10.1	10.0	10.1	10.3	10.6	10.7
North Carolina	11.4	11.7	12.1	12.2	12.3	11.2	10.7	10.4	10.6	10.7	11.1	11.5
North Dakota	19.6	20.1	19.9	19.8	20.8	20.5	20.2	20.9	21.3	21.0	21.7	22.9
Ohio	14.7	14.7	15.0	15.5	15.9	14.0	12.9	12.7	12.6	12.4	12.4	12.4
Oklahoma	10.3	10.7	10.9	11.1	11.3	11.0	10.3	10.0	9.9	10.3	10.8	11.3
Oregon	14.5	14.6	14.3	14.3	14.5	13.4	12.6	12.4	12.4	12.5	12.7	12.8
Pennsylvania	10.8	11.1	11.5	11.9	12.4	11.8	11.6	11.5	11.7	12.0	12.4	12.8
Rhode Island	11.5	12.1	12.9	13.6	14.3	13.5	12.6	12.4	12.6	12.1	12.6	12.4
South Carolina	10.3	10.6	11.0	11.1	11.7	10.6	9.9	9.6	9.7	9.5	10.0	10.3
South Dakota	19.3	19.5	20.1	20.4	21.1	20.4	19.5	19.9	20.2	20.3	20.5	20.6
Tennessee	9.5	9.4	9.6	10.0	10.1	8.9	8.4	8.3	8.4	8.4	8.7	9.1
Texas	10.1	10.6	10.8	10.9	11.3	10.7	10.0	9.7	9.7	10.0	10.8	11.7
Utah	20.6	20.0	19.8	19.7	19.5	18.1	17.0	16.5	16.7	17.3	17.9	18.6
Vermont	15.0	15.2	16.3	17.3	19.0	18.7	18.2	18.3	18.7	18.9	18.9	18.7
Virginia	10.8	11.2	11.5	12.1	12.8	11.9	11.8	11.6	11.8	12.0	12.6	12.9
Washington	13.5	14.1	14.4	14.5	14.7	13.5	12.3	11.9	11.8	12.1	13.2	13.1
West Virginia	5.8	5.8	6.0	6.3	6.4	6.2	6.1	6.2	6.4	6.6	6.8	7.0
Wisconsin	19.3	19.2	19.7	20.0	20.1	18.5	17.8	17.8	17.6	17.6	17.5	17.6
Wyoming	18.8	19.0	18.6	19.7	19.7	19.8	19.4	19.1	19.6	20.3	20.9	20.9

SOURCE: Authors' calculations based on SSA's 2007 TRF data linked to MEF data.

NOTE: Social Security disability beneficiaries include SSI and DI beneficiaries who were in current-pay status for at least 1 month in the observation year and had been receiving benefits from either program for at least 1 calendar year.

Table A-2.
State-level employment rates for DI-only beneficiaries, 1996–2007

State	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
All states	14.1	14.2	14.6	14.8	15.7	15.2	14.7	14.5	14.4	14.4	14.8	15.0
Alabama	9.0	9.3	9.7	9.9	10.4	9.9	9.7	9.3	9.4	9.7	10.2	10.6
Alaska	17.6	16.5	18.3	16.5	17.8	17.5	17.2	17.1	16.9	16.9	16.8	16.7
Arizona	17.7	17.7	18.2	18.2	19.6	19.3	19.0	18.1	18.0	18.2	18.7	19.0
Arkansas	10.4	10.3	10.6	11.0	11.8	11.6	11.5	11.2	11.3	11.5	11.7	12.0
California	14.5	14.6	15.1	15.3	16.4	16.4	15.7	14.8	14.7	14.6	15.2	15.6
Colorado	19.6	19.6	20.1	20.2	21.8	20.5	19.7	18.5	18.4	18.2	18.6	18.8
Connecticut	18.7	18.6	19.1	19.6	20.9	20.9	20.7	19.8	19.7	19.8	20.1	20.5
Delaware	19.1	19.5	21.0	21.1	22.3	21.6	21.6	19.9	19.6	19.4	19.3	19.8
District of Columbia	16.9	17.9	18.1	19.0	20.2	19.8	19.1	17.5	17.6	18.0	18.7	19.1
Florida	12.0	12.1	12.8	13.2	14.2	13.7	13.4	13.2	13.4	13.5	14.2	14.1
Georgia	11.9	11.8	12.5	13.0	13.9	13.5	13.3	12.5	12.5	12.5	13.0	13.3
Hawaii	12.0	12.0	11.4	11.5	12.7	12.6	12.1	12.0	12.3	12.3	13.4	13.7
Idaho	17.5	17.4	17.6	17.1	18.9	18.3	17.8	17.6	16.9	17.4	18.1	18.0
Illinois	16.1	16.0	16.4	16.6	17.7	16.9	16.3	16.2	16.0	15.8	16.1	16.3
Indiana	16.8	16.5	17.0	17.3	18.0	17.0	16.3	15.9	15.7	15.4	15.3	15.3
Iowa	22.9	23.2	24.1	24.3	25.6	25.1	24.7	23.8	23.6	23.7	23.8	23.7
Kansas	18.2	18.6	18.5	18.7	19.8	19.1	18.9	18.4	18.1	17.9	18.7	18.8
Kentucky	9.3	9.4	9.9	10.1	10.9	10.8	10.4	10.1	10.1	10.2	10.6	10.7
Louisiana	10.9	11.3	11.7	11.6	12.2	12.2	12.2	11.9	12.1	12.4	12.8	13.5
Maine	13.6	13.5	14.5	14.9	16.4	16.0	16.2	16.0	15.9	15.9	15.9	16.0
Maryland	15.5	15.7	16.4	16.7	18.2	17.6	17.6	17.0	16.7	17.0	17.7	17.9
Massachusetts	18.1	18.2	18.7	19.3	20.5	20.2	19.4	18.6	18.5	18.3	18.9	19.3
Michigan	19.1	18.7	19.3	19.8	20.6	19.6	18.7	17.8	17.2	16.8	16.6	16.1
Minnesota	25.2	24.9	25.5	25.9	28.0	27.5	26.5	26.5	26.2	26.3	26.2	26.2
Mississippi	9.1	9.2	9.3	9.7	10.1	9.7	9.8	9.3	9.3	9.3	9.6	9.7
Missouri	16.0	16.1	16.7	16.9	18.2	17.3	17.1	16.6	16.4	16.2	16.3	16.4
Montana	15.0	15.2	15.8	15.2	16.5	16.6	16.5	16.8	17.1	17.8	17.9	18.8
Nebraska	19.8	19.9	20.5	21.2	22.9	22.1	21.1	20.2	19.8	19.8	19.7	20.5
Nevada	14.4	13.9	14.1	14.2	15.5	14.9	14.2	13.8	14.1	14.4	15.1	15.4
New Hampshire	18.6	19.0	19.3	19.7	21.4	20.8	19.7	19.7	20.0	20.0	20.3	20.3
New Jersey	13.4	13.7	14.2	14.5	15.4	15.0	14.8	14.5	14.6	14.5	15.0	15.0
New Mexico	12.8	12.6	12.7	13.2	14.4	14.3	14.4	14.3	14.3	14.1	14.4	14.8
New York	12.8	12.9	13.1	13.1	14.1	13.8	13.7	13.5	13.4	13.5	14.0	13.9
North Carolina	14.0	14.4	15.0	14.8	15.3	14.5	14.1	13.2	13.2	13.1	13.5	13.9
North Dakota	21.3	21.3	21.7	21.7	23.2	23.4	23.5	24.4	24.5	24.6	25.2	26.8
Ohio	16.3	16.2	16.7	16.9	18.3	17.2	16.7	16.5	16.3	15.9	16.0	16.0
Oklahoma	12.1	12.3	12.6	12.7	13.5	13.5	12.9	12.5	12.3	12.5	13.1	13.6
Oregon	16.3	16.4	16.6	16.8	17.5	16.8	16.2	15.4	15.5	15.5	15.5	15.5
Pennsylvania	13.4	13.7	14.1	14.5	15.5	15.3	15.5	15.3	15.4	15.5	16.1	16.4
Rhode Island	13.5	13.9	14.7	15.2	16.6	16.3	15.8	15.7	15.9	15.2	15.7	15.6
South Carolina	11.4	11.8	12.2	12.5	13.6	13.0	12.4	11.7	11.6	11.4	11.7	12.0
South Dakota	22.2	21.8	22.9	23.4	25.3	24.9	24.3	24.6	24.4	24.4	24.4	24.8
Tennessee	11.2	11.1	11.5	11.8	12.4	11.7	11.4	10.8	10.7	10.6	10.8	11.1
Texas	12.9	13.5	13.8	13.8	14.8	14.6	14.3	13.3	13.2	13.2	13.9	14.7
Utah	22.9	21.9	22.0	22.2	22.7	21.4	20.8	19.9	20.1	20.5	20.9	21.5
Vermont	18.5	19.1	19.8	20.7	23.1	23.6	23.8	23.4	23.8	23.6	23.7	23.6
Virginia	12.5	12.7	13.1	13.7	14.8	14.2	14.4	13.9	14.0	14.2	14.9	15.1
Washington	15.9	16.5	17.1	17.1	17.9	17.3	16.1	15.5	15.2	15.3	16.4	16.0
West Virginia	7.6	7.6	7.8	8.2	8.6	8.6	8.7	8.5	8.7	8.8	9.1	9.4
Wisconsin	21.3	21.3	21.8	22.2	23.2	22.4	22.4	21.9	21.6	21.7	21.3	21.5
Wyoming	19.6	20.0	19.7	20.5	21.3	21.8	21.8	21.3	21.7	22.5	23.4	23.6

SOURCE: Authors' calculations based on SSA's 2007 TRF data linked to MEF data.

NOTE: DI-only beneficiaries include individuals who received DI benefits only, who were in current-pay status for at least 1 month in the observation year, and had been receiving benefits for at least 1 calendar year.

Table A-3.
State-level employment rates for SSI-only recipients, 1996–2007

State	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
All states	9.4	9.6	10.0	10.2	10.1	8.8	7.7	6.8	6.8	7.1	7.4	7.6
Alabama	6.9	7.2	7.4	7.4	7.0	6.1	5.2	4.7	5.0	5.8	6.7	7.2
Alaska	11.0	11.1	12.4	10.9	10.6	10.6	9.9	8.2	7.7	7.4	7.2	7.4
Arizona	10.3	10.5	10.6	10.7	10.4	9.0	7.7	7.1	7.2	8.0	9.0	9.1
Arkansas	8.7	9.2	9.4	9.7	9.2	7.7	6.5	5.6	5.7	5.6	6.0	6.1
California	7.4	7.7	8.0	8.3	8.5	8.0	7.2	6.4	6.4	6.7	7.0	7.0
Colorado	14.8	15.0	15.7	16.0	15.1	13.0	10.7	8.9	8.8	8.8	9.0	9.6
Connecticut	11.6	11.9	12.8	13.0	12.9	11.9	10.9	9.5	9.6	9.2	9.2	9.3
Delaware	13.5	15.2	15.6	16.0	16.4	13.7	12.3	10.5	11.0	10.8	11.8	11.1
District of Columbia	8.0	9.0	9.2	10.0	10.9	9.8	8.7	7.6	7.6	8.8	9.8	10.2
Florida	8.8	9.1	9.5	10.3	9.8	8.5	7.2	6.7	7.3	8.5	9.0	8.6
Georgia	8.4	8.2	8.5	9.0	8.5	7.2	6.0	5.4	5.5	5.8	6.0	6.4
Hawaii	6.9	6.1	6.3	6.2	6.2	6.1	5.9	5.8	6.4	7.3	7.5	7.1
Idaho	14.7	16.1	15.7	15.1	14.3	12.8	11.7	10.1	10.3	10.4	11.6	11.3
Illinois	10.4	10.4	10.9	11.8	11.3	9.8	8.4	7.5	7.5	7.7	8.1	8.5
Indiana	13.4	13.1	13.6	13.9	12.4	9.9	8.7	7.2	7.3	7.2	6.9	7.2
Iowa	18.9	19.2	19.8	20.2	18.6	16.1	13.9	12.3	12.3	12.8	12.6	12.6
Kansas	15.3	16.8	16.7	16.1	14.9	13.2	11.8	10.0	9.5	9.6	10.0	10.6
Kentucky	5.0	5.2	5.5	5.9	5.8	4.9	4.1	3.6	3.6	4.0	3.9	4.1
Louisiana	7.8	8.7	9.1	9.1	8.6	7.8	7.0	6.1	6.0	6.6	7.3	7.9
Maine	10.2	10.1	10.7	11.2	11.9	10.6	9.6	8.6	8.4	7.9	7.8	7.3
Maryland	11.0	11.3	11.8	13.0	12.9	11.9	10.7	9.7	9.7	10.2	10.6	10.6
Massachusetts	10.6	11.3	11.9	12.6	12.7	11.3	9.9	8.6	8.6	8.6	8.7	8.7
Michigan	13.1	13.1	13.7	14.2	13.5	11.1	9.4	7.8	7.6	7.5	7.3	7.2
Minnesota	19.5	19.5	19.5	20.0	18.8	16.6	14.5	13.3	13.1	13.1	13.1	13.0
Mississippi	7.3	7.5	8.0	8.2	7.6	6.3	5.6	5.0	5.0	5.0	5.4	5.4
Missouri	12.4	12.9	13.0	13.4	12.8	11.5	10.1	8.6	8.2	8.0	7.8	7.9
Montana	11.3	11.8	11.3	12.4	13.0	11.9	10.9	9.5	8.9	10.1	9.7	11.1
Nebraska	15.7	15.9	16.1	15.8	15.3	13.1	11.6	9.7	9.8	10.3	9.9	10.7
Nevada	12.7	12.2	11.7	12.3	12.3	11.2	9.5	8.7	9.5	10.6	11.4	10.0
New Hampshire	14.8	16.6	16.9	17.9	18.0	15.2	12.7	11.4	11.2	11.7	11.1	10.6
New Jersey	9.8	10.5	10.7	11.3	11.0	9.9	9.0	8.1	8.1	8.1	8.0	8.3
New Mexico	9.1	9.0	9.5	9.5	9.6	9.1	8.7	7.2	7.0	7.5	7.7	8.2
New York	7.0	7.1	7.6	8.1	8.2	7.6	6.8	6.3	6.3	6.5	6.6	6.9
North Carolina	8.1	8.3	8.7	9.1	8.4	7.1	6.1	5.4	5.7	6.2	6.4	6.9
North Dakota	17.2	19.2	17.6	17.3	16.8	16.5	15.8	14.2	14.5	12.9	13.3	13.6
Ohio	12.7	12.8	13.2	13.9	13.4	10.7	8.9	7.6	7.4	7.2	7.0	7.2
Oklahoma	8.4	9.2	9.4	9.8	9.0	8.4	7.4	6.3	6.1	6.5	6.7	7.0
Oregon	12.2	12.2	11.5	11.2	10.5	8.9	7.8	7.2	6.9	7.2	7.5	7.7
Pennsylvania	8.0	8.3	8.7	9.2	9.2	8.3	7.5	6.6	6.6	6.8	6.9	7.4
Rhode Island	9.1	10.0	11.2	12.1	12.0	10.8	9.4	8.4	8.2	7.9	8.2	7.9
South Carolina	9.4	9.8	10.2	10.2	10.0	8.2	6.9	6.2	6.2	6.0	6.5	6.7
South Dakota	14.8	16.2	16.6	17.1	15.9	15.2	13.9	11.6	12.7	13.1	13.3	12.7
Tennessee	8.1	7.9	8.2	8.7	8.1	6.4	5.4	4.7	4.8	4.9	5.2	5.6
Texas	7.6	8.1	8.3	8.7	8.2	7.3	6.1	5.2	5.4	5.9	6.6	7.6
Utah	18.4	18.3	17.8	17.3	16.4	14.2	12.2	10.6	10.7	11.5	12.1	12.9
Vermont	12.3	11.9	13.8	15.5	15.7	14.5	12.5	11.3	11.5	11.9	10.9	11.1
Virginia	9.0	9.6	9.9	10.7	10.5	9.4	8.5	7.6	7.9	8.1	8.4	8.6
Washington	11.0	11.6	11.7	12.1	11.4	9.7	8.3	7.0	7.1	7.4	8.0	8.4
West Virginia	3.9	4.0	4.1	4.3	4.1	3.8	3.5	3.2	3.3	3.4	3.4	3.5
Wisconsin	16.8	16.8	17.6	17.8	16.5	13.7	11.8	10.4	10.1	9.9	10.1	10.2
Wyoming	18.2	17.8	17.7	20.8	18.0	17.0	15.3	15.1	15.5	15.6	14.9	14.9

SOURCE: Authors' calculations based on SSA's 2007 TRF data linked to MEF data.

NOTE: SSI-only disability recipients include individuals who received SSI disability benefits only, who were in current-pay status for at least 1 month in the observation year, and had been receiving benefits for at least 1 calendar year.

Table A-4.
State-level employment rates for concurrent beneficiaries, 1996–2007

State	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
All states	9.2	8.8	8.9	9.0	8.7	7.8	7.4	6.9	7.2	7.6	7.8	8.0
Alabama	4.8	4.6	4.7	4.6	4.4	4.0	3.9	3.6	4.0	4.8	5.3	5.8
Alaska	11.0	11.0	11.1	11.5	12.2	10.9	9.3	9.5	11.5	9.9	10.3	11.1
Arizona	10.1	9.5	8.7	9.4	9.2	7.8	6.9	7.0	7.6	9.1	10.1	9.7
Arkansas	6.2	6.1	6.1	6.1	6.0	5.1	4.5	4.6	5.0	5.4	5.5	5.9
California	7.7	7.8	7.7	8.1	8.1	7.4	7.0	6.4	6.6	6.9	7.1	7.3
Colorado	14.3	12.7	12.4	12.7	11.2	10.3	8.8	7.2	7.6	8.2	8.4	9.6
Connecticut	13.2	12.6	12.9	12.9	13.0	12.1	11.6	10.5	10.8	11.5	11.7	11.8
Delaware	13.1	14.4	14.2	13.0	11.8	11.3	10.6	10.0	10.2	11.3	11.2	10.0
District of Columbia	9.1	8.9	9.5	9.3	9.3	8.8	8.7	7.4	7.3	7.9	9.0	9.4
Florida	7.2	7.0	7.5	7.7	7.4	6.4	6.1	5.9	6.3	7.2	7.8	7.4
Georgia	6.6	5.9	5.9	6.2	5.8	4.9	4.8	4.4	4.7	5.1	5.5	5.7
Hawaii	6.3	5.5	6.0	5.9	4.8	5.3	5.1	5.3	5.4	5.3	5.9	6.6
Idaho	13.5	12.1	11.9	11.0	11.5	10.1	9.2	9.2	9.0	9.7	11.2	10.4
Illinois	12.7	11.7	11.7	12.4	11.1	9.9	9.2	8.7	8.9	9.1	9.4	9.7
Indiana	12.9	11.2	11.2	11.7	10.6	8.5	8.0	7.5	7.8	7.8	7.7	7.8
Iowa	17.7	16.8	17.6	17.8	17.3	15.8	14.4	13.4	13.5	14.6	14.1	14.7
Kansas	15.3	14.7	15.1	14.0	13.0	12.7	12.1	11.2	10.1	11.0	11.9	11.9
Kentucky	5.2	5.0	5.4	5.4	5.1	4.4	4.2	4.1	4.2	4.7	4.8	5.0
Louisiana	5.4	5.6	6.0	6.0	5.5	5.3	5.3	5.4	5.6	6.0	7.0	7.6
Maine	9.6	9.0	8.4	9.9	10.3	9.4	9.4	9.4	9.2	9.1	8.8	9.0
Maryland	11.5	11.2	11.5	12.6	11.5	10.0	9.8	9.1	9.0	10.4	10.8	10.9
Massachusetts	10.9	11.1	11.1	11.5	11.6	10.3	9.2	8.5	8.7	9.0	9.3	9.3
Michigan	14.9	13.8	14.0	14.1	13.4	11.3	10.3	9.0	8.8	8.9	8.5	8.5
Minnesota	22.1	19.9	20.1	21.2	19.9	17.9	17.6	16.5	16.0	17.1	16.9	16.9
Mississippi	4.6	4.8	4.9	5.0	4.6	3.9	4.2	4.1	4.1	4.5	4.7	4.9
Missouri	12.9	12.3	12.1	13.1	11.8	10.9	10.5	9.8	9.8	9.7	10.1	9.7
Montana	12.6	11.2	10.5	11.5	10.9	11.0	10.1	10.1	11.3	12.4	11.6	12.3
Nebraska	13.0	12.5	12.8	13.8	12.6	11.1	10.1	9.7	10.1	10.8	10.7	11.1
Nevada	10.1	9.8	8.8	9.8	9.4	7.2	7.4	7.0	8.3	8.9	9.7	8.5
New Hampshire	13.4	13.3	13.0	13.5	13.6	11.4	11.6	10.3	12.6	13.1	11.6	12.2
New Jersey	9.1	8.7	9.2	9.7	9.1	8.1	7.5	7.1	7.6	8.2	8.5	8.4
New Mexico	7.8	7.2	6.9	7.0	7.0	6.9	6.8	6.8	7.6	7.4	8.8	9.3
New York	8.8	8.5	8.5	8.7	8.6	8.0	7.8	7.4	7.6	7.7	7.8	8.0
North Carolina	6.5	6.4	6.4	6.8	6.4	5.2	4.9	4.6	5.0	5.3	5.8	6.2
North Dakota	17.2	16.4	16.6	16.4	17.4	15.4	14.7	14.8	16.3	15.9	16.8	16.4
Ohio	14.7	13.7	13.4	14.0	12.8	11.0	10.2	9.5	9.3	9.7	9.5	9.2
Oklahoma	7.1	7.1	6.7	7.2	7.2	6.7	6.7	6.1	6.2	6.8	7.7	8.2
Oregon	12.0	11.7	10.5	10.5	10.0	9.4	8.6	8.1	8.0	8.3	8.8	8.4
Pennsylvania	9.2	8.9	9.2	9.6	9.2	8.4	8.0	7.6	8.2	8.4	8.3	8.8
Rhode Island	9.6	10.0	10.5	11.3	10.8	9.6	8.6	7.8	8.1	8.4	8.7	8.1
South Carolina	7.4	7.3	7.3	7.0	6.7	6.0	5.7	5.3	6.0	5.7	6.3	6.4
South Dakota	18.3	17.7	17.2	16.1	15.6	15.2	14.2	14.4	14.7	14.4	14.4	14.5
Tennessee	7.3	6.3	6.5	6.4	6.2	4.8	4.9	4.5	5.0	5.0	5.1	5.7
Texas	5.7	5.9	5.9	6.0	5.6	5.3	4.8	4.3	4.4	5.1	5.7	6.8
Utah	15.0	14.0	13.8	12.9	11.1	11.6	10.7	10.3	11.1	11.4	12.5	12.8
Vermont	10.1	9.8	10.6	11.0	12.2	11.0	11.3	10.7	11.1	11.9	12.4	11.3
Virginia	7.7	7.5	7.4	8.2	8.1	7.0	6.9	6.9	7.0	7.5	7.9	8.0
Washington	10.9	11.1	10.5	10.5	10.1	8.5	7.5	6.9	7.0	7.8	8.5	8.6
West Virginia	3.8	3.6	4.0	4.3	4.1	3.5	3.8	3.4	3.9	4.0	4.2	4.2
Wisconsin	17.7	16.7	16.7	16.9	16.0	14.7	13.6	13.5	13.0	12.9	12.6	12.3
Wyoming	15.7	15.8	14.9	13.3	15.0	15.4	15.9	13.4	14.6	15.0	16.3	15.4

SOURCE: Authors' calculations based on SSA's 2007 TRF data linked to MEF data.

NOTE: Concurrent beneficiaries include individuals who received both SSI disability and DI benefits, who were in current-pay status for at least 1 month in the observation year, and had been receiving benefits for at least 1 calendar year.

Notes

Acknowledgments: We thank David Stapleton for helpful comments and Dawn Phelps for programming support.

[1] Individuals eligible to receive SSI disability payments are officially referred to as "SSI disability recipients," and individuals entitled to receive DI benefits are officially referred to as "DI beneficiaries." However, to facilitate easier communication, in this article we apply the word "beneficiaries" as well as phrases such as "SSI and DI beneficiaries" and "Social Security beneficiaries" loosely to indicate both SSI disability recipients and DI beneficiaries.

[2] While opportunities for, and barriers to, employment for individuals with disabilities may also vary at a county or more local level (for example, availability of support services in the county, or proximity of a locality to hubs of economic activity), we focus our analysis on state-level differences, given the current lack of information in this area.

[3] We define employment based on earnings greater than $1,000 to separate substantial work effort from small ad hoc earnings over the course of a year. We considered 12- and 3-month multiples of the trial work value ($640 in 2007), but concluded that doing so would set the limit too high and exclude too many beneficiaries. The monthly substantial gainful activity (SGA) level was $900 in 2007, so we settled on $1000 as a reasonable figure to indicate substantial work in a given year.

[4] SSI makes payments to children with disabilities and working-age adults in low-income households. In addition, certain low-income aged individuals (65 or older) can only qualify for SSI if they are disabled. However, we only included the working-age SSI population in this analysis.

[5] In 2007, earnings of DI beneficiaries had to exceed $640 per month to be counted as a trial work month. The threshold was $200 per month for the period from 1996 through 2000, and between $530 and $620 for the 2001–2006 period.

[6] There is also a $20 disregard for any income that can be applied to earnings if it has not been used to offset unearned income.

[7] For persons in the DI program, cash benefits stop when they earn more than the SGA level, but they can continue to receive Medicare benefits for at least 93 consecutive months. SSI disability recipients can earn more than the SGA level, but still receive payments. Even if their earnings are too high for an SSI payment, Medicaid coverage can continue until their gross earnings are sufficient to cover the cost of Medicaid.

[8] We accessed the MEF under rules established by the Internal Revenue Service. In accordance with those rules, SSA maintains a restricted access extract containing the earnings records of DI and SSI beneficiaries represented in the TRF. To comply with security requirements for the earnings data, SSA staff produced all statistics based on those records and verified that the statistics did not disclose personal information.

[9] Medicare earnings are not subject to the Federal Insurance Contributions Act (FICA) taxable limits like those used for the primary insurance amount (PIA) benefit calculation. Summary statistics using Medicare earnings thus provide a more accurate picture of actual earnings levels in the beneficiary population.

[10] The major groups that are not covered include those who are employed "off the books"; civilian federal employees hired before January 1, 1984; railroad workers; certain employees of state and local governments who are covered under their employers' retirement system; domestic and farm workers whose earnings do not meet certain minimum requirements; and persons with very low net earnings from self-employment.

[11] Note that this definition leaves open the possibility that we could consider a person a concurrent beneficiary in a year in which he or she was not a concurrent beneficiary during any one month. These cases, however, make up only a small proportion of the concurrent population in each year.

[12] SSA's data include detailed disability diagnostic codes, although we chose to use broad categories for this analysis, given our primary objective was to explore differences across broad groups.

[13] It is important to note that the findings on impairment might be related to our choice of impairment definitions. As noted earlier, we chose broad impairment categories to analyze outcomes across beneficiaries. Our findings indicate that there appears to be limited differences across those categories, but it is possible that further differences exist for more detailed diagnostic categories.

[14] Although we show conventional standard errors, we do not refer to statistical significance because the figures represent population estimates. Because the number of observations is so large, we would consider all differences significant if the data were treated as a sample.

[15] We cannot assess the effects that changes in the caseload composition or changes in SSA work incentives (for example, changes in the level of SGA or implementation of TTW) had on employment rates.

[16] We restricted the analysis to the economic downturn to illustrate variation in beneficiary employment rates during a period of large changes in unemployment rates.

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Longitudinal Statistics on Work Activity and Use of Employment Supports for New Social Security Disability Insurance Beneficiaries

by Su Liu and David C. Stapleton*

We present longitudinal employment and work-incentive statistics for individuals who began receiving Social Security Disability Insurance (DI) benefits from 1996 through 2006. For the longest-observed cohort, 28 percent returned to work, 6.5 percent had their benefits suspended for work in at least 1 month, and 3.7 percent had their benefits terminated for work. The corresponding percentages are much higher for those who were younger than age 40 when they entered the DI program. Most first suspensions occurred within 5 years after entry. Cross-state variation in outcomes is high, and, to the extent observed, statistics for more recent cohorts are lower.

Introduction

Knowing how many Social Security Disability Insurance (DI) beneficiaries return to work and eventually have their benefits suspended and then eventually terminated for work is critical to monitoring program performance and informing policy change.[1] The 1999 Ticket Act includes a well-known statistic on exits for work:

> Despite such historic opportunities and the desire of millions of disability recipients to work and support themselves, less than one-half of one percent of Social Security Disability Insurance and Supplemental Security Income beneficiaries leave the disability rolls and return to work.— *Public Law 106-170, Section 2(a)(8).*

This statistic, which is published by the Social Security Administration (SSA) each year, is the percentage of DI beneficiaries whose benefits were terminated in the current year because they were working (SSA 2009). Like most such statistics, it is based on the behavior of existing beneficiaries over a short period—a month or year. Statisticians call this type of statistic "cross-sectional."

However, there is another important way to measure the number of beneficiaries who leave the rolls for work: by counting them *from the time they first receive their DI award* over a period that is much longer than a year. This kind of statistic, known as "longitudinal," paints a somewhat different picture of the behavior of DI beneficiaries; in fact, it addresses a fundamentally different question than does the cross-sectional statistic. The longitudinal statistic shows how many DI entrants eventually work enough to leave the program from the time they enter, while the cross-sectional

Selected Abbreviations

AWI	average wage index
BOND	Benefit Offset National Demonstration
DI	Disability Insurance
EPE	extended period of eligibility
FRA	full retirement age

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Selected Abbreviations—*Continued*

NSTW	nonpayment status following suspension or termination for work
RSA	Rehabilitation Services Administration
SGA	substantial gainful employment
SSA	Social Security Administration
SSI	Supplemental Security Income
TRF	Ticket Research File
TTW	Ticket to Work
TWP	trial work period
VR	vocational rehabilitation

statistic shows how many current beneficiaries leave the rolls for work in a given year. The values of these statistics are different for two important reasons. One is obvious: The longitudinal statistic covers a much longer period. The second is less obvious: The cross-sectional statistic gives disproportionately greater weight to those who stay on the rolls for many years and, by definition, have low exit rates. Those who enter the rolls and leave after finding work are only counted in the denominator of the statistic in the years before they leave. In contrast, the longitudinal statistic gives equal weight to all beneficiaries entering at the same time, regardless of how long they stay on the rolls.

Both cross-sectional and longitudinal statistics have value. There is considerable potential for confusion between the two, however. Further, because cross-sectional statistics are readily available, it might well be that they are interpreted as longitudinal statistics; for example, some might believe that only 0.5 percent of DI entrants eventually will have their benefits terminated for work, but previous work has shown that the actual percentage is likely several times higher (discussed later). This article updates the earlier findings, expands on them in several ways, and considers the implications of the longitudinal statistics for efforts to both increase the employment and earnings of DI beneficiaries and reduce their reliance on the program.

Previous Longitudinal Studies

Despite their great value, longitudinal statistics are rare, perhaps because they are difficult to produce. The first work-related longitudinal statistics for DI beneficiaries we find are produced from SSA's New Beneficiary Survey and New Beneficiary Follow-up. Both samples were drawn from all Social Security beneficiaries (including those claiming benefits on the basis of age or survivorship) who were initially entitled to benefits from July 1980 through June 1981.

Muller (1992) produced statistics on completion of the trial work period (TWP)—a DI work incentive described in the next section—and employment for the New Beneficiary Survey cohort over a shorter period (the length is unclear), excluding data from the supplementary sample available in the New Beneficiary Follow-up. He found that 10.2 percent of DI beneficiaries had worked after entitlement, 6.1 percent had already completed a TWP, and 2.8 percent had their benefits terminated for work. The last statistic confirms that leaving the rolls after finding work is a relatively rare phenomenon, but it is not nearly as rare as what the cross-sectional statistic quoted in the introduction suggests (less than 0.5 percent). Among other things, Muller also found a very strong negative relationship between age and employment outcomes, a finding we confirm in this study.

Hennessey and Muller (1994) examined the use of vocational rehabilitation (VR) services by New Beneficiary Survey/New Beneficiary Follow-up respondents. The authors estimated that 27 percent received at least one VR service over approximately 10 years. Schechter (1997) estimated that 22 percent of this cohort was employed in the 10 years following entitlement.

Numerous methodological differences between the earlier studies and the analyses we present here make it difficult to directly compare the findings. The New Beneficiary Survey/New Beneficiary Follow-up followed samples from a cohort of *disabled-worker* beneficiaries who were first *entitled* to benefits in a 1-year period; using administrative data alone, we follow 100 percent of all disabled beneficiaries, including the small share who were disabled adult children or disabled widow(er)s, in cohorts that received their awards in each of several calendar years. Two specific differences in the measurement of outcomes are worth noting. Although the earlier studies used a combination of information from administrative records, folder reviews, and survey responses to determine employment, we rely solely on administrative records. The earlier studies also relied on survey responses to determine use of employment services (including those not potentially eligible for SSA financing), whereas our analysis uses administrative records of enrollment for services that were potentially eligible for SSA financing. As described later, there is also one notable programmatic difference that applied to the

1980–1981 cohort until approximately 8 years after its entry into DI; this difference pertains to the period after TWP completion, called the extended period of eligibility (EPE).

There is also significant literature on employment rates for allowed and denied DI applicants, in which applicants are followed for many years after filing for benefits (Bound 1989; Chen and van der Klaauw 2008; French and Song 2009; Maestas, Mullen, and Strand 2011; von Wachter, Song, and Manchester, forthcoming). This literature does not examine use of DI work incentives or suspensions and terminations for work.

Data Sources and Methods

The production of the longitudinal statistics we report here was made possible by using a set of analytic administrative data files constructed for the Ticket to Work (TTW) evaluation. These files, collectively called the Ticket Research File (TRF), contain extensive information on the more than 20 million DI or Supplemental Security Income (SSI) beneficiaries who received a benefit in at least 1 month from January 1996 through December 2007 (Page and others 2009).[2] For the purpose of this study, annual cohort files are constructed for each cohort from 1996 through 2005. Cohort assignment is based on the month of a beneficiary's DI award—defined as the month in which SSA first sent a payment to the beneficiary. Each cohort is followed from its first year through 2006. Although it is possible for an individual to have multiple entitlements, he or she is assigned to just one cohort based on the year that corresponds to the individual's *first* payment.[3]

Reporting of earnings data requires access to SSA's Master Earnings File, which includes annual earnings data derived from tax reports under rules established by the Internal Revenue Service. SSA maintains an extract of DI and SSI beneficiaries' earnings records represented in the TRF. To comply with security requirements for the earnings data, SSA staff produced the statistics that are based on those records and verified that the results do not disclose personal information.

To obtain data on enrollment for VR services, we also merge matched records on state VR closures obtained from the Rehabilitation Services Administration (RSA) for fiscal years (FY) 1998–2007, under an interagency agreement between SSA and RSA's parent agency, the Department of Education. These data, known as the RSA-911 records, contain information on closed VR cases only, as the state agencies only report information on individual cases when the cases are closed. The date of eligibility determination is used to establish the year of service entry.

Although data are available through 2007, we end the analysis in 2006. Many of the 2007 values for SSA variables will be revised at a later date because of delays in reporting of earnings, as well as the processing time required for determining work incentive status. In addition, although we report 2006 VR service enrollment statistics, these data are subject to substantial revisions because of the nature of the RSA-911 data: Enrollment for a case is not captured in the file until the case is closed. Enrollment by a DI beneficiary in 2006 will only be recognized if the beneficiary's VR case closed before September 2007 or the beneficiary assigned his or her ticket to the state agency. Hence, we consider the enrollment estimates for 2006 to be preliminary.[4]

Study Population

All of the statistics presented are based on 100 percent of the relevant DI population, including people receiving concurrent SSI benefits; that is, the data represent population statistics, rather than estimates. Because we are mostly interested in return-to-work issues among working-age beneficiaries, we exclude beneficiaries who died before January 1, 1996; were younger than age 18 as of December 31, 2005; or were above the full retirement age (FRA) as of the month of initial entitlement or January 1, 1996. Disabled widow(er)s and disabled adult children who otherwise met the above criteria are included along with disabled workers in each cohort. All individuals are followed through 2006, or up to benefit termination because of death, FRA attainment, or medical recovery. The size and age/sex composition of each cohort we include in this analysis is provided in the Appendix table.

Changes in cohort age/sex composition over our study period suggest that even if return-to-work behavior does not change across cohorts, employment outcomes are likely to change simply because age and sex composition changes. Hence, for the cross-cohort comparisons, the national statistics are adjusted to the age/sex composition of the 2001 award cohort—the middle cohort of those examined and the last cohort prior to the TTW rollout.[5] The percentages of the 2001 cohort in each age/sex category are used as weights to produce the age/sex-adjusted national totals and means. Similarly, all state series are adjusted to the national age/sex composition in 2001 so that

cross-state differences for the 1996 cohort do not reflect cross-state variation in cohort age/sex composition. Note that the initial national statistics for the 1996 cohort are not age/sex adjusted.

Program Work Incentives

The most important of the DI work incentives we examine in this study are the TWP, the EPE, and the TTW program.[6] The TWP consists of 9 months during which beneficiaries are permitted to work and earn at any level without loss of benefits, provided that they continue to meet medical eligibility requirements. The 9 months need not be consecutive—any 9 months in a 60-month rolling window are counted. In 2008, a beneficiary was considered to be in a TWP month if he or she had monthly earnings of at least $670 (TWP income) or was working at least 80 self-employed hours. The TWP income limit increased from $200 in 2000 to $530 in 2001 and was indexed to SSA's average wage index (AWI) thereafter.

The month after the last TWP month is automatically the first month of the beneficiary's EPE. During the next 36 months, benefits are suspended if the beneficiary engages in substantial gainful activity (SGA), that is, no benefits will be paid, except that each beneficiary has 3 grace-period months during which benefits are paid even if the beneficiary is engaged in SGA. The beneficiary is entitled to full benefits during any month of this period when he or she is not engaged in SGA, provided that benefits have not been terminated for medical recovery or some other reason. After the first 36 months of the EPE and use of any remaining grace-period months, benefits are terminated if the beneficiary engages in SGA; the now former beneficiary must reapply to obtain benefits again.[7] DI beneficiaries may continue to have earnings and remain on the rolls until termination for some other reason if their work does not constitute SGA. The nonblind SGA amount was $500 from the beginning of the sample period through June 1999, after which it was increased to $700 and, starting in 2001, indexed to the AWI.[8] Prior to 1988, and before the sample period, the EPE during which benefits were suspended because of SGA lasted only 15 months.

DI beneficiaries are also eligible to enroll for employment services that SSA will pay for, provided that the beneficiary achieves sufficient earnings over a specified period. TTW, which was implemented over 3 years starting in 2002, is the current version of this work-incentive program. At award, the beneficiary receives a "ticket" that he or she may present to any employment network to obtain services. Employment networks include all state VR agencies and other private and public entities that meet criteria set by SSA and that have agreed to accept tickets. Because RSA-911 data before FY 1998 have not been matched to the TRF, the service enrollment statistics we present are for the 1998 and later cohorts only.[9]

In general, the path from entitlement month to the termination for work month must pass the following markers in this order: award month, TWP completion month, and first suspension month.[10] Termination for work can occur after the EPE, even if there is no suspension during the EPE. Beneficiaries need not enroll for employment services along the way to termination for work; if that marker is passed, it may be passed at any month during the process. Benefits might be terminated for other reasons at any point along the way—most commonly because of mortality or attainment of the FRA (when retirement benefits replace DI benefits), and less commonly because of medical recovery and other miscellaneous reasons.

For each cohort, we develop a series of annual outcome measures, based on the return-to-work progress markers discussed earlier:

- TWP completion.
- Benefit suspension for work, during the first 36 months of the EPE.
- Benefit termination for work after the 36th month of the EPE. If benefits were terminated for work, the beneficiary remains in "terminated for work" status in our analysis unless he or she dies, attains the FRA, or returns to the rolls, in which case the beneficiary's status is changed as appropriate. This does not necessarily mean that the beneficiary is continuing to engage in SGA.
- Number of years in nonpayment status following suspension or termination for work (NSTW) is a composite measure of the extent to which beneficiaries are not receiving benefits because they are working.[11] It is defined as the total number of months with no payments following suspension or termination for work, divided by 12. After the month of suspension or termination for work, every additional month during the analysis period is counted until the month of death, FRA attainment, or return to the rolls. This cumulative measure reflects the longitudinal nature of the analysis and has implications for total program savings over a longer period.

- First-time service enrollment is identified when beneficiaries assign their tickets to a provider (according to the TRF) or are determined eligible for rehabilitation services (according to RSA-911 files), whichever occurs earlier.[12] This variable only captures enrollment for services that will potentially be paid for by SSA.
- Employment is defined as having annual earnings of at least $1,000 in 2007 dollars, based on data from the Master Earnings File (inflation adjusted using the AWI). For each cohort, we present employment statistics starting with the second full calendar year after the award year, so that those with carried-over earnings from preaward jobs, but no subsequent earnings, are not included in the statistics.[13] Average earnings are calculated for all beneficiaries, including those with zero earnings. If earnings were not reported to the IRS, they are not reflected in the statistics.[14]

Many statistics we report are cumulative statistics for the above measures from award year through the year indicated (for example, percentage of beneficiaries in the 1996 award cohort having completed the TWP *by the end* of 2006; that is, the unduplicated count of individuals who completed a TWP during the 10-year period, expressed as a percentage of the number in the cohort). One cumulative statistic is an exception: The cumulative employment rate covers the period from the second year after award through the year indicated.

We also report mean annual earnings, adjusted to 2007 earnings levels using the AWI. For comparison purposes, in 2007 the nonblind SGA amount was $900 monthly and $10,800 annually. The blind SGA amount was $1,500 monthly and $18,000 annually.

Factors Affecting Employment and Work-Incentive Statistics over the Study Period

We have previously described the following three programmatic changes, each of which might have influenced the patterns observed in the statistics presented later: (1) the 1999 SGA increase and subsequent indexing to the AWI, (2) the 2001 increase in the TWP income amount, and (3) the 2002 introduction of TTW. The 1999 SGA increase seems very likely to have reduced NSTW months because some months that would have counted as SGA under the earlier SGA amount would not be counted as SGA under the higher SGA amount. In a similar fashion, the increase in the TWP income amount seems very likely to have reduced, or at least delayed, TWP completion; consequently, this might have reduced or delayed first suspension for work and termination for work. TTW was designed to increase beneficiary access to employment services and, as a result, increase or hasten employment, earnings, TWP completion, and NSTW months.

Several additional programmatic changes during the sample period might have influenced the statistics. The first is the processing of continuing disability reviews (CDRs). SSA conducts periodic medical CDRs for beneficiaries deemed to have a chance of medical recovery; the agency also conducts work CDRs for those who might have completed the TWP or been engaged in SGA after the TWP. The backlog of CDRs was very high in the mid-1990s because SSA had diverted its limited administrative resources to the processing of a high volume of applications. Congress authorized additional resources to clear the backlog, resulting in a near quadrupling of CDRs from 1999 through 2002 relative to 1996 levels, after which CDRs fell to approximately the same level as in 1996 (Social Security Advisory Board 2006; SSA 2010). The effect on work-incentive statistics might be mixed because increased terminations for medical recovery are quite likely to reduce TWP completions and suspensions or terminations for work, but increased work CDRs are quite likely to have the opposite effect.

The 1999 Ticket Act resulted in the following changes besides the introduction of TTW, all designed to encourage beneficiary work activity and reduce reliance on benefits: substantial grant programs to fund counselors and advocates for working beneficiaries, SSA system upgrades to speed up the processing of earnings information and work CDRs, restrictions on the use of work activity to trigger medical CDRs, and an expedited reinstatement process for those whose benefits are terminated for work (Stapleton and others 2008). The Ticket Act also provided Medicaid Infrastructure Grants in support of state efforts to provide public health insurance for workers with disabilities under Medicaid Buy-In programs, including DI beneficiaries.

The business cycle also quite likely affected the patterns observed for some statistics.[15] Economic growth was very strong from before 1996 through the middle of 2000. Growth slowed down in the second half of 2000 and the first quarter of 2001, and the economy declined from April 2001 through November 2001. The recovery started in 2002, but unemployment remained high through 2003.

Data Limitations

The administrative data used for this analysis have limitations, like most data of its kind, stemming from the fact that it is collected for administrative, rather than research, purposes. The statistics we report all have an important administrative purpose and are generally reliable, but are also subject to errors that reflect the processing of postentitlement work (that is, determining TWP months and SGA and effectuating suspensions and terminations for work). If such errors occurred consistently over time, they would not affect trends in statistics across award cohorts. However, the postentitlement work backlog, and SSA's effort to address this, varied over this period, which might have contributed to possible reduction of such errors during our study period. Hence, it is possible that some trends observed reflect changes in the processing of postentitlement work rather than changes in policy or the economic environment.

Our employment and earnings data are based on posted earnings in the Master Earnings File, which could include items such as sick pay, vacation pay, and commissions from prior work; hence, positive earnings do not necessarily represent current employment. This is why we choose to present employment statistics starting with the second full calendar year after the award year. Still, it is possible that some individuals not actively working may be counted as "employed" in the analysis. At the same time, because we only count someone as employed if they have annual earnings of at least $1,000, some who are actually working but earning below $1,000 are not counted as employed.

The measurement of NSTW months is particularly challenging. We used a new indicator of NSTW months developed to support the TTW evaluation. NSTW is not 100 percent accurate, but has held up well to a careful review of sample cases (Schimmel and Stapleton 2011).

One aspect of the TRF's construction, coupled with the sometimes lengthy period between entitlement month and award month, made it difficult to definitively identify the first award year for a small share of beneficiaries. Although the TRF covers beneficiaries in 1996 and later, its benefit data date back to January 1994. For those individuals whose initial entitlement month was prior to that, we cannot be certain that the first month with a payment appearing in the TRF is the first award month. We developed a rule to address this issue, which is necessarily imperfect. No doubt we excluded some beneficiaries in each award cohort that should have been included and vice versa. Such errors are very small as a percentage of all beneficiaries in each award cohort, and there is no reason to think those errors have a material impact on the statistics. We were particularly concerned about impacts for the earliest cohorts, which have the largest percentage of ambiguous cases because of the nature of the ambiguity, but discovered that our major findings changed very little when we omitted all of the ambiguous cases.[16]

Major Findings

We summarize findings from the 1996 award cohort first by documenting the different pathways that led beneficiaries to benefit termination. We then present a series of longitudinal statistics on employment, earnings, and use of work incentives for the entire cohort and by age groups. Key statistics are then compared across states with statistics from more recent award cohorts. We then compare selected statistics for later cohorts with those for the 1996 cohort.

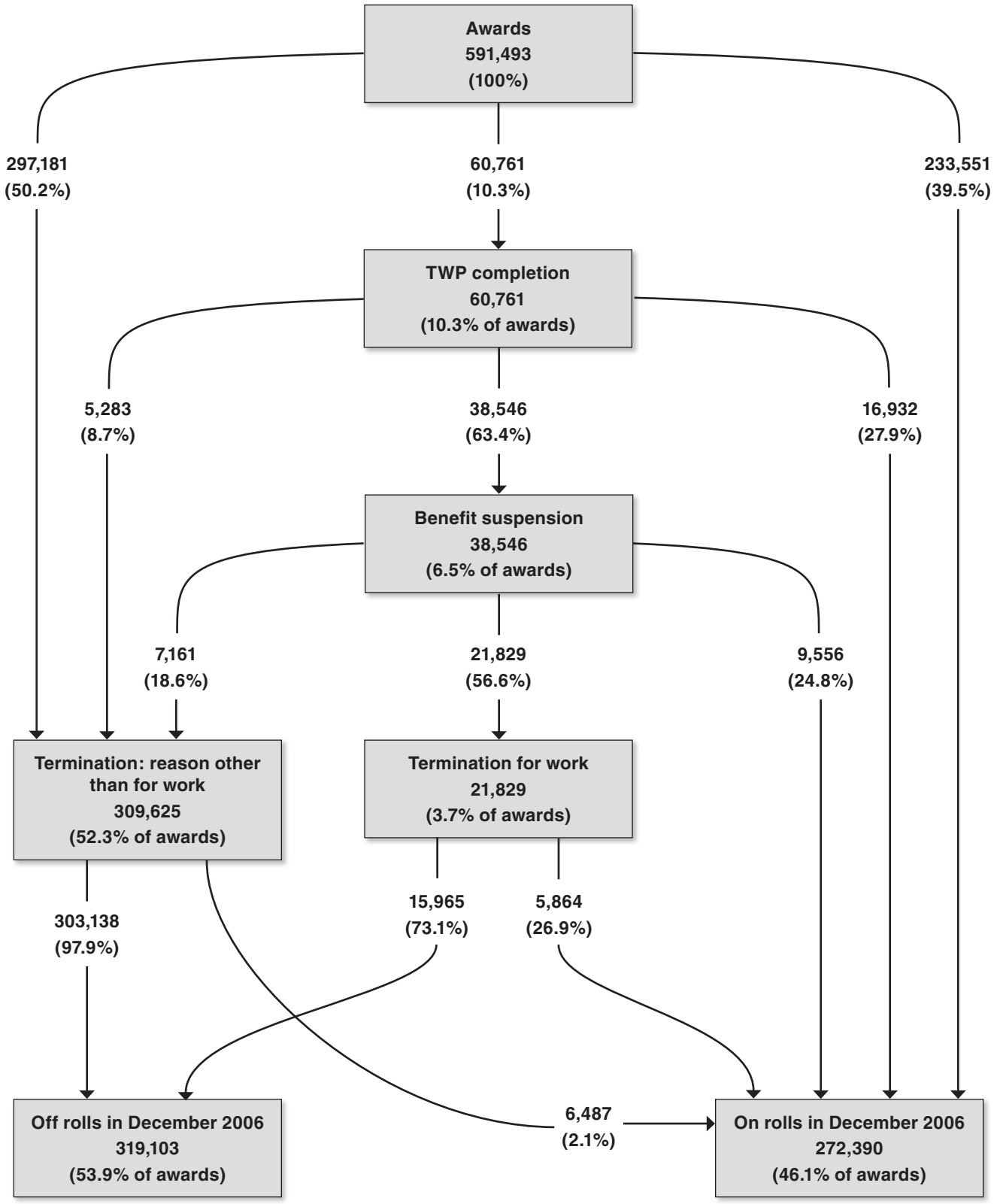
1996 DI Award Cohort

Chart 1 shows the progression toward termination for work for the entire 1996 award cohort.[17] The number of beneficiaries reaching the return-to-work markers and the percentage of the total cohort those figures represent are shown in the boxes. The routes through which beneficiaries reach each marker and how many beneficiaries follow the specific route from the previous marker are presented outside of the boxes. The bottom boxes show the status of beneficiaries in December 2006, the end of our study period.

We find that 46 percent of the 1996 awardees were on the rolls in December 2006, including 40 percent who did not use any DI work incentives. Of the 54 percent who were no longer on the rolls, most (50 percent of the cohort) had exited for reasons other than work—attainment of the FRA, death, or medical recovery. Over 10 percent made some progress toward termination for work by completing the TWP. A substantial majority of those (63 percent, or 6.5 percent of the cohort) went on to have their benefits suspended for work in at least 1 month, and more than half of those eventually had their benefits terminated for work—3.7 percent of the cohort.

Nearly 27 percent of the 1996 awardees whose benefits were terminated for work in their first 10 years on the rolls had their benefits reinstated by December 2006. This highlights the importance of another

Chart 1.
Paths toward benefit termination for work for the 1996 award cohort, 1996–2006



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

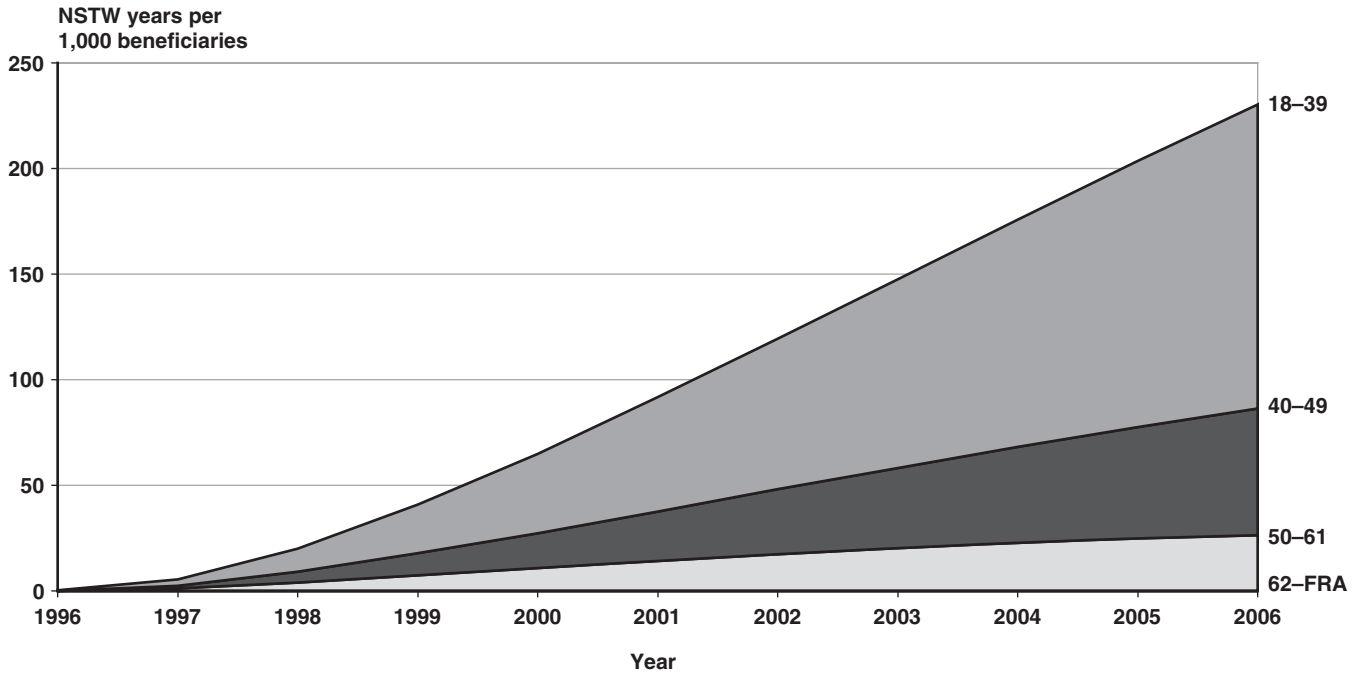
NOTE: One return-to-work marker not captured here is service enrollment.

dimension of measuring beneficiary work activity and the extent to which beneficiaries actually forego benefit payments for work: the duration of time off the rolls for work. Chart 2 shows the number of NSTW years per thousand awardees. As of December 2006, the cohort had accumulated 230 NSTW years per thousand beneficiaries—less than 3 months per beneficiary over 10 plus years. This is equivalent to 2.3 percent of all possible months, or 3.4 percent of those months in which their benefits were not terminated for some other reasons. Although small in percentage terms, the total amount of benefits these months represent is substantial. The magnitude of benefits in 2008 dollars can be assessed by assuming that the mean benefit foregone was equal to the average amount ($1,063) for all DI beneficiaries in December 2008. That assumption yields an estimate of $2.9 million per thousand beneficiaries or $1.7 billion for the entire 1996 cohort.[18]

Because of differences in the characteristics of younger and older beneficiaries—such as impairments, benefit amounts, assets, and motivation—we conduct most of our analyses by age groups (18–39, 40–49, 50–61, and 62–FRA). Chart 2 shows that a large majority of cumulative years of benefit suspension or termination for work (62 percent as of 2006) is attributable to the youngest age group, even though this group accounts for less than 25 percent of the cohort. Those in the 40–49 age group are close in number to the youngest group (24 percent of the cohort), but account for a much smaller share of years off the rolls for work (26 percent). Only a small minority (11 percent) is accounted for by those aged 50–61 at the time of award, even though that age group is by far the largest of the four groups (almost 45 percent of all beneficiaries in the cohort). The contribution of the oldest age group is so small that it is not clearly visible in the chart. The age-group pattern reflects higher levels of employment and lower mortality among younger beneficiaries, along with the fact that most surviving beneficiaries in the two oldest cohorts attained the FRA during the 10-year study period.

Statistics on the extent to which beneficiaries return to work and make progress toward termination for work are also of significant interest to policymakers and others. As with exit statistics, the statistics most often cited are cross-sectional in nature. For instance, Livermore, Stapleton, and Roche (2009) found that less than 13 percent of DI-only beneficiaries and 15 percent of DI beneficiaries concurrently receiving SSI benefits reported having worked

Chart 2.
Cumulative years with benefits suspended or terminated for work (per 1,000 beneficiaries) for the 1996 award cohort, by age group at award, 1996–2006



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

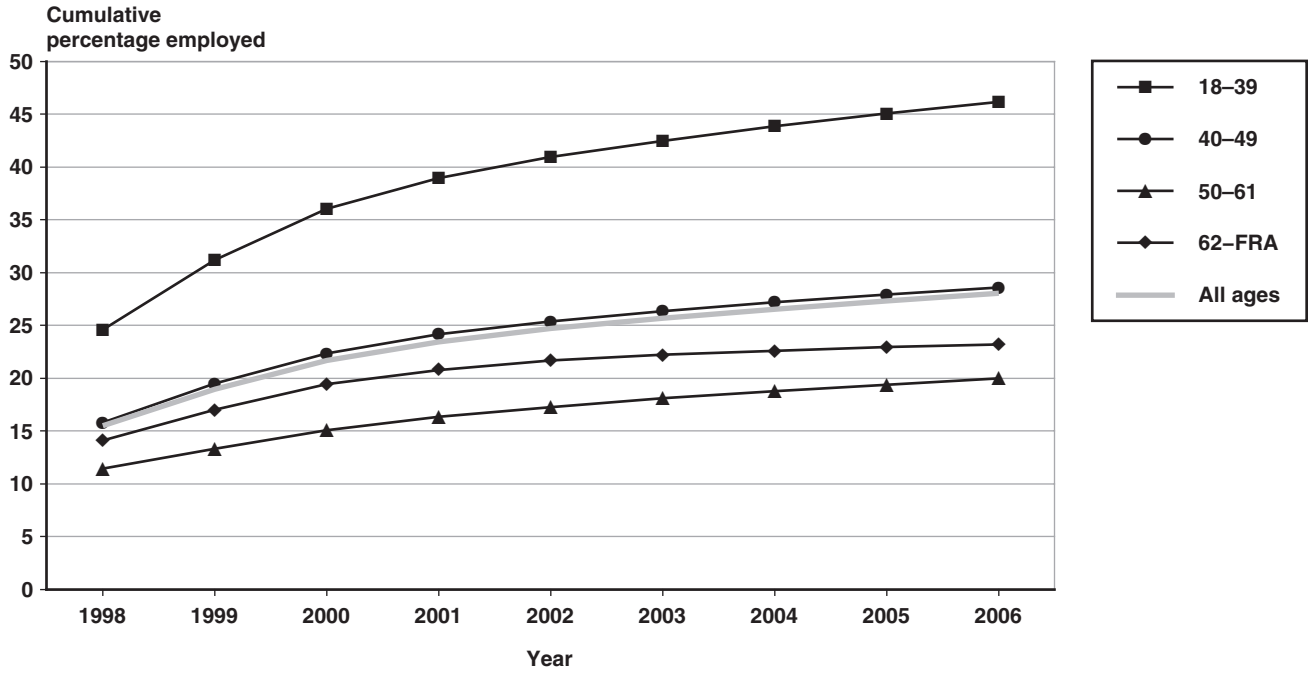
NOTE: The contribution of the oldest age group is so small that it is not clearly visible on the chart.

during the previous year, based on the 2006 National Beneficiary Survey.

Longitudinal statistics show that a much larger percentage of beneficiaries eventually return to work (Chart 3). By 2006, 28 percent of the beneficiaries in the 1996 award cohort had worked (earning more than $1,000) in at least 1 year since the second postaward year. Cumulative employment rates increase each year, indicating that beneficiaries not employed previously are becoming employed for the first time, but the rate of increase steadily diminishes. By the fifth year after award (2001), the weighted cumulative rate is 23.5 percent, and this rate only increases by 4.5 percentage points through the 10th year (2006). Not surprisingly, cumulative employment rates for the youngest group are much higher than for all older groups: 46 percent of the youngest group had worked in at least 1 year by 2006, compared with 29 percent, 20 percent, and 23 percent for those aged 40–49, 50–61, and 62–FRA at award, respectively. The fact that the cumulative rate is higher for the oldest age group than for the next oldest age group might reflect the attainment of the FRA for some members of the oldest group by the end of the third year after award. Once that age is attained, beneficiaries can earn above the SGA amount without risk of benefit loss.

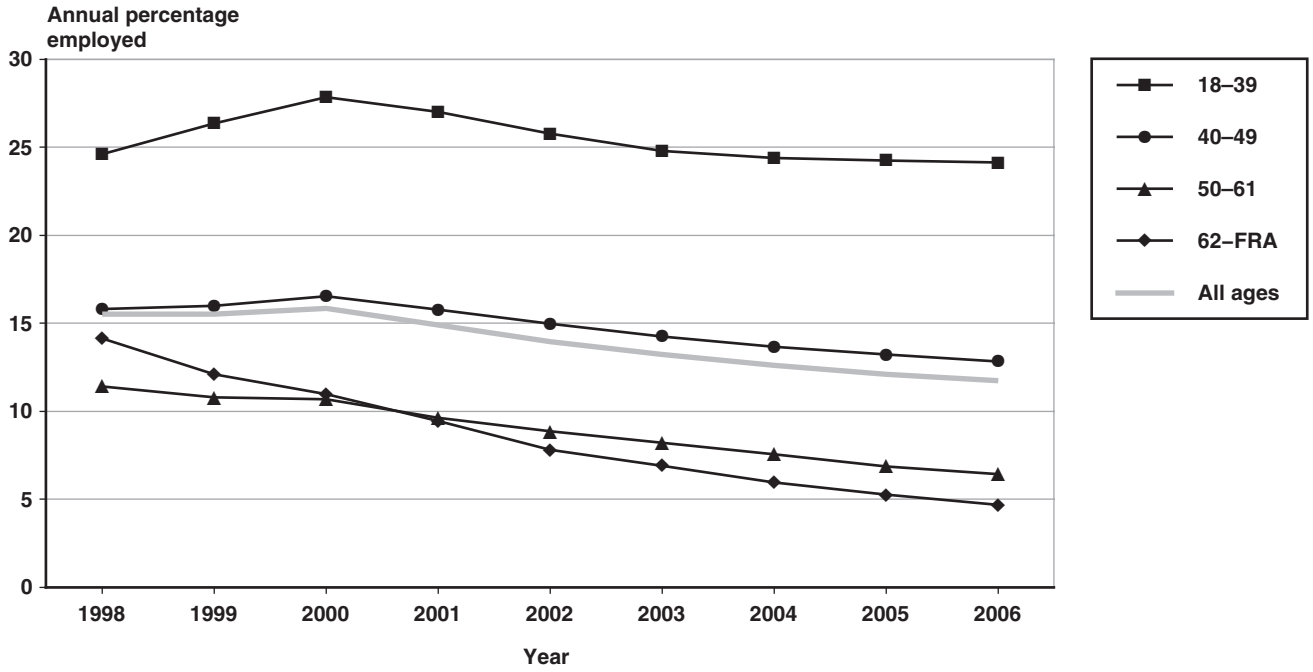
The cumulative percentage of employed beneficiaries we report is the percentage of the 1996 cohort that worked *in at least 1 year* from 1998 through the year indicated on the horizontal axis. The percentage employed *in each year* (Chart 4) is smaller, as some who return to work do not continue to work in every subsequent year. The annual percentage of working beneficiaries peaks in 2000, 5 years after the award and at the beginning of the recession. This pattern is consistent across age groups with the notable exception of the oldest age group, for which employment monotonically declines. For the youngest age group (18–39), the annual percentage employed peaks at nearly 28 percent in 2000 and then declines gradually to just over 24 percent by 2006. Of the 46 percent of the youngest age group that worked in at least 1 year, more than half worked in the 10th year after award. For the other age groups, fewer than half of those who worked in at least 1 year were working in the 10th year after the award.[19] The oldest age group (62–FRA) has a higher employment rate than the second oldest age group (50–61) in the second and third year after award; the two rates are essentially the same in the fourth year, and thereafter the rate for the oldest group is lower. This might reflect the difference in timing of FRA attainment for the two groups, as well

Chart 3.
Cumulative percentage employed for the 1996 award cohort, by age group at award, 1998–2006



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

Chart 4.
Annual percentage employed for the 1996 award cohort, by age group at award, 1998–2006



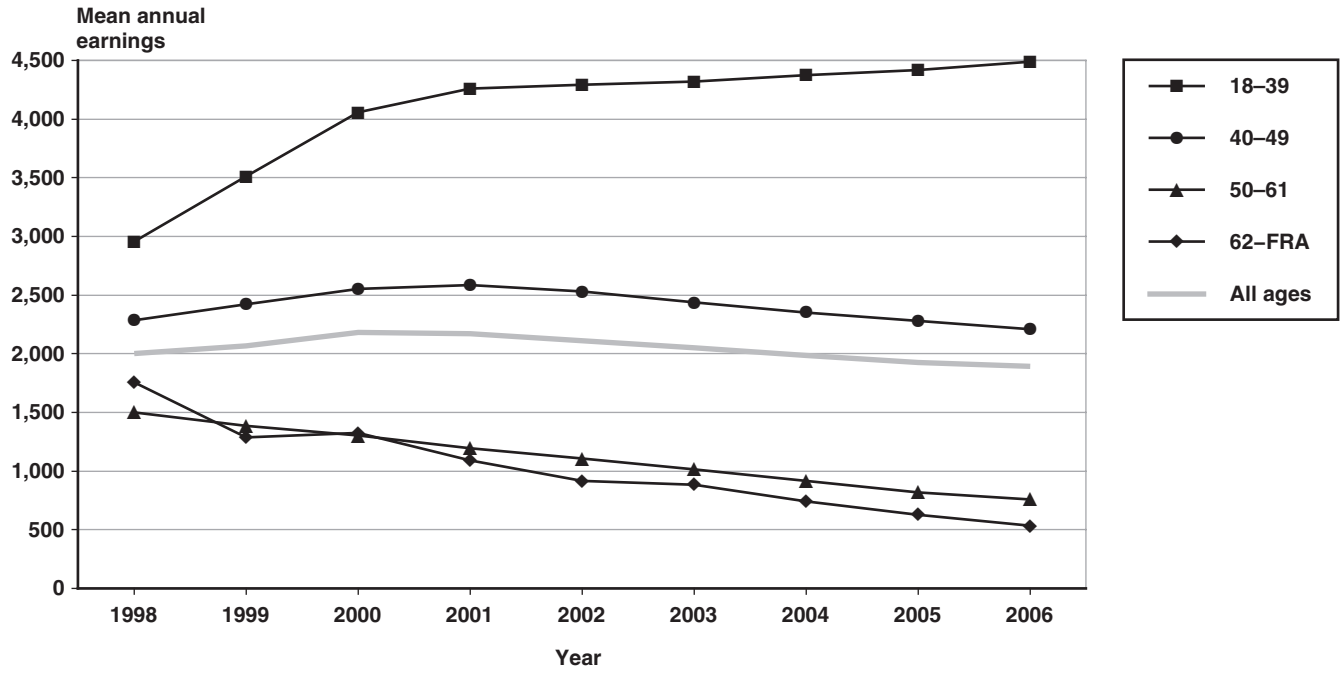
SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

as differences in other characteristics at the time of award and any direct effect of age on earnings.

Mean annual earnings (including those with zero earnings) for the entire cohort do not exhibit a strong pattern over the 10-year period, but the cohort means disguise differences across the age groups (Chart 5). The youngest age group (18–39) experiences a substantial increase throughout the period, especially from 1998 through 2000, and the increase continues after their employment rate starts to drop in 2001. With one exception, the means for those who are employed in the youngest two age groups are above the annual nonblind SGA amount ($10,800) in every year (Chart 6). The exception is for the youngest age group in 1998 ($8,108). Remarkably, mean earnings for the youngest age group rise faster than for the next youngest age group (40–49), surpassing the latter in 2003 and reaching $15,790 in 2007. Note also that growth continued through the 2001 recession. One possible explanation for this growth is that the shrinking number of employed beneficiaries (or former beneficiaries) in the youngest group represents those able to achieve the highest earnings. Presumably the same phenomenon would apply to the other groups, but perhaps to a lesser degree. Another possible explanation for the relative high growth of earnings for the youngest group is that, on average, they initially invest more heavily in training or education, which pays off later in terms of higher earnings.[20] The relative means for the oldest and next oldest age groups reflect the same pattern as their relative employment rates, shown in Chart 4, and quite likely reflect the timing of FRA attainment.

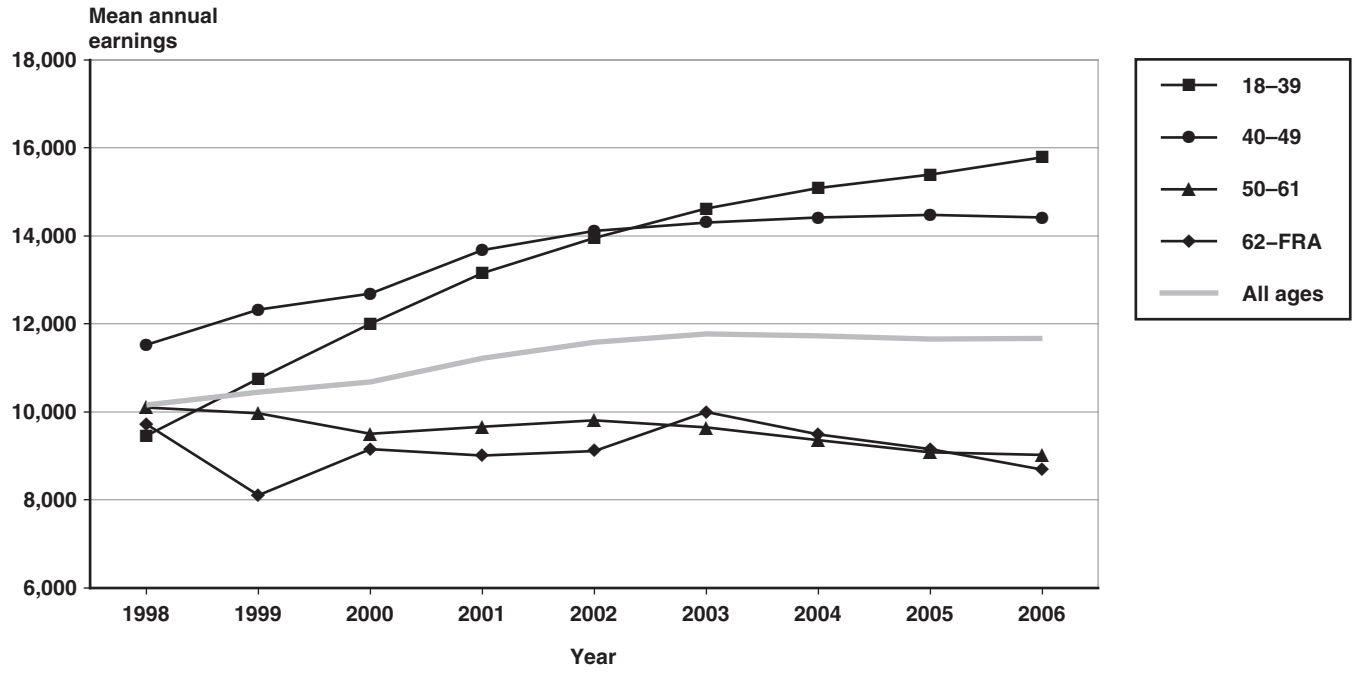
The two patterns that dominate the cumulative employment statistics—rapidly diminishing growth after 5 years on the rolls and much higher rates for the youngest cohort—are repeated in the statistics for other markers. Chart 7 presents cumulative statistics for the percentages of the 1996 award cohort that complete the TWP, have their benefits suspended for work, and have their benefits terminated for work. The first two of those return-to-work markers all increase rapidly during the first 5 years on the rolls, with the rate of increase diminishing rapidly thereafter. The cumulative percentage terminated for work mirrors the same pattern, but with a delay of 3 to 4 years, reflecting the fact that benefits cannot be terminated for work until the 9-month TWP and the first 36 months of the EPE have been completed. Age differences are displayed in Chart 8.

Chart 5.
Mean annual earnings, by age group, 1998–2006 (in 2007 dollars)



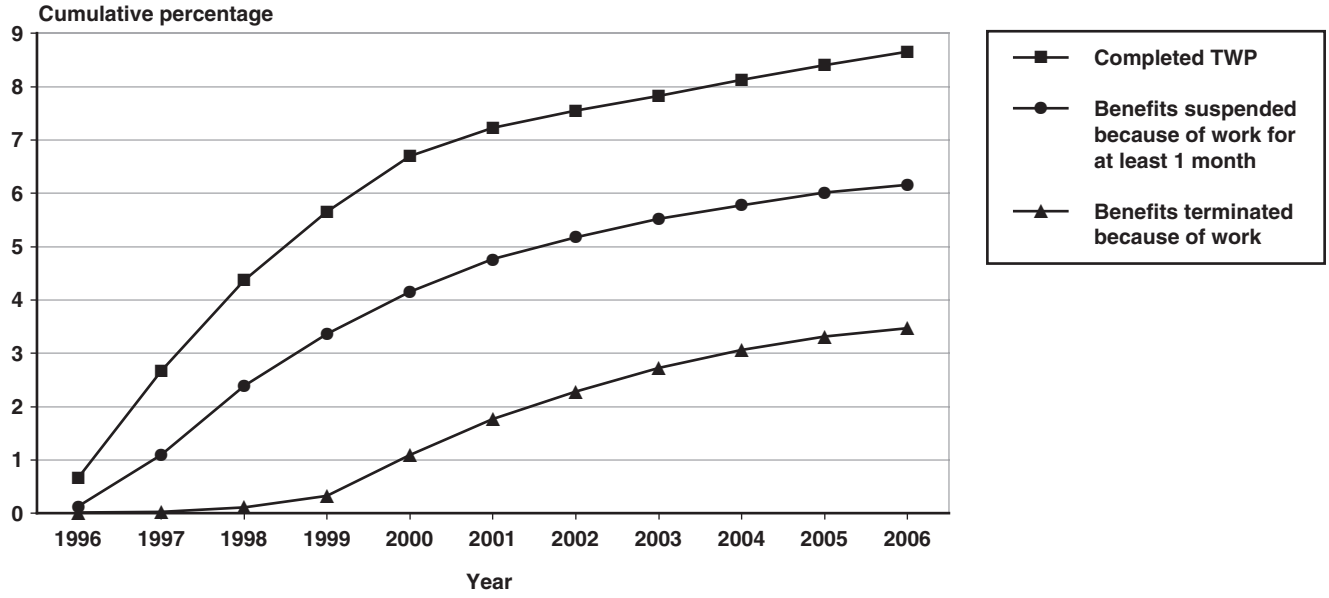
SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

Chart 6.
Mean annual earnings for those with positive earnings among the 1996 award cohort, by age group, 1998–2006 (in 2007 dollars)



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

Chart 7.
Age/sex-adjusted cumulative longitudinal work-incentive statistics for the 1996 award cohort, 1996–2006



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

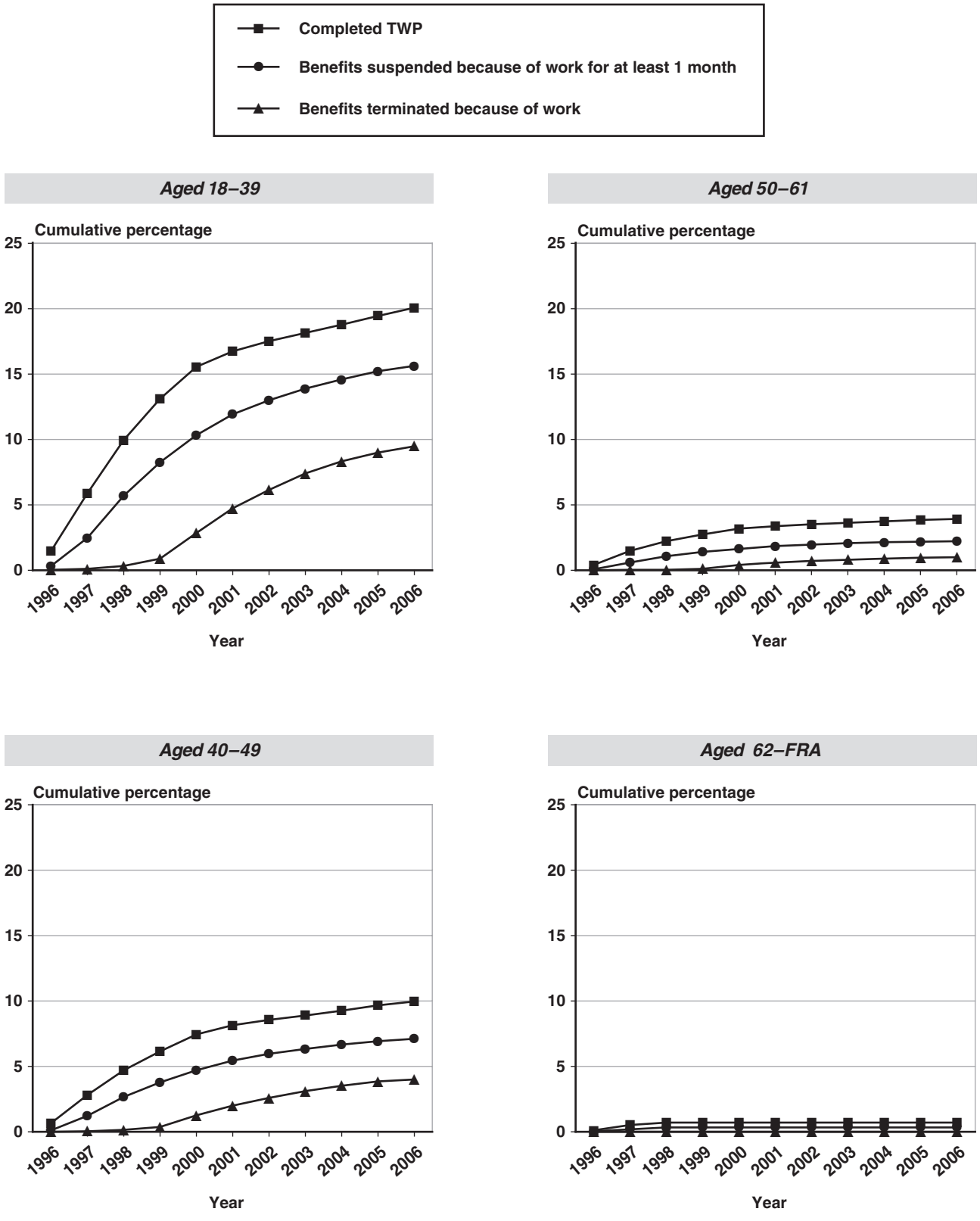
NOTE: Weights were used to adjust the series to reflect the age/sex composition of the 2001 award cohort. See the text for details.

The previous figures do not show one important return-to-work marker because of incomplete data for the 1996 cohort: service enrollment. A separate analysis (data not shown) for the 1998 cohort—the first cohort with complete data—finds that a large majority of those whose benefits were suspended or terminated for work by 2006 (79 percent) had not enrolled for employment services, or at least had not done so with providers that would be eligible for payment from SSA. However, service receipt could have made critical contributions to suspensions and terminations for work among those who did enroll. We find that 38,327 beneficiaries (6.6 percent of the 1998 cohort) had enrolled for services by 2006. One-third of those had also completed the TWP (33.5 percent), 17.7 percent had their benefits suspended for work in at least 1 month, and 8.4 percent had their benefits terminated for work. Thus, only a minority of service users achieves each of these markers. Nevertheless, the rates at which they achieve these markers are well above the corresponding rates for the entire 1998 award cohort, which are very similar to those for the 1996 cohort.[21] It could be that services received were instrumental to the outcomes for those whose benefits were suspended or terminated for work.

State Variation

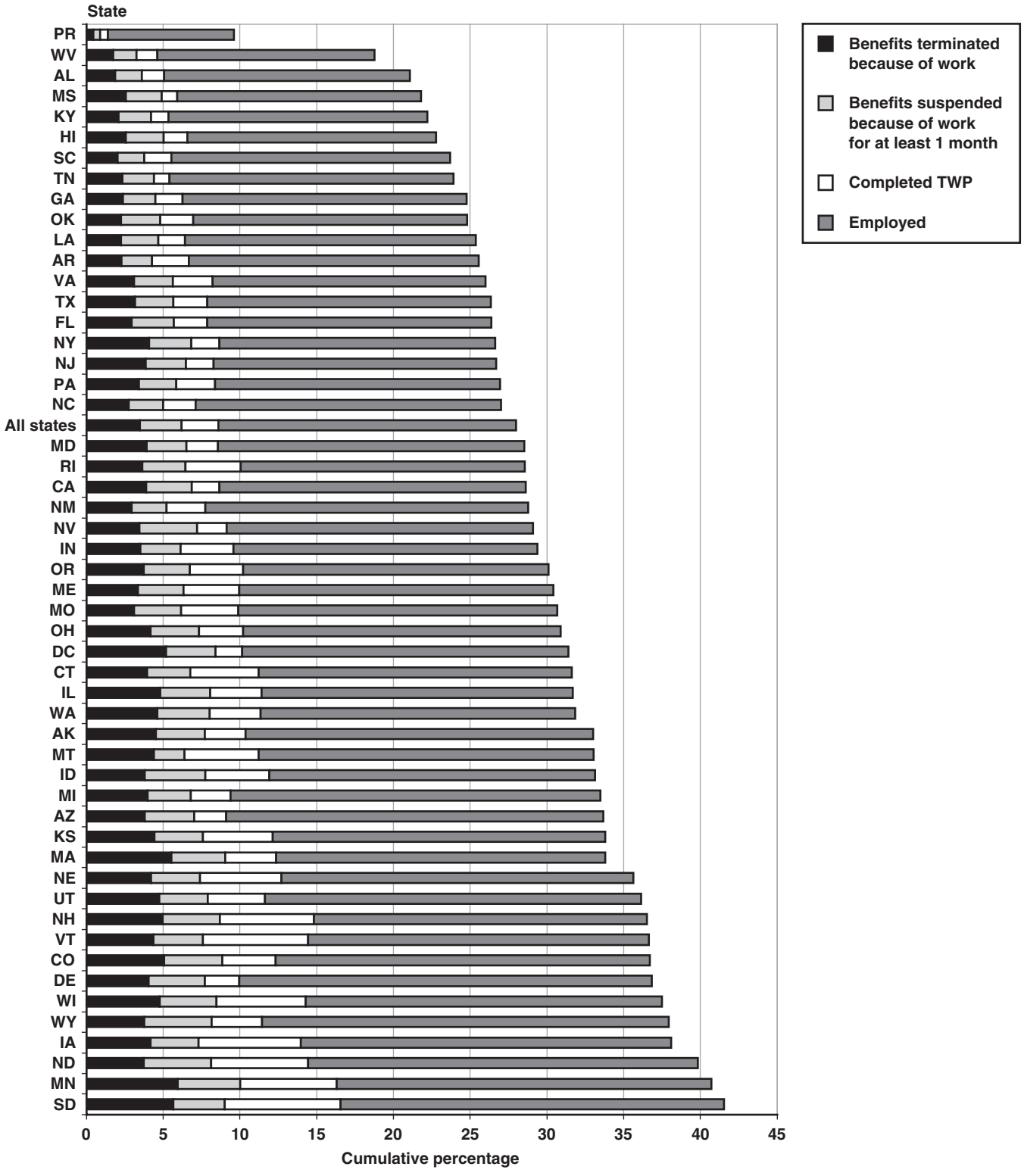
Chart 9 illustrates cross-state variation in employment and work-incentive statistics for the 1996 award cohort as of 2006, the 10th full year after award, adjusted to the national age/sex distribution for the 2001 award cohort. The full length of each bar (that is, the length of all four components combined) is the cumulative percentage employed for the corresponding geographic area (individual state, Puerto Rico, the District of Columbia, or the entire United States), and the areas have been ordered from lowest to highest by this measure. Moving from left to right, the first component of each bar represents the percentage with benefits ever terminated for work; the combined first and second components represent the percentage with benefits ever suspended for work; and the combined first, second, and third components represent the percentage having completed the TWP.[22] Taking South Dakota, the state with the highest percentage employed, as an example, we find that 5.7 percent of its weighted 1996 award cohort had benefits terminated for work, 9 percent had benefits suspended for work, 16.6 percent completed the TWP, and 41.5 percent were employed at some point during our study period (1996–2006).

Chart 8.
Cumulative longitudinal work-incentive statistics for the 1996 awardee cohort, by age group, 1996–2006



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

Chart 9.
Age/sex-adjusted cumulative work-incentive statistics for the 1996 award cohort, by state, 1996–2006



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

NOTE: Weights were used to adjust each state's values to the age/sex composition of the national 2001 award cohort. See the text for details.

Variation in the cumulative percentage of employed beneficiaries is high, ranging from 9.6 percent in Puerto Rico and 18.7 percent in West Virginia to 41.5 percent in South Dakota. The median cumulative percentage employed was 30.0 percent in Oregon. Reflecting the fact that the four most populous states have cumulative employment rates below the median, the national mean is lower than the state median: 28.9 percent. In all states, a large majority of those who were employed had not completed the TWP and had never had their benefits suspended or terminated for work. The percentage completing the TWP ranges from 1.4 in Puerto Rico and 4.6 in West Virginia to 16.6 in South Dakota; the percentage with benefit suspension for work ranges from 0.9 in Puerto Rico and 3.2 in West Virginia to 10.0 in Minnesota; the percentage with benefits terminated for work ranges from 0.5 in Puerto Rico and 1.7 in West Virginia to 5.9 in Minnesota. Variation across states in all work-incentive statistics follows the pattern seen in the cumulative percentage employed, although inexactly.

We also find large cross-state variation in the cumulative percentage enrolled for services and cumulative years spent off the rolls for work (not shown). Intriguingly, there is a strong positive relationship between those two measures across states; the simple correlation coefficient is 0.64. The cause of this relationship is unclear. High service enrollment might contribute to high employment, but it seems likely that this is only part of the explanation, at best, because we know from national statistics that cumulative service enrollment is much lower than cumulative employment. The alternative, and perhaps more plausible, hypothesis is that beneficiaries in some states are more likely to work and leave the rolls than beneficiaries in other states because of differences in the distributions of personal characteristics (for example, health or functional limitations) or environmental differences (for example, the strength and nature of the economy, population density, availability of public transportation, and so forth), which could lead to greater utilization of VR services in those states.

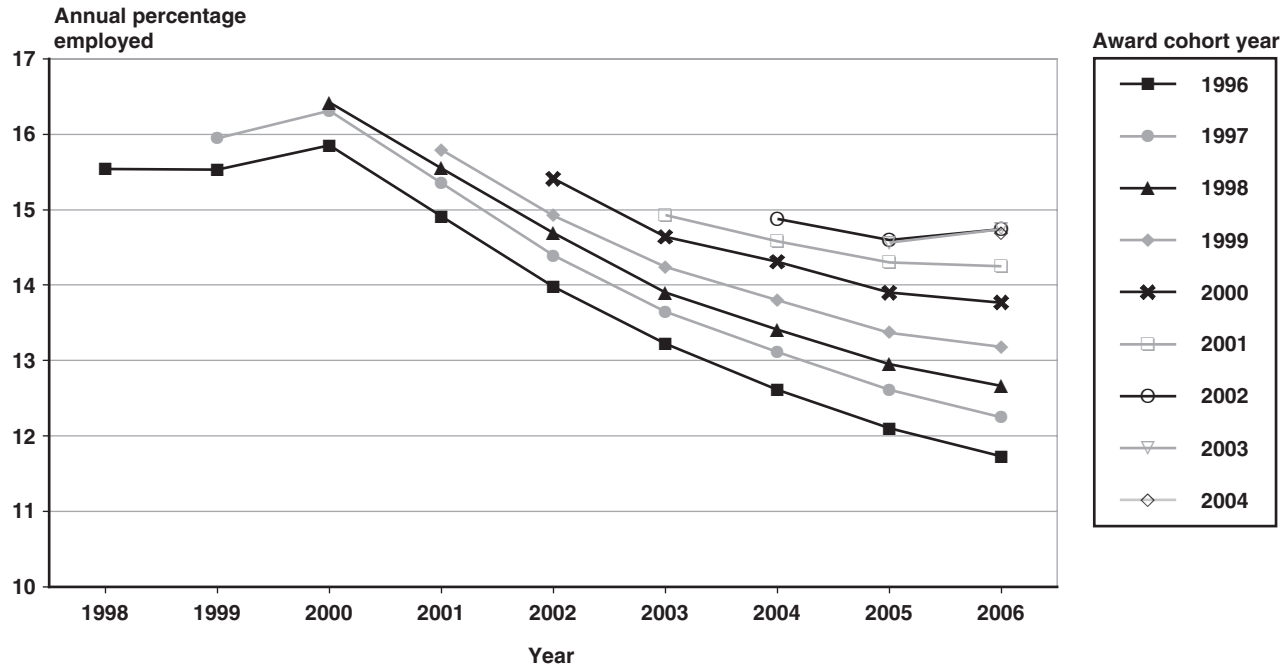
More Recent Cohorts

The longitudinal analysis of the more recent cohorts (1997–2005) allows us to compare the progress of these cohorts with that of the 1996 cohort for as long as the later cohorts are observed. It also provides some evidence on the extent to which policy change and the economic environment influence outcomes. We hypothesize that (1) the 2000–2001 recession would have a negative employment impact on cohorts awarded benefits during that time; (2) the 2001 increase in the TWP income amount would reduce TWP completions and exits from the rolls; and (3) the 1999 increase in the nonblind SGA amount, and subsequent indexing of the SGA amount to the AWI, would also reduce months off the rolls for work.

The next three charts show clear evidence that the increase in the TWP income amount reduced TWP completions and NSTW months. They also suggest that the 2001 recession had a negative impact on many statistics, but do not provide clear evidence of any effects from the 1999 SGA increase. Each chart is shown similarly, with calendar year on the horizontal axis, outcome measure on the vertical axis, and each series corresponding to a cohort (all weighted to the 2001 cohort's age/sex composition), which can be identified visually by the starting point of the series (for example, the series starting in 1996 represents the weighted 1996 cohort). Moving from left to right, as the cohort becomes more recent, there are fewer years of data to show.

In Chart 10, we compare the percentage of beneficiaries employed (that is, earning at least $1,000) in each calendar year across cohorts. Because we compute the employment statistics starting from the second postaward year, the series for the 1996 cohort starts with 1998, and the last series, starting in 2006, is for the 2004 cohort. Beneficiaries in the 1997, 1998, and 1999 cohorts all had higher employment rates in the second postaward year than those in the 1996 cohort, very likely reflecting strong economic growth during the period. As the economy entered into recession in 2001, the economic downturn appears to have affected all cohorts regardless of number of years on the rolls. Through 2000, the employment rates for the earlier cohorts appeared to be steady or increasing. The first employment rate observed for each cohort decreases steadily from 2001 through 2005 (for the 1999 through 2003 cohorts). Further, for each cohort the employment rate declines from 2001 through 2005, although the rate of decline slowed after 2003, as the economy recovered. It is somewhat surprising that the cohorts entering the rolls during and following the recession (2001 through 2003) do not return to work at higher rates than those who entered earlier, as presumably their entry was more likely to be caused by job loss for reasons other than their disability. It might be, however, that in comparison with their counterparts in the earlier cohorts, some who enter during a recession find it more difficult to return to work later because

Chart 10.
Annual age/sex-adjusted percentage employed since the second postaward year, by award cohort year, 1998–2006



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

NOTE: Weights were used to adjust the series to reflect the age/sex composition of the 2001 award cohort. See the text for details.

many of the jobs for which they have experience no longer exist. It is also possible that the high levels of CDR during this period discouraged early return to work.

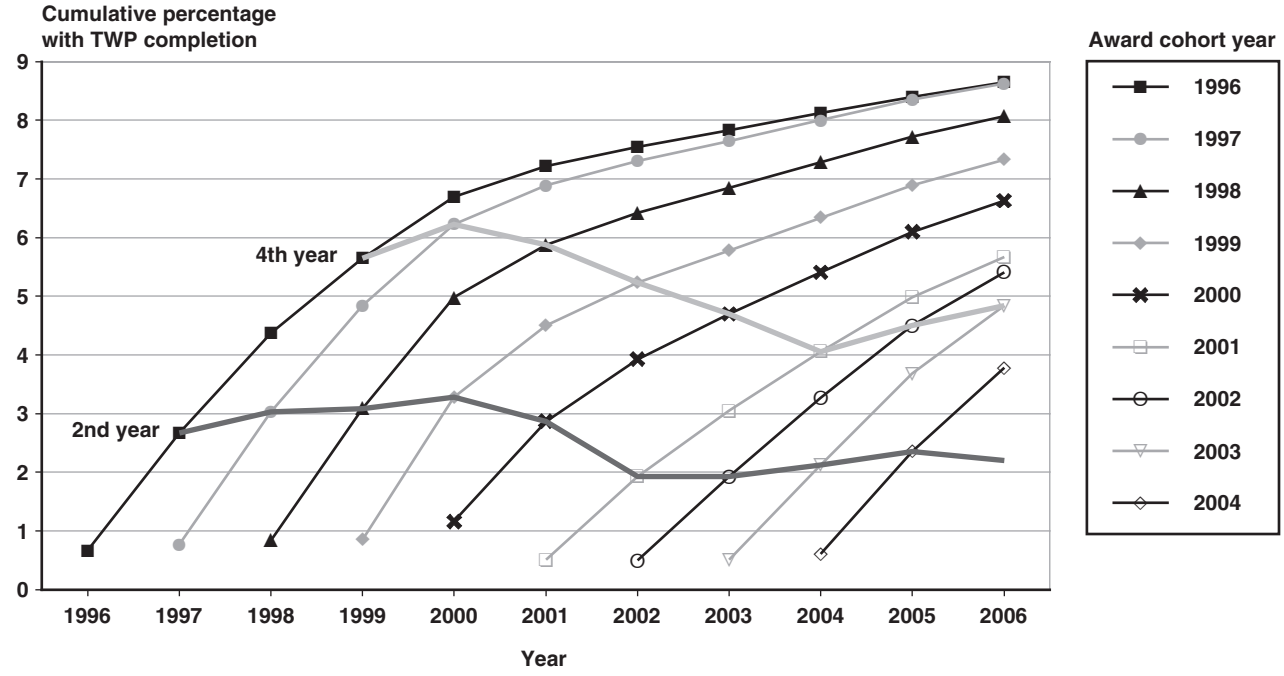
We did find some positive signs among awardees in 2003, the first cohort that entered during the recovery, although their initial employment percentage is the lowest among all cohorts considered. Similar to the trend we see with the 1996 cohort, the employment percentage among awardees in 2003 appears to be on a rising path, with just 2 years of data for the second and third postaward years. The first (and only) observation for the 2004 cohort, in 2006, is also encouraging, as it is higher than the first observation for the 2003 cohort. It seems likely, however, that any positive trends after 2006 were short-lived because of the severe recession starting in 2008.

Chart 11 compares the cumulative TWP completion percentage across the 10 study cohorts. To facilitate cross-cohort comparisons of outcomes for the same postaward year, we connect the points representing the second- and fourth-year values for each cohort (corresponding to the first and third full postaward year, respectively)—the two lines that cross the cohort lines in the exhibit. Because the statistics are age/sex adjusted, the shape of the cross-cutting lines quite likely reflect the effects of changes in policy or the economic environment. In the absence of any such changes, we would expect these lines to be nearly straight and horizontal.

Instead, what we see is a small but steady increase between the 1996 cohort and the 2000 cohort in the percentage of beneficiaries who complete the TWP in the first year on the rolls, followed by a sudden drop for the 2001 cohort. After this drop, the first-year percentage starts to increase again, although quite slowly. A closer examination shows that the drop is not associated with the 2001 cohort alone. The substantial decline between calendar years 2000 and 2001 is also apparent when comparing second-year values (the lower horizontal line) between the 1999 and 2000 cohorts, as well as the third-year values between the 1998 and 1999 cohorts, and the fourth-year values between the 1997 and 1998 cohorts (the higher horizontal line).[23]

One obvious explanation for the decline from 2000 to 2001 is the substantial 2001 increase in the TWP income threshold. Numerous months that would have

Chart 11.
Age-adjusted cumulative percentage with TWP completion, by award cohort year, 1996–2006



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

NOTE: Weights were used to adjust the series to reflect the age/sex composition of the 2001 award cohort. See the text for details.

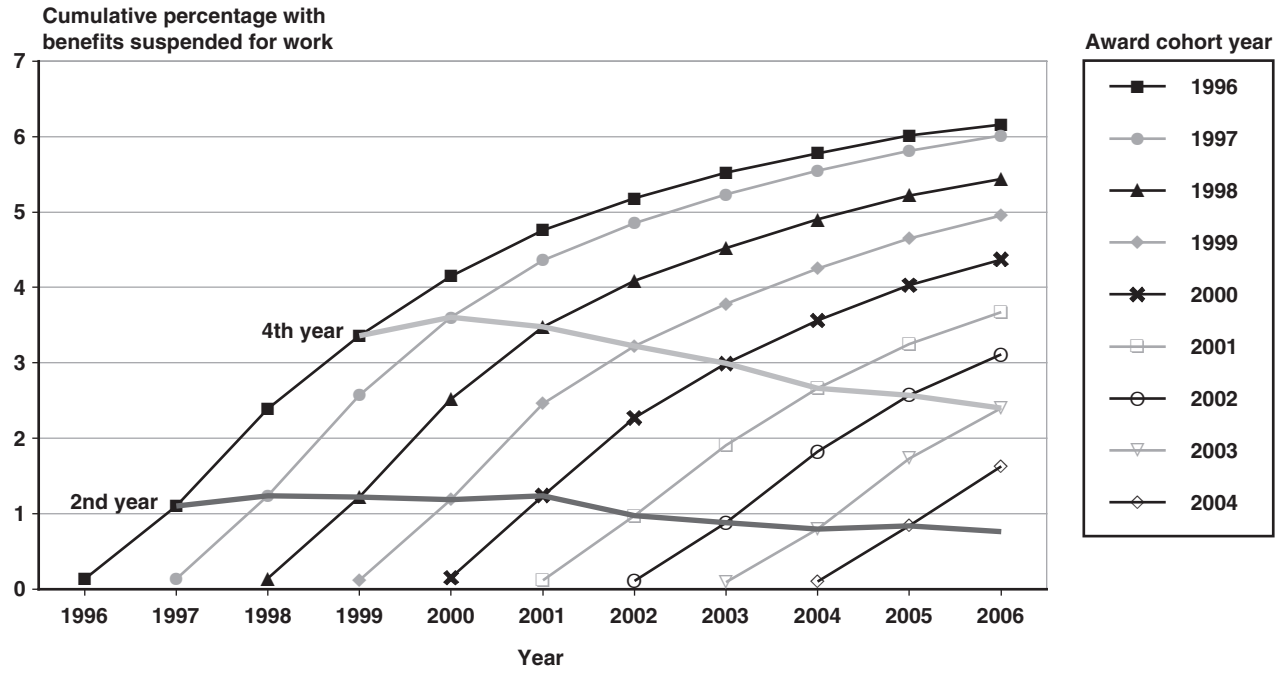
been counted as TWP months under the pre-2001 amount do not count under the higher value for 2001 and later years.[24] The decline stops with the 2001 cohort, the first cohort subject to the higher TWP income threshold starting from its award year; later cohorts complete the TWP at modestly higher rates, holding years since award constant.

If the TWP threshold increase was the only explanation for the difference between the experiences of the 2001 and the 1997 cohorts in their first 4 years on the rolls, then the impact of the TWP income increase, as of the fourth year on the rolls, would be a reduction in the cumulative TWP completion percentage from 6.2 percent (fourth-year value for the 1997 cohort) to 4.1 percent (fourth-year value for the 2001 cohort)—a 35 percent decline. However, it is unlikely that the increase in the TWP threshold is the only factor behind the decline in TWP completion. In particular, the analysis of the employment statistics in Chart 10 suggests that the economic downturn and recovery played a role in the 2001 decline in TWP completion, as well as in the growth in TWP completion thereafter. The possible effect of stepped up CDR activity on TWP completion is unclear. Increased terminations that are due to medical recovery would very likely reduce TWP completions, but increased work CDRs would most likely have the opposite effect.

It is possible that the TWP threshold increase only delayed TWP completion for some beneficiaries. We do not know the extent to which this increase reduced the number of awardees who eventually complete their TWP. However, the size of the differences between the series for the 1997 and 2001 cohorts suggests that the effect is more than just delay. The TWP completion percentage for the 2001 cohort at the end of its sixth year on the rolls, 5.7 percent, was below the TWP completion percentage for the 1997 cohort by the end of its fourth year on the rolls, 6.2 percent. If this difference was explained solely by induced delays in TWP completion, then the length of the typical delay would have been greater than 2 years.

Like the TWP completion percentage, the cumulative percentage of awardees with at least 1 month of benefit suspension for work began to decline in 2001, holding years since award constant (Chart 12). Presumably the TWP threshold increase also delayed initial benefit suspensions for work because suspensions only occur after TWP completion. The 1999 increase in the nonblind SGA amount and subsequent

Chart 12.
Cumulative age/sex-adjusted percentage with benefits suspended for work, by award cohort year, 1996–2006



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

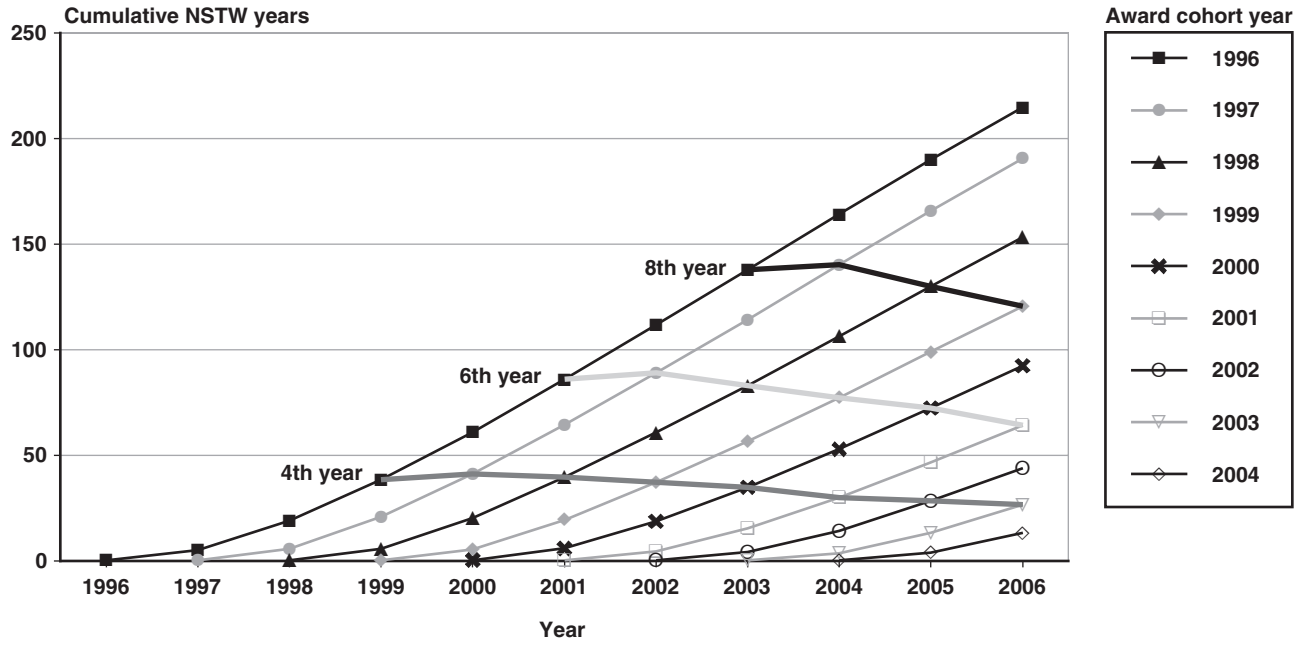
NOTE: Weights were used to adjust the series to reflect the age/sex composition of the 2001 award cohort. See the text for details.

indexing to the AWI might also have had an effect. As a result, monthly earnings needed to be higher than before to trigger benefit suspension for work after June 1999, potentially delaying first benefit suspension and reducing the number of beneficiaries that ever reach that marker. However, Chart 12 shows no clear decline in suspensions (holding years since award constant) from 1998 through 2000—years that span the increase in the SGA amount and precede the TWP threshold increase. This suggests that any effect of the 1999 increase in the SGA amount on months off the rolls for work was too small to discern in the cohort statistics. A separate analysis focusing on those beneficiaries who completed the TWP in 1998 (regardless of when they entered DI) concludes that the increase in the SGA amount reduced their months off the rolls in 2000 by 6.5 percent (Schimmel, Stapleton, and Song 2010)—a substantial reduction, but not large enough to be visible in the statistics we report here.

Unlike the upswing seen for the percentage completing the TWP starting with the 2002 cohort, the percentage with benefit suspension continues to decline for later cohorts, although the rate of decline appears to have diminished by the end of the period. It is likely that this reflects the lingering effects of the 2001 recession and might also reflect the 1999 increase in the SGA amount. Other policy initiatives designed to increase earnings and exits from the rolls began during this period—most notably the rollout of the Ticket to Work program, starting in 2002. The TTW evaluation found evidence that TTW increased service enrollment (Stapleton and others 2008; Thornton and others 2007), but any impacts of TTW on earnings or months of benefit suspension or termination for work were too small to detect. It is also possible that the expansion of counseling and advocacy services increased beneficiary awareness of how much they could earn without losing their benefits, so that some wishing to keep their benefits were more careful to keep their earnings below that level—a phenomenon known as "parking."

To show the net effects of the economy, numerous policy changes, administrative/budget issues, and other factors relevant to suspension or termination for work across cohorts, we present age-adjusted cohort statistics on NSTW years per 1,000 beneficiaries (Chart 13).

Chart 13.
Cumulative NSTW years per 1,000 age/sex-adjusted awardees, by award cohort year, 1996–2006



SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

NOTE: Weights were used to adjust the series to reflect the age/sex composition of the 2001 award cohort. See the text for details.

Holding years since award constant, the 1997 cohort experienced the most such years, and each successive cohort has experienced fewer. As of the sixth year since award, the 1997 cohort had experienced 89 NSTW years per 1,000 beneficiaries; for the 1999 and 2001 cohorts, the corresponding values are 77 years (13 percent lower) and 64 years (28 percent lower).

Conclusions and Policy Implications

Knowing the extent to which disability beneficiaries find work can help shape the efforts of policymakers to encourage more beneficiaries to give up their benefits and become self-sufficient. In general, longitudinal statistics paint a somewhat more optimistic picture of the efforts of beneficiaries to find work than SSA's published statistics, which are cross-sectional. The longitudinal statistics show that nearly 30 percent of DI beneficiaries eventually find work, and a small but nontrivial share (nearly 7 percent) have their benefits suspended for at least 1 month for work. These shares are much higher for the roughly one-quarter of beneficiaries who enter the rolls before age 40.

Many beneficiaries return to work without ever having their benefits suspended or terminated for work. For instance, 21.5 percent of the 1996 cohort returned to work during the 10-year period, but never had even 1 NSTW month. In addition, benefit termination for work is sometimes followed by eventual reinstatement. There are numerous reasons for this, including increases in functional limitations and declines in health, but perhaps many of those beneficiaries would have earned enough to give up their benefits for an extended period if more assistance or better work incentives had been available.

Most beneficiaries who find work and use the work incentives do so during their first 5 years on the rolls—a finding that has implications for return-to-work initiatives. If beneficiaries are most likely to return to work during this period, perhaps work incentives should specifically target recent awardees. These findings also give policymakers a reason to pay close attention to how recent awardees respond to innovations in work incentives.

We also find that making changes to the DI program to help beneficiaries increase earnings might not produce program savings, even if the changes increase exits from the rolls. This is because the program may end up providing additional support to those who would exit anyway. We illustrate this point by drawing

some implications specific to the TTW program and the Benefit Offset National Demonstration (BOND).

Implications for TTW

The Ticket to Work program was designed to expand SSA financing for employment services for those who find work and have their benefits suspended or terminated. However, statistics show that 79 percent of beneficiaries in the 1998 cohort who had their benefits suspended or terminated for work never enrolled in SSA-financed services. TTW might therefore have expanded SSA-financed services to those who would have had their benefits suspended or terminated even if the services had been unavailable—a cost to SSA with no program savings unless such benefits were suspended or terminated for longer periods.

Among employment service recipients in the 1998 award cohort, the small share (17.7 percent) whose benefits were suspended for work might suggest to some that additional expenditures will at best result in only small benefit reductions, even if received by beneficiaries who would otherwise remain on the rolls. It would be premature, however, to draw this conclusion based on this finding alone. SSA's payments to service providers depend on the number of months the beneficiary foregoes benefits for work, or the extent to which he or she achieves earnings that might lead to benefit suspension or termination. TTW has increased incentives for providers to help their beneficiary clients forego benefits for work for a long time; that could lead to more months of benefit suspension or termination for work than we find for the 1996 cohort.

Implications for BOND and Other Employment Initiatives

A similar observation applies to the benefit offset that is currently being tested under BOND. Under the offset, beneficiaries no longer lose all of their benefits if they engage in SGA after they complete the TWP and grace period. Instead, annual benefits will be reduced by $1 for every $2 of countable earnings above the annualized SGA amount, paid on a monthly basis. If this offset had been in place for the 1996 cohort, at least 6.5 percent of beneficiaries would have used the offset within the next 10 years—that is, the percentage with benefits suspended because of work in at least 1 month of that period. Their benefits were zero for an average of 42 months, but would quite likely have been much higher under an offset.

To illustrate the possible magnitude of the benefit increase for these beneficiaries under a benefit offset, assume that they would have received partial payments under the benefit offset equal to half of the mean December 2008 disabled-worker benefit (after indexing). That would require their earnings, on average, to have exceeded the monthly SGA amount ($940 for nonblind beneficiaries in 2008) by an amount equal to the benefits they would have received if they had not engaged in SGA.[25] The total increase in benefits paid to this group over 10 years would have been $868 million.[26] The amount would have been higher if those who gave up benefits for work under current law earned less than assumed, and lower if they earned more. For the offset to achieve benefit-neutrality relative to current law (that is, not affect total SSA payments to the cohort), it would have had to induce an equal amount of benefit reductions for other beneficiaries.[27]

The finding that most beneficiaries who use the offset will likely do so within their first 5 years on the rolls implies that the long-run impacts of BOND might be quite different than the mean impacts for those observed in the demonstration. Most beneficiaries in the demonstration areas will have been on the rolls for many years before they become eligible to use the benefit offset, and many might be past the point where they could potentially increase their earnings and use the offset. To enable the BOND evaluation to assess long-term impacts—when all beneficiaries will have been entered after the implementation of the offset—half of the beneficiaries offered the offset will be those who have been on the rolls for 36 or fewer months (Stapleton and others 2010).

More generally, longitudinal statistics show that the number of months spent off the rolls for work under current law is a small but nontrivial percentage of all months during the first 10 years after award. To produce benefit savings for SSA, any initiatives to increase months off the rolls for work would have to offset any additional payments made for the support of beneficiaries in months they would have been off the rolls in the absence of the initiative; in evaluation terminology, such payments represent a "base" that other savings will have to "buy" or offset to achieve benefit-neutrality. BOND illustrates this point, but it also applies to TTW to the extent that SSA makes outcome payments for some months in which Ticket participants would have been off the rolls even if they had not assigned their tickets.

Initiatives that are targeted more narrowly at beneficiaries who would not leave the rolls for work under current law and at reducing their benefits during the months in which they currently receive full benefits will have a smaller base to buy, but it may be very difficult to narrow the target of such initiatives in this manner without making them ineffective. SSA could, for instance, prohibit the employment network from making cash payments to their participant clients because such payments are especially attractive to beneficiaries who would exit on their own, but such payments might also be a very efficient means of providing other beneficiaries with the resources and incentives they need to exit the rolls for work. As another example, initiatives could be targeted at only those who have been on the rolls for at least 5 years, so that most beneficiaries who would exit the rolls on their own would already have done so, or at only those who are older than age 50, who rarely exit for work under current law. However, large shares of those who recently entered the DI program and those who are relatively young return to work without having their benefits suspended or terminated, and assistance targeted at those individuals might be relatively effective in reducing benefits or increasing the number of months in which they forego benefits for work. Of course, targeting work support to certain groups of beneficiaries raises equity concerns that might make it unattractive, even if efficient.

In summary, the longitudinal statistics represent "good news" in that, compared with the cross-sectional statistics, they show more beneficiaries leaving the rolls after finding work. They also show that some beneficiaries return to work but do not leave the rolls; perhaps a change in the work incentives of the DI program, such as those to be tested under BOND, would encourage such beneficiaries to become more self-sufficient.

Implications for Future Work

It is unfortunate that comparability issues undermine any attempt to assess whether the statistics for the 1996 and later cohorts presented here represent a substantive change in beneficiary work activity and suspensions or terminations for work relative to the statistics for the 1980–1981 New Beneficiary Survey/New Beneficiary Follow-up cohort. The earlier statistics are broadly similar, but somewhat lower than what we find. It would be interesting to know how earlier cohorts faired relative to more recent cohorts. For instance, prior research has suggested that eligibility expansions (starting with the 1984 Amendments to the Social Security Act) and expansion of DI work incentives (for example, the 1988 increase in the length of the EPE, the 1990 and 1999 SGA increases, the 2001 TWP income increase, and the 2002 introduction of TTW) have increased the sensitivity of awards to layoffs caused by recessions, industrial restructuring, or other economic factors, with more workers induced to apply for benefits because of such layoffs than in the past (Autor and Duggan 2003). That would suggest that the share of new beneficiaries who are capable and interested in returning to work is larger today than in the 1980s. An analysis of the administrative data for earlier cohorts might substantially improve our understanding of how past programmatic and other changes affect the number of awards to individuals who return to work and influence the extent to which new beneficiaries eventually exit the rolls for work. Such an analysis might also provide information about the extent to which possible future policy changes, such as a benefit offset, might induce DI entry of workers with disabilities who would benefit from an offset.

It would also be interesting to examine how the return-to-work activities of future award cohorts change in response to programmatic and economic factors. Those who receive their awards in 2009 will be the first full award cohort to receive tickets under the July 2008 TTW regulations. Whether they enroll for services at substantially higher rates than past cohorts will be telling. Effects on earnings and benefits are quite likely to take much longer to emerge, however, because the 2009 cohort entered the DI program at the bottom of a business cycle that was the worst since the Great Depression. Given the experience of those who entered during the much weaker downturn from 2000 through 2002, it seems quite likely that we will see a substantial decline in the employment rates of new beneficiaries, even if service enrollment increases. Any contributions of the new TTW regulations to improvements in return-to-work outcomes might well be obscured until the economy substantially recovers and later cohorts receive their awards.

Appendix

Appendix table.
Annual award cohort size and age/sex composition, by award year, 1996–2005 (in percent)

Age/sex composition	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total number	591,493	562,998	578,504	590,023	597,925	665,135	719,109	747,777	762,234	785,405
Women	44.2	45.6	46.5	47.0	46.7	47.1	47.2	47.2	47.5	48.0
Men	55.8	54.4	53.5	53.0	53.3	52.9	52.8	52.8	52.5	52.0
18–39	24.7	23.1	22.4	21.9	21.9	22.2	21.7	20.7	19.9	19.5
Women	42.4	44.6	45.6	46.3	46.5	46.8	47.2	47.6	47.8	48.0
Men	57.6	55.4	54.4	53.7	53.5	53.2	52.8	52.4	52.2	52.0
40–49	23.6	23.2	23.6	23.6	22.8	22.6	22.6	22.4	22.0	22.0
Women	46.3	48.0	48.7	49.2	49.0	49.4	49.7	49.4	49.7	49.9
Men	53.7	52.0	51.3	50.8	51.0	50.6	50.3	50.6	50.3	50.1
50–61	44.6	46.4	46.8	47.1	47.2	47.7	48.2	49.0	49.7	50.0
Women	45.3	46.1	47.1	47.6	47.2	47.2	47.1	47.0	47.3	48.1
Men	54.7	53.9	52.9	52.4	52.8	52.8	52.9	53.0	52.7	51.9
62–FRA	6.8	7.0	7.0	7.1	7.7	7.5	7.5	7.8	8.3	8.4
Women	38.2	38.8	39.7	40.1	40.2	40.5	40.7	41.4	41.9	42.5
Men	61.8	61.2	60.3	59.9	59.8	59.5	59.3	58.6	58.1	57.5

SOURCE: Analysis of DI beneficiary records in the 2007 TRF.

Notes

Acknowledgments: We would like to thank Dawn Phelps for the substantial contributions made developing the reported statistics from administrative data; Sarah Prenovitz for carefully preparing all of the charts in the article; and Paul O'Leary, Gina Livermore, Scott Muller, Kalman Rupp, Evan Schechter, and Robert Weathers for their helpful comments on earlier versions.

[1] Unless otherwise indicated, statistics for "DI beneficiaries" in this article are combined statistics for three groups of Old-Age, Survivors, and Disability Insurance (OASDI) beneficiaries: (1) disabled workers, (2) disabled adult children of other OASDI beneficiaries or deceased workers, and (3) disabled widow(er)s of deceased workers. Disabled workers are by far the largest group. Reflecting the status of the primary beneficiary, benefits to disabled adult children are most often paid from the Old-Age and Survivors Insurance (OASI) Trust Fund, rather than the Disability Insurance (DI) Trust Fund; disabled widow(er) benefits are always paid from the OASI Trust Fund.

[2] Extracts from several Social Security administrative files were merged to create the Ticket Research File (TRF), including the Disability Control File, Master Beneficiary Record, Supplemental Security Record, Numerical Identification System (Numident) file, and the 831 and 832/33 Disability files.

[3] The first payment month (that is, the award month) is the month in which the first payment was actually made, which is usually after the first month for which the beneficiary is entitled to a benefit (that is, the entitlement month). The latter is often used in SSA's statistics to classify beneficiaries by entry year (for example, SSA 2009). We use the award month instead because our focus is on the activities of beneficiaries once they become informed of their award and are entitled to use the DI work incentives.

[4] Because RSA-911 data captures 90 percent of closures within 5 years of application, and the median time in the VR program before exiting is 465 days for those with employment and 667 days for those without employment (GAO 2005), service enrollment statistics for 2004 and 2005 may be underestimated.

[5] Specifically, the age/sex-adjusted statistics for each cohort are weighted means of statistics in eight categories defined by four age groups (18–39, 40–49, 50–61, 62–FRA) and sex.

[6] There are other DI work-incentive programs (for example, impairment-related work expenses) that do not play a prominent role in this analysis and therefore are not described. For more detail, see Social Security's *2011 Red Book: A Summary Guide to Employment Support for Individuals with Disabilities under the Social Security Disability Insurance and Supplemental Security Income Programs*. In addition, other federal and state agencies also implemented or strengthened programs designed to help disability beneficiaries and potential beneficiaries return to work or increase their earnings during the period examined. Most notably, many states introduced Medicaid Buy-In programs, which allow workers with disabilities (including DI beneficiaries) to enroll in Medicaid for a sliding-scale premium, and many states' One Stop Employment Centers introduced Disability Program Navigators

and took other steps to help job seekers with disabilities take advantage of available services.

[7] The TTW legislation created an expedited reinstatement or "easy back on" provision where an individual who is terminated for work need not reapply, but is subjected to a process more akin to a continuing disability review (CDR).

[8] The higher blind SGA amount was already indexed to the AWI, and it was only increased to keep up with the AWI in 1999.

[9] SSA implemented substantial changes in the TTW in July 2008, after the end of the period examined here.

[10] There is one exception: Benefits would not be suspended if the first month with earnings above SGA (following the grace period) occurs 36 months after the TWP completion or later.

[11] Presumably benefits would have been paid during the months when a beneficiary was not earning more than the SGA amount.

[12] As noted in the previous section, the 2006 data for this variable should be considered preliminary because 2006 VR service entrants that did not assign their tickets and continued to receive services through the end of FY 2007 will not have a record in the RSA-911 data file.

[13] Muller (1992) noted that earnings reported to the Internal Revenue Service (IRS), the basis of our employment measure, can include those for work performed in a different year, such as delayed compensation, commissions, and vacation pay. It is for this reason that we did not include the first year after award in our employment and earnings statistics. Our annual estimates for later years quite likely reflect errors in the timing of work, but it seems much less likely that the cumulative statistics reflect such errors.

[14] One potentially important example of earnings not captured in the IRS data is the earnings of beneficiaries who work in sheltered workshops, which are not subject to payroll taxes.

[15] This description of the business cycle is based on statistics for real gross domestic product and civilian employment (Council of Economic Advisors 2011, Tables B-2 and B-3).

[16] The rule is simple: We exclude each ambiguous case if the month of first entitlement was more than 144 months before the first observed payment. Application of this rule excludes 2 percent of all beneficiaries who would otherwise have been included in each cohort and ranges from 1.7 percent in the 1996 cohort to 2.4 percent in the 2005 cohort. Conversely, the cases that are included despite the ambiguity ranged from 10.8 percent of all beneficiaries who would have been included without the rule in 1996 to 0.1 percent in the 2005 cohort. We perform a sensitivity analysis by excluding the ambiguous cases and discover that doing so would have no substantive impact on the findings for the 1996 cohort—the cohort most affected by the ambiguity of our current exclusionary rule. We later determine that about 25 percent of the excluded cases in each year comprised disabled adult children, and an additional 5 percent comprised disabled widow(er)s. The first entitlement date of the excluded cases was actually the first entitlement date of the primary beneficiary. This represents about 9 percent and 4 percent of the disabled adult children and disabled widow(er) awards, respectively; hence both groups of cases are somewhat underrepresented in each cohort. We do not think this has a material effect on the statistics or, more importantly, trends in the statistics.

[17] Because of data limitations previously discussed, paths for some beneficiaries do not follow the appropriate order. For example, some individuals indicate suspension or termination for work even though there is no documentation of a completed TWP. We did some recoding (mostly on the TWP completion variable, affecting 1.7 percent of the records) in order to correctly identify the paths for each individual. Other analyses in the article are based on the raw data and are not affected by this recoding and therefore may show slightly different statistics.

[18] The mean benefit for disabled workers in December 2008 was $1,063 per month (SSA 2009, Table 2), equivalent to $12,756 per year. There were 591,493 beneficiaries in the 1996 award cohort (as shown in the Appendix table), so at that benefit level, forgone benefits for the entire cohort would be $1,063 x 230 x 12 x 591,493/1,000 = $1,735,369,482. This estimate is inexact, but is likely to be close. Mean benefits foregone by disabled workers whose benefits were suspended for work were somewhat higher than the mean benefits for all disabled workers in December 2008 ($1,186), but mean benefits for those terminated for work in 2008 were somewhat lower ($1,043); see SSA (2009, Tables 54 and 55). Only a very small share of the months in which benefits were foregone were for disabled adult children and disabled widow(er)s, whose benefits were considerable lower ($660 and $646, respectively, in December 2008).

[19] The employment statistics in Chart 4 are roughly comparable with those reported by von Wachter, Song, and Manchester (forthcoming), although time periods and definitions differ. The authors define employment as any positive earnings, based on the same data source that we use. They provide statistics for male applicants aged 30–44 and 45–64, allowed at the state Disability Determination Service level only, during each of two periods: 1982–1987 and 1992–1997. For both periods the authors find that about 20 percent of the younger men were employed in the third year after application, gradually declining to about 17 percent in the tenth year. The corresponding statistics for the older men are approximately 12 percent in the third year and 7 percent in the tenth year. The employment rates are slightly higher for those allowed in the more recent period than for those allowed in the earlier period.

[20] The earnings statistics in Chart 6 are roughly comparable with those provided by von Wachter, Song, and

Manchester (forthcoming) for men in the two allowed-applicant age groups, after inflation by 25 percent for the change in the AWI from 2000 through 2007. For their more recent period (1992–1997), the authors find that allowed men aged 30–44 at application with positive earnings had mean annual earnings of approximately $12,500 in the third year after application (adjusted to 2007 dollars), rising to approximately $15,500 in the tenth year. The comparable figure for men aged 45–64 at application is approximately $10,000 in both the third and tenth years.

[21] Age-adjusted statistics for the 1998 cohort are shown in charts appearing later in the article.

[22] Although the presentation of the statistics might suggest that those passing one marker are always a subset of those passing what is normally the previous marker, this is not always true. For instance, some whose benefits are terminated for work did not experience a suspension for work first, and TWP completion is sometimes not recorded in the data for those whose benefits are suspended or terminated for work.

[23] The only exception is evident when comparing the fifth-year values between the 1996 and 1997 cohorts: We find an increase in the percentage with TWP completion from 2000 through 2001. This is not surprising, given the 1997 cohort in general appears to outperform the 1996 cohort. In fact, the rising trend indeed slowed down in 2001.

[24] There is no simple way to determine whether the TWP income increase had an impact on beneficiary behavior. It is possible, for instance, that some beneficiaries reacted by reducing their earnings to keep them below the new threshold and avoid using up TWP months and entering the EPE, but we suspect that extremely few beneficiaries are so well informed that they would engage in such strategic behavior, even if they had sufficient motivation to do so; in addition, reduction in working hours may not always be accommodated.

[25] For example, if the individual's benefit when not working was $1,000, but under current law the individual would give that benefit up to earn $1,940, then under the benefit offset the individual would receive a benefit of $500, assuming no change in earnings.

[26] This amount is half of the previously imputed value of $1.7 billion benefits foregone because of work by the 1996 award cohort as of 2006.

[27] Weathers, Hemmeter, and Wiseman (2010) found that the Benefit Offset Pilot Demonstration (BOPD), during which time the benefit offset was offered to small samples of volunteers in four states, had, if anything, a positive impact on the volunteers' mean benefits in the next 2 years. BOPD volunteers might be atypical of all potential benefit offset users, however, so BOND results might be quite different.

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Social Security Disability Beneficiaries with Work-Related Goals and Expectations

by Gina A. Livermore*

This study examines working-age Social Security Disability Insurance and Supplemental Security Income beneficiaries who report having work goals or expectations, referring to these individuals as "work-oriented." The study uses data from the 2004 National Beneficiary Survey matched to administrative data spanning 2004–2007 to identify work-oriented beneficiaries and to analyze their sociodemographic, health, and employment characteristics, as well as their earnings-related benefit suspensions and terminations. Relative to other disability beneficiaries, the 40 percent classified as work-oriented were younger and more educated, had been on the disability rolls a shorter time, had lower income from public assistance, and were healthier. Just over half had recently engaged in work or in work preparation activities at interview, about half had earnings at some point during 2004–2007, and 10 percent left the disability rolls because of earnings for at least 1 month during that period. The findings show that a large share of beneficiaries have work goals, most are attempting to work, and many experience some success.

Introduction

The Social Security Administration (SSA) administers two programs that provide income support to about 12 million working-age people with disabilities—the Social Security Disability Insurance (DI) program and the Supplemental Security Income (SSI) program.[1] To qualify for either program, applicants must demonstrate that they are unable to work at substantial levels because of a long-term medically determinable impairment. Over the past decade, Congress has instituted a number of initiatives designed to promote employment among disability beneficiaries.[2] The passage of the Ticket to Work and Work Incentives Improvement Act of 1999 prompted numerous changes in SSI and DI intended to encourage and facilitate work among program participants. Ticket to Work greatly expanded the types of organizations that SSA would pay to support beneficiaries' employment efforts.

Ticket to Work program evaluations have reported results of a national survey in which a large minority of beneficiaries—about 40 percent—stated that their personal goals included work or that they saw themselves working in the near future (Thornton and others 2007; Stapleton and others 2008). This figure seems especially high because the disability programs' stringent eligibility requirements suggest that beneficiaries face formidable obstacles to employment; yet those studies also show that about half of these individuals (or about 20 percent of all beneficiaries) reported recent employment or work preparation

Selected Abbreviations

DI	Disability Insurance
IRS	Internal Revenue Service
NBS	National Beneficiary Survey
PIA	primary insurance amount
SSA	Social Security Administration
SSI	Supplemental Security Income

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Selected Abbreviations—*Continued*

TRF	Ticket Research File
VIF	variance inflation factor

activities. Thus, the 40 percent figure might not be unrealistic.

This article focuses on SSI and DI beneficiaries who report having work goals and expectations, assesses how they differ from other disability beneficiaries, and analyzes their work activity and the extent to which they meet their short-term employment expectations. Hereafter, these individuals are referred to as "work-oriented" beneficiaries. Data from the 2004 National Beneficiary Survey (NBS) are used to classify working-age (18 to 64) SSI and DI beneficiaries by their work-orientation status and to analyze their characteristics. The study also matches Social Security administrative data for 2004–2007 to the 2004 NBS to analyze employment activity during the NBS interview year and in the three following years. The analysis addresses the following issues:

- What are the characteristics of work-oriented beneficiaries and how do they differ from those of other disability beneficiaries? Among work-oriented beneficiaries, are there important differences across the SSI and DI programs?
- To what extent do work-oriented beneficiaries find work and leave the disability rolls during the years including and following their 2004 NBS interview?
- To what extent do work-oriented beneficiaries meet their short-term employment expectations?

Work-oriented beneficiaries are examined for two primary reasons. First, the policies designed to encourage employment are most relevant for this group. A better understanding of the characteristics and experiences of the SSI and DI beneficiaries most likely to demand and use employment supports might help SSA and other federal agencies improve their programs and better target their efforts. Second, prior analysis that compared work-related activities, goals, and expectations across 3 years of the NBS (Livermore, Stapleton, and Roche 2009) found a statistically significant increase in the share of beneficiaries reporting interest in employment, from 43 percent in 2004 to 48 percent in 2006. Most of this increase was due to changes in reported work goals and expectations. Perhaps SSA's efforts to promote employment changed beneficiaries' goals and expectations about work, and provided an important first step toward success. The study analyzes the employment outcomes of work-oriented beneficiaries and allows us to assess how realistic their work goals and expectations turned out to be over an extended (4-year) period. This analysis defines beneficiaries as work-oriented if they report having work goals and expectations, regardless of whether they are currently engaged in work-related activities.[3]

The analysis found that work-related activities were highly concentrated among the 40 percent of beneficiaries classified as work-oriented. With all else held constant, work-oriented beneficiaries were significantly more likely to be enrolled in DI and not in SSI, have higher average lifetime earnings, be younger, be more educated, and report being in better health. They were also more likely to have been on the disability rolls a shorter time in their most recent period of entitlement and to have lower levels of non–Social Security assistance. Among work-oriented beneficiaries, just over half had recently worked or engaged in work preparation activities at the time they were interviewed in 2004. About half of work-oriented beneficiaries had earnings at some point from 2004 through 2007, and of those with earnings, about half had earnings in all 4 years. Although many were working, only 10 percent of work-oriented disability beneficiaries had earnings sufficient to suspend or terminate their cash benefits for at least 1 month from 2004 through 2007. Although many work-oriented beneficiaries fell short of their employment goals, the findings suggest that most were actively attempting to work, and many had some success.

Background

The SSI and DI programs are designed to provide income support to individuals who have significant disabilities and are unable to work at levels considered by SSA to be substantial, as determined by earnings amount, hours worked, and nature of work. To qualify for either program, an applicant must demonstrate an inability to engage in substantial gainful activity (SGA) due to a medically determinable impairment that is expected to last at least 12 months or result in death. As of 2011, earnings above $1,000 per month qualify as SGA for most applicants.[4] DI eligibility also requires accumulating a sufficient number of recent and lifetime quarters of Social Security-covered employment. The DI benefit level is based on past earnings—individuals with higher lifetime earnings are eligible for higher DI benefits. By contrast, SSI is a means-tested program;

that is, eligibility is subject to strict income and resource limits. The amount of monthly SSI cash assistance is based on the individual's income and living arrangement. Individuals may qualify for both SSI and DI if their income (including DI benefits) and assets do not exceed SSI limits. Eligibility for either program can also provide access to public health insurance. DI beneficiaries qualify for Medicare coverage after a 24-month waiting period, and most SSI recipients are eligible for Medicaid automatically.

Although initial eligibility for both programs is contingent on limited work activity, DI and SSI differ markedly in their treatment of earnings in determining monthly cash payments and ongoing program eligibility. In the DI program, individuals are permitted to work and earn at any level for up to 9 months without losing eligibility for benefits. This 9-month period is referred to as the trial work period.[5] In 2011, individuals are considered to be in a trial work period if monthly earnings exceed $720 or if they work more than 80 self-employed hours per month. If individuals earn more than the SGA level in any month after completing this period, they become ineligible for any DI benefits, but remain eligible for Medicare (if they completed the 24-month Medicare waiting period prior to losing DI eligibility).

SSI payments are reduced by $1 for every $2 of earnings above $65 per month; thus, SSI payments decline gradually as earnings rise. SSI program provisions, known by their Social Security Act section numbers, allow certain participants with earnings above the SGA level to remain eligible for SSI payments (Section 1619(a)) or for Medicaid benefits even after SSI cash payments cease because of earnings (Section 1619(b)).

Elements of the SSI and DI programs can create disincentives for employment. Beneficiaries may not wish to jeopardize their cash or health insurance benefits by working, or may be willing to work only at limited levels so they will not lose benefits. This may be particularly true among DI-only beneficiaries with high benefits, some of whom might also be receiving benefits for dependents.[6] Fear of losing benefits because of increased earnings is just one of a long list of potential barriers to employment that beneficiaries may face. Others include

- poor health or functioning that limits the ability to work or reduces productivity;
- inadequate education, skills, training, or job-related experience;
- lack of reliable transportation;
- lack of specific work-enabling supports;
- inaccessible workplaces and inflexible employment situations;
- discrimination and employer misconceptions of disability;
- insufficient wages or benefits offered with employment;
- lack of information about employment-related supports and resources available;
- lack of information about the effect of earnings on cash and in-kind benefits; and
- inadequate job search and interview skills or information.

A number of SSI and DI provisions help beneficiaries in their efforts to work.[7] Most are intended to allow beneficiaries to maintain eligibility for public health insurance and to keep more of their cash disability benefits while working or preparing for work, but others help beneficiaries enhance their ability to work or their knowledge of the resources available to support their work efforts. Despite these supports, relatively few beneficiaries (about 9 percent) are employed at any given time (Livermore, Stapleton, and Roche 2009) and very few earn enough for cash benefits to cease in a given year.[8]

Given the large proportion of beneficiaries who report having work goals or expectations (40 percent), it may be surprising that so few are actually working at any given time. However, many beneficiaries share certain characteristics that can limit the ability to secure and maintain employment despite their desire to do so (Thornton and others 2007; Stapleton and others 2008; Livermore, Stapleton, and Roche 2009). Aside from poor health, large shares have less than a high school education, live in poverty, and report a variety of obstacles such as lack of reliable transportation, inaccessible workplaces, and discouragement of work either from others or through their own experiences. Survey respondents may also exaggerate their interest in work.

This article builds on previous studies of the employment of SSI and DI beneficiaries by presenting descriptive statistics on the characteristics and employment outcomes of beneficiaries who report having work goals and expectations, and by drawing comparisons with those who do not. It also conducts multivariate analyses to explore the characteristics associated with being work-oriented and the

determinants of leaving the disability benefit rolls because of earnings. Linking the survey data to administrative data sources also allows for an assessment of the extent to which work-oriented beneficiaries met their goals during the period following their survey interview.

Data

Four rounds of the NBS have been conducted as part of the Ticket to Work program evaluation. A new, nationally representative sample of beneficiaries aged 18 to 64 is selected for each round; for the first round, conducted in 2004, the sample comprised 7,603 respondents.[9] Each sample provides a wealth of information about the characteristics, service use, and employment activities of Social Security disability beneficiaries.

The analyses presented here are based on the 2004 NBS. The earliest round was selected because it provided the longest observation period into which the Social Security administrative data could be incorporated. Records in the 2004 NBS were matched to data contained in the 2007 Ticket Research File (TRF). The TRF consists of data extracts from a number of Social Security administrative files and contains records for all individuals aged 10 to 64 who have participated in the SSI and DI programs since 1996 (including those who entered SSI or DI prior to 1996). These data permit the analysis of information on mortality, the use of SSA work supports, and the number of months that cash benefits were suspended or terminated because of work.

The 2004 NBS data also were matched to annual Internal Revenue Service (IRS) records to analyze the earnings of NBS respondents during 2004–2007.[10] The earnings data come from SSA's Master Earnings File, which contains wage and salary items from the employer-filed W-2 form and information on other earnings not subject to Federal Insurance Contributions Act (FICA) Social Security and Medicare taxes.[11]

The 2004 NBS sample sizes are shown in Table 1.[12] Beneficiaries are categorized by work orientation based on self-reported goals and expectations. Respondents were asked if their personal goals included getting a job, moving up in a job, or learning new job skills. They were also asked if they saw themselves working for pay in the next year and in the next 5 years. Respondents providing a positive response to any of these questions were classified as work-oriented. The specific NBS questions (and results) were as follows:

- Do your personal goals include [*(if not working)* getting a job,] moving up in a job, or learning new job skills? (30 percent responded positively.)
- Please tell me how much you agree with the following statements. Would you say you strongly agree, agree, disagree, or strongly disagree?
  - —You see yourself [*(if working)* continuing to work/*(if not working)* working] for pay in the next year. (20 percent agreed or agreed strongly.)
  - —You see yourself [*(if working)* continuing to work/ *(if not working)* working] for pay in the next five years. (26 percent agreed or agreed strongly.)

Forty percent of the sample provided a positive response to at least one of these questions and was classified as work-oriented. In this study, many statistics are shown by program type to identify any differences in the experiences of work-oriented beneficiaries

Table 1.
2004 NBS sample sizes, by work orientation and program type

Measure	All beneficiaries	Nonwork-oriented beneficiaries	Work-oriented beneficiaries			
			All	DI-only	Concurrent	SSI-only
Number						
Unweighted	7,603	3,170	4,433	1,790	909	1,734
Weighted	8,786,823	5,308,163	3,478,660	1,643,854	645,556	1,189,250
Percentage distribution of weighted samples						
All disability beneficiaries	100	60	40	19	7	14
Work-oriented beneficiaries	…	…	100	47	19	34

SOURCE: Author's calculations, 2004 National Beneficiary Survey.

NOTES: … = not applicable.

Rounded components of percentage distributions do not necessarily sum to 100.

between DI and SSI participants. Program types are DI-only, SSI-only, and concurrent (participating in both programs). The weighted and unweighted sample sizes for all subgroups are shown in Table 1.

All estimates were derived using the relevant survey sampling weights, and all standard errors used to compute tests of statistical significance account appropriately for the survey's complex sampling design.[13] The statistics represent all working-age SSI and DI beneficiaries on the disability rolls as of June 2003.

Personal Characteristics

A variety of personal characteristics have been shown to be associated with beneficiary work-related activity and employment success. Previous analyses have examined the characteristics associated with employment, service use, and Ticket to Work program participation (Thornton and others 2007; Stapleton and others 2008). Those studies showed that age, health status, and time on the disability rolls were significantly correlated with these outcomes. This section focuses on work-oriented beneficiaries and examines how their program participation, sociodemographic, and health characteristics differ from those of nonwork-oriented beneficiaries. A multivariate analysis of the predictors of work orientation follows, in which other characteristics are held constant and program type is treated as a characteristic potentially differentiating work-oriented from nonwork-oriented beneficiaries.

Work-oriented beneficiaries differed somewhat from other disability beneficiaries in terms of their distribution by SSA program type and average benefit amounts (Table 2). Relative to those without work goals or expectations, work-oriented beneficiaries were significantly less likely to be DI-only beneficiaries

Table 2.
Disability beneficiary program participation and sociodemographic characteristics, by work orientation and program type

Characteristic	All beneficiaries	Work-oriented beneficiaries				Nonwork-oriented beneficiaries			
		All	DI-only	Concurrent	SSI-only	All	DI-only	Concurrent	SSI-only
				Program participation characteristics					
Program type at interview (%)									
DI-only	53.3	47.3*	100.0	…	…	57.2	100.0	…	…
Concurrent	16.2	18.6*	…	100.0	…	14.7	…	100.0	…
SSI-only	30.5	34.2*	…	…	100.0	28.1	…	…	100.0
Mean monthly benefit amount ($)	788.0	741.7**	962.2	645.8	489.1	818.2	1,014.4	652.5	505.1
Months since initial award (%)									
Fewer than 24	3.8	4.5	6.1	4.3	2.4	3.3	4.3	2.1	1.9
24–59	19.8	20.0	29.0	13.8	11.0	19.6	28.0	9.1	7.9
60–119	23.2	22.1	23.9	18.5	21.5	23.8	27.8	17.1	19.2
120 or more	53.3	53.4	41.0	63.4	65.1	53.2	39.8	71.6	70.9
Mean months since initial award	148.8	146.2	122.3	173.1	164.7	150.4	121.8	204.5	180.3
Months since most recent award (%)									
Fewer than 24	9.3	9.5*	8.3	16.7	7.4	9.2	9.7	14.9	5.3
24–59	25.3	27.6*	31.1	30.1	21.4	23.8	27.1	20.8	18.6
60–119	26.1	25.7*	25.1	29.2	24.7	26.3	27.8	25.9	23.4
120 or more	39.3	37.1*	35.6	24.0	46.5	40.7	35.4	38.5	52.8
Mean months since most recent award	113.3	109.0**	107.8	85.5	123.5	116.2	108.3	104.0	138.5
				Sociodemographic characteristics					
Mean age (years)	48.7	43.5**	48.3	41.0	38.3	52.0	54.7	49.2	48.1
Percentage distributions:									
By sex									
Men	49.7	51.0	54.3	51.3	46.1	48.8	54.9	44.0	39.0
Women	50.3	49.0	45.7	48.7	53.9	51.2	45.1	56.0	61.0

(Continued)

Table 2.
Disability beneficiary program participation and sociodemographic characteristics, by work orientation and program type—*Continued*

Characteristic	All beneficiaries	Work-oriented beneficiaries				Nonwork-oriented beneficiaries			
		All	DI-only	Concurrent	SSI-only	All	DI-only	Concurrent	SSI-only
				Sociodemographic characteristics (cont.)					
Percentage distributions:									
By race									
White	71.3	66.5*	75.2	66.1	54.7	74.4	80.1	71.9	64.1
Black	22.4	27.2*	20.9	25.8	36.7	19.3	15.7	20.5	25.9
Other race	6.3	6.3*	3.9	8.1	8.7	6.3	4.2	7.6	9.9
By ethnicity									
Hispanic origin	10.6	11.6	8.4	16.3	13.5	9.9	5.4	15.0	16.2
Non-Hispanic	89.4	88.4	91.6	83.7	86.5	90.1	94.6	85.0	83.8
By educational attainment									
Did not finish high school	41.9	37.9*	26.5	39.8	52.6	44.5	31.5	61.1	62.4
High school diploma or equivalent	35.3	35.5*	37.5	36.8	31.9	35.2	41.2	26.8	27.1
Education beyond high school	22.8	26.6*	36.0	23.4	15.5	20.3	27.3	12.1	10.5
By living arrangement									
Lives alone or with unrelated others	35.7	35.8*	31.2	47.9	35.6	35.6	28.4	43.9	45.9
Lives with spouse/other relatives, no children	50.0	46.8*	52.3	36.8	44.6	52.1	59.7	45.1	40.0
Lives with spouse and own children	8.1	9.2*	10.6	7.7	8.2	7.4	8.9	4.9	5.6
Unmarried and lives with own children	6.3	8.2*	5.9	7.6	11.6	5.0	3.0	6.1	8.5
By household income in 2003 as a percentage of federal poverty threshold									
Less than 100	48.5	49.5	30.2	65.6	67.6	47.9	27.4	73.8	76.0
100–299	38.6	38.9	52.1	28.7	26.4	38.4	51.4	23.3	20.0
300 or more	12.8	11.5	17.8	5.7	6.0	13.7	21.2	2.9	4.0

SOURCE: 2004 NBS linked to the 2007 TRF.

NOTES: Sample size = 7,603.

… = not applicable.

Rounded components of percentage distributions do not necessarily sum to 100.

* = Significantly different from the distribution of all nonwork-oriented beneficiaries at the 0.05 level, chi-square test.

** = Significantly different from all nonwork-oriented beneficiaries at the 0.05 level, two-tailed test.

and more likely to be SSI recipients. SSI payments are lower, on average, than DI benefits, which might contribute to the finding that the average Social Security benefit amount for work-oriented beneficiaries was significantly lower than that of nonwork-oriented beneficiaries. Work-oriented beneficiaries in each program had lower benefit amounts than their nonwork-oriented counterparts. Elapsed time since initial disability award did not differ significantly according to work orientation: About 53 percent of both groups received their initial award 10 or more years before the NBS interview. This finding holds for DI-only beneficiaries, but the average time since initial award for work-oriented SSI-only and concurrent beneficiaries was shorter than that of their nonwork-oriented counterparts by 15.6 and 31.4 months, respectively. However, the average time elapsed since work-oriented beneficiaries' most *recent* award was significantly shorter (by 7 months) than that of nonwork-oriented beneficiaries. This finding holds for concurrent and

SSI-only beneficiaries, but average time since most recent award did not differ between work-oriented and other DI-only beneficiaries.

Table 2 also shows that work-oriented beneficiaries differed from those without work goals or expectations in terms of certain sociodemographic characteristics. On average, work-oriented beneficiaries were significantly younger and were more likely to be nonwhite. They also were more likely to have at least finished high school. These findings do not change when the groups are compared by program. In terms of living arrangements, work-oriented beneficiaries were as likely to live alone as those without work goals or expectations, but were more likely to be living with children. When compared by program, work-oriented SSI-only recipients were much less likely to live alone than their nonwork-oriented counterparts. For disability beneficiaries overall, the likelihood of living in households with incomes below the federal poverty level did not differ according to work orientation. However, work-oriented SSI-only and concurrent beneficiaries were less likely to be in poverty than their nonwork-oriented counterparts were.

By a variety of indicators, work-oriented beneficiaries appear to be in better health than beneficiaries without work goals or expectations (Table 3), and this is true regardless of program type. Overall, work-oriented beneficiaries were significantly less likely to report being in poor or very poor health (30.2 percent versus 51.6 percent), to report that their health was worse than last year (29.3 percent versus 48.1 percent), and to report difficulty with 10 out of 13 specific activities. Administrative data also indicate that work-oriented beneficiaries were significantly less likely to have died during the 3-plus years following the NBS interview in 2004 (5.8 percent compared with 10.5 percent). Beneficiaries with and without work goals or expectations were similar in the extent to which they experienced difficulties with selected social and cognitive activities such as getting along with others, concentrating, and coping with stress.

The differences in health status might in part reflect the age difference between the two groups, as well as the nature of the underlying conditions causing disability. In addition to being younger on average (Table 2), work-oriented beneficiaries, regardless of program, were significantly more likely to report that their disabilities began during childhood (Table 3). Work-oriented beneficiaries were significantly more likely to report mental illness and intellectual disability as conditions limiting their daily activities, and less likely to report musculoskeletal disorders as a limiting factor. With the scope narrowed to SSI-only recipients, the likelihood of reporting mental illness was about equal for those with and without work goals or expectations; the same was true for intellectual disability among concurrent and SSI-only beneficiaries. Thus, the overall differences by work orientation appear to be due to the relatively higher prevalence of mental illness and intellectual disability among work-oriented DI-only beneficiaries, and a higher prevalence of mental illness among work-oriented concurrent beneficiaries compared with their nonwork-oriented counterparts.

Predictors of Work Orientation

This section describes the general findings of a logistic regression model constructed to determine which characteristics were significantly associated with being work-oriented. The appendix discusses the model's explanatory variables; Table 4 presents its results. The model's findings are summarized for the following categories of characteristics, holding all other characteristics constant:[14]

Program type and benefit level. DI-only beneficiaries were generally more likely to be work-oriented than other beneficiaries, but DI beneficiaries with higher than average lifetime earnings were significantly less likely to be work-oriented.[15] DI eligibility requires recent and sufficient work history at the time of disability onset. Thus, finding that DI-only beneficiaries are more likely to be work-oriented might indicate that, with all else held constant, those with stronger labor market histories are more likely to be work-oriented after entering disability programs. Work history and unobserved characteristics such as motivation to work are both likely to affect current work goals and expectations.[16] Finding that those with higher lifetime earnings are less likely to be work-oriented might seem counterintuitive. Perhaps because higher earners face greater opportunity costs for leaving the labor force because of disability, they might have relatively more severe disabilities than lower earners by the time they enter DI, and therefore be less likely to be work-oriented after program entry.

Social Security benefit levels are not significant work orientation predictors after controlling for other characteristics, but individuals receiving more than $500 per month in non–Social Security benefits were significantly less likely to report having work goals or expectations. Time on the disability rolls for the most recent period of entitlement is also a significant

predictor of work orientation. After the first year on the rolls, the more time had elapsed since the most recent award, the less likely beneficiaries were to report having work goals or expectations.

Age and sex. The likelihood of being work-oriented decreased markedly with age. Sex is not a significant predictor of work orientation.

Race and ethnicity. Beneficiaries who are black and those who are Hispanic were significantly more likely to be work-oriented than beneficiaries of other races or ethnicity.

Education. The likelihood of being work-oriented increased with level of education.

Table 3.
Disability beneficiary health and functional status indicators, by work orientation and program type (in percent)

Indicator	All beneficiaries	Work-oriented beneficiaries				Nonwork-oriented beneficiaries			
		All	DI-only	Concurrent	SSI-only	All	DI-only	Concurrent	SSI-only
Childhood disability onset	22.8	31.5*	17.2	40.1	46.8	17.0	8.4	29.5	28.0
General health									
Excellent or very good	10.0	16.0**	12.6	17.3	20.0	6.0	4.9	6.3	8.1
Good or fair	46.9	53.8**	54.4	59.1	50.1	42.4	40.7	48.1	43.0
Poor or very poor	43.1	30.2**	33.1	23.6	29.9	51.6	54.4	45.6	48.9
Current health compared to last year									
Better	16.1	23.3**	22.1	25.1	23.9	11.4	10.5	11.7	13.2
About the same	43.2	47.4**	46.5	48.6	48.0	40.5	38.5	43.8	42.8
Worse	40.7	29.3**	31.4	26.3	28.1	48.1	51.0	44.5	44.0
Category of limiting condition(s)									
Musculoskeletal disorders	36.1	28.5*	33.5	26.6	22.6	41.0	45.1	37.9	34.2
Mental illness	31.0	34.8*	31.7	41.3	35.5	28.5	24.2	31.1	36.0
Other diseases of the nervous system	15.1	14.0	14.5	13.4	13.8	15.9	18.1	12.9	12.9
Sensory disorders	9.0	8.9	8.6	10.4	8.5	9.0	8.5	10.2	9.4
Intellectual disability	7.2	8.1*	5.3	11.7	10.2	6.5	3.4	12.3	9.9
Other	63.2	56.1*	58.2	50.4	56.3	67.8	69.6	66.0	65.0
No limiting conditions	4.6	7.9*	6.3	8.1	9.9	2.4	2.3	3.7	2.1
Difficulty with specific activities									
Walking 3 blocks, climbing 10 steps, standing 1 hour, or crouching	84.4	74.3*	79.9	71.0	68.4	91.0	94.0	87.0	86.9
Grasping, reaching, or lifting 10 pounds	67.5	54.5*	59.1	48.6	51.3	76.0	79.4	71.7	71.4
Speaking, hearing, or seeing	65.3	60.4*	60.5	58.5	61.3	68.4	66.7	69.1	71.7
Coping with stress	58.7	56.9	53.3	61.2	59.6	59.9	54.8	67.8	66.1
Concentrating	55.1	54.6	52.9	53.4	57.7	55.5	50.7	59.2	63.4
Getting around outside of the home	46.6	36.1*	38.4	32.5	34.8	53.5	53.1	51.0	55.6
Shopping for personal items	37.1	28.9*	29.1	30.6	27.9	42.4	39.1	46.1	47.2
Preparing meals	38.0	31.4*	30.0	33.4	32.3	42.3	39.3	48.7	45.3
Getting into or out of bed	37.2	29.1*	33.2	24.9	25.6	42.5	45.7	31.8	41.6
Bathing or dressing	28.7	21.5*	24.3	17.7	19.6	33.5	32.8	31.7	35.9
Getting along with others	26.4	28.0	22.1	33.9	33.1	25.4	20.9	29.3	32.3
Getting around inside the house	22.8	16.2*	18.4	13.7	14.6	27.2	28.8	22.4	26.2
Eating	15.4	11.2*	10.8	11.0	12.0	18.2	17.3	21.7	18.0
Died between interview and December 2007	8.6	5.8*	7.5	4.1	4.2	10.5	11.4	9.1	9.3

SOURCE: 2004 NBS linked to the 2004 TRF.

NOTES: Sample size = 7,603.

Rounded components of percentage distributions do not necessarily sum to 100.

* = Significantly different from all nonwork-oriented beneficiaries at the 0.05 level, two-tailed test.

** = Significantly different from the distribution of all nonwork-oriented beneficiaries at the 0.05 level, chi-square test.

Living arrangement. Living arrangement, defined based on marital status, children, and living with others, is not a significant predictor of work orientation after controlling for other characteristics, with the exception of those living with their own children aged 6 or younger, who were significantly more likely to be work-oriented than others.

Health status. Specific health conditions are not predictive of work orientation, but a variety of health status measures are significant predictors. With one exception, these measures indicated that those in better health were significantly more likely to be work-oriented than were those in poorer health. The exception was the variable reflecting indicators of

Table 4.
Logit model estimates of the likelihood of being work-oriented

Variable	Coefficient	Standard error	Odds ratio
Constant	-1.68	0.23	0.19
	Program participation characteristics		
Program type			
Concurrent	0.11	0.11	1.12
DI-only	0.23*	0.11*	1.26*
Social Security benefits monthly amount			
PIA greater than $1,200	-0.47*	0.13*	0.63*
$500–$1,000	-0.04	0.12	0.97
Greater than $1,000	-0.08	0.14	0.92
Non–Social Security benefits monthly amount			
$1–$199	0.00	0.10	1.00
$200–$499	0.01	0.15	1.01
$500 or more	-0.37*	0.15*	0.69*
Months on disability benefit rolls			
0–12	-0.13	0.26	0.88
13–24	0.50*	0.16*	1.65*
25–60	0.27*	0.11*	1.32*
61–120	-0.04	0.10	0.96
	Sociodemographic characteristics		
Age			
18–24	2.11*	0.15*	8.22*
25–39	1.36*	0.12*	3.91*
40–54	0.83*	0.11*	2.30*
Sex, race, and ethnicity			
Male	0.03	0.08	1.03
Black	0.39*	0.10*	1.48*
Other race	0.14	0.17	1.15
Hispanic origin	0.36*	0.13*	1.44*
Educational attainment and income			
Completed high school or equivalent	0.21*	0.09*	1.23*
Education beyond high school	0.81*	0.12*	2.24*
Family income = 300 percent or more of federal poverty threshold	-0.10	0.12	0.91
Living arrangements			
Lives with spouse or other relatives, no children	-0.07	0.11	0.93
Married, lives with children	-0.08	0.16	0.92
Unmarried, lives with children	0.15	0.15	1.17
Lives with children younger than age 6	0.31*	0.17*	1.37*

(Continued)

Table 4.
Logit model estimates of the likelihood of being work-oriented—*Continued*

Variable	Coefficient	Standard error	Odds ratio
		Health characteristics	
Cause of limiting condition			
Mental illness	0.08	0.09	1.08
Intellectual disability	-0.19	0.14	0.83
Musculoskeletal disorders	0.03	0.08	1.03
Sensory disorders	0.11	0.15	1.12
Other disorders of the nervous system	-0.05	0.10	0.95
Other condition causing limitation	-0.01	0.08	0.99
No condition causing limitation	0.51*	0.22*	1.66*
Health status[a]			
MCS score 44–51	0.16	0.12	1.17
MCS score greater than 51	0.10	0.09	1.11
PCS score 44–51	0.30*	0.11*	1.35*
PCS score greater than 51	0.47*	0.14*	1.59*
MCS and PCS scores both greater than 51	0.37*	0.16*	1.45*
Presence or type of limitation			
No ADL, IADL, or functional limitations	0.44*	0.23*	1.55*
At least one ADL/IADL requiring assistance	-0.26*	0.09*	0.77*
At least one severe physical limitation	-0.41*	0.08*	0.67*
Other health indicator			
Obesity	0.08	0.08	1.09
Substance abuse	0.55*	0.18*	1.74*

SOURCE: Author's calculations based on 2004 NBS.

NOTES: Sample size = 7,603.

PIA = primary insurance amount; MCS = Medical Component Summary; PCS = Physical Component Summary; ADL = activities of daily living; IADL = instrumental activities of daily living.

* = Statistically significant at the 0.05 level.

a. The MCS and PCS measures were developed by designers of the SF-8 Health Survey. MCS and PCS scores for the general adult populaton both have a mean of 50 and a standard deviation of 10. For more information about the SF-8, see Ware and others (2001).

substance abuse. Those reporting such indicators were significantly more likely to be work-oriented than others.

Many of the differences in characteristics between beneficiaries who were and were not work-oriented still hold after controlling for other characteristics, but some do not. For example, although work-oriented beneficiaries were less likely to be enrolled in DI only, after controlling for other characteristics, DI-only status is a significant and positive predictor of being work-oriented. Likewise, Hispanic ethnicity is a significant predictor of being work-oriented after controlling for other characteristics. As shown earlier, some of the differences are due to differences in the characteristics of beneficiaries across programs. The multivariate analysis allows us to see which characteristics are significantly associated with work orientation after controlling for program and other characteristics.

Consistent with findings on the determinants of work activity and work-orientation status presented in other studies (Thornton and others 2007; Stapleton and others 2008), the model indicates that younger ages, shorter time on the disability rolls, and higher educational attainment are important positive predictors of beneficiaries having work goals or expectations. Age in particular is a strong predictor. Those aged 18 to 24 were most likely to report having work goals or expectations (8.22 odds ratio). The findings suggest that targeting information about employment supports and interventions to beneficiaries with these characteristics might lead to significant improvements in employment outcomes and reduced reliance on benefits.

Employment Outcomes and Benefit Cessation

This section presents information about the employment-related activities of beneficiaries, focusing on differences by work orientation. Because SSI and DI differ significantly in terms of eligibility requirements and the treatment of earnings, employment outcomes for work-oriented beneficiaries also are examined by program.

Overview of Employment-Related Activities

Not surprisingly, work-oriented beneficiaries were much more likely to engage in work-related activities than other beneficiaries (Table 5). About one-quarter of work-oriented beneficiaries received training or other services during the previous year that were specifically intended to enhance their employment prospects, and 41 percent reported that they recently worked or actively sought work. By comparison, only 4 percent of nonwork-oriented beneficiaries reported any employment service or training activities and only 3 percent indicated any recent work or job searches. Just over half (52 percent) of work-oriented beneficiaries reported participating in any sort of recent employment-related activities, compared with only 6 percent of nonwork-oriented beneficiaries.

Analysis by program type reveals that SSI recipients were significantly more likely than DI-only beneficiaries to be looking for work or waiting to finish school or a training program at the time of the NBS interview. Although SSI recipients were more likely to be seeking a job, they were significantly less likely to have engaged in recent work-related activities overall. This may stem from their much lower employment rates, both at interview (15 percent for SSI-only recipients compared with 25 percent for DI-only beneficiaries) and during the previous year (22 percent versus 33 percent). These findings seem logical given the different eligibility criteria for the two programs. DI beneficiaries need more significant work histories to qualify for benefits, whereas SSI recipients' work histories are insufficient to qualify for DI benefits. The same factors that contributed to the differences in work histories likely contributed to the differences in their recent employment success.

Table 5.
Employment-related activities of disability beneficiaries, by work orientation and program type (in percent)

Activity	All beneficiaries	Nonwork-oriented beneficiaries	Work-oriented beneficiaries			
			All	DI-only	Concurrent	SSI-only
Employment service or training						
Used employment or training services in previous year	9	3	17*	18	21	14
Used employment or other services in previous year specifically for getting a job or increasing income	3	1	7*	7	9	5
Not working because waiting to finish school or training program	4	1	10*	6	11**	15**
Any employment service or training	12	4	24*	22	27	24
Work or job search						
Working at interview	9	1	21*	25	22	15**
Worked during the previous year	13	2	29*	33	33	22**
Looked for work in past 4 weeks	6	1	13*	10	17**	16**
Any work or job search	18	3	41*	42	45	36**
Any of the above activities	24	6	52*	51	56	50

SOURCE: 2004 NBS.

NOTES: Sample size = 7,603.

Rounded components of percentage distributions do not necessarily sum to 100.

* = Significantly different from nonwork-oriented beneficiaries at the 0.05 level, two-tailed test.

** = Significantly different from work-oriented DI-only beneficiaries at the 0.05 level, two-tailed test.

Earnings During 2004–2007

SSA staff analyzed annual IRS earnings data matched to the 2004 NBS to examine whether disability beneficiaries had earnings during 2004–2007, and if so, to determine the amounts (Table 6). Overall, 27 percent of beneficiaries had earnings in at least 1 of the 4 years, and among those with any earnings, 25 percent earned above the annualized SGA level for nonblind beneficiaries in at least 1 year.[17] As expected, work-oriented beneficiaries were significantly more likely than other beneficiaries to have earnings. Nearly half (45 percent) of all work-oriented beneficiaries had earnings in at least 1 of the 4 years, compared with only 15 percent of nonwork-oriented beneficiaries. Among those with earnings, work-oriented beneficiaries had higher average earnings than nonwork-oriented beneficiaries ($7,091 versus $5,121), were significantly more likely to have worked above the annualized SGA level in at least 1 year (28 percent versus 19 percent), and were more likely to have earnings in multiple years (80 percent versus 66 percent). SSI-only recipients were significantly less likely than other work-oriented beneficiaries to have earnings in any of the 4 years, and both SSI-only and concurrent beneficiaries had lower average earnings and were significantly less likely to earn above the annualized SGA level in at least 1 of the 4 years than were work-oriented DI-only beneficiaries.[18]

When the earnings of beneficiaries with and without work goals or expectations are compared across individual years, two interesting patterns emerge (Table 7). First, the percentages who were working in each group remained constant across all years—about one-third of work-oriented beneficiaries and just under one-tenth of nonwork-oriented beneficiaries had earnings in each of the 4 years. Second, earnings increased each year among work-oriented beneficiaries, contrasting with the relatively flat earnings across the years for those who are not work-oriented. During the first year, the share of beneficiaries who worked was much greater among the work-oriented, but their average earnings and likelihood of earning above SGA level did not differ significantly from those of other beneficiaries with earnings. Over the next 3 years, there was a steady increase in both the average earnings and likelihood of earning above SGA level among work-oriented beneficiaries that was not evident among nonwork-oriented beneficiaries with earnings.

Months Without Cash Benefits Because of Work

Administrative data in the TRF were used to determine the share of beneficiaries whose DI and SSI cash benefits were suspended or terminated for at least 1 month during 2004–2007 because of work activity (Table 8).[19] Although benefit cessation because of work

Table 6.
Earnings of disability beneficiaries during 2004–2007, by work orientation and program type

Earnings measure	All beneficiaries	Nonwork-oriented beneficiaries	Work-oriented beneficiaries			
			All	DI-only	Concurrent	SSI-only
No earnings 2004–2007 (%)	73	85	56*	51	49	63**
Earnings in 1 year only (%)	7	5	9*	8	12	9
Earnings in all 4 years (%)	11	5	21*	24	23	15**
Earnings in any year 2004–2007 (%)	27	15	45*	49	51	37**
Average annual earnings ($) [a]	6,442	5,121	7,091*	8,605	4,781**	6,087**
Earners with earnings exceeding annualized SGA level in at least 1 year (%) [b]	25	19	28*	32	23**	26**

SOURCE: 2004 NBS matched to 2004–2007 IRS earnings data.

NOTES: Sample size = 7,603.

Earnings are expressed in 2007 dollars, adjusted based on the national Average Wage Index.

* = Significantly different from nonwork-oriented beneficiaries at the 0.05 level, two-tailed test.

** = Significantly different from work-oriented DI-only beneficiaries at the 0.05 level, two-tailed test.

a. Computed as the mean of the individual averages across all years with earnings among those with earnings in any of the 4 years.

b. The annualized nonblind SGA level was approximately $11,000 (ranging from $10,788 to $11,017) in each year when expressed in 2007 dollars.

Table 7.
Selected earnings characteristics of disability beneficiaries with positive earnings, by work orientation, 2004–2007

Characteristic	All beneficiaries	Work-oriented beneficiaries	Nonwork-oriented beneficiaries
		2004	
Percentage with—			
Any earnings	18	[a] 33	9
Earnings exceeding annualized SGA level [b]	19	20	18
Average annual earnings ($)	6,792	7,196	5,809
		2005	
Percentage with—			
Any earnings	19	[a] 33	9
Earnings exceeding annualized SGA level [b]	20	22	17
Average annual earnings ($)	7,488	[a] 8,110	5,972
		2006	
Percentage with—			
Any earnings	18	[a] 33	9
Earnings exceeding annualized SGA level [b]	22	[a] 24	18
Average annual earnings ($)	7,739	[a] 8,649	5,574
		2007	
Percentage with—			
Any earnings	18	[a] 31	8
Earnings exceeding annualized SGA level [b]	23	[a,c] 26	16
Average annual earnings ($)	8,127	[a,c] 9,159	5,580

SOURCE: 2004 NBS matched to 2004–2007 IRS earnings data.

NOTES: Sample size = 7,603.

Earnings are expressed in 2007 dollars based on the national Average Wage Index.

a. Significantly different from nonwork-oriented beneficiaries at the 0.05 level, two-tailed test. Tests of significance were not performed on median values.

b. The annualized nonblind SGA level was approximately $11,000 (ranging from $10,788 to $11,017) in each year when expressed in 2007 dollars.

c. Significantly different from the corresponding 2004 value at the 0.05 level, two-tailed test.

is generally infrequent, work-oriented beneficiaries were much more likely to experience it than nonwork-oriented beneficiaries were (9.7 percent versus 3.4 percent). Work-oriented beneficiaries with earnings sufficient to discontinue cash benefits for 1 year or longer constituted about half of work-oriented beneficiaries with at least 1 month of discontinued benefits and 4.5 percent of all work-oriented beneficiaries. Given the lack of work expectations and limited recent work-related activities observed among nonwork-oriented beneficiaries, it is perhaps surprising that even 3.4 percent had earnings sufficient to discontinue benefits for at least 1 month between 2004 and 2007. Possibly, circumstances and work expectations changed after the interview in 2004. For a small share of beneficiaries, reporting recent work activity at the time of interview was not synonymous with having work-related goals or expectations. As shown in Table 5, 6 percent of nonwork-oriented beneficiaries reported engaging in recent employment-related activities when interviewed in 2004. Furthermore, nearly half (48 percent) of work-oriented beneficiaries had not engaged in any recent employment-related activities at interview. Just as work-related goals and expectations are not a universal indicator of work-related activity, their absence does not necessarily equate with a lack of work-related activity.

Although the administrative data are somewhat imprecise in attributing cash benefit suspensions and terminations to work activity,[20] the findings suggest

that work-oriented beneficiaries often overestimate the likelihood that they will work and earn enough to discontinue disability benefits. As Table 9 shows, 19 percent of all work-oriented beneficiaries saw themselves earning enough to discontinue benefits within 1 year, and 38 percent saw themselves doing so within 5 years. Administrative data for the interview year and the 3 following years indicate that only 10 percent had earned enough to discontinue benefits for at least 1 month. Although lower than their stated expectations, this still represents a significant number of cash benefit suspensions and terminations because of work, and suggests that the expectations of work-oriented beneficiaries are not entirely unrealistic.

The likelihood of earning enough to discontinue benefits varied across programs (Table 8). Work-oriented SSI-only and concurrent beneficiaries were significantly more likely to discontinue cash benefits for at least 1 month because of work (about 11 percent) than their DI-only counterparts were (8.0 percent). This may be because earnings affect SSI payments more readily than DI benefits, DI's 9-month trial work period delays the cessation of benefits, and those with high DI benefit levels might be unwilling or unable to earn enough to replace the benefits lost if earnings exceed SGA level. [21]

Determinants of Leaving the Disability Rolls Because of Work

This section describes the findings of a logistic regression model constructed to determine which characteristics were significantly associated with leaving the disability rolls because of work for 1 month or longer during 2004–2007. Model estimates are based on the full sample of beneficiaries regardless of work orientation. The appendix discusses the model's explanatory variables and Table 10 presents its results. The model's findings are summarized for the following categories

Table 8.
Months off the disability rolls because of work during 2004–2007, by work orientation and program type (in percent)

Months	All beneficiaries	Nonwork-oriented beneficiaries	Work-oriented beneficiaries			
			All	DI-only	Concurrent	SSI-only
0	94.1	96.6	90.3*	92.0	88.9**	88.8**
1–3	1.2	0.6	2.0*	1.3	2.4**	2.8**
4–12	2.0	1.2	3.1*	2.1	4.5**	3.9**
13–24	1.8	1.5	2.3*	1.1	3.1**	3.4**
25–48	0.9	0.1	2.2*	3.5	1.1**	1.2**

SOURCE: 2004 NBS matched to the 2007 TRF.

NOTES: Sample size = 7,603.

* = Significantly different from the distribution of nonwork-oriented beneficiaries at the 0.05 level, chi-square test.

** = Significantly different from the distribution of work-oriented DI-only beneficiaries at the 0.05 level, chi-square test.

Table 9.
Employment expectations among work-oriented disability beneficiaries, by program type (in percent)

Expectation	All	DI-only	Concurrent	SSI-only
Sees self working for pay within—				
1 year	51	51	54	49
5 years	65	62	69*	67*
Sees self working and earning enough to stop receiving disability benefits within—				
1 year	19	15	19	24*
5 years	38	34	39	43*

SOURCE: 2004 NBS.

NOTES: Sample size = 4,433.

* = Significantly different from DI-only beneficiaries at the 0.05 level, two-tailed test.

of characteristics, holding all other characteristics constant:

Program type and benefit level. SSI-only recipients were more likely than other beneficiaries to leave the disability rolls because of work. Those with low Social Security benefits (less than $500 per month) were also significantly more likely to leave the rolls for at least 1 month during the 4-year observation period. Time on the rolls for the most recent period of entitlement is a significant predictor; those observed during their second year on the rolls (months 13 to 24) were more likely to leave the rolls because of work than others were.

Age and sex. After controlling for other characteristics, neither age nor sex is a significant predictor of leaving the rolls because of work.

Table 10.
Logit model estimates of the likelihood of working enough to leave the disability rolls for at least 1 month during 2004–2007

Variable	Coefficient	Standard error	Odds ratio
Constant	-0.86	0.37	0.42
	Program participation characteristics		
Program type			
Concurrent	-0.03	0.18	0.97
DI-only	-1.11*	0.23*	0.33*
Social Security benefits monthly amount			
PIA greater than $1,200	-0.13	0.34	0.88
$500–$1,000	-0.95*	0.16*	0.39*
Greater than $1,000	-0.83*	0.30*	0.43*
Non–Social Security benefits monthly amount			
$1–$199	0.03	0.19	1.03
$200–$499	-0.18	0.26	0.84
$500 or more	-0.21	0.30	0.81
Months on disability benefit rolls			
0–12	-0.01	0.35	0.99
13–24	0.74*	0.27*	2.09*
25–60	0.29	0.19	1.33
61–120	0.23	0.18	1.26
	Sociodemographic characteristics		
Age			
18–24	-0.12	0.26	0.89
25–39	0.13	0.22	1.14
40–54	-0.08	0.23	0.92
Sex, race, and ethnicity			
Male	-0.15	0.14	0.86
Black	-0.10	0.19	0.91
Other race	-0.81*	0.33*	0.44*
Hispanic origin	-0.32	0.25	0.72
Educational attainment and income			
Completed high school or equivalent	-0.29	0.15	0.75
Education beyond high school	0.25	0.21	1.29
Family income = 300 percent or more of federal poverty threshold	0.30	0.19	1.34
Living arrangements			
Lives with spouse or other relatives, no children	0.18	0.17	1.20
Married, lives with children	0.65*	0.23*	1.91*
Unmarried, lives with children	-0.26	0.24	0.77
Lives with children younger than age 6	-0.05	0.18	0.95

(Continued)

Table 10.
Logit model estimates of the likelihood of working enough to leave the disability rolls for at least 1 month during 2004–2007—*Continued*

Variable	Coefficient	Standard error	Odds ratio
		Health characteristics	
Cause of limiting condition			
Mental illness	-0.22	0.20	0.80
Intellectual disability	-0.54*	0.18*	0.58*
Musculoskeletal disorders	-0.09	0.20	0.91
Sensory disorders	0.17	0.28	1.18
Other disorders of the nervous system	-0.11	0.22	0.90
Other condition causing limitation	-0.38*	0.16*	0.68*
No condition causing limitation	-0.03	0.30	0.97
Health status[a]			
MCS score 44–51	0.02	0.20	1.02
MCS score greater than 51	-0.32	0.22	0.73
PCS score 44–51	0.15	0.21	1.17
PCS score greater than 51	-0.15	0.24	0.86
MCS and PCS scores both greater than 51	0.63*	0.29*	1.87*
Presence or type of limitation			
No ADL, IADL, or functional limitations	-0.07	0.28	0.93
At least one ADL/IADL requiring assistance	-0.55*	0.16*	0.57*
At least one severe physical limitation	-0.41*	0.15*	0.67*
Other health indicator			
Obesity	0.05	0.16	1.05
Substance abuse	-0.17	0.28	0.85

SOURCE: Author's calculations based on 2004 NBS.

NOTES: Sample size = 7,603.

PIA = primary insurance amount; MCS = Medical Component Summary; PCS = Physical Component Summary; ADL = activities of daily living; IADL = instrumental activities of daily living.

* = Statistically significant at the 0.05 level.

a. The MCS and PCS measures were developed by designers of the SF-8 Health Survey. MCS and PCS scores for the general adult populaton both have a mean of 50 and a standard deviation of 10. For more information about the SF-8, see Ware and others (2001).

Race and ethnicity. Those classified as "other" race were significantly less likely to leave the rolls than either black or white beneficiaries. Hispanic origin is not a significant predictor of leaving the rolls because of work.

Education. Education is not a significant predictor of leaving the rolls because of work.

Living arrangement. Married beneficiaries living with children were more likely than those in other living arrangements to leave the rolls.

Health status. Specific health conditions are generally not predictive of leaving the disability rolls because of work, with the exception of intellectual disability and conditions grouped in the "other" category. Beneficiaries in these categories were significantly less likely to leave the rolls than others were. Three health status measures are also significant predictors. Beneficiaries with severe physical limitations and those requiring assistance with at least one activity or instrumental activity of daily living were significantly less likely than others to leave the disability rolls because of work, and those in good physical and mental health were significantly more likely to do so.[22]

In general, few variables in the model are predictive of leaving the disability rolls because of work during the 4-year period. Some of the findings are consistent with those of previous studies that explored the characteristics associated with work orientation and employment, while others are not. For example, in this model, age is not a significant predictor of leaving the rolls because of work. This is surprising because age is a significant predictor of work orientation and employment in other studies.[23] Additionally, although

DI-only beneficiaries were less likely to leave the rolls because of work during the 4-year period, they were more likely to be work-oriented and employed at the time of the interview. Those with high Social Security benefit amounts and those with severe physical and activity limitations were significantly less likely to be working or to leave the rolls because of work. The finding that being in one's second year on the disability rolls is a significant predictor of leaving the rolls because of work is consistent with previous analyses that found that beneficiaries are more likely to be work-oriented and employed within their first 5 years on the rolls.[24]

Finding that age is not a significant predictor of leaving the rolls bears further discussion. Previous studies have shown that age is an important predictor of work orientation and employment, and the likelihood of leaving the disability rolls declines with age among work-oriented beneficiaries.[25] However, after controlling for other characteristics, including program type and benefit levels, age is not a significant predictor of leaving the rolls because of work among all beneficiaries. The logit model findings suggest that the disability programs' benefit levels and treatment of earnings are more important than age in determining whether a beneficiary leaves the rolls.

Meeting Work Expectations

By definition, all work-oriented beneficiaries reported having work goals or expectations, but not all saw themselves working for pay in the near future, and only a minority saw themselves working and earning enough to leave the disability rolls in the next 5 years (Table 9). Overall, about half saw themselves working for pay in the next year, and two-thirds saw themselves doing so in the next 5 years. Relative to work-oriented DI-only beneficiaries, work-oriented concurrent and SSI-only beneficiaries were somewhat more likely to see themselves working in the next 5 years (69 percent and 67 percent, respectively, versus 62 percent). These small differences might be due to a couple of factors. First, because work-oriented DI-only beneficiaries are older on average than work-oriented concurrent and SSI-only beneficiaries,[26] more of them might expect to retire in the relatively near future. Second, as shown earlier, work-oriented SSI-only and concurrent beneficiaries were significantly more likely to indicate that they were not working at the time of the interview because they were waiting to finish school or training, suggesting they might have a longer time horizon for achieving employment than DI-only beneficiaries.

When asked about their prospects of working and leaving the disability rolls in the near future, 19 percent of work-oriented beneficiaries saw themselves earning enough to do so in the next year, and 38 percent believed they could do so in the next 5 years. Work-oriented SSI-only recipients were significantly more likely to see themselves earning enough to leave the disability rolls in 1 year and in 5 years. This might partly reflect the previously noted differences in the way earnings are treated in the two programs. Changes in earnings affect SSI payments more readily than they affect DI benefits.[27] In addition, those with high DI benefits might be unwilling (or believe they are unable) to earn enough to replace the benefits that are lost when earnings exceed the SGA level.

Among disability beneficiaries who reported expectations of working in the near future, about half (52 percent) met those expectations during 2004–2007 (Table 11). Work-oriented SSI-only recipients were significantly less likely to meet their expectations during the 4-year period than other beneficiaries.

Among disability beneficiaries who reported expectations of earning enough to leave the disability rolls, only a small minority met those expectations during 2004–2007 (Table 12). Overall, 14 percent of work-oriented beneficiaries who believed they would earn enough to leave the disability rolls in either the next year or the next 5 years had done so for at least 1 month during the 4-year period. The shares did not vary by program. It is interesting that, regardless of whether they saw themselves leaving the rolls within the next year or the next 5 years, the large majority of those who left the rolls for at least 1 month at any time did so by the end of the 2005, or within approximately 1.5 years of interview. This is particularly apparent among work-oriented beneficiaries who saw themselves leaving the rolls in the next year: Among the 21 percent who did so at any time over the 4-year period, over 90 percent had done so by the end 2005. Table 12 suggests that those who achieved their expectations did so quickly.

Discussion

A large minority of Social Security disability beneficiaries works and engages in work preparation activities, and many more see themselves working in the future. In 2004, 40 percent of all disability beneficiaries reported having work-related goals or expectations. Even if their employment expectations seem somewhat optimistic, they do not appear to be excessively so, given that roughly half reported engaging in recent

work and training activities. Tracking their employment activity over a longer period indicated that nearly half also worked at some time during 2004–2007.

A majority (60 percent) of 2004 NBS respondents had no plans or expectations of working. Another 20 percent reported interest in or expectations of pursuing work, but did not and had not recently engaged in any work-related activities. Perhaps many in this group had exaggerated expectations, but many might also have dealt with health problems or other circumstances that limited their current ability to prepare or look for work. The remaining 20 percent of disability

Table 11.
Work-oriented disability beneficiaries who had any expectations of working either in the next year or within 5 years, and earnings outcomes, by program type

Beneficiaries	All	DI-only	Concurrent	SSI-only
Number (weighted)	2,664,587	1,242,785	513,470	908,332
Percentage of all disability beneficiaries (weighted)	30	14	6	10
Percentage who had earnings in at least 1 year during 2004-2007	52	56	58	44*

SOURCE: 2004 NBS matched to 2004–2007 IRS earnings data.

NOTES: Sample size = 3,693.

* = Significantly different from DI-only beneficiaries at the 0.05 level, two-tailed test.

Table 12.
Outcomes during 2004–2007 of work-oriented disability beneficiaries with expectations of leaving the disability rolls because of work, by program type

Outcome	All	DI-only	Concurrent	SSI-only
	Beneficiaries who saw themselves earning enough to leave the rolls within 1 year			
Number (weighted)	648,682	242,666	122,600	283,416
Percentage of all disability beneficiaries (weighted)	7	3	1	3
Percentage who earned enough to leave disability rolls for at least 1 month in—				
2004–2005	19	22	17	17
2004–2007	21	23	22	19
	Beneficiaries who saw themselves earning enough to leave the rolls within 5 years [a]			
Number (weighted)	1,313,595	554,263	252,795	506,536
Percentage of all disability beneficiaries (weighted)	15	6	3	6
Percentage who earned enough to leave disability rolls for at least 1 month in—				
2004–2005	12	14	10	11
2004–2007	14	15	14	14
	Beneficiaries who saw themselves earning enough to leave the rolls within either 1 or 5 years [a]			
Number (weighted)	1,426,051	604,900	268,364	552,787
Percentage of all disability beneficiaries (weighted)	16	7	3	6
Percentage who earned enough to leave disability rolls for at least 1 month in—				
2004–2005	12	13	11	11
2004–2007	14	14	14	14

SOURCE: 2004 NBS matched to the 2007 TRF.

NOTE: Sample size = 3,693.

a. Because most NBS respondents were interviewed in mid-2004, data available as of year-end 2007 cover only about 3.5 years and not the full 5-year period for which respondents were asked about their employment expectations.

beneficiaries were actively pursuing their work goals and expectations. Policies designed to promote and support work will be most successful for the latter group, and could be instrumental in converting members of the second group into members of the third. Perhaps structuring the programs in ways that provide greater economic incentives for employment could benefit both the government and the program participants.

The findings suggest that beneficiaries with certain characteristics should be targeted for more intensive information or intervention efforts. In particular, addressing the employment obstacles of younger beneficiaries, and of all beneficiaries very early in their tenure on the disability rolls, could be successful long-run strategies. Age and time on the disability rolls are significant predictors of a variety of employment-related outcomes in the analyses presented here and in other studies. However, age is not a significant predictor of leaving the disability rolls because of work, and DI-only status combined with high benefit levels is a significant and negative predictor. These findings also suggest that even if beneficiaries are working, the structure of the DI program might provide incentives to keep earnings below the level that would reduce benefits to zero.

Appendix: Regression Variables

The logistic regression models used for estimating the predictors of being work-oriented and of working enough to leave the disability rolls for at least 1 month use an array of binary variables, listed below. For each variable, if the identifying characteristic applies to a disability beneficiary, a value of 1 is assigned; otherwise, the indicator value is 0. Social Security administrative data were used to determine the values for variables describing program type at interview, lifetime earnings, monthly Social Security benefit amounts, and elapsed months on the disability rolls.

The variables are arranged categorically, as follows:

Program Participation Characteristics

Program type at interview: concurrent; DI-only. The SSI-only variable is omitted.

Lifetime earnings: PIA is greater than $1,200.

Monthly Social Security benefit amount: $500–$1,000; greater than $1,000. The variable for benefit amounts under $500 is omitted.

Monthly value of other benefits that could be affected by earnings (food stamps; energy, housing, or other in-kind assistance; public assistance; workers' compensation; veterans' benefits; private disability insurance; unemployment insurance; and pension income among those under age 59): $1–$199; $200–499; $500 or more. The variable for zero non–Social Security benefits is omitted.

Elapsed months on the disability rolls: 0–12; 13–24; 25–60; 61–120. The variable for 121 months or more is omitted.

Sociodemographic Characteristics

Age: 18–24; 25–39; 40–54. The variable for 55 or older is omitted.

Sex: male.

Race and ethnicity: black; other race; Hispanic origin. The variable for white is omitted.

Education: high school diploma or equivalent; some postsecondary education. The variable for not finishing high school or equivalent is omitted.

Income: family income relative to federal poverty level is 300 percent or more.

Living arrangements: living with spouse, partner, or other relatives, no children; living with spouse or partner with children; unmarried with children. The variable for living alone or with unrelated others and no children is omitted.

Age of children: living with own children younger than age 6.

Health Characteristics

Limiting conditions: mental illness; intellectual disability; musculoskeletal disorders; sensory disorders; other diseases of the nervous system; other limiting conditions; no limiting conditions.

Mental Component Summary (MCS) and Physical Component Summary (PCS) health status scores: MCS 44–51; MCS greater than 51; PCS 44–51; PCS greater than 51; both MCS and PCS greater than 51. The variables for MCS less than 45 and PCS less than 45 are omitted.

Activities of daily living (ADLs), instrumental ADLs (IADLs), or functional limitations: none; at least one ADL or IADL for which assistance is required; at least one severe physical limitation.

Obesity: body mass index is 30 or greater, calculated based on self-reported weight and height.

Substance abuse: presence of one more symptoms.

Notes

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[1] SSI also serves children with disabilities and individuals aged 65 or older.

[2] Examples include expedited reinstatement of benefits after unsuccessful work attempts, abolishing continuing disability reviews triggered by work activity, and establishing the Area Work Incentives Coordinator position, the Work Incentives Planning and Assistance program, the Mental Health Treatment Study, and the Benefit Offset National Demonstration.

[3] A general limitation of this work-orientation measure is that it represents goals and expectations only at a specific time, and the NBS does not provide information on how individuals' goals and expectations change over time.

[4] For blind beneficiaries, the monthly SGA level is $1,640.

[5] The 9 months need not be consecutive but must occur within a rolling 60-month period.

[6] DI beneficiaries with dependent children younger than age 18 or still in high school receive additional benefits up to a family limit.

[7] See SSA (2011) for a description of the DI and SSI work-support provisions.

[8] Less than one-half of 1 percent of DI beneficiaries discontinues benefits each year because of work (SSA 2008).

[9] The surveys include both cross-sectional and longitudinal samples of Ticket to Work participants. All statistics reported in this article were derived from the 2004 cross-sectional sample.

[10] Because access to the IRS data is restricted, the IRS-NBS record linkage and earnings data analyses presented here were performed by SSA staff.

[11] The primary source of information for the Master Earnings File is the W-2 form sent by employers directly to SSA. W-2 forms arrive at SSA continuously and the Master Earnings File is updated with new W-2 information on a weekly basis. The unposted detail segment contains detailed records of earnings not subject to FICA tax, such as deferred Medicare earnings, self-employment earnings, and earnings paid into retirement plans. Two variables from this detailed earnings record are used: W2_BOX5_WGE_MED, corresponding to the amount contained in Box 5 of the form W-2, which includes taxable tips; and SEI_MED, corresponding to any Medicare-covered self employment. The detailed earning record may include multiple employers per year; these earnings are summed to obtain total wages per year and total self-employment earnings per year. These total annual wage and self-employment values are then summed to obtain total earnings for the year.

[12] For further information about the 2004 NBS, see Thornton and others (2007, Appendix B).

[13] To meet the objectives of the survey efficiently, the sample design incorporates geographic primary sampling units and strata defined by age, Ticket to Work participation status, phase of Ticket to Work rollout, and payment system. The relevant weights and the primary sampling unit and strata indicators must be used to produce statistics that are representative of all working-age SSI and DI beneficiaries, and to generate standard errors of the estimates that are adjusted for the sample design. See Bethel and Stapleton (2002) and Thornton and others (2007, Appendix B) for detailed descriptions of the survey objectives and sample design.

[14] Because of the large number of explanatory variables included in the model, and because a few of the variables might be highly correlated with one another, variance inflation factors (VIFs) were computed to assess the degree to which multicollinearity might occur. The VIF measures the impact of collinearity among the explanatory variables on the precision of a regression model's estimates. A VIF value greater than 10 is believed to be of concern, but lower values (such as 2.5 or 5) also have been proposed as more conservative thresholds for indicating potential multicollinearity. In the model estimating the likelihood of being work-oriented, all variables except one had VIFs of 2.5 or less. The exception, the variable representing Social Security monthly benefits greater than $1,000, had a VIF of 3.5.

[15] Higher-than-average lifetime earnings is defined as having a DI primary insurance amount (PIA) greater than $1,200. The PIA is determined using lifetime Social Security-covered earnings and therefore represents a rough indicator of the individual's lifetime labor market success. Higher PIAs reflect higher lifetime earnings and DI benefit amounts. In our sample, only 15 percent of disability beneficiaries had a PIA greater than $1,200 in 2004.

Although related, PIA and Social Security benefit levels are not collinear. First, all SSI-only recipients have a PIA of zero but have SSI payments that vary substantially depending on other income and living arrangements; second, DI benefits may be based on a spouse's or a parent's PIA (rather than one's own); and third, DI benefit amounts can be affected by the number of dependents. As mentioned in note 14, the VIF for the variable representing monthly Social Security benefits greater than $1,000 was higher than the VIFs for other variables in the model, perhaps because of its relationship to the PIA; however, it is still considered low relative to commonly used standards for identifying multicollinearity.

[16] The effect of earnings on SSI payments may convert some concurrent beneficiaries to DI-only status and further contribute to the finding that DI-only beneficiaries are more likely to be work-oriented.

[17] The annualized SGA levels for nonblind beneficiaries were $9,720 in 2004, $9,960 in 2005, $10,320 in 2006, and $10,800 in 2007.

[18] The finding that SSI-only recipients were less likely than DI-only beneficiaries to work above SGA level is inconsistent with the findings of a previous study based on NBS data (Livermore, Stapleton, and Roche 2009). Respondent-reported earnings data indicate that SSI-only recipients who were working at the time of the interview were significantly more likely to report monthly earnings above SGA level than their DI-only counterparts (36 percent compared with 20 percent). The difference might be attributed to several factors. First, the survey data represent respondent-reported earnings and there may be differences in the propensities for SSI recipients and DI beneficiaries to misreport earnings. Second, the survey data represent a snapshot in time, whereas the administrative data follow beneficiaries for 4 years. As SSI-only recipients are less likely to be working in all 4 years (Table 6), they may be less likely to be working above SGA level in at least 1 of the 4 years. Third, the survey data represent *monthly* earnings and are compared with the *monthly* SGA level, whereas the earnings obtained from administrative data are *annual* amounts compared with an *annualized* SGA level (the monthly SGA level multiplied by 12). With all else constant, if employment among SSI-only recipients is shorter-term or more sporadic than that of DI-only beneficiaries, then one would expect the average monthly earnings based on annual data to be less than the actual monthly earnings during the months when they are employed. This would contribute to the finding that more are working above SGA level when analyzing monthly values than when analyzing annual values.

[19] The TRF variables used to identify those whose cash benefits were discontinued because of work are monthly indicators based on administrative data showing that DI or SSI cash benefits were either suspended or terminated because of earnings. For concurrent beneficiaries to be classified as having cash benefits discontinued because of work, both SSI and DI cash benefits must have ceased in a given month, with the cessation in at least one of the programs due to work.

[20] The TRF variables used to construct the indicators of discontinuing DI and SSI cash benefits because of work are likely imprecise for two primary reasons. First, work activity not reported by beneficiaries or not processed by SSA at the time the TRF file was created will not be reflected in the indicators. Second, in some instances, the reason noted for benefit cessation may be other than work (for example, medical improvement), but employment could have been concurrent with or material to the documented reason for benefit cessation. Both factors will lead to underestimates of months off the disability rolls because of work in our sample.

[21] Cross-sectional statistics provide a different view of employed beneficiaries (see Livermore, Roche, and Prenovitz 2009, Exhibit A-3). At a given time, employed DI-only beneficiaries and SSI-only recipients are about equally likely to have cash benefits cease because of work, and both of these groups are more likely than employed concurrent beneficiaries to have their benefits cease because of work. It is interesting that among all SSI-only recipients whose benefits were suspended or terminated because of work at the time of the interview, only 45 percent were presently employed, compared with 81 percent of all DI-only beneficiaries. It is unclear why the employment rate among SSI-only recipients was so low.

[22] Physical and mental health status was determined using measures constructed by developers of the SF-8 Health Survey. For more information, see Ware and others (2001).

[23] See Thornton and others (2007, Appendix B).

[24] Given the model's 4-year observation period, beneficiaries in their second year on the rolls at the time of the interview in 2004 were observed until well into their fourth or early into their fifth year on the rolls by the end of 2007.

[25] Among work-oriented beneficiaries, the likelihood of leaving the disability rolls because of work over the 4-year period declines from 10 percent among those aged 18–24 to 6 percent among those aged 55 or older.

[26] The mean age of work-oriented DI-only beneficiaries is 48, compared with means of 38 for work-oriented SSI-only recipients and 41 for work-oriented concurrent beneficiaries.

[27] SSI cash payments are immediately reduced by $1 for every $2 of monthly earnings above $65. DI benefits are reduced (to zero) only when earnings exceed the SGA level after the 9-month trial work period.

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Disability Benefits Suspended or Terminated Because of Work

by Jody Schimmel and David C. Stapleton*

We use a new variable in the Social Security Administration's Ticket Research File to produce statistics on the first month of suspension or termination for work (STW) for Social Security Disability Insurance (DI) and Supplemental Security Income (SSI)-only beneficiaries as well as on the number of months in nonpayment status following suspension or termination for work (NSTW) before their return to the rolls, attainment of the full retirement age, or death—in each year from 2002 through 2006. Less than 1 percent of beneficiaries experienced their first STW in each year, but more were in NSTW in at least 1 month. Ticket to Work (TTW) participants were more likely to have a first STW than nonparticipants, but most of those who had an STW were not TTW participants, reflecting low use of TTW. Employment networks often failed to file claims for outcome payments during months when their TTW clients were in NSTW.

Introduction

The benefits of only a small share of Social Security Disability Insurance (DI) and Supplemental Security Income (SSI)-only beneficiaries are terminated each year because of work—about one-half of 1 percent of DI participants and an even smaller percentage of SSI-only participants (O'Leary, Livermore, and Stapleton 2011). Terminations provide only a partial picture of the extent to which beneficiaries forego benefits because of work, however, for two reasons. First, a substantial number of beneficiaries have their benefits suspended for work—many more than the number whose benefits are eventually terminated for work. Second, beneficiaries may remain in nonpayment status for many months, even years, after suspension or termination for work occurs. In any month, the total number of beneficiaries or former beneficiaries who are in nonpayment status following benefit suspension or termination for work is far larger than the number first suspended or terminated for work in the same month, even after excluding months after the beneficiary attains the full retirement age (FRA) or dies.

Recent efforts to increase beneficiary employment and program exits for work have heightened interest in counting the number of months in which beneficiaries and former beneficiaries forego benefits because of work. One specific objective of the Social Security Administration's (SSA's) Ticket to Work (TTW) program, launched in 2002, was to increase the number of such months. To achieve this objective, TTW expanded the types of organizations SSA would pay to support

Selected Abbreviations

DI	Disability Insurance
EN	employment network
FRA	full retirement age
MO	milestone outcome
NSTW	nonpayment status following suspension or termination for work

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Selected Abbreviations—*Continued*

OO	outcome only
SGA	substantial gainful activity
SSA	Social Security Administration
SSI	Supplemental Security Income
SVRA	state vocational rehabilitation agency
STW	suspension or termination for work
TRF	Ticket Research File
TTW	Ticket to Work
TWP	trial work period

beneficiaries' employment efforts. The new providers, called employment networks (ENs), became eligible to receive payments under TTW's milestone-outcome (MO) or outcome-only (OO) payment systems, whichever they preferred. Both of these new payment systems offer outcome payments to ENs in months when their clients are in nonpayment status because of work.[1] State vocational rehabilitation agencies (SVRAs) could also choose to use one of the new payment systems. SVRAs were also allowed to continue to use a "traditional" payment system, which ties cost reimbursement payments to attainment of an earnings objective, without regard to benefit suspension or termination for work, on a case-by-case basis, provided that they obtained the beneficiary's "ticket." During the 5-year period examined in this article, from 2002 through 2006, the traditional payment system was considered to be a TTW payment system, although regulatory modifications changed that in July 2008.[2] In this article, "TTW participants" refers to beneficiaries who assigned their tickets under any one of the three payment systems.

Prior to TTW, information about benefit suspensions and terminations for work was quite limited (Newcomb, Payne, and Waid 2003; O'Leary, Livermore, and Stapleton 2011), and SSA did not routinely produce statistics on suspensions and terminations of DI benefits for work. The best information available about terminations specifically for work came from a series of studies based on DI beneficiaries who entered the program in 1980 and 1981 (for example, Muller 1992). SSA did not start regularly publishing statistics on DI benefit suspensions and terminations for work until 2001. Statistics on SSI suspensions for work are more comprehensive; SSA has reported, consistently since 1987, the number of beneficiaries whose payments were suspended under section 1619(b) of the Social Security Act.

Even today, however, the annual published statistics on benefit suspension and termination for work have significant limitations. Most importantly, the data lack information about the duration of suspensions and terminations for work and do not tell us how long the small share of beneficiaries whose benefits are first suspended or terminated for work in each year remain in nonpayment status thereafter. In fact, those whose benefits have been terminated for work are not represented in SSA statistics at all in later years unless they return to current-pay status. Another limitation of the published statistics is that the data do not consider the intersection of DI and SSI. In some instances, concurrent beneficiaries might be in nonpayment status for SSI after suspension or termination for work, but in payment status for DI, or vice versa. No statistics we have seen identify those who are not receiving benefits from either program following benefit suspension or termination for work.

We exploit a newly developed monthly variable in SSA's 2007 Ticket Research File (TRF) that indicates whether a beneficiary is in nonpayment status following benefit suspension or termination for work (NSTW). The variable was developed to support the TTW evaluation because a primary goal of the program was to increase the time that beneficiaries and former beneficiaries are in NSTW. We use the NSTW variable to produce new statistics on months in which benefits were not paid following suspension or termination for work.[3] We count the number of suspension or termination for work (STW) events in each year (that is, the number of beneficiaries whose benefits are suspended or terminated because of work for the first time) and provide statistics on the duration of NSTW.

By definition, NSTW only ends when the beneficiary returns to current-pay status (that is, he or she is entitled to a benefit payment), attains the FRA, or dies. Those classified as in NSTW are not necessarily working at a level that would make them ineligible to receive benefits; that is, they are not necessarily engaged in substantial gainful activity (SGA), as defined by SSA. We know that they were engaged in SGA when their STW event occurred, but not in every NSTW month thereafter. The counted NSTW months are an upper bound on the number of months such beneficiaries were engaged in SGA prior to their return to current-pay status, attainment of the FRA, or death. The counted NSTW months are not necessarily an upper bound on the number of months that beneficiaries are in nonpayment status because

of work, however, for two reasons. First, we cannot identify beneficiaries whose benefits were suspended or terminated for other reasons, but are now ineligible for benefits only because of SGA. Second, there are also instances of ambiguity about why benefits are suspended or terminated, reflecting how program administrative data are collected and used.

We provide the first STW and NSTW statistics over multiple years and compare statistics for TTW participants and nonparticipants. We also count the number of outcome payments made to ENs under the MO and OO payment systems in months when, according to the NSTW indicator, their clients were in NSTW. This comparison led to the unexpected result that no payments were made to an EN in a large share of NSTW months, prompting SSA to investigate the reasons why.

SSA's investigation included a review of a random sample of months when NSTW was at odds with the TTW payment information. The review confirmed that the NSTW statistics presented in this article are substantively correct. Some classification errors occur in both directions, but in this sample such errors approximately offset each other. The review also suggests that TTW participants are actually engaged in SGA during a large majority of the months identified as NSTW months. Because TTW participants are a self-selected group, we do not know the extent to which this finding extends to nonparticipants in NSTW.

The article first describes the NSTW indicator and defines the subpopulations analyzed, and then it presents statistics on the first STW event and the duration of NSTW months thereafter. This includes a comparison of statistics for TTW participants and nonparticipants. Annual statistics on total NSTW months from 2002 through 2006 are given next, again comparing TTW participants and nonparticipants. We then take a closer look at NSTW months for TTW participants and the extent to which those months generated outcome payments to ENs or SVRAs. Our conclusions provide a summary of key findings and a discussion of their implications.

Data and Methods

The STW statistics are derived from the 2007 version of the Ticket Research File—a compilation of data from multiple administrative data sources containing information on 100 percent of DI and adult SSI disability beneficiaries with at least 1 month in current-pay status from 1996 onward.

STW is based on a complex set of administrative information. We first constructed separate STW measures for DI and SSI beneficiaries and then combined them into a single measure indicating whether the beneficiary is in one of five status categories: (1) current-pay status in at least one of the programs and has not left the rolls because of work; (2) suspended-pay status because of work in both programs, or in suspended status because of work in one program and either ineligible or in terminated status for any reason under the other program; (3) terminated status because of work in both programs, or in terminated status for work in one program and either ineligible or in terminated status for any reason under the other program; (4) has attained the FRA or died; or (5) is in terminated status for some other reason, such as medical improvement. For the purposes of this analysis, we define the first occurrence of either the second or third category as the first STW event and all subsequent occurrences as NSTW months. We do not distinguish between suspended and terminated status.

We constructed two data extracts to support the analysis. The first was used to support comparison of statistics for TTW participants and nonparticipants. It consists of repeated cross sections of DI and SSI-only beneficiaries in each year from 2002 through 2006. For each year, all beneficiaries included were either in current-pay status or had benefits suspended or terminated for work in at least 1 month of that year, were aged 18–64, and were not deceased in January. For each year, TTW participants are those whose tickets were already assigned (that is, held by a provider) as of January or were assigned during a later month of the year. We differentiate TTW participants by payment system (traditional, MO, or OO) and "payment title" (DI or SSI-only). The latter distinction reflects the fact that TTW payments for DI beneficiaries are higher than those for SSI-only beneficiaries. It is important to recognize that all statistics for DI beneficiaries encompass both DI-only and concurrent DI and SSI beneficiaries.[4]

We constructed the second data extract to support longitudinal analysis of TTW participants over multiple years. The extract includes records for all TTW participants who assigned their tickets from February 2002 through December 2005. We consider only the most recent ticket assignment for each participant; the small number who assigned their tickets during this time period, but reassigned them after the period, are excluded.[5] Months in which tickets were unassigned (either because they had not yet been assigned or had been unassigned) were not included in this

analysis. Hence, we excluded all months after termination for age, mortality, medical recovery, or any reason other than work. We grouped participants into annual cohorts, based on when they assigned their tickets. We again stratified the statistics by payment system and payment title. In this case, the stratum is based on the month of ticket assignment rather than the status of the beneficiary in January of the relevant year.

Nearly 140,000 of the most recent ticket assignments occurred from 2002 through 2005 (Table 1). Ticket assignments were highest in 2004 and 2005, when more than 45,000 beneficiaries assigned their tickets in each of those years. The majority of participants (86.5 percent) assigned their tickets under the traditional payment system over this period. That percentage rose from 81.8 percent in 2002 to 89.4 percent in 2005. Of the 18,809 beneficiaries who assigned their tickets under the new payment systems, 80 percent (15,029) assigned them to a provider that used the MO system. A large majority of those who assigned their tickets were DI beneficiaries under each of the three payment systems, and especially under the OO system; 85 percent of OO participants, 70 percent of MO participants, and 69 percent of traditional system participants were DI beneficiaries.

Suspensions and Terminations for Work

This section presents longitudinal statistics for all DI and SSI-only beneficiaries who experienced their first STW event from 2002 through 2006, by year. We define the first STW event in the year as the beneficiary's first STW event if and only if the beneficiary was in current-pay status in every month of the previous calendar year. This definition excludes the bulk of beneficiaries who had an earlier STW event, but does include a small number with STW events that occurred prior to the previous calendar year. The denominator for the percentage experiencing their first STW event in each year similarly excludes those who were not on the rolls in each month of the previous calendar year.[6]

TTW participants were much more likely than nonparticipants to experience their first STW event, regardless of payment system (Table 2)—from 2 percent to 4 percent of participants did so in each year, versus less than 1 percent for nonparticipants. We expected this finding, as TTW participants signal an interest in foregoing benefits for work when they assign their tickets. Some, perhaps many, TTW participants who had their first STW event would have done so in the absence of TTW. Despite the lower percentages for nonparticipants, the number of nonparticipants who experienced their first STW event is much larger than the number of participants who did so because the vast majority of ticket-eligible beneficiaries did not assign their tickets.

In 2006, the percentage of participants with a first STW event varied substantially across TTW payment systems: OO participants had the highest percentage (6.3 percent), followed by MO (4.0 percent) and

Table 1.
Number of TTW participants, by payment system, payment title, and assignment cohort, February 2002–December 2005

Payment system and payment title	First month of most recent ticket assignment				Total	Percentage of total
	Feb.–Dec. 2002	Jan.–Dec. 2003	Jan.–Dec. 2004	Jan.–Dec. 2005		
Total	13,981	32,406	48,161	45,247	139,795	100.0
Milestone-outcome	2,133	3,485	5,745	3,666	15,029	10.8
DI	1,450	2,450	4,020	2,564	10,484	7.5
SSI-only	683	1,035	1,725	1,102	4,545	3.3
Outcome-only	414	1,073	1,178	1,115	3,780	2.7
DI	332	924	988	973	3,217	2.3
SSI-only	82	149	190	142	563	0.4
Traditional	11,434	27,848	41,238	40,466	120,986	86.5
DI	8,331	19,760	28,430	26,625	83,146	59.5
SSI-only	3,103	8,088	12,808	13,841	37,840	27.1

SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Counts include participants who most recently assigned their tickets from February 2002 through December 2005. Payment system and payment title are based on ticket-assignment month.

Table 2.
Number and percentage of beneficiaries experiencing first STW event, by payment title and payment system, 2002–2006

Payment title and payment system	Number of beneficiaries experiencing first STW event					Percentage of all beneficiaries experiencing first STW event				
	2002	2003	2004	2005	2006	2002	2003	2004	2005	2006
DI										
TTW participants	221	1,089	2,421	3,896	4,210	2.58	3.76	4.11	4.54	3.84
Milestone-outcome	44	195	341	546	501	3.66	5.73	5.04	6.08	4.71
Outcome-only	12	105	176	221	225	4.23	9.69	9.43	8.48	6.57
Traditional	165	789	1,904	3,129	3,484	2.33	3.22	3.79	4.21	3.64
Nonparticipants	49,351	49,832	48,221	50,469	43,842	0.87	0.83	0.77	0.77	0.65
All DI beneficiaries	49,574	50,925	50,646	54,370	48,067	0.87	0.85	0.80	0.82	0.70
SSI-only										
TTW participants	50	224	457	627	836	1.69	2.26	2.19	2.02	2.11
Milestone-outcome	10	31	58	74	76	2.07	2.49	2.30	2.33	2.06
Outcome-only	4	9	14	12	18	6.56	5.66	4.61	3.03	4.02
Traditional	36	184	385	541	742	1.49	2.16	2.13	1.97	2.09
Nonparticipants	22,439	19,056	23,207	24,457	22,150	1.01	0.85	1.00	1.04	0.93
All SSI-only beneficiaries	22,489	19,281	23,665	25,086	22,988	1.01	0.86	1.01	1.05	0.95
Total										
TTW participants	271	1,313	2,878	4,523	5,046	2.35	3.38	3.61	3.87	3.38
Milestone-outcome	54	226	399	620	577	3.20	4.86	4.30	5.10	4.02
Outcome-only	16	114	190	233	243	4.64	9.17	8.76	7.76	6.27
Traditional	201	973	2,289	3,670	4,226	2.11	2.95	3.35	3.61	3.22
Nonparticipants	71,790	68,888	71,428	74,926	65,992	0.91	0.84	0.83	0.84	0.72
All beneficiaries	72,063	70,206	74,311	79,546	71,055	0.91	0.85	0.86	0.88	0.77

SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Counts are based on the NSTW indicator. They include existing beneficiaries in January of each calendar year who were aged 18–64, not deceased, had at least 1 month during the year in current-pay status or with benefits suspended or terminated for work, and were in current-pay status for all 12 months in the previous calendar year. "TTW participants" in each year include those whose most recent tickets were assigned to an EN in at least 1 month of the year; months during the year in which the participants' tickets were not assigned are included under this definition. "Nonparticipants" include those who never assigned tickets or whose most recent tickets were not yet assigned in that calendar year. Within each panel, TTW participants and nonparticipants comprise "All beneficiaries." Total numbers are generated by adding the number of DI and SSI-only beneficiaries from the panels above. Payment title is determined in January of each calendar year. Payment system for TTW participants is determined in the month of most recent ticket assignment.

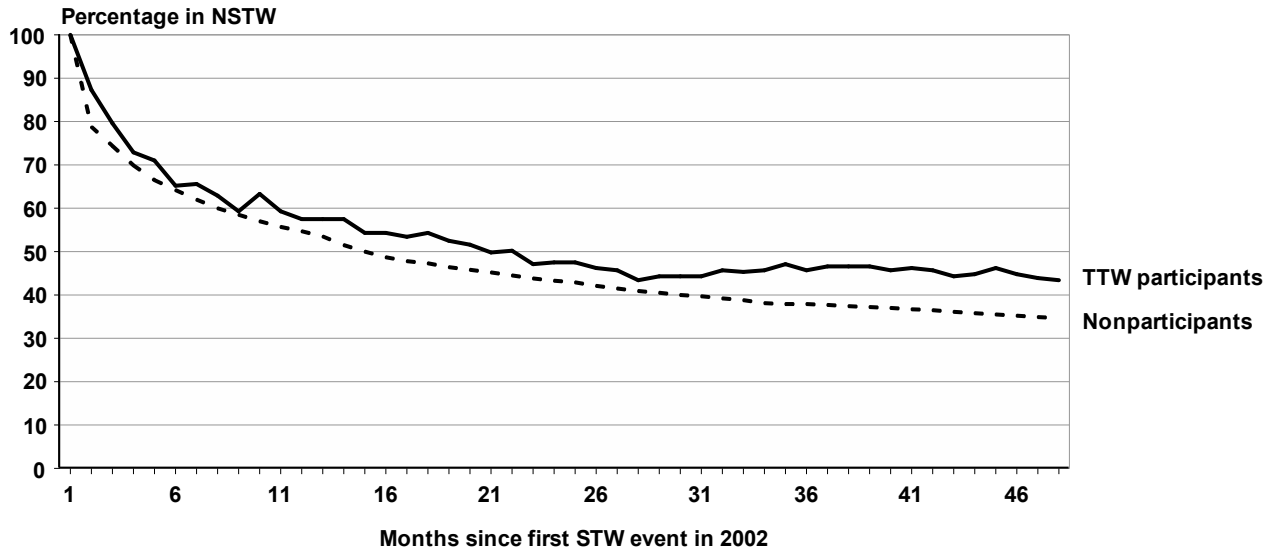
The denominators that were used to obtain the percentages (that is, the total number of TTW participants in each year, the total number of nonparticipants in each year, and the total number in each payment title category for each year) are not shown in the table.

traditional (3.2 percent) participants. This pattern held in each year from 2002 through 2006, for both DI and SSI-only participants. Among participants, we find that DI beneficiaries were more likely to experience their first STW event, but the opposite was true for nonparticipants; SSI-only nonparticipants were more likely than DI nonparticipants to experience their first STW event for work.

Among beneficiaries experiencing their first STW event, TTW participants were more likely to remain in NSTW in subsequent months than nonparticipants, although there were important differences by payment title. Charts 1 and 2 highlight the experience of participants and nonparticipants with their first STW event in 2002, for DI and SSI-only beneficiaries, respectively.[7] Differences between participant and nonparticipant statistics might reflect differences in the characteristics of participants and nonparticipants, but also might reflect differences in services received. For DI beneficiaries, TTW participants were somewhat more likely than nonparticipants to be in NSTW in every month after their first STW event (Chart 1). The difference gradually increases through the 48th month, when 43.4 percent of the TTW participants were in NSTW, compared with 34.7 percent of the nonparticipants.

SSI-only beneficiaries experiencing their first STW event were much less likely than their DI counterparts

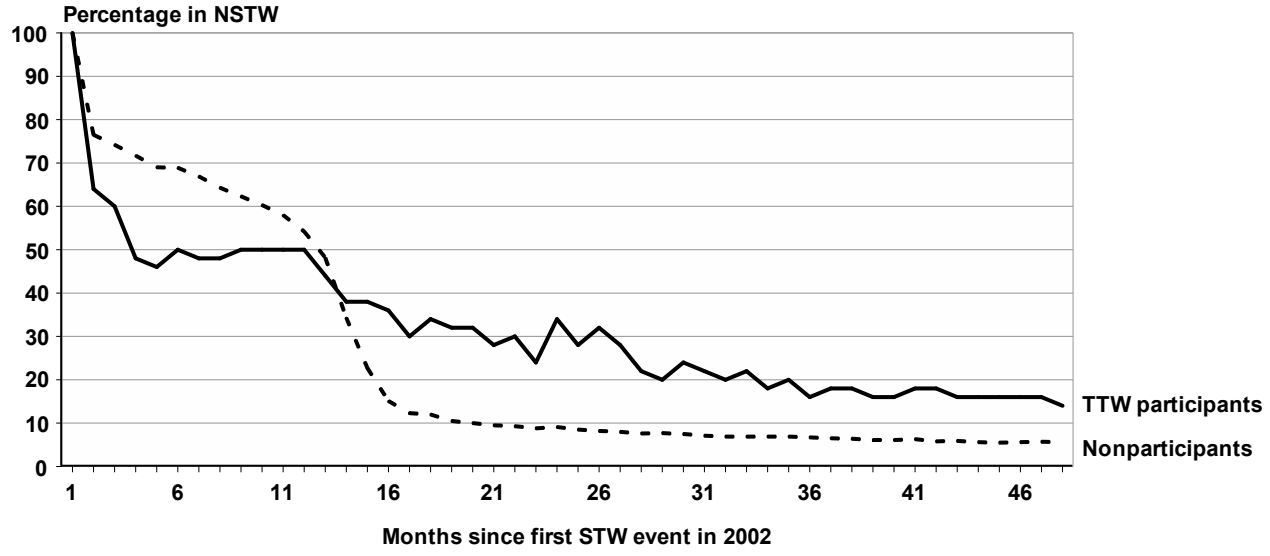
Chart 1.
Percentage of DI beneficiaries in NSTW, by months since first STW event in 2002 and TTW participation status



SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes DI beneficiaries who were aged 18–64, not deceased in January 2002, were in current-pay status throughout 2001, and had at least 1 month during 2002 in current-pay status or with benefits suspended for work. The first STW event is the first month of suspension or termination for work in 2002. TTW participants are those whose most recent tickets were assigned to an EN in at least 1 month of 2002, even if assignment occurred after the first STW event. Nonparticipants are those whose tickets had not been assigned by the end of 2002. Ticket payment system is determined at the month of ticket assignment; payment title was determined in January 2002.

Chart 2.
Percentage of SSI-only beneficiaries in NSTW, by months since first STW event in 2002 and TTW participation status



SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes SSI-only beneficiaries who were aged 18–64, not deceased in January 2002, were in current-pay status throughout 2001, and had at least 1 month during 2002 in current-pay status or with benefits suspended for work. The first STW event is the first month of suspension or termination for work in 2002. TTW participants are those whose most recent tickets were assigned to an EN in at least 1 month of 2002, even if assignment occurred after the first STW event. Nonparticipants are those whose tickets had not been assigned by the end of 2002. Ticket payment system is determined at the month of ticket assignment; payment title was determined in January 2002.

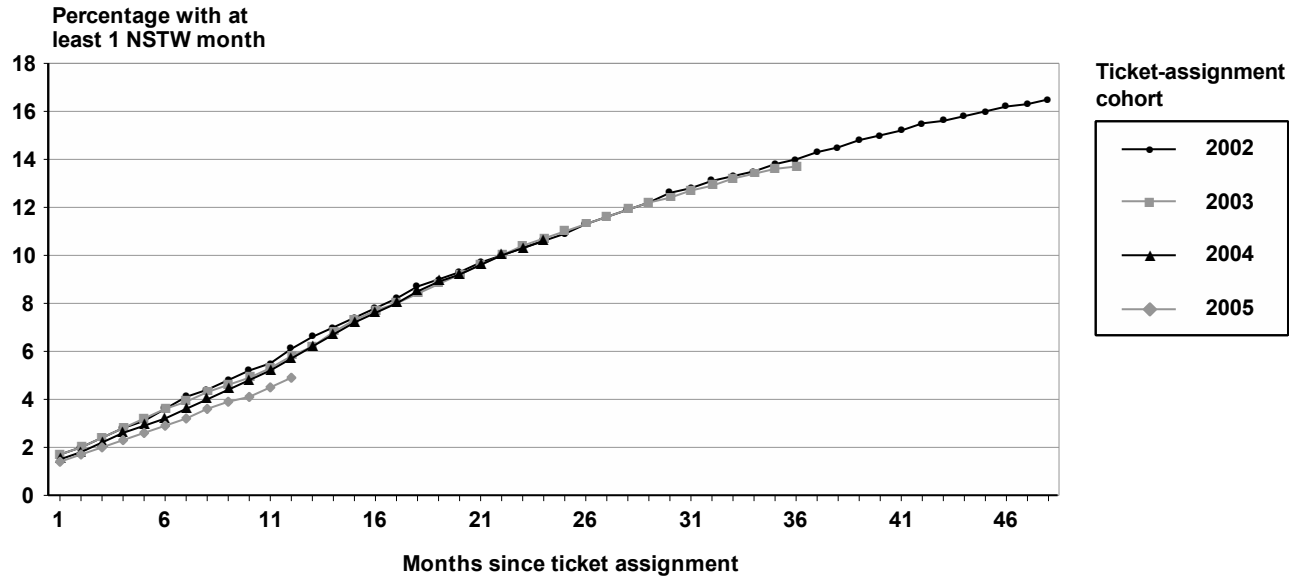
to be in NSTW in later months, and an interesting pattern emerges by TTW participation status for the SSI-only group (Chart 2). For the first 14 months, the percentage in NSTW is higher for nonparticipants than for participants, but the percentage for nonparticipants then drops off rapidly while that for participants continues a gradual decline. The only programmatic explanation we can think of relates to the fact that SSI-only payments are terminated after 12 months of suspension *if suspension occurs for a reason other than work*. Perhaps TTW participants whose benefits are suspended for work are more likely to know that SSA will not terminate their benefits after the 12th month if they continue to work.[8] At 48 months after the first STW event, 14.0 percent of the TTW participants were in NSTW, compared with just 5.6 percent for nonparticipants; both values are much lower than the corresponding values for DI beneficiaries, as shown in Chart 1 (43.4 percent and 34.7 percent, respectively).

Thus far, we have considered NSTW months for TTW participants without regard for how long or in which months of a particular year their tickets were assigned. In what follows, we provide a more complete picture of the extent to which participants had NSTW months by presenting longitudinal statistics for four annual "assignment cohorts." The analysis follows all TTW participants in the 2002 assignment cohort for 48 months after the month of ticket assignment, those in the 2003 cohort for 36 months, those in the 2004 cohort for 24 months, and those in the 2005 cohort for 12 months. The analysis includes only months in which tickets were assigned; it excludes NSTW months that occurred before a ticket was assigned or after it was unassigned.

Fewer than 2 in 10 participants in the 2002 cohort had their first STW event by the 48th month after ticket assignment, but experience varied considerably by payment system (Charts 3, 4, and 5).[9] By the 48th month after ticket assignment, the percentage with at least 1 NSTW month was highest for OO participants (25.1 percent, Chart 5); lower for traditional payment system participants (17.3 percent, Chart 3); and lowest for MO participants (16.5 percent, Chart 4).

The experiences of more recent cohorts have differed somewhat from earlier ones, at least to the extent they have been observed. For the traditional and MO payment systems, the percentages of the 2005 cohort that experienced their first STW event by the 12th month after ticket assignment were lower (4.9 percent for the traditional system and 6.6 percent for the MO

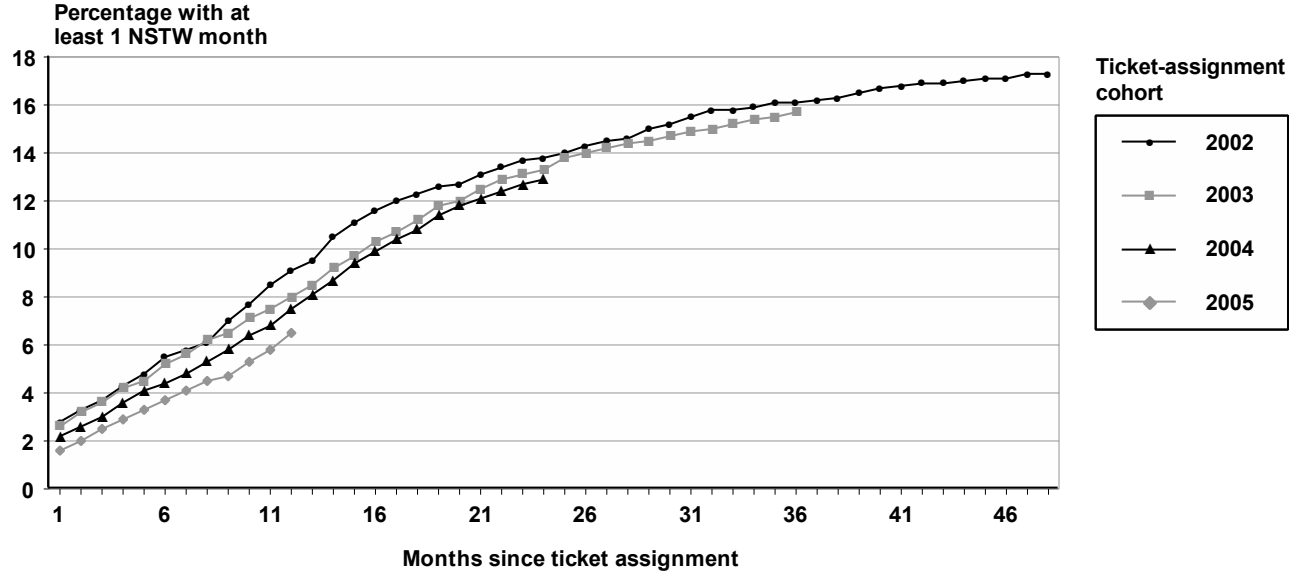
Chart 3.
Cumulative percentage of TTW participants under the traditional payment system with at least 1 NSTW month since ticket assignment, by ticket-assignment cohort and months since assignment



SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes TTW participants who, as of December 2005, had most recently assigned their tickets under the traditional payment system; payment system and payment title are determined in the month of ticket assignment. The first month observed is the month in which the ticket was assigned. Months in which tickets were unassigned are excluded.

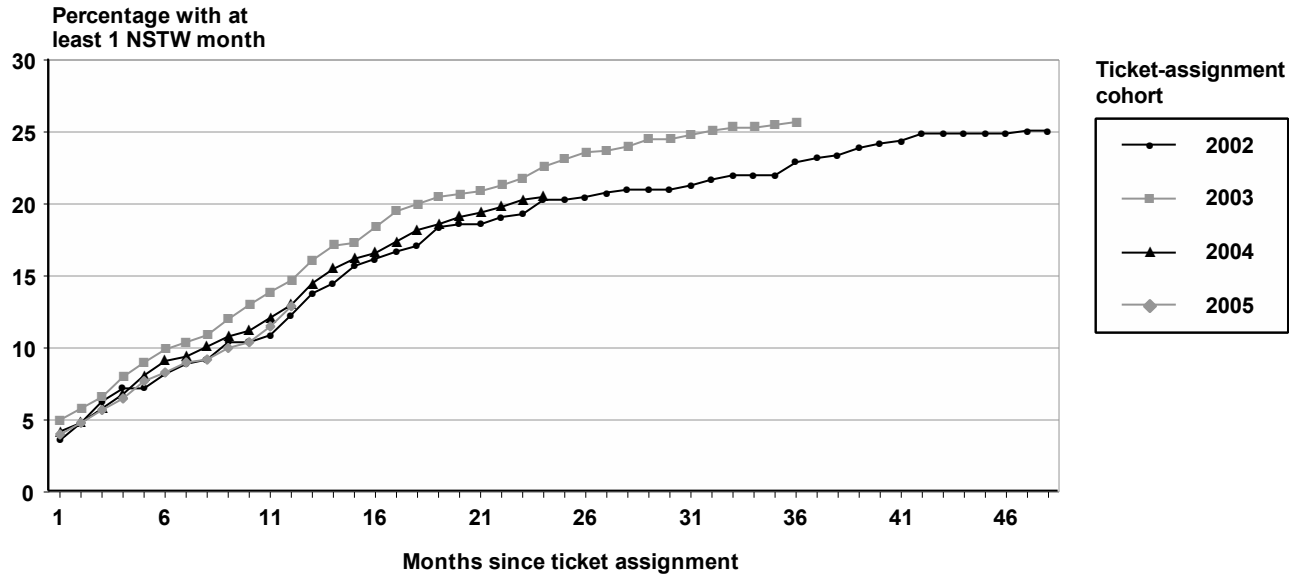
Chart 4.
Cumulative percentage of TTW participants under the MO payment system with at least 1 NSTW month since ticket assignment, by ticket-assignment cohort and months since assignment



SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes TTW participants who, as of December 2005, had most recently assigned their tickets under the MO payment system; payment system and payment title are determined in the month of ticket assignment. The first month observed is the month in which the ticket was assigned. Months in which tickets were unassigned are excluded.

Chart 5.
Cumulative percentage of TTW participants under the OO payment system with at least 1 NSTW month since ticket assignment, by ticket-assignment cohort and months since assignment



SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes TTW participants who, as of December 2005, had most recently assigned their tickets under the OO payment system; payment system and payment title are determined in the month of ticket assignment. The first month observed is the month in which the ticket was assigned. Months in which tickets were unassigned are excluded.

system) than for the 2002 cohort (6.1 percent for the traditional system and 9.1 percent for the MO system). These patterns suggest that the percentages of later cohorts experiencing their first STW event by the 48th month under these payment systems will be lower than those for the 2002 cohort.

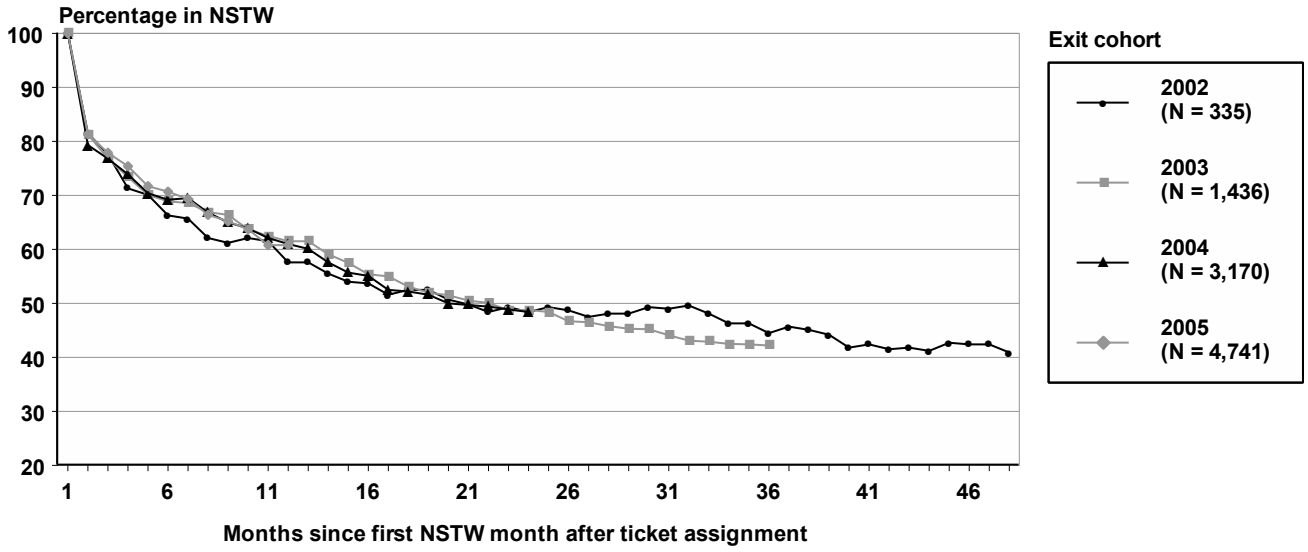
The pattern across cohorts for OO participants is different, however (Chart 5). The 2002, 2004, and 2005 cohorts all have nearly identical percentages at the 12-month mark (12.3, 12.9, and 12.9 percent, respectively), while the percentage for the 2003 cohort is higher (14.7 percent). The differences across cohorts might reflect variation in experiences across states, as the 2002 cohort only includes those persons residing in the states included in the first phase of the TTW rollout, the 2003 cohort includes those in the first and second phase states, and the 2004 cohort includes those in all states. We also note that the severe recession, which started in December 2007 (after our sample period), quite likely has been detrimental to outcomes for the 2004 and 2005 cohorts within their 48-month windows.

Within a given payment system, the likelihood of being off the rolls for at least 1 month tended to be slightly higher for DI than for SSI-only beneficiaries by the end of the 48th month after ticket assignment (not shown). This difference was most pronounced among participants under the traditional payment system (17.0 percent for DI and 15.3 percent for SSI-only) and MO payment system (18.8 percent for DI and 14.2 percent for SSI-only). Among OO participants, the difference was much smaller (25.6 percent for DI and 25.1 percent for SSI-only).

Charts 6, 7, and 8 plot the share of months in which participants who had at least 1 STW event remained in NSTW, starting from their first STW event. These charts follow all cohorts of participants who experienced their first STW event in the same calendar year ("exit cohorts"), as opposed to the assignment cohorts shown in the previous three charts.[10] The first month observed is the first NSTW month.

Participants under the OO payment system were the most likely to remain in NSTW. For those in the 2002 exit cohort, 48.3 percent of OO participants were in NSTW in month 48 (Chart 8), compared with 40.9 percent and 24.3 percent among traditional (Chart 6) and MO (Chart 7) participants, respectively. This may reflect major differences in the

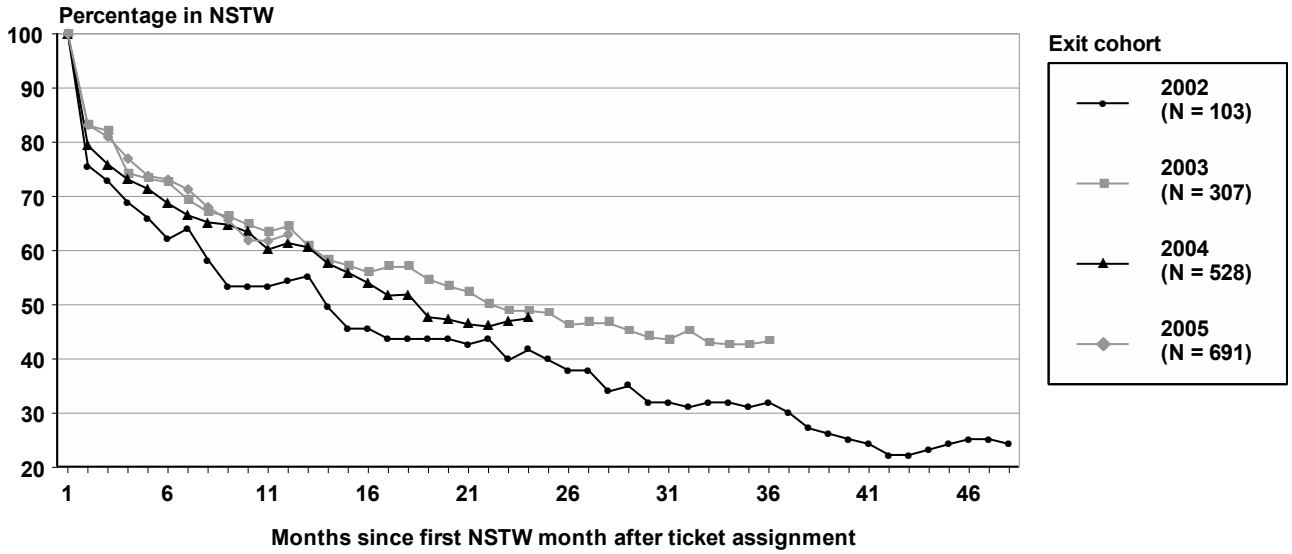
Chart 6.
Percentage of TTW participants under the traditional payment system in NSTW, by months since first NSTW month after ticket assignment and year of first NSTW month after ticket assignment (exit cohort)



SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes participants who, as of December 2005, had most recently assigned their tickets under the traditional payment system and had a least 1 NSTW month during the observation period for their assignment cohort. Each line represents the experience of those who had their first NSTW month after ticket assignment in the year indicated. The first month observed is the first NSTW month. Months in which tickets were unassigned are excluded.

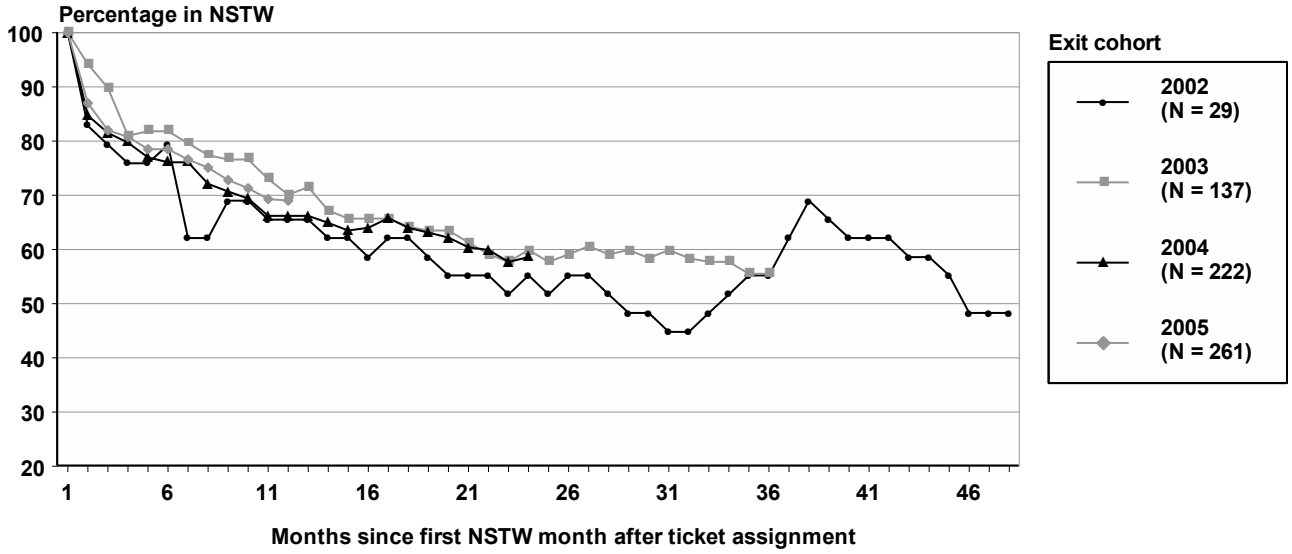
Chart 7.
Percentage of TTW participants under the MO payment system in NSTW, by months since first NSTW month after ticket assignment and year of first NSTW month after ticket assignment (exit cohort)



SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes participants who, as of December 2005, had most recently assigned their tickets under the MO payment system and had a least 1 NSTW month during the observation period for their assignment cohort. Each line represents the experience of those who had their first NSTW month after ticket assignment in the year indicated. The first month observed is the first NSTW month. Months in which tickets were unassigned are excluded.

Chart 8.
Percentage of TTW participants under the OO payment system in NSTW, by months since first NSTW month after ticket assignment and year of first NSTW month after ticket assignment (exit cohort)



SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes participants who, as of December 2005, had most recently assigned their tickets under the OO payment system and had a least 1 NSTW month during the observation period for their assignment cohort. Each line represents the experience of those who had their first NSTW month after ticket assignment in the year indicated. The first month observed is the first NSTW month. Months in which tickets were unassigned are excluded.

characteristics of the beneficiaries who assign their tickets under the three payment systems (Livermore, Stapleton, and Roche 2009), as well as any differences in service delivery. It is also interesting that the percentage in STW status for the OO participants *increases* from month 32 (44.8 percent) to month 38 (69.0 percent) before declining again. This may be an anomaly, however, as there were just 29 individuals in this group.

Those in the more recent exit cohorts were somewhat more successful at remaining in STW status than those in the 2002 cohort. For example, 47.5 percent of the MO participants in the 2003 cohort were in STW status in the 24th month after the first STW event, compared with only 41.8 percent for the 2002 cohort. Similar but less pronounced patterns appear for the participants under the OO and traditional payment systems. This most likely reflects differences in duration from ticket assignment to first STW event, which varied across those cohorts because of how the cohorts are defined. By definition, those whose first STW event was in 2002 must have assigned their tickets quite recently, whereas some of those whose first STW event was in 2003 or later had assigned their tickets many months before their first STW event. The differences also might reflect some of the same factors behind the variation across assignment cohorts in the percentage of participants with at least 1 NSTW month.

Regardless of payment system, the likelihood of being in NSTW conditional on having an STW event in an earlier month was much higher for DI beneficiaries than for SSI-only beneficiaries (not shown). For example, in the 48th month after the first STW event, the percentage in NSTW for DI beneficiaries under the traditional payment system is 45.7 percent, compared with 16.6 percent for the SSI-only group. Comparable values for participants under the MO payment system are 28.7 percent and 8.7 percent, respectively. The number of SSI-only participants under the OO payment system observed for 48 months after an STW event is too small (just six) to make a meaningful comparison.

In summary, only a minority of participants under all three payment systems had an STW event during the period of observation, but very substantial shares of those who did have such an event were in NSTW for a long time. Across the three payment systems, OO participants were the most likely to both have an STW event and be in NSTW for an extended period; MO participants were the least likely. Those participants who were DI beneficiaries were more likely to both have an STW event and be in NSTW for an extended period than those who were SSI-only beneficiaries. To the extent observed, beneficiaries in more recent assignment cohorts were less likely to have an STW event than those in earlier cohorts, but when they did have such an event, they spent more months in NSTW. Cross-cohort differences might well have changed after the end of the sample period because of the recession.

Cumulative Effects of Suspensions and Terminations on NSTW Months

Annual statistics on beneficiaries do not capture the cumulative effects of past entry into NSTW because they exclude information on those whose benefits were previously terminated for work. In this section, we explore the total number of beneficiaries in NSTW in each year of the period under study, taking into account the cumulative effects of past entry. We base these statistics on the first subpopulation described earlier—those in current-pay status or in NSTW for at least 1 month during the year.

For this analysis, we exclude beneficiaries whose benefits were suspended or terminated for the entire year for a reason other than work—mostly because of age or mortality, but also because of medical recovery. Each year's subpopulation includes those who entered DI in an earlier year.[11] We stratify each group based on TTW participation. Participants include beneficiaries who assigned their tickets in the specified or previous calendar years, provided that those tickets were also assigned during the relevant NSTW months.[12] All other beneficiaries are nonparticipants. We base the payment system for TTW participants on the first month of the most recent ticket assignment.

In 2002, more than 400,000 beneficiaries (including former beneficiaries) had at least 1 NSTW month because of work; 59.5 percent were DI beneficiaries and the remaining beneficiaries were in the SSI-only group (Table 3). From 2002 through 2006, there was some fluctuation in the total number of beneficiaries with at least 1 NSTW month, but no apparent trend. The share of NSTW months for DI beneficiaries increased, reaching 67.9 percent of the total in 2006.

TTW participants accounted for only a small percentage of those with at least 1 NSTW month, even in the most recent year (Table 3). That percentage is

Table 3.
Number of beneficiaries with at least 1 NSTW month and the percentage who were TTW participants, 2002–2006

Payment title	2002	2003	2004	2005	2006
			Beneficiaries with at least 1 NSTW month		
DI	245,673	259,065	259,734	274,816	274,271
SSI-only	166,971	173,132	136,503	135,216	129,328
Total	412,644	432,197	396,237	410,032	403,599
	Percentage of beneficiaries with at least 1 NSTW month who had assigned tickets under any of the three payment systems				
DI	0.16	0.68	1.73	2.89	3.60
SSI-only	0.05	0.27	0.87	1.65	2.28
Total	0.11	0.52	1.43	2.48	3.17

SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample consists of existing DI or SSI beneficiaries who had entered the programs by January of each calendar year, were in current-pay status or had benefits suspended or terminated because of work for at least 1 month during the calendar year, and were below the FRA in January. In each year, TTW participants include beneficiaries whose tickets were assigned as of their first NSTW month. Stapleton and others (2010b) provide statistics for TTW participants with an assigned ticket during any month of the year indicated.

The figures in the bottom bank use the numbers in the top bank as the denominator and show the percentages of the total who were TTW participants. The corresponding numerator (the number of TTW participants with at least 1 NSTW month) is not shown.

just 0.11 in the first year of TTW, when the program was only available in 13 states. By 2006, the percentage had grown to 3.17 percent, still very small. We expect this percentage to continue to grow because an increasingly larger share of those in NSTW will have had their first STW event after the rollout of the TTW program.

Many of those with NSTW months were not in NSTW in every month of the year. To adjust for this fact, we divide the total number of NSTW months in a year by 12 to obtain a full-year equivalent measure of time off the rolls for work ("NSTW years"). This figure can also be interpreted as the number of beneficiaries and former beneficiaries in NSTW during the average month in the year. The number of NSTW years also fluctuated from 2002 through 2006, from a low of nearly 265,000 years in 2002 to a high of just over 275,000 years in 2006 (Table 4). The share of NSTW years represented by DI beneficiaries rose from 67.8 percent of the total in 2002 to 77.5 percent in 2006.

The percentage of NSTW years that were accrued by TTW participants also increased during this time, from 0.05 percent in 2002 to 2.96 percent in 2006. Much of the observed growth of this percentage was the result of growth in the number of TTW participants. We cannot determine the extent to which this growth reflects an impact of TTW on months off the rolls for work versus an increase in ticket participation by those leaving the rolls anyway.

We also examine NSTW months for TTW participants by payment system. The number of NSTW months are counted for participants under each system in each calendar year from 2002 through 2006, taking into account whether a beneficiary's ticket was assigned during the first STW event.

Most participants who had NSTW months had assigned their tickets under the traditional payment system, and most NSTW years for participants are accounted for by the same group. This reflects the fact that a very large majority of tickets were assigned under the traditional payment system throughout this period. Participants under that system had proportionally fewer NSTW months than those under the other two payment systems. In 2002, when 73.0 percent of NSTW years were attributed to those participants, 81.8 percent of ticket assignments were under the traditional payment system. The percentage of NSTW years attributed to this group increased to 80.7 percent in 2006, but the percentage of assignments under the traditional payment system also increased, to 86.5 percent.

It is important to recognize that participants who assigned their tickets to SVRAs did not represent all of the beneficiaries served by those agencies during this period, nor all of those served who had NSTW

Table 4.
Number of NSTW years among all beneficiaries and the percentage who were TTW participants, 2002–2006

Payment title	2002	2003	2004	2005	2006
			NSTW years		
DI	179,701	194,107	198,083	208,946	213,630
SSI-only	85,251	78,709	61,944	64,481	62,013
Total	264,952	272,816	260,027	273,427	275,643
	Percentage of beneficiaries with assigned tickets under any of the three payment systems				
DI	0.06	0.38	1.20	2.27	3.13
SSI-only	0.02	0.19	0.72	1.48	2.40
Total	0.05	0.33	1.09	2.08	2.96

SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample consists of existing DI or SSI beneficiaries who had entered the programs by January of each calendar year, were in current-pay status or NSTW for at least 1 month during the calendar year, and were below the FRA in January. In each year, months for assigned tickets only include the NSTW months during the year when the tickets were assigned. Stapleton and others (2010b) report slightly larger statistics that include NSTW months for the same participants in any months during the year when their tickets were not assigned.

months. This was especially true during 2002 and 2003, when beneficiaries in some states were not eligible for TTW. Hence, a large share of the growth in NSTW years for participants under the traditional payment system reflects growth in the number of beneficiaries served by an SVRA under TTW, not growth in the number of beneficiaries actually served by the SVRA.

In 2002, only 103 MO and 29 OO participants had at least 1 NSTW month (Table 5). By 2006, those numbers had increased to 1,432 and 663, respectively. This growth reflects the TTW program rollout, completed in 2004, as well as gradual growth in ticket assignments after they became available. In 2006, MO participants had a total of 926 NSTW years and OO participants had 476.[13] Although MO participants spent nearly twice as many months in NSTW as OO participants in 2006, the number of MO participants was nearly five times as large as the number of OO participants.

DI participants under all three payment systems had more NSTW years than SSI-only participants, both because there were more DI participants and because they had more NSTW months per beneficiary.

Outcome Payments to MO and OO Participants in NSTW

The MO and OO payment systems are of special interest because they were first introduced under TTW, and their outcome payments are tied directly to the suspension or termination of benefits for work. Specifically, SSA makes outcome payments in months when a participant receives no DI or SSI-only payment because of earnings, provided that the participant's EN files a claim for payments with acceptable documentation.

In this section we report findings from an analysis of the extent to which milestone and outcome payments were made during months that were identified as NSTW months for TTW participants. We focus on the period from 2002 through 2005, omitting 2006 to ensure that sufficient time had passed for all EN claims for payment to have been made and processed at the time the payment dates were extracted for this analysis.

Table 6 shows that of the 18,809 MO and OO participants who assigned their tickets from February 2002 through December 2005, at least one payment was generated by the end of 2006 by 2,502 participants (13.3 percent).[14] MO participants were slightly more likely to generate at least one payment than OO participants (13.7 percent compared with 11.6 percent, respectively). Conditional on generating at least one payment, however, OO participants generated more payments than MO participants (14.9 payments compared with 7.2 payments, respectively). Under both payment systems, DI participants were more likely than their SSI-only counterparts to generate a payment. This might reflect differences in the characteristics of those two types of participants, including differences in their prior work histories, but also might reflect programmatic differences. Outcome

Table 5.
TTW participants with at least 1 NSTW month and number of NSTW years: All three payment systems, 2002–2006

Payment title and payment system	2002	2003	2004	2005	2006
			TTW participants with at least 1 NSTW month		
DI					
Traditional	280	1,336	3,542	6,415	8,096
Milestone-outcome	80	295	627	1,020	1,119
Outcome-only	23	139	306	489	587
Subtotal	383	1,770	4,475	7,924	9,802
SSI-only					
Traditional	55	358	970	1,891	2,557
Milestone-outcome	23	83	173	272	313
Outcome-only	6	22	47	62	76
Subtotal	84	463	1,190	2,225	2,946
Total					
Traditional	335	1,694	4,512	8,306	10,653
Milestone-outcome	103	378	800	1,292	1,432
Outcome-only	29	161	353	551	663
Total	467	2,233	5,665	10,149	12,748
			NSTW years		
DI					
Traditional	78	555	1,858	3,806	5,453
Milestone-outcome	22	128	348	608	763
Outcome-only	5	61	175	318	433
Subtotal	105	744	2,381	4,732	6,649
SSI-only					
Traditional	11	117	355	807	1,278
Milestone-outcome	5	27	66	111	163
Outcome-only	2	8	23	33	43
Subtotal	18	152	444	951	1,484
Total					
Traditional	89	672	2,213	4,613	6,731
Milestone-outcome	27	155	414	719	926
Outcome-only	7	69	198	351	476
Total	123	896	2,825	5,683	8,133

SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Counts are based on the NSTW indicator. The analysis includes participants who most recently assigned their tickets from February 2002 through December 2006. Statistics only include NSTW months in which their tickets were assigned. Stapleton and others (2010b) provide slightly larger statistics that include any NSTW months during the year without regard for whether or not a ticket was assigned. Payment title and payment system are determined in January of the calendar year. Payment system for TTW participants is determined in the month of the most recent ticket assignment. NSTW years are calculated by dividing the number of months off the rolls, as indicated by NSTW months in each year, by 12.

payments for SSI-only participants are lower than for DI participants, and SSI-only participants typically must earn more than their DI counterparts for their benefits to be suspended because of differences in the work-incentive features of the two programs.[15] These factors might have a substantial effect on whether a participant generates a payment, but would most likely have much less effect on how many payments are generated by those who generate payments. In fact, among those who generate a payment, SSI-only participants generated slightly more payments than DI participants under either system.

The 18,809 MO and OO participants who assigned their tickets from February 2002 through December 2005 spent a very small share of subsequent months in NSTW through the end of 2005. Of the

Table 6.
Ticket payments generated from February 2002 through December 2006 among TTW participants assigning under the two new payment systems (MO and OO) by December 2005

Payment system and payment title	Number of tickets assigned	Tickets with payments		Mean number of payments, conditional on at least one payment		
		Number	Percent	Any	Outcome	Milestone
Total	18,809	2,502	13.3	8.5	6.9	1.7
Milestone-outcome	15,029	2,063	13.7	7.2	5.2	2.0
DI	10,484	1,587	15.1	7.1	4.8	2.2
SSI-only	4,545	476	10.5	7.6	6.4	1.2
Outcome-only	3,780	439	11.6	14.9	14.9	. . .
DI	3,217	393	12.2	14.8	14.8	. . .
SSI-only	563	46	8.2	15.6	15.6	. . .

SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes MO and OO participants who assigned their most recent tickets from February 2002 through December 2005. Months when a beneficiary's ticket was not assigned are excluded. Payment system and payment title are based on ticket-assignment month. Payments generated for months through December 2006 and processed through December 2007 are included.

. . . = not applicable.

346,423 months in which their tickets were assigned during this period, only 6.8 percent (23,405 months) were NSTW months (Table 7). These participants were in current-pay status during a large majority of those months (90.1 percent) and off the rolls for some other reason (such as age or mortality) in the remaining months (2.9 percent).

Because SSA makes outcome payments only in months when an MO or OO participant is engaged in SGA and the participant's benefits are suspended or terminated for work, we expected that NSTW months and outcome payments would paint a relatively consistent picture of the months in which those participants received no benefits because of work. Our expectations were only partly confirmed, however. As expected, a very high percentage of outcome payments (84.9 percent) were made for months that we counted as NSTW months (Table 8). Most other outcome payments were made in months during which we classified the beneficiary as suspended or terminated for some other reason (10.7 percent). Further analysis reveals that most of those months were for SSI-only beneficiaries who had earnings, but whose benefits were formally suspended or terminated for a reason other than work (for example, because of other income, such as the earnings of a spouse). Future refinements of the NSTW indicator will quite likely lead to reclassification of some of these cases as STW. This might also mean that any future revisions to the NSTW numbers for the SSI-only beneficiaries we reported earlier in this article will increase. Very few outcome payments were made to beneficiaries who were identified as being in current-pay status (4.4 percent).

Contrary to expectations, SSA made outcome payments in only a minority of the months that we classified as NSTW—just 38.7 percent (Table 8). One explanation is that SSA made milestone payments instead, but when we included milestone payments, the percentage of NSTW months with payments

Table 7.
Months with assigned tickets among all TTW participants, by suspension or termination status, 2002–2005

Status	Months	Percent
Months in which tickets were assigned	346,423	100.0
Current-pay	312,231	90.1
Suspension or termination	34,192	9.9
NSTW	23,405	6.8
Other suspension or termination	9,787	2.9

SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes MO and OO participants who assigned their most recent tickets from February 2002 through December 2005. Months when a beneficiary's ticket was unassigned are excluded. The "Other suspension or termination" category indicates that the beneficiary was off the rolls for a reason other than work (such as medical recovery).

Table 8.
Comparison of NSTW months and ticket payments among TTW participants under the MO and OO payment systems, February 2002–December 2005

Status	Months with an outcome payment			Months with a milestone payment			Months with any payment		
	Months	Percent of all assigned months in status	Percent of months with outcome payment	Months	Percent of all assigned months in status	Percent of months with milestone payment	Months	Percent of all assigned months in status	Percent of months with any payment
Total	10,673	3.1	100.0	3,547	1.0	100.0	14,220	4.1	100.0
Current-pay	466	0.1	4.4	3,175	9.3	89.5	3,641	1.2	25.6
NSTW months	9,060	38.7	84.9	271	1.1	7.6	9,331	39.9	65.6
Other suspension or termination	1,147	11.7	10.7	101	1.0	2.8	1,248	12.8	8.8

SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF.

NOTES: Sample includes MO and OO participants who assigned their most recent tickets from February 2002 through December 2005. Payments processed by December 2007 corresponding to months from February 2002 through December 2005 are included. Assigned months are those months in which the beneficiary's ticket was assigned to a provider. The "Other suspension or termination" category indicates that the beneficiary was off the rolls for a reason other than work (such as medical recovery).

increases only to 39.9 percent, as shown in the table. In other words, SSA made no payments in 6 out of 10 months that MO and OO participants were in NSTW according to our indicator.

This surprising result led us to investigate such cases further. Based on an initial analysis, SSA assessed a sample of NSTW months for which it had not paid the provider.[16] The agency found that the NSTW indicator sometimes misclassified beneficiaries as being in NSTW when their benefits were suspended or terminated for some other reason, including incarceration, spousal earnings, or receipt of unemployment compensation. We were able to refine the NSTW indicator to take into account incarceration and spousal earnings. Those refinements are reflected in the results we present here, but they did not appreciably change the results.

After those revisions were implemented, we reviewed the concordance between the NSTW indicator and payments again (Table 9). In 96 percent of the cases, the NSTW indicator was found to be concordant with the payments data; discrepancies were identified in 4 percent of the months. SSA then selected and reviewed a random sample of 100 months from all of the 13,773 months in which the NSTW indicator and outcome payment information were discrepant; that is, NSTW months with no payment to the EN (79.2 percent), or outcome payment months that were not classified as NSTW months (20.8 percent). The SSA reviewer had access to information beyond that contained in the 2007 TRF, the data source for our analysis.[17]

The review confirmed that the NSTW indicator was accurate in 73 of the 100 discrepant months reviewed (last column of Table 9). This includes 67 months in which the reviewer found evidence that benefits were suspended or terminated and the beneficiary was engaged in SGA, but the EN did not file a payment claim. In the other 6 months in which the NSTW indicator was confirmed to be correct, an outcome payment was made, but the indicator correctly showed that benefits were not suspended or terminated for work. Evidence available to the reviewer failed to contradict the NSTW indicator in an additional 3 months, leaving 24 months in which the NSTW indicator was demonstrably incorrect.

When the NSTW indicator was incorrect, it was less likely to falsely indicate that benefits were suspended or terminated for work when they were not (9 of the months reviewed) than to falsely indicate that benefits were in current-pay status or suspended or terminated for some other reason (15 of the months reviewed). That is, false negatives were more common than false positives.[18]

The review of the sampled cases demonstrates that the NSTW variable is an essentially accurate indicator of benefit suspension or termination for work, although imperfect. If the NSTW indicator is assumed to be correct in all months for which being in NSTW is not discrepant with outcome payment

Table 9.
Comparison of NSTW variable and ticket payments to findings from SSA's review of discrepant months among TTW participants under the MO and OO payment systems, February 2002–December 2005

Category of months	NSTW variable	Ticket payment	NSTW review	Number of months	Percent of months	Number of months reviewed
Total months	. . .	. . .	. . .	347,472	100.0	100
Total concordant months (not sampled for review)	. . .	. . .	. . .	333,699	96.0	0
Total discrepant months (sampled for review)	. . .	. . .	. . .	13,773	4.0	100
NSTW = Yes	. . .	. . .	. . .	19,399	5.6	79
Outcome payment (concordant; agrees with NSTW = Yes)	Yes	Outcome	No	8,484	2.4	0
No outcome payment (discrepant; disagrees with NSTW = Yes)	. . .	. . .	. . .	10,915	3.1	79
Evidence matches NSTW (evidence of SGA)	Yes	Not paid	Yes	9,257	2.7	67
Evidence inconclusive	Yes	Not paid	Yes	414	0.1	3
NSTW incorrect (no evidence of SGA)	Yes	Not paid	No	1,243	0.4	9
NSTW = No	. . .	. . .	. . .	328,073	94.4	21
No payment (concordant; agrees with NSTW = No)	No	Not paid	No	321,691	92.6	0
Milestone payment (concordant; agrees with NSTW = No)	No	Milestone	No	3,524	1.0	0
Outcome payment (discrepant; disagrees with NSTW = No)	. . .	. . .	. . .	2,858	0.8	21
Evidence matches NSTW (no evidence of SGA)	No	Outcome	No	817	0.2	6
NSTW incorrect (evidence of SGA)	No	Outcome	Yes	2,041	0.6	15

SOURCE: Analysis of DI and SSI beneficiary records in the 2007 TRF. The NSTW review included 100 randomly selected cases from all cases in which the NSTW variable and ticket payment were discrepant.

NOTE: . . . = not applicable.

information and if the findings from the review provide accurate estimates of what would have been found if all discrepant cases had been reviewed, then the NSTW indicator correctly identified the following: (1) that benefits were suspended or terminated for work in 89.7 percent of all TTW participant months in which benefits were actually suspended or terminated for work, and (2) that benefits were not suspended or terminated for work in 99.6 percent of all TTW participant months in which benefits were actually not suspended or terminated for work.[19] For the months reviewed, the number of months found to be NSTW months (82) is actually larger than the NSTW months reviewed (79), but this difference is not statistically significant.[20]

The findings of the review also suggest that beneficiaries actually were engaged in SGA in a large majority of the NSTW months represented in the earlier NSTW statistics. It is important to note, however, that the sample reviewed is not a random sample of all months identified as NSTW months, but rather a random sample of those MO and OO participant months in which the NSTW variable and the outcome payment data were discrepant. It might be that, relative to TTW participants under the MO and OO payment systems, participants under the traditional payment system and nonparticipants were engaged in SGA during a smaller share of months that we identified as NSTW months.

Finally, the findings from the review imply that providers would have been eligible for payments in a very large share of the 60.1 percent of NSTW months for which they were not paid if they had filed a properly documented claim. The most likely reason the provider did not file a claim is inability to obtain the necessary documentation. ENs must keep in touch with their clients for several years, and clients must cooperate in the EN's effort to collect documentation. Outcome payments are in line with the TTW objective of having the EN take a long-term interest in the client's success. Another explanation applies to a small share of these cases where the provider had withdrawn from its contract with SSA.

Conclusions

Based on the NSTW indicator, less than 1 percent of all beneficiaries, or about 70,000 each year, experienced their first month of benefit suspension or termination for work in each year from 2002 through 2006. Although the percentage entering NSTW in any year was small, the cumulative effect was much more substantial because many beneficiaries remain in NSTW for a sustained period. Just over 400,000 beneficiaries or former beneficiaries had at least 1 NSTW month in 2006. This number is equal to 3.9 percent of all working-age beneficiaries who were on the DI or SSI-only rolls in December 2006.[21] Many of those beneficiaries were not on the rolls at any point in 2006. The benefits of some had been terminated for work in earlier years, and the NSTW indicator counts those beneficiaries as being in NSTW because they had not re-entered the rolls, reached the FRA, or died. Because many of these beneficiaries were not in NSTW in all months of the year, the total number of NSTW months is equivalent to a smaller number of years, approximately 275,000.

The number of NSTW months is not growing rapidly. The annual number grew by less than 4 percent from 2002 through 2006. Over the same period, the number of beneficiaries increased by nearly 14 percent.[22] The statistics reflect NSTW months for those with their first STW event in 1996 or later. We cannot attribute the relatively low NSTW growth to a specific cause. For DI beneficiaries, there is substantial evidence that the 2000–2001 recession and the 2001 increase in the trial work period (TWP) "service month" amount (the minimum earnings that constitute a TWP month) contributed to a reduction in the number of NSTW months for cohorts that received their awards from 2000 through 2003, relative to earlier cohorts (Stapleton and others 2010a). Analysis of the impacts of the 1999 increase in the nonblind SGA amount from $500 to $700 indicates that it, too, reduced the number of NSTW months for DI beneficiaries (Schimmel, Stapleton, and Song, forthcoming). Another reason for the relatively slow growth in NSTW months is that the aging of the large baby boom generation at least partially drives the recent growth in the number of beneficiaries; they are now in their fifties and early sixties—the period in which workers are most likely to exit the labor force and enter DI, but least likely to accumulate NSTW months after DI entry (Stapleton and others 2010a). A final, more subtle reason for relatively slow growth in NSTW months is that rapid growth in the number of DI beneficiaries is not expected to translate into a similar pattern of rapid growth in NSTW months immediately. It takes time for new beneficiaries to return to work, complete the TWP and grace period (in the case of DI), and, finally, have their benefits suspended or terminated for work.

It is likely that NSTW months increased in 2007 because of economic growth and continued growth in the beneficiary rolls, but declined in 2008 because of the severe recession. Even with its new regulations in place, TTW is clearly fighting an uphill battle to accelerate growth in NSTW months.

TTW participants account for only a small percentage of NSTW months—just 3 percent in 2006. As the number of TTW participants grew from 2002 through 2006, that percentage also grew. We do not know the extent to which growth in that percentage represents an impact of TTW on NSTW months versus increased use of TTW by those who would have NSTW months in the absence of TTW. Not surprisingly, TTW participants were more likely than nonparticipants to experience NSTW months; ticket assignment presumably reflects beneficiary interest in increasing their earnings and, for some, becoming self-sufficient.

Compared with nonparticipants, participants who had an STW event were in NSTW for a longer period, on average, but the differences are modest. It is possible that the longer duration in NSTW reflects the usefulness of services received under TTW, but it might also be that those beneficiaries most capable and determined to leave the rolls for a lengthy period were also the most likely to assign their tickets. Perhaps both are true, but we are not able to distinguish their relative importance.

In 2006, TTW participants under the MO and OO payment systems were in NSTW for the equivalent of 1,403 years, counting only months when their tickets were assigned. Participants under the traditional payment system (nearly 90 percent of all participants in 2006) were in NSTW for the equivalent of 7,475 years (almost 81 percent of the NSTW months for all participants). The number of TTW participants in NSTW increased substantially in every year from 2002 through 2006, reflecting the gradual rollout of the TTW program from 2002 through 2004 and growth in beneficiary use of TTW once it was available.

We find that a minority of participants under each of the three payment systems had NSTW months—only about 20 percent by the 48th month after

assignment. The percentages for OO and MO participants were substantially higher than the previously reported percentages for those generating payments to providers by the 48th month after assignment (Stapleton and others 2008), reflecting the fact that providers did not receive payments in many months when their clients were in NSTW. We also find that OO participants were substantially more likely than MO and traditional participants to have at least 1 NSTW month: 25 percent by the 48th month after assignment, compared with about 17 percent for participants under either the MO or traditional payment systems.

In addition, we find that OO participants with at least 1 NSTW month typically remained in NSTW longer than participants under the other two payment systems. For instance, of the OO participants with a first STW event in 2002, nearly half (48.3 percent) were in NSTW 48 months later, compared with 40.9 percent for participants under the traditional payment system and 24.3 percent for those under the MO system.

NSTW months for TTW participants may reflect the impact of the TTW program on NSTW months, but we do not know how many of those months would have been NSTW months in the absence of TTW. Presumably some participants would have obtained services from SVRAs under the traditional payment system, or entered NSTW without service financing from SSA. Our analysis shows that TTW participants constitute only a small fraction of those who leave the rolls for work in any given year. Hence, there are many more beneficiaries who could have elected to participate in TTW even though they would have left the rolls if they had not participated.

It is likely that the participant NSTW months increased again in 2007, but the severe recession, which started at the end of 2007, might well have reversed the trend. The July 2008 changes in the Ticket regulations eventually might have a positive effect on NSTW months, but that will take time to materialize, as the negative effect of the recession may linger for several years. We suspect that the recession is overwhelming any positive impact that TTW has on NSTW months.

We find that ENs received payments in only about 40 percent of the months during which their MO and OO clients were in NSTW. Investigation of a random sample of such cases led us to conclude that payment was not made in a large majority of these cases only because the provider did not file a claim.

SSA was designing and implementing changes to the payment process during the 2002–2006 period. The main objectives of those changes were to reduce the burden on providers of filing payment claims and to improve the timeliness of payments (Stapleton and others 2008, chapter X). To file a payment claim, the EN must keep in touch with the client for several years, and the client must cooperate in the EN's effort to collect documentation. This payment system is in line with the TTW objective of having the EN take a long-term interest in the client's success. The attractiveness of TTW to providers might hinge on the extent to which those efforts have increased the percentage of months in which providers request and receive payments when their TTW clients' benefits are suspended or terminated for work. Therefore, when considering further revisions to the payment process and the information required of providers to submit a claim, SSA should carefully consider the balance between the objective of encouraging the EN to maintain a relationship with the client and the burden of properly adhering to the payment process. For the program to be economically viable, the payment system might need to change in the direction of reducing the burden on ENs at a cost of reducing the incentive for the EN to maintain a relationship with the client.

Notes

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[1] Under the regulations in place during the period under study, outcome payments could be made for up to 60 months. Under the MO system, SSA makes some payments based on achieving earnings milestones, but not on the receipt of benefits; in addition, outcome payments are made.

[2] After 2008, it was no longer necessary for the SVRA to obtain a beneficiary's ticket for purposes of using the traditional payment system. Further, under the Partnership Plus option, the beneficiary can obtain services from an SVRA under the traditional payment system and then obtain

follow-up services from an EN under a modified version of either the MO or OO system.

[3] In previous reports this indicator has been called the "left-due-to-work" indicator, or LDW. We have changed the name to STW to reflect the fact that the variable identifies suspensions for work, not just terminations.

[4] The DI group includes both DI-only and concurrent (that is, DI and SSI-only) beneficiaries because the Ticket payment schedule for those two groups is the same.

[5] The use of the most recent ticket assignment for dating the assignment avoids double counting of participants, but it also means that the number of assignments reported early in the period are somewhat lower than the actual number. Comparing our findings with those in Exhibit XIII.1 in Stapleton and others (2008), we find that our method captures 91 percent of all assignments in 2002; 96 percent of assignments in 2003; and 97 percent of assignments in 2004. If a participant's ticket was unassigned during this period and not reassigned, the participant is included in our analysis, but only the most recent assignment is considered and months in which the ticket is unassigned are not included.

[6] These definitions exclude beneficiaries from both the numerator and the denominator if they receive their award partially through the previous calendar year or in the specified calendar year. Such beneficiaries only rarely experience an STW month because of the trial work period (TWP) and grace period.

[7] For the sake of simplicity, we display only those results for beneficiaries whose first STW event was in 2002. There was virtually no difference between participants and nonparticipants based on when the first STW event occurred, and 2002 offers the longest observed time trend.

[8] Suspension for work is not time limited. Termination for work only occurs if earnings exceed the section 1619(b) income limit for the beneficiary's state (SSA 2011, 41).

[9] Longitudinal statistics presented in Charts 3, 4, and 5 follow participants for a set number of months, depending on the year they assigned their tickets. Beneficiaries who assigned their tickets in 2002 are observed for 48 months following assignment, 2003 assigners are followed for 36 months, 2004 assigners are followed for 24 months, and 2005 assigners are followed for 12 months. The length of observation is the same within a given cohort, regardless of whether the ticket was assigned in January or December of that year. This method avoids right censoring and ensures the same sample size for a given cohort throughout the observation period.

[10] Beneficiaries who first assigned their tickets in 2002 could have been first off the rolls in any year from 2002 to 2005, while beneficiaries who assigned their tickets in 2005 could have been first off the rolls only in 2005.

[11] Statistics for the number of beneficiaries off the rolls and the number of months they were off would be only very slightly higher if we had included those entering the rolls during the year because suspensions for work rarely occur during the first year on the rolls.

[12] Stapleton and others (2010b) reported a second set of statistics for TTW participants that are slightly larger because STW months for participants that occurred in months when the ticket was not assigned are counted as participant months.

[13] As reported by Stapleton and others (2010b), NSTW years in 2006 are somewhat larger if STW months in which the participant's tickets are not assigned are included in the count: 1,214 for MO and 569 for OO. The difference partly reflects the fact that a number of ENs withdrew from the program.

[14] Because Ticket payments often are processed with a lag, we use data on payments processed by the end of 2007 to allow sufficient time for 2006 payments to have been processed.

[15] SSI-only beneficiaries typically need to earn well above the SGA amount ($1,000 per month for nonblind beneficiaries in 2011) before their SSI payments fall to zero, whereas DI beneficiaries can have their benefits suspended or terminated for work when their earnings are just above the SGA amount after they have used up their 9 TWP months and 3 grace period months. See O'Leary, Livermore, and Stapleton (2011).

[16] The data we submitted to SSA for the purposes of this review were more recent than those used in this analysis, specifically, cases with months off of the rolls for work from July 2008 through December 2008 (using the 2008 TRF).

[17] The SSA reviewer first checked to see if the beneficiary had a payment status code or suspension/termination code that indicated no cash benefit because of work. The reviewer then checked for verified earnings above SGA based on earnings reported directly to SSA or reported to the Internal Revenue Service; for the latter, earnings are annual, so the reviewer divided earnings by 12 to get a monthly amount. The reviewer also checked the National Directory of New Hires (NDNH), but none of the cases had NDNH data for the quarter in question. The reviewer considered a combination of the payment status indicating a suspension/termination because of work with evidence of earnings above SGA for the month in question from any of the earnings sources as positive evidence that the month was an STW month.

[18] Revisions to the NSTW indicator in light of the investigations undertaken for purposes of this study are continuing. However, such revisions have not substantively changed the frequency with which ENs received outcome payments in the months when, according to the NSTW indicator, their MO and OO clients were in STW status. We are confident that any remaining revisions to the NSTW indicator will not lead to findings materially different than those presented here.

[19] Under the assumption stated and as Table 9 shows, the number of months in which benefits were actually in nonpayment status following suspension or termination for work is the sum of (a) the NSTW variable = Yes, months with outcome payments (8,484); (b) the number of NSTW months = Yes, months with SGA evidence (9,257); and (c) the number of NSTW months = No, months with evidence of SGA (2,041)—for a total of 19,782 months. The percentage of those months in which the NSTW indicator is estimated to be accurate is (9,257 + 8,484)/19,782 = 89.7 percent.

Similarly, the number of months in which benefits were actually in current-pay status or in nonpayment status for a reason other than work is the sum of (a) the number of NSTW months = Yes, months with no outcome payments and no evidence of SGA (1,243); (b) the number of NSTW months = No, months with no payment (321,691); (c) the number of NSTW months = No, months with a milestone payment (3,524); and (d) the number of NSTW months = No, months with an outcome payment, but no evidence of SGA (817)—for a total of 327,275 months. The percentage of such months in which the NSTW indicator is estimated to be accurate is (321,691 + 3,524 + 817)/327,275 = 99.6 percent. We excluded from both calculations the 414 months with NSTW = Yes, with inconclusive evidence of SGA.

[20] The number of reviewed months found to be actual months of nonpayment status following suspension or termination for work is the sum of the 67 months with NSTW = Yes, with evidence of SGA and the 15 months with NSTW = No, with evidence of SGA. The estimated standard error for the number of reviewed months that are NSTW months is 3.8.

[21] In December 2006, there were 10,362,419 DI or SSI-only beneficiaries aged 18–64 (SSA 2009, Table 65).

[22] In December 2002, there were 9,106,014 DI or SSI-only beneficiaries aged 18–64. By December 2006, this number had increased to 10,362,419 (SSA 2009, Table 65).

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Longitudinal Outcomes of an Early Cohort of Ticket to Work Participants

by Gina A. Livermore and Allison Roche*

Using 2004–2006 National Beneficiary Survey data matched to Social Security administrative data, we follow a cohort of disability beneficiaries participating in the Ticket to Work (TTW) program for several years to assess changes in their service use, health status, employment, and income. About 20 percent of TTW participants achieved employment at levels that would significantly reduce their disability benefits. Another 40 percent achieved some employment success, but the remaining 40 percent reported no earnings during 2003–2005. Use of TTW support services during 2003–2005 was modest. Many participants experienced significant changes in their health status across survey rounds, which might have affected their ability to actively participate in TTW and to become employed. Many also experienced significant employment and income instability. The findings suggest that employment among TTW participants was associated with reduced poverty

Introduction

The Ticket to Work and Work Incentives Improvement Act of 1999 prompted numerous changes in the Social Security Disability Insurance (DI) and Supplemental Security Income (SSI) programs intended to encourage and facilitate the work efforts of disability program participants. Among the changes was the implementation of the Ticket to Work (TTW) program. TTW was designed to increase access to and quality of employment services for disability beneficiaries. Under TTW, the Social Security Administration (SSA) provides beneficiaries with a ticket they can use to obtain vocational rehabilitation or other employment support services either from participating providers called Employment Networks (ENs) or from state vocational rehabilitation agencies (SVRAs). These providers receive payments from SSA if the beneficiaries they serve achieve successful employment outcomes.

Other studies evaluating the TTW program have presented extensive information about the characteristics, experiences, and employment outcomes of TTW participants (Thornton and others 2006; Thornton and others 2007; Stapleton and others 2008; Stapleton, Gruman, and Prenovitz 2009). Findings of these previous studies include:

- Only about 2 percent of disability beneficiaries have participated in TTW. Relative to other disability beneficiaries, TTW participants were younger, had higher levels of education, were more likely to be receiving DI benefits, had been on the disability rolls for a shorter period, were in better health, and were less likely to have severe functional or activity limitations. Although these characteristics suggest

Selected Abbreviations

DI	Disability Insurance
EN	employment network
IRS	Internal Revenue Service
MCS	mental component summary
NBS	National Beneficiary Survey
PCS	physical component summary

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Selected Abbreviations—*Continued*

SGA	substantial gainful activity
SIPP	Survey of Income and Program Participation
SSA	Social Security Administration
SSI	Supplemental Security Income
SVRA	state vocational rehabilitation agency
TRF	Ticket Research File
TTW	Ticket to Work

that TTW participants might face fewer employment obstacles than other disability beneficiaries, they do have significant health and functional limitations, low levels of education, and very high poverty rates relative to the general working-age population—factors that can limit their employment success.

- Relative to other disability beneficiaries, TTW participants were significantly more likely to have used services to improve their ability to work or live independently, and in particular to have used services that were specifically intended to help them obtain or keep a job.
- TTW participants were nearly four times as likely as other disability beneficiaries to be employed, to be looking for work, or to have been employed recently. TTW participants worked a similar number of hours relative to other beneficiaries who were employed, but they earned higher average wages and were more likely to be in competitive (rather than sheltered) employment.
- TTW participants' service use and employment outcomes differed significantly depending on the type of service provider. Participants who used ENs were less likely to have received services, received fewer median hours of service, and were more likely to report unmet service needs than those who used SVRAs. Although participants were equally likely to be employed regardless of provider type, working participants who used ENs worked more hours, had higher wages and earnings, were offered more job-related benefits, and were less likely to be in sheltered employment than working participants who used SVRAs.

In this study, we build on the previous cross-sectional findings by following an early cohort of TTW participants for 3 years using survey data and for 5 years using administrative data to provide a longitudinal perspective on their TTW enrollment, service use, and employment experiences. We also examine changes in health status and income—characteristics that might be affected directly or indirectly by TTW participation.

In interpreting the findings it is important to keep in mind that TTW participants are not typical SSI and DI beneficiaries, and likewise do not represent all working-age disability beneficiaries who are interested in employment. The sample of TTW participants studied here is a very small subgroup of working-age SSI and DI beneficiaries who were sufficiently interested in pursuing employment that they assigned their tickets to service providers very shortly after TTW was implemented. Their characteristics and experiences might differ from those of other employment-oriented disability beneficiaries.[1] It is also important to keep in mind that the findings presented here and in previous studies reflect substantial differences, in both the characteristics and employment outcomes, between TTW participants who assigned their tickets to ENs and those who assigned their tickets to SVRAs.[2] Given these differences, in this study we report nearly all findings by provider type.

The article opens with some background on the SSI, DI, and TTW programs, and a description of the data and methods. We next present detailed findings for the early cohort of TTW participants on longitudinal TTW enrollment and service use, health status, employment, and income. Then we compare selected outcomes of TTW participants across three levels of employment success during 2003–2005. We conclude with a discussion of the findings.

Background

The SSI and DI programs are designed to provide income support to individuals with significant disabilities who are unable to work at levels considered by SSA to be substantial, as determined by earnings amount, hours worked, and nature of work. To qualify for either program, an applicant must demonstrate that he or she is unable to engage in substantial gainful activity (SGA) because of a medically determinable impairment expected to last at least 12 consecutive months or to result in death. As of 2011, SSA considers earnings above $1,000 per month as SGA for most applicants. DI eligibility is also contingent on having accumulated a sufficient number of recent and lifetime quarters of Social Security–covered employment, and the level of the DI benefit is based on past earnings—individuals with higher lifetime earnings are eligible for higher DI benefits. By contrast, SSI is a

means-tested program where eligibility is subject to strict income and resource limits. The monthly SSI payment is based on the individual's income and living arrangement. Individuals may qualify for both SSI and DI if their income (including DI benefits) and assets do not exceed SSI limits. Eligibility for either program can also provide access to public health insurance. DI beneficiaries qualify for Medicare coverage after a 24-month waiting period, and most SSI recipients are eligible for Medicaid automatically.

Although initial eligibility for both programs is contingent on an inability to engage in substantial work activity, the DI and SSI programs differ in their treatment of earnings for determining monthly cash payments and ongoing program eligibility. In the DI program, individuals are permitted to work and earn at any level for up to 9 months without losing eligibility for cash benefits. This 9-month period is referred to as the trial work period.[3] As of 2011, an individual is considered to be in a trial work period if monthly earnings exceed $720 or if he or she is working more than 80 self-employed hours per month. If individuals earn more than the SGA level in any month after completing the trial work period, they become ineligible for any DI benefits but remain eligible for Medicare if they completed the 24-month Medicare waiting period prior to losing DI eligibility.[4]

In the SSI program, payments are reduced by $1 for every $2 of earnings above $65 per month; thus, SSI payments decline gradually as earnings rise. Program provisions that allow participants who meet certain conditions to retain SSI eligibility they would otherwise lose are known by their Social Security Act section numbers. Section 1619(a) preserves SSI payments for those with earnings exceeding the SGA level, and Section 1619(b) preserves Medicaid eligibility even if earnings are high enough to cause SSI cash payments to cease. Individuals remain eligible for Medicaid until their earnings exceed a "threshold amount," which is based on annual per capita Medicaid expenditures for SSI recipients and varies by state. The threshold also can be computed for individuals if their Medicaid expenditures exceed the state per capita amount. In 2010, state threshold amounts ranged from about $24,000 to almost $55,000.

The SSI and DI programs have a number of provisions to support beneficiaries' efforts to return to work, using mechanisms such as those noted above that allow beneficiaries to keep more of their cash benefits and retain eligibility for public health insurance as earnings increase. Enacted in 1999, the Ticket to Work and Work Incentives Improvement Act included a number of new provisions designed to promote the employment of disability beneficiaries. One provision established the TTW program.[5] TTW is intended to increase access to, and the quality of, rehabilitation and employment services for disability beneficiaries. The program is designed to provide beneficiaries with a greater choice of service providers, foster competition among providers to develop high-quality services responsive to beneficiary needs, and give providers incentives to deliver services efficiently and appropriately. TTW implementation occurred in a phased rollout beginning in February 2002. By September 2004, the program was implemented in all US states and territories.

Under TTW, eligible DI and SSI disability beneficiaries are given a ticket, which can be used to obtain vocational rehabilitation or other employment support services through a participating provider—an EN—or through the SVRA. Although the beneficiary typically initiates a ticket assignment by selecting a provider from which he or she would like to receive services, the provider can choose whether to accept the ticket. Once the ticket is assigned to a provider, the beneficiary can choose to reassign it to a different provider at any time and for any reason. Likewise, providers have the option to discontinue services to a beneficiary and "unassign" the ticket. This might occur, for example, if the provider believes that the beneficiary is not actively pursuing employment or that its available services are insufficient or inappropriate for the beneficiary's specific needs. Ticket assignment thus represents a mutual and voluntary agreement between the provider and the beneficiary, and over time, a participant may use services from both provider types. Therefore, in this study, whether a participant is identified as an EN client or as an SVRA client depends on the type of provider to which his or her ticket had been assigned for the longest period as of December 2006.

When the program was implemented, ENs chose one of two TTW payment systems, *outcome-only* and *milestone-outcome*. Under the outcome-only system, an EN received an outcome payment from SSA for each month (up to 60 total months) in which the beneficiary received no DI or federal SSI payments because of work or earnings. Under the milestone-outcome system, an EN would receive payment when a beneficiary achieved one of up to four employment milestones, defined by a specified number of months working at or above SGA level during a specified period. In addition to the milestone payments, monthly

outcome payments could be paid to the EN if the beneficiary received no DI or SSI payments because of work or earnings.[6] Amounts paid for DI beneficiaries differed from those paid for SSI-only recipients.

SVRAs could also choose one of the TTW payment systems, or instead choose the traditional cost-reimbursement system in place prior to TTW implementation. Under the traditional SVRA payment system, SSA will pay an SVRA its allowable costs of providing services to a beneficiary if the beneficiary works and has earnings above the SGA level for at least 9 consecutive months during a 12-month period. For an agency to obtain payment under the traditional cost-reimbursement system, a beneficiary's ticket had to be assigned to the SVRA.

In July 2008, SSA implemented new TTW program regulations. Among other changes, the two TTW payment systems were substantially revised in order to make provider participation more financially worthwhile. The revised regulations increased the total potential amounts payable under the milestone-outcome and outcome-only systems, reduced the outcome payment period from 60 to 36 months for DI beneficiaries, increased the number of milestone payments, reduced the level of employment necessary to generate certain milestone payments (the Phase 1 milestones), and no longer reduced outcome payments for previous milestone payments.[7]

Data and Methods

The findings are based in part on data from the first three rounds of the National Beneficiary Survey (NBS). The NBS is conducted as part of an ongoing evaluation of the TTW program. Survey rounds were administered in each year from 2004 through 2006.[8] Each NBS round included both cross-sectional and longitudinal samples of TTW participants. For the cross-sectional samples, a new, nationally representative sample of SSI and DI beneficiaries aged 18 to 64 was interviewed for each round. Samples numbered 7,603 in 2004, 4,864 in 2005, and 2,508 in 2006. Each NBS round provided a wealth of information about the characteristics, service use, and employment activities of Social Security disability beneficiaries that was not available from administrative data, nor from any other survey for such a large and recent sample of SSI and DI beneficiaries.

The findings of this study are based on the longitudinal sample of TTW participants who were followed in all three NBS rounds. This sample is representative of TTW participants who were enrolled in the program at some point between January and June 2003 and who resided in the 13 states where TTW was first implemented in 2002 (the Phase 1 states).[9] The findings thus represent the longitudinal experiences of one of the first participant cohorts, one whose members were enrolled in the program while it operated under the original TTW regulations. We believe that the early cohort analyzed here can be considered comparable to later cohorts for two reasons. First, analyses of TTW participants in the Phase 2 states indicate that the characteristics and employment experiences of TTW participants across implementation rounds did not differ substantially (Stapleton and others 2008). Second, and perhaps more importantly, the vast majority of tickets (nearly 90 percent) have been and continue to be assigned to SVRAs under the traditional payment system that was in place prior to TTW. Thus, for the majority who assigned their tickets to SVRAs, we would expect their characteristics and experiences to be comparable to later cohorts. To date, no detailed analyses of the characteristics of beneficiaries entering TTW since the implementation of the revised TTW regulations in 2008 have been conducted. The revised regulations changed the TTW payment system in ways that increased the incentives for ENs to accept tickets, and the number of tickets assigned to ENs has increased since that change (Altshuler and others 2011). Even so, we have little reason to believe that the characteristics and experiences of the early cohort presented here would differ substantially from those of later TTW participant cohorts, as the fundamental nature of the program has not changed.

Only sample members who responded to all three rounds of the survey are included in the analysis.[10] Analysis of a variety of characteristics and outcomes between the full 2004 NBS TTW participant sample and the sample members who responded to all three NBS rounds indicated no statistically significant differences (Grau 2007), suggesting that attrition bias is likely to be minimal. Table 1 compares the characteristics of the longitudinal TTW sample members who answered all three NBS rounds with those of the full 2004 NBS TTW sample and of all disability beneficiaries (based on the 2004 NBS).

Because the types of beneficiaries seeking services from ENs versus SVRAs differ significantly, and because the provider types face different payment systems and incentives, many of the characteristics and outcomes of TTW participants are shown by provider type. Sample sizes for specific subgroups used in the analyses are shown in Table 2.

Table 1.
Sample characteristics: Longitudinal and full TTW participant samples, and all disability beneficiaries, 2004 (in percent)

Characteristic	Longitudinal TTW participant sample	Full TTW participant sample	All beneficiaries
	Program characteristics		
Program type			
DI only	48	50	53
Concurrent	22	22	16
SSI only	30	28	31
TTW provider type			
EN	12	13	…
SVRA	88	87	…
Age at disability onset			
Younger than 18	38	37	23
18 or older	62	63	77
	Sociodemographic characteristics		
Sex			
Men	51	52	50
Women	49	48	50
Age			
18–24	11	10	5
25–39	34	35	17
40–54	41	42	39
55 or older	14	14	39
Race			
White only	60	61	71
Black only	34	33	22
Other	6	5	6
Ethnicity			
Hispanic origin	10	9	11
Non-Hispanic	90	91	89
Education			
Did not obtain high school diploma or equivalent	20	22	42
High school diploma or equivalent	39	36	35
Education beyond high school	41	42	23
Marital status			
Married	16	16	33
Widowed, divorced, or separated	29	29	34
Never married	55	55	33
Household income as a percentage of federal poverty threshold [a]			
Less than 100	53	50	49
100–299	37	36	38
300 or more	10	11	13
Mean months on the disability rolls since initial eligibility	152	150	…

SOURCES: 2004 NBS; Thornton and others (2007).

NOTES: Values are weighted. Statistics reported are based on the sample member's status at interview in 2004.

… = not applicable.

Rounded components of percentage distributions do not necessarily sum to 100.

a. The threshold is determined by family size and the ages of family members. In 2003 (the reference period for the household income question in the 2004 NBS), the threshold for a household with one individual under age 65 was $9,573 per year.

Table 2.
Phase 1 TTW participant longitudinal sample sizes, by analytical subgroup

Subgroup	Number (unweighted)	Number (weighted)	Percentage (weighted)
All Phase 1 TTW participants	767	20,763	100
TTW provider type[a, b]			
EN	407	2,507	12
SVRA	354	18,181	88
Employment status at round 3 interview (2006)			
Employed	267	7,206	35
Not employed	500	13,558	65

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds, with results matched to the 2007 TRF.

a. TTW provider and payment types are based on the provider to which the participant's ticket was assigned the longest as of December 2006.

b. Six members of the Phase 1 TTW participant longitudinal sample lacked any TTW program-related information in the TRF and so were excluded from all statistics generated for subgroups defined by TTW-related characteristics.

Records in the NBS Phase 1 TTW participant longitudinal sample were matched to Social Security administrative data contained in the 2007 Ticket Research File (TRF). The TRF is made up of data extracts from a number of Social Security administrative data files and contains a record for all individuals from ages 10 to full retirement age who have participated in the SSI and DI programs since 1996. From these data, we are able to analyze information about the use of SSA work supports and the number of months that cash benefits were suspended or terminated because of work during 2004–2007 for our sample members.

The NBS Phase 1 TTW participant longitudinal sample also was matched to annual Internal Revenue Service (IRS) earnings records for 2003–2007 to analyze the earnings of the early TTW participants during that time.[11] The earnings data come from SSA's Master Earnings File, which contains earnings items from the employer-filed W-2 form and information on other earnings not subject to Federal Insurance Contributions Act (FICA) Social Security and Medicare taxes.[12]

Wage and earnings values presented were adjusted for changes over time based on the national average wage index. Income amounts were adjusted for inflation using the SSA cost-of-living adjustment.[13] All estimates were derived using the relevant survey sampling weights, and all standard errors used to compute tests of statistical significance account appropriately for the survey's complex sampling design.[14] The statistics presented are representative of all SSI and DI beneficiaries residing in Phase 1 states who were enrolled in the TTW program at some point between January and June 2003.

TTW Enrollment and Service Use

Using Social Security administrative data in the TRF through December 2006, we examined the enrollment characteristics of our sample of early TTW participants.[15] Here, "enrollment" refers to an eligible beneficiary signing up for TTW services by assigning his or her ticket to a provider. Recall that all sample members had enrolled in TTW at some time between February 2002 (when TTW was first implemented) and June 2003 (when the 2004 NBS TTW sample was drawn).

As of the end of December 2006, 16 percent of the TTW participants were no longer enrolled in the program; that is, their ticket was no longer assigned to a provider (Table 3). On average, participants had been enrolled in TTW for 45 months out of a possible maximum of 59 months. Significant differences in the duration of enrollment are evident between EN clients and SVRA clients. About one-half (52 percent) of EN clients had left the program by the end of December 2006, compared with just 10 percent of SVRA clients. The mean TTW enrollment duration was 34 months among EN clients and 46 months among SVRA clients. Among those who left TTW, about half had done so after participating in the program for 1 year or less, and this did not differ significantly by provider type.

Using data from the three NBS rounds, we examined the likelihood of using services, hours of

Table 3.
TTW enrollment characteristics, by provider type, as of December 2006

Enrollment status and duration	All TTW	Provider type[a]	
		EN	SVRA
Still enrolled in TTW (%)	84	48*	90
Total months enrolled (%)			
Fewer than 13	6	28**	4
13–24	3	10**	2
25–36	3	7**	2
37 or more	87	55**	92
Mean months enrolled	45	34*	46

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds, with results matched to the 2007 TRF.

NOTES: Sample size = 767.

* = Significantly different from SVRA clients at the 0.05 level, two-tailed test.

** = Significantly different from SVRA clients at the 0.05 level, chi-square test.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

service use, and reported unmet service needs during 2003–2005. Services are defined very broadly, and include any that respondents identified as having been received for purposes of improving their ability to work or live independently. In the analyses presented below, we categorize the types of services used into two broad groups: employment services and medical or other services. Employment services include work or job assessment, help finding a job, prehire or on-the-job training, job coaching, and advice about modifying a job to accommodate a disability. Medical or other services include all other types, such as physical, occupational, and speech therapy; mental health and counseling services; and medical procedures and devices. Note that the data include all services received during the calendar year prior to the year of interview and encompass all services received regardless of whether they were arranged by a TTW provider or outside program auspices.

Table 4 shows the likelihood of using services overall, by service type, and by provider type:

- As expected, the likelihood of using services was relatively high among TTW participants, ranging from 52 percent to 61 percent across the 3 years. Only 29 percent of all disability beneficiaries and 37 percent of disability beneficiaries employed at the 2004 NBS interview had used services during 2003 (Thornton and others 2006). Although the likelihood of using either type of services declined each year, the decline was sharper for employment-related services than for medical or other services.
- SVRA clients were more likely to use services in all years than were EN clients.[16]
- The decline in service use over the 3 years was less pronounced among EN clients than among SVRA clients because use of medical or other services remained fairly constant for EN clients (at around 40 percent) but declined significantly for SVRA clients (from 54 percent in 2003 to 42 percent in 2005). Use of employment services declined similarly (in percentage terms) for both groups over the 3 years.

We examined the share of all TTW participants who used 50 or more hours of service in each year (Table 5), which we believe represents a very modest level of service use—equivalent to approximately 1 hour per week, on average. Only 19–25 percent of TTW participants received services at this level in any year, and the proportion declined each year. Relative to SVRA clients, EN clients were significantly less likely to use 50 or more hours of service in 2003 and 2004; in 2005, there was no significant difference.

The median number of service hours used followed a similar pattern. Overall, annual median service hours among users declined over the 3 years, from 43 in 2003 to 24 in 2005. SVRA clients had much higher median service hours, overall and in each year, than EN clients had. However, SVRA clients experienced the sharpest decline in service hours over the 3-year period.

In each interview round, sample members were asked whether they had any unmet service needs

Table 4.
Service use during 2003–2005, by provider type (in percent)

Service and year	All TTW	Provider type[a]	
		EN	SVRA
Used employment services			
2003	46	[b] 31	48
2004	[c] 39	[b] 26	[c] 41
2005	[c] 29	[b,c] 19	[c] 30
Anytime during 2003–2005	66	[b] 45	69
Percent change 2003 to 2005	-37	-39	-38
Used medical or other services			
2003	52	[b] 39	54
2004	48	[b] 41	49
2005	[c] 42	40	[c] 42
Anytime during 2003–2005	70	[b] 59	71
Percent change 2003 to 2005	-19	2	-22
Used any services			
2003	61	[b] 48	63
2004	58	[b] 47	60
2005	[c] 52	46	[c] 52
Anytime during 2003–2005	82	[b] 68	83
Percent change 2003 to 2005	-15	-4	-17

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTE: Sample size = 767.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

b. Significantly different from SVRA clients at the 0.05 level, two-tailed test.

c. Significantly different from 2003 value at the 0.05 level, two-tailed test.

Table 5.
Service use hours, 2003–2005

Year	All TTW	Provider type[a]	
		EN	SVRA
Used 50 or more hours of service (%)			
2003	25	11*	27
2004	24	14*	26
2005	19**	15	20**
Median hours of service use among all service users			
2003	43	19	48
2004	39	18	45
2005	24	16	24
Percent change 2003 to 2005	-44	-16	-50
Median service use hours, all years 2003–2005	102	44	109

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTES: Sample size = 767.

Tests of significance were not performed for median values. Mean service use hours among users differed significantly between the EN and SVRA groups in 2003 and 2004, at the 0.05 level, two tailed test.

* = Significantly different from SVRA clients at the 0.05 level, two-tailed test.

** = Significantly different from 2003 value at the 0.10 level, two-tailed test.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

during the previous calendar year, regardless of whether they had used any services. Previous TTW evaluation reports have noted the relatively higher rate of unmet needs among TTW participants; based on the 2004 NBS sample, about 10 percent of all disability beneficiaries and the same share of all employed beneficiaries reported having unmet service needs during 2003 (Thornton and others 2006). In our sample of TTW participants, 19 percent reported unmet service needs in that year (Table 6). Among all beneficiaries indicating an unmet service need, the most common reasons for not obtaining services were being ineligible for or refusing services (23 percent), inability to afford services (18 percent), and lack of information about where to get services (16 percent) (Thornton and others 2007). The higher rate of unmet need among TTW participants possibly reflects demand (desire to work) more than it reflects supply (availability of services). Assigning a ticket implies interest in working, and thus greater demand for services, than is likely among all beneficiaries. Presumably, participants' unmet needs would have been even higher in the absence of TTW.

Over the 3 years we analyzed, about one-third (34 percent) of all TTW participants reported unmet service needs in at least 1 year, but only 5 percent reported unmet needs in all 3 years (Table 6). The share of participants reporting unmet needs generally declined over the 3 years, although the difference from 2003 to 2005 was statistically significant only for EN clients. There were no significant differences in the likelihood of reporting unmet needs by provider type (overall or within each survey round), and there were few significant differences across rounds (not shown). We also examined unmet needs by whether participants were employed at the round 3 interview in 2006. Those employed at this round were significantly less likely to report unmet needs between 2003 and 2005 than those who were not. From the information available, we cannot determine whether those who were employed had fewer needs, had more success in getting their needs met, or had both, than those who were not.

Although we cannot determine whether the observed declines in the unmet needs of TTW participants were because services met needs or because needs changed, we do have some information about the reasons for reporting unmet needs (Chart 1). Lack of information and problems with service providers were the two most frequently cited reasons, each reported by 26 percent of participants with unmet needs. These were followed closely by ineligibility or service denial, reported by 20 percent of those with unmet needs. Reasons for unmet needs did not differ significantly by provider type or employment status at round 3 (not shown).

Health Status

Previous studies using NBS data (Stapleton and others 2008; Thornton and others 2007; Livermore, Stapleton, and Roche 2009) have shown a strong relationship between general physical and mental health status

Table 6.
Reported unmet service needs, 2003–2005, by provider type and employment status at round 3 (in percent)

Year	All TTW	Provider type[a]		Employed at round 3	Not employed at round 3
		EN	SVRA		
Unmet service needs					
2003	19	23	18	17	20
2004	17	21	17	12*	20
2005	15	15**	15	9*	18
Percent change 2003 to 2005	-21	-35	-17	-47	-10
Unmet needs in at least one year 2003–2005	34	38	33	28*	37
Unmet needs in all years, 2003–2005	5	6	4	3	6

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

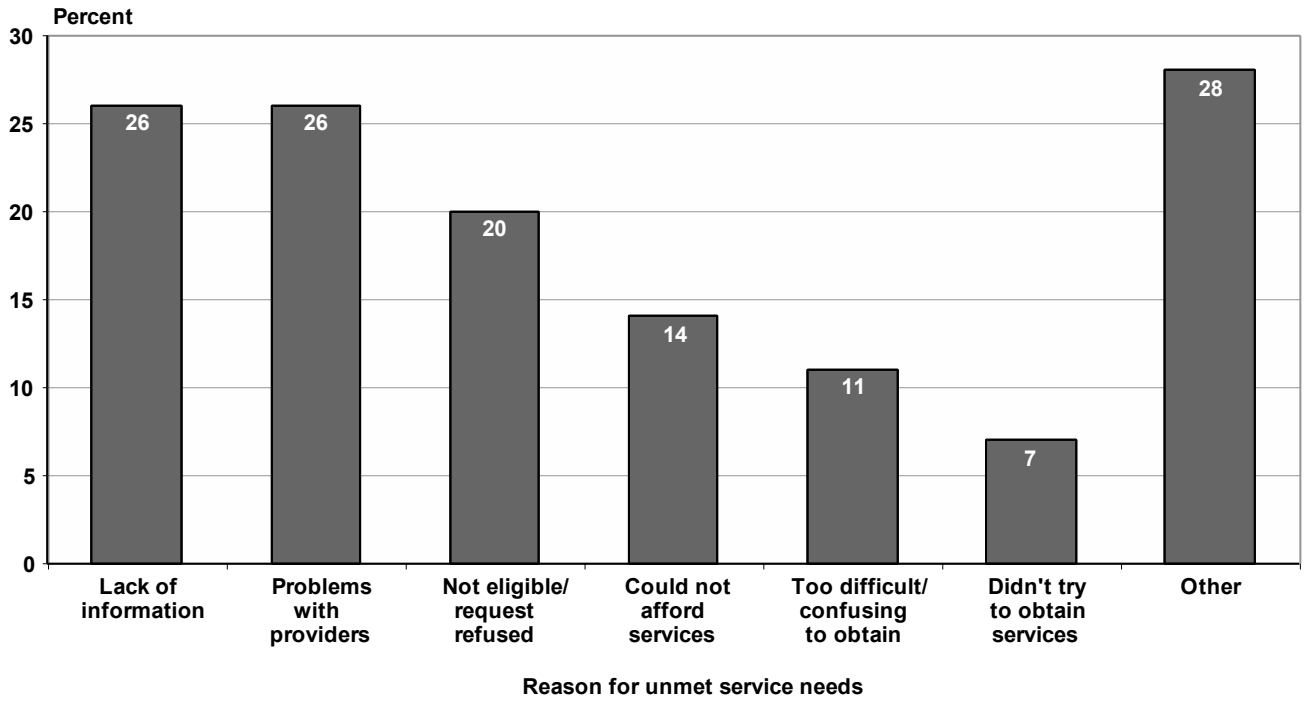
NOTES: Sample size = 767.

* = Significantly different from those not employed at round 3 at the 0.05 level, two-tailed test.

** = Significantly different from 2003 value at the 0.05 level, two-tailed test.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

Chart 1.
Reasons for unmet service needs among those reporting unmet needs in any year, 2003–2005 (in percent)



SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTE: Sample size = 767.

and the likelihood of beneficiary employment. For example, employment rates among SSI and DI beneficiaries are markedly higher for those who report their general health to be excellent or very good (27 percent) than for those reporting their health to be good or fair (10 percent) or poor or very poor (3 percent). Consistent with the previous studies, we use health measures called the physical component summary (PCS) and the mental component summary (MCS). These measures were constructed by developers of the SF-8 Health Survey, a generic, multipurpose, eight-item survey intended to assess health status across several domains.[17]

In Table 7, we show the distribution of PCS and MCS scores for the full sample of Phase 1 TTW participants as of their 2004, 2005, and 2006 interviews. We also indicate the shares of participants in the latter 2 years who experienced an increase or a decline of 10 percent or more in their health status score from the previous year. Overall, the mean PCS and MCS scores were very similar to the mean scores reported for the general adult population, and also appear to be stable across the three survey rounds. Findings reported in Ware and others (2001) indicate that the mean PCS and MCS scores for an adult general population sample (interviewed by phone) are about 50 and 51, respectively. The means for our sample ranged between 51 and 53 for both scores across the 3 years. It is perhaps surprising that the average mental and physical health scores for TTW participants were similar to those of the general adult population. One might expect individuals with disabilities severe enough to qualify for the SSI and DI programs to be in poorer health than the general adult population. This is certainly the case for all SSI and DI beneficiaries. The average PCS and MCS scores for all beneficiaries in the 2004 NBS were about 10 points lower than those for our TTW participant sample. As noted earlier, TTW participants are younger and healthier than SSI and DI beneficiaries in general. Additionally, the general population norms published in Ware and others (2001) reflect adults of all ages, including individuals older than 65. The mean age of the TTW sample was 41, compared with a mean age of 50 in the SF-8 norm studies. The fact that average PCS and MCS scores decline with

Table 7.
Health status indicators, 2004–2006 (in percent)

Health status measure	2004	2005	2006
Percentage distribution by PCS score:			
Less than 45	31	33	30
45–51	15	16	20*
More than 51	54	51	49
Percentage whose PCS score—			
Declined 10 percent or more from previous interview	…	28	22
Increased 10 percent or more from previous interview	…	24	29
Mean PCS score	52	51	52
Percentage distribution by MCS score:			
Less than 45	33	28*	26*
45–51	13	14	17
More than 51	54	58	57
Percentage whose MCS score—			
Declined 10 percent or more from previous interview	…	24	30
Increased 10 percent or more from previous interview	…	37	25
Mean MCS score	52	53*	53
Percentage whose PCS and MCS scores both—			
Declined 10 percent or more from previous interview	…	6	5
Increased 10 percent or more from previous interview	…	5	6
Self-reported current health compared to last year (%)			
Same	45	46	48
Better	31	26	27
Worse	24	27	25

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTES: Sample size = 767.

Among the general population of US adults, PCS and MCS scores of less than 45 correspond approximately with the 25th percentile, scores of 45–51 correspond approximately with the 25th through 50th percentiles, and scores of more than 51 correspond approximately with percentiles above the 50th (Ware and others 2001).

… = not applicable.

Rounded components of percentage distributions do not necessarily sum to 100.

* = Significantly different from 2004 value at the 0.05 level, two-tailed test.

age, combined with the differences in the age composition of the TTW and general adult population samples, likely contributes to the surprisingly high scores for the TTW sample.

Although the mean health status scores appear fairly stable across the 3 years, about one-quarter to one-third of the sample experienced health improvements each year, and roughly the same share experienced health declines. We define improvement and decline as a change of at least 10 percent in the PCS or MCS from the previous year. We were not able to identify comparable information about the variation in the health measures over time for the general adult population, but approximately half of the TTW sample experienced rather significant health improvements or declines in each year. This suggests that the health status of TTW participants might be rather volatile.[18] The findings on PCS and MCS score changes are supported by participant responses to the question comparing their current health to their health during the previous year. Roughly one-half reported their current health as being the same as last year, and about one-quarter to one-third reported improvements or declines in their current health in each year (Table 7).[19]

Employment

The employment and earnings of SSI and DI beneficiaries have been examined in a number of studies (Scott 1992; Muller 1992; Hennessey and Muller 1995; Hennessey 1996; Muller, Scott, and Bye 1996;

Newcomb, Payne, and Waid 2003; Livermore, Goodman, and Wright 2007) and in previous TTW evaluation reports (Thornton and others 2006; Thornton and others 2007; Stapleton and others 2008; Livermore, Stapleton, and Roche 2009) using both survey and administrative data sources. The most recent of these studies based on the 2004 NBS indicates that about 9 percent of all SSI and DI beneficiaries were working at a given time and, of these, most (79 percent) were working part-time, at an overall average of about 22 hours per week. About one-third were earning below the federal minimum wage ($5.15 per hour at the time) and about one-third earned $8.00 or more per hour. Average monthly earnings were $622, and about one-fifth (22 percent) were earning above the monthly SGA level ($810 in 2004). The median number of months they had been employed at the current job was 26 (Livermore, Stapleton, and Roche 2009). In summary, these statistics indicate that relatively few beneficiaries are working at a given time. Working beneficiaries have typically held their jobs for an extended period, but make relatively low wages and work about half-time on average.

The employment statistics presented here differ from those of previous studies in that we focus on TTW participants, a very select group of beneficiaries. The earnings and job characteristics of employed TTW participants are of substantial interest, in part because of the incentives in the three TTW payment systems. The milestone-outcome and outcome-only payment systems introduced by TTW give providers a stronger incentive to help their clients secure and sustain high-paying jobs than does the traditional payment system that remains available to SVRAs. In fact, providers receive the maximum payment amounts under the two new TTW payment systems only if their clients earn enough to exit the disability benefit rolls for at least 36 months (for DI beneficiaries) or 60 months (for SSI-only recipients). Of course, the traditional payment system available to SVRAs also gives providers an incentive to help their clients achieve high earnings, but providers are paid if these earnings are above the SGA level for at least 9 months; their clients do not have to exit the rolls.

As might be expected, TTW participants are much more likely to be working than are disability beneficiaries in general. Among the 2004 NBS sample, 32 percent of TTW participants were employed at interview, compared with 9 percent of all beneficiaries (cited earlier) and 21 percent of all disability beneficiaries reporting work goals or expectations (Livermore, Roche, and Prenovitz 2009). At each of three NBS rounds, information needed to construct a complete employment history for the previous calendar year was collected from respondents in the longitudinal TTW sample. This information provides a more complete picture of TTW participant work activity than is provided by the cross-sectional employment rates cited earlier. During each of the 3 years for which complete employment information was collected (2003–2005), about 45 percent of the cohort of early TTW participants was employed at some time during each year, and 59 percent had been employed at some point during the 3-year period (Table 8). No significant differences in employment rates were evident by provider type.

Overall, just over one-quarter of the sample (27 percent) was employed for more than 2 years during the 3-year period. This share represents nearly half (46 percent) of those who were employed at some time during the 3 years. The remaining half of those who were employed at all is nearly equally divided between those working for 1 year or less and those working for 1 to 2 years over the 3-year period. With respect to the number of jobs held, most (about 60 percent) of those who were employed held two or more jobs. We found no significant differences by provider type in the distributions of total months employed or the number of jobs held.

Using annual IRS earnings data matched to the longitudinal TTW participant sample, we can examine employment activity over a longer period (2003–2007) than is available from the NBS. The IRS data (Table 9) indicate that TTW participants underreported their work activity in the NBS (Table 8). Underreporting of work activity was greatest for 2003; although 46 percent of TTW participants reported working in 2003 in the NBS, the IRS data indicate that 57 percent had earnings in that year. In both 2004 and 2005, the differences between the survey-reported work activity and the IRS data were less than 5 percentage points.

According to IRS earnings information, 75 percent of the cohort of early TTW participants had earnings in at least 1 year from 2003–2007 (Table 9). The percentage with earnings was highest in 2003 (57 percent) but remained at approximately 50 percent in all 5 years. Among those with positive earnings in at least 1 year and including only years with earnings, average annual earnings (across all years) were $6,830 (2007 dollars). Average earnings were

Table 8.
Employment during 2003–2005, by provider type

Employment indicator	All TTW	Provider type[a]	
		EN	SVRA
Percentage employed—			
2003	46	47	46
2004	46	46	46
2005	45	44	46
Any time during 2003–2005	59	60	59
Percentage distribution by months employed :			
0	41	40	41
1–12	15	17	15
13–24	13	13	13
25 or more	27	24	27
Unknown	4	6	4
Percentage distribtution by number of jobs held:			
0	41	40	41
1	20	17	21
2 or 3	26	26	26
4 or more	9	11	9
Unknown	4	6	4

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTES: Sample size = 767.

Rounded components of percentage distributions do not necessarily sum to 100.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

lowest in 2003 at just under $6,000, and ranged from $8,000 to nearly $10,000 in all subsequent years. Comparable data reported for all beneficiaries in Livermore, Roche, and Prenovitz (2009) indicate that the average earnings of TTW participants are about 15 percent to 20 percent higher than the average for all beneficiaries with earnings. For example, among those with earnings in 2007, average annual earnings were $8,127 for all beneficiaries and $9,710 for TTW participants. With respect to the number of years with earnings, nearly one-third of TTW participants (30 percent) had earnings in all 5 years analyzed. Among those who had any earnings during 2003–2007, two-thirds had earnings in 3 or more of the 5 years.

Although there were no significant differences between EN clients and SVRA clients with respect to the likelihood of having earnings in each year, there were significant differences in average earnings amounts. EN clients had higher average annual earnings than SVRA clients for the period overall and in 3 of the 5 individual years, and the differences were statistically significant. Significant differences in the wage and earnings between provider types have been documented in the previous TTW evaluation reports, as we discuss further in the next section.

Job Characteristics

Previous studies have presented statistics about the characteristics of jobs held by TTW participants at the time they were interviewed (Thornton and others 2007; Stapleton and others 2008). In Table 10, we present similar statistics; but instead of looking at a particular job, we look across all jobs held by a sample member during 2003–2005 and report the means and distributions associated with his or her "best" job. The best job is defined as that with the longest hours, highest hourly wages, highest monthly pay, or longest duration for each set of statistics pertaining to hours, wages, pay, and duration, respectively. Thus, if an individual held multiple jobs, different jobs might be the basis for the statistics generated for different job characteristics. Examining the individual maximum values for the various job features across all jobs held during 2003–2005 is intended to provide a more accurate picture of the maximum work capacity of Phase 1 TTW participants over the 3-year period. In all cases, the statistics reported in Table 10 indicate a

Table 9.
Employment rate and average annual earnings, by provider type, 2003–2007

Indicator	All TTW	Provider type [a]	
		EN	SVRA
2003			
Percentage employed	57	55	58
Average annual earnings ($)	5,760*	8,693**	5,365
2004			
Percentage employed	49	49	49
Average annual earnings ($)	8,081	11,863**	7,538
2005			
Percentage employed	49	49	51
Average annual earnings ($)	9,284	11,665	9,002
2006			
Percentage employed	52	52	53
Average annual earnings ($)	9,106	11,662**	8,761
2007			
Percentage employed	47	48	47
Average annual earnings ($)	9,710	11,387	9,477
2003–2007			
Percentage employed at any time	75	76	75
Average annual earnings ($)	6,830	8,899**	6,566
Percentage who had earnings in—			
0 years	25	24***	25
1 year	14	16***	13
2 years	11	9***	12
3 years	11	9***	11
4 years	9	16***	9
5 years	30	26***	30

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds, with results matched to IRS earnings data.

NOTES: Sample size = 767.

Earnings are expressed in 2007 dollars and represent the average among all beneficiaries with any positive earnings during the reported period.

* = Significantly different from average earnings in all other years, two-tailed test.

** = Significantly different from SVRA clients at the 0.05 level, two-tailed test.

*** = Significantly different from the distribution of SVRA clients at the 0.05 level, chi-square test.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

greater work capacity for TTW participants than that suggested by the analogous cross-sectional statistics presented in previous studies.

Employed TTW participants worked an average of 27 hours per week in the jobs at which they worked the most hours during 2003–2005. Nearly one-third had engaged in full-time employment (35 or more hours per week) for at least one of their jobs. They received a maximum average hourly wage of $10.40 and the average highest monthly pay over the period was $1,196. About 60 percent of TTW participants were able to earn above the SGA level in at least 1 month during the 3-year period, and about one-third (35 percent) were able to do so for 13 or months or longer. The average duration for the longest-held job was nearly 3 years (33 months).

The overall statistics obscure significant differences between EN clients and SVRA clients, which mirror the cross-sectional findings presented in previous studies and the longitudinal findings from the annual IRS earnings data described earlier. With one exception, EN clients outperformed SVRA clients with respect to all best-job features shown in Table 10. On average, EN clients worked more hours, had higher wages and

Table 10.
Characteristics of "best" jobs held by those reporting at least one job during 2003–2005, by provider type

Characteristic	All TTW	Provider type [a]	
		EN	SVRA
Percentage reporting at least one job 2003–2005	[b] 55	[b] 55	[b] 55
Percentage distribution by most hours worked per week:			
1–10	11	6*	12
11–20	29	23*	30
21–34	26	25*	26
35 or more	33	46*	31
Unknown	1	1*	1
Mean most hours worked per week	27	31**	26
Percentage distribution by highest hourly wage [c]			
$5.15 or less	2	0*	3
$5.16–$7.99	33	15*	35
$8.00–$14.99	49	63*	47
$15.00 or more	13	19*	12
Unknown	3	3*	3
Mean highest hourly wage ($) [c]	10.40	12.90**	10.10
Mean highest monthly pay ($) [c]	1,196	1,695**	1,123
Percentage who earned above SGA in at least 1 month [c]	59	76**	57
Percentage distribution by months with pay above SGA [d]			
0	41	23*	43
1–12	24	29*	23
13 or more	35	47*	34
Unknown	<1	2*	<1
Percentage distribution by maximum job duration			
1–6 months	17	20	17
7–12 months	15	19	15
13–24 months	20	15	21
25–36 months	19	18	19
37 months or more	28	26	28
Unknown	1	2	1
Mean maximum job duration (months)	33	27**	34

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTES: Full sample size = 767; sample members who provided information about at least one job during 2003–2005 = 458.

Rounded components of percentage distributions do not necessarily sum to 100.

* = Significantly different from the distribution of SVRA clients at the 0.05 level, chi-square test.

** = Significantly different from SVRA clients at the 0.05 level, two-tailed test.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

b. Values differ from those reported in Table 11. This table covers only repsondents who reported at least one job; Table 11 includes some employed respondents who omitted or provided incomplete job information.

c. In 2007 dollars.

d. Computed based on a comparison of unadjusted monthly pay values to the monthly SGA value corresponding to the calendar year of earnings.

monthly pay, and were more likely to earn above the SGA level than SVRA clients. The difference between the two groups in the likelihood of earning above SGA level in at least 1 month is particularly striking. Among EN clients, 76 percent earned above the SGA level in at least 1 month, compared with 57 percent of SVRA clients. The one exception was job duration: By 7 months, SVRA clients averaged longer maximum job durations than EN clients.

As has been discussed in previous TTW evaluation reports, the observed differences in outcomes between SVRA and EN clients might be explained by the

differences in the characteristics of clients seeking services from ENs versus SVRAs described above, and also by differences in the incentives for providers to serve particular clients depending on their likelihood to exit the disability benefit rolls because of earnings.[20] For example, based on the full 2004 NBS TTW participant sample, SVRA clients were significantly more likely than EN clients to be working in sheltered employment (39 percent versus 23 percent) and to use personal assistant services (27 percent versus 8 percent) (Thornton and others 2007). The higher earnings of EN clients might reflect the fact that, compared with SVRAs, ENs—because of differences in incentives—emphasize the attainment of earnings at a level that reduces benefits to zero. This is reflected both in the characteristics of the TTW participants they are willing to serve and the types of services they provide.

Reasons for Leaving Jobs

Among the approximately 60 percent of Phase 1 TTW participants who reported working at a job for 1 month or longer during 2003–2005, over half (58 percent) reported leaving one or more of those jobs (Table 11). Overall, the most common reason for leaving a job was disability onset or worsening, reported by nearly one-third of job leavers. A similar finding was reported by Hennessey (1996) in a study of new DI beneficiaries. EN clients were significantly more likely than SVRA clients to report poor health as the reason for leaving a job (44 percent versus 31 percent). Overall, dislike of specific job features followed closely behind poor health as a reason for leaving a job (31 percent), and the shares reporting this reason did not differ by provider type. Relative to EN clients, SVRA clients were significantly more likely to report that they left a job because the job was temporary (31 percent versus 17 percent).

To better understand the employment barriers among TTW participants who were employed at some time during 2003–2005, we examined the members of the subgroup who were no longer employed at the time of a subsequent NBS interview round, and the reasons why they were no longer employed (Table 12).[21] Even among these beneficiaries with work experience, health status played an important role. About 80 percent of those not working when interviewed reported that a physical or mental health condition prevented work. Inability to find

Table 11.
TTW participants leaving jobs and reasons for leaving, by provider type, 2003–2005

Job-leaving circumstance	All TTW	Provider type [a]	
		EN	SVRA
Percentage of participants working in 2003–2005 [b]	59	60	59
Participants who left a job, as a percentage of—			
All participants	34	38	34
Those working at any time 2003–2005	58	63	58
Main reasons for leaving a job (%) [c]			
Disability onset or worsening	33	44*	31
Disliked specific job features [d]	31	31	31
Job was temporary	29	17*	31
Fired	15	18	15
Laid off	14	12	14
Family/personal reasons	18	11	20
Moved, left for school, or took another job	16	14	17
Other/unknown	22	18	23

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTES: Full sample size = 767; sample members who left at least one job during 2003–2005 = 307.

* = Significantly different from those assigned longest to SVRAs at the 0.05 level, two-tailed test.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

b. Reflects working at least one job for 1 month or longer.

c. Components do not sum to 100 because respondents were permitted to report multiple reasons for leaving one or more jobs. However, a particular reason was counted only once per individual even if it was reported for multiple job terminations.

d. Job features include pay, benefits, duties, schedule, coworkers, location, advancement opportunities, and availability of accommodations.

Table 12.
Reasons for not working reported by those employed at any time during 2003–2005 and not employed at one or more interviews (in percent)

Reason	All TTW	Provider type[a]	
		EN	SVRA
Employed at any time 2003–2005 and not employed at one or more NBS interviews	39	43	39
Reasons for not working			
Physical or mental condition prevents work	81	81	81
Cannot find a job for which he or she is qualified	62	70*	60
Discouraged by previous work attempts	56	63	55
Employers will not give him or her a chance	53	63	52
Cannot find a job he or she wants	49	58*	47
Others do not think he or she can work	39	47*	37
Workplaces not accessible to people with his or her disability	38	40	37
Lacks reliable transportation to and from work	31	41*	30
Does not want to lose cash or health insurance benefits	27	27	27
Waiting to finish school or training program	25	27	25
Caring for someone else	12	11	12
Other	20	17	21

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTES: Full sample size = 767; sample members who reported being employed at some time during 2003–2005 and were not employed at one or more interviews = 345.

* = Significantly different from SVRA clients at the 0.10 level, two-tailed test.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

a job for which they were qualified, being discouraged by previous work attempts, and believing that employers would not give them a chance also were reasons reported by majorities of nonworking TTW participants who had worked at some point during 2003–2005. Several of the reasons for not working were reported more frequently by EN clients than by SVRA clients. EN clients were significantly more likely to report not being able to find jobs for which they were qualified, not being able to find jobs that they wanted, believing that others did not think they could work, and lacking reliable transportation to and from work.

Months off the Disability Rolls Because of Earnings

We used TRF administrative data to determine the share of TTW participants who left the SSA disability rolls because of earnings during 2004–2007. Being off the rolls because of work is defined as having cash disability benefits suspended or terminated for at least 1 month by reason of a beneficiary's own earnings.[22, 23] Overall, 19 percent of TTW participants were off the rolls because of work for at least 1 month during the 4-year period (Table 13). Of those whose cash benefits were discontinued for at least 1 month, about half were off for 12 or fewer months, and about half were off for 13 or more months. Relative to SVRA clients, EN clients were significantly more likely to have left the rolls for at least 1 month (27 percent versus 17 percent) and also were more likely to have done so for 13 or more months (17 percent versus 10 percent).

Discontinuing cash benefits because of work was generally uncommon among disability beneficiaries; during 2004–2007, only about 6 percent left the rolls for at least 1 month (Livermore, Roche, and Prenovitz 2009). In Table 13, we present the analogous statistics for all work-oriented beneficiaries to provide a point of comparison to the early cohort of TTW participants. Even compared with all disability beneficiaries who indicate having work goals or expectations, TTW participants were about twice as likely to leave the rolls for at least 1 month over the 4-year period analyzed. Although TTW participants were much more likely to discontinue cash benefits because of work, the share doing so was still fairly small in light of the requirements for providers to receive TTW outcome payments. The findings suggest that TTW outcome payments might be generated by about one-quarter of those served by ENs during the period analyzed.

Table 13.
Months off the SSA disability rolls because of work during 2004–2007 (in percent)

Months	All TTW	Provider type[a]		All work-oriented beneficiaries
		EN	SVRA	
0	81	73*	83	90
1–3	3	4*	3	2
4–12	5	6*	4	3
13–24	5	7*	5	2
25–48	5	10*	5	2

SOURCES: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds, with results matched to the 2007 TRF; and Livermore, Roche, and Prenovitz (2009), based on 2004 NBS national cross-sectional beneficiary sample results matched to the 2007 TRF.

NOTES: NBS Phase 1 longitudinal TTW sample size = 767; NBS national cross-sectional beneficiary sample size = 4,433.

Rounded components of percentage distributions do not necessarily sum to 100.

* = Significantly different from the distribution of SVRA clients at the 0.05 level, chi-square test.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

Income and Poverty

Social Security disability beneficiaries receive assistance in the form of cash payments and also in noncash forms such as food stamps and energy and housing subsidies from a variety of sources. Other studies have documented the extent to which beneficiaries rely on different sources of income, and have also examined the extent to which these sources have changed over time (Martin and Davies 2003/2004; DeCesaro and Hemmeter 2008; Livermore, Stapleton, and Roche 2009). DI and SSI benefits are the largest source of family income for disability beneficiaries, representing 57 percent of total family income among all DI beneficiaries and 69 percent of total family income among SSI recipients in 2002 (DeCesaro and Hemmeter 2008). Earnings (including those of the beneficiary's family members) represented the next largest source of income, accounting for 29 percent of income among DI beneficiaries and 22 percent among SSI recipients. For many beneficiaries, SSI and DI eligibility and benefit levels are affected by earnings. If larger shares of TTW participants work and their earnings increase over time, we should expect to see changes in their income from DI and SSI as well as from other sources.

In Table 14, we examine changes in total monthly personal income of our early cohort of TTW participants as of the month before interview in 2004, 2005, and 2006. We also look at changes in three major components of personal income: DI and SSI benefits, non–Social Security benefits,[24] and earnings. Note that all income amounts represent personal rather than family income.

DI and SSI Benefits

The share of TTW participants receiving any benefits remained constant across the three NBS interviews, at 98 percent. The average monthly benefit amount also remained constant, at about $830. At both the 2005 and 2006 interviews, 10 percent of TTW participants experienced a decline in monthly benefits of $50 or more;[25] the average decline was substantial, at $245 to $301. At the same time, about an equal share of participants experienced an increase in benefits of $50 or more, and although the average increase in 2006 ($274) was similar in magnitude to the declines experienced by their counterparts, in 2005 it was lower ($199).

Non–Social Security Benefits

The shares of TTW participants receiving cash and in-kind support from sources other than SSA programs increased slightly from 2004 to 2006, from 40 percent to 44 percent. Average monthly benefits per recipient were between $255 and $275 each year. The relatively small changes overall mask some rather significant churning. Among those receiving non–Social Security benefits in 2005 and 2006, one-third or more experienced a decline of $50 or more from the previous interview (representing about 15 percent of all participants); among these individuals, the

Table 14.
Regular sources and amounts of personal income during month before interview in 2004, 2005, and 2006, and changes from prior interviews

Source	2004	2005	2006
DI and SSI benefits			
Received benefit (%)	98	98	98
Average among those receiving benefit ($)	825	830	834
Experienced decline of $50 or more from prior interview			
Percent of all	...	10	10
Percent of those receiving benefit at prior interview	...	6	10
Average decline among those with $50 or more decline ($)	...	301	245
Experienced increase of $50 or more from prior interview	...		
Percent of all	...	9	10
Average increase among those with $50 or more increase ($)	...	199	274
Non–Social Security sources of income and assistance			
Received income/assistance (%)	40	42	44
Average among those receiving income/assistance ($)	255	275	274
Experienced decline of $50 or more from prior interview			
Percent of all	...	14	16
Percent of those receiving income/assistance at prior interview	...	35	38
Average decline among those with $50 or more decline ($)	...	283	270
Experienced increase of $50 or more from prior interview			
Percent of all	...	15	14
Average increase among those with $50 or more increase ($)	...	346	324
Earnings			
Had earnings (%)	24	25	30
Average among those with earnings ($)	742	846	810
Experienced decline of $50 or more from prior interview			
Percent of all	...	8	7
Percent of those with earnings at prior interview	...	38	28
Average decline among those with $50 or more decline ($)	...	466	179
Experienced increase of $50 or more from prior interview			
Percent of all	...	6	7
Average increase among those with $50 or more increase ($)	...	459	420
Total monthly personal income			
Average ($)	1,090	1,142	1,178
Experienced decline of $50 or more from prior interview (%)	...	26	29
Average decline among those with $50 or more decline ($)	...	408	267
Experienced increase of $50 or more from prior interview (%)	...	31	29
Average increase among those with $50 or more increase ($)	...	497	546

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTES: Sample size = 767.

Earnings are reported in 2007 dollars, adjusted using the SSA cost-of-living adjustment, based on changes in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

… = not applicable.

average decline was around $275 each year—a large amount, given that it is roughly equivalent to the average monthly benefit. Nearly an equal number of TTW participants experienced increases in monthly non–Social Security benefits of $50 or more over the previous year; the average increases among these individuals also were substantial, at more than $300 in both 2005 and 2006.

Earnings

At each of the first two interviews, about one-quarter of the TTW participants reported earnings during the previous month. By the third interview, a slightly higher percentage (30 percent) reported earnings. Average monthly amounts among those with earnings were $742 at the first interview in 2004, increased to $846 at the second interview, and declined slightly to $810 at the third interview in 2006. Only a small share of beneficiaries (6–7 percent) experienced an increase in monthly earnings of $50 or more from the prior interview, but among those affected, the average increase was relatively large, at more than $400 (about 50 percent of the average monthly earnings of all who were working). Among those with any earnings at the prior interview, earnings declines of $50 or more were more common at the second interview in 2005 than at the third interview in 2006 (38 percent versus 28 percent). The average earnings declines among those affected also were much larger in 2005 than in 2006 ($466 versus $179).

Total Personal Income

Overall, total monthly income remained stable, at about $1,100 each year. However, this stability in overall average income masks rather significant changes in income for a majority of TTW participants. At both the second and third interviews, about 30 percent of TTW participants reported an increase in income from the prior interview on the order of $500. At the same time, a similar percentage of TTW participants reported declines in income from the previous interview. The average declines were $408 in 2005 and $267 in 2006.

We suspect that much of the year-to-year changes in benefit levels were due to changes in earnings. We examined how average benefits changed across rounds for subgroups of beneficiaries who experienced round-to-round changes in earnings (not shown). Although the information available to us is somewhat limited for purposes of tying earnings changes to public benefit changes,[26] it suggests that DI and SSI benefits were more responsive to declines in earnings than to increases, and that the response was time-lagged. No clear correspondence between earnings changes and non–Social Security benefits was apparent. This is likely due to the large variation in the types of benefits considered (with some being more responsive to earnings changes than others) and to imprecision in the reporting of non–Social Security benefits by respondents.[27]

Poverty

High poverty rates have been documented among working-age people with disabilities, and among SSI and DI beneficiaries in particular (Martin and Davies 2003/2004; DeCesaro and Hemmeter 2008; She and Livermore 2009; Livermore, Stapleton, and Roche 2009). Poverty rates among SSI and DI beneficiaries based on NBS data are substantially higher than those based on Survey of Income and Program Participation (SIPP) data. For example, rates based on the 2002 SIPP reported in DeCesaro and Hemmeter (2008) were about 23 percent among DI beneficiaries and 49 percent among SSI recipients. Rates based on the 2006 NBS were 31 percent among DI-only beneficiaries and 71 percent among concurrent and SSI-only beneficiaries. The differences might in part reflect changes in the amount and sources of income over the 7-year period and differences in the sampling methods used in the two surveys,[28] but they also likely reflect differences in the manner in which the two surveys document income. The SIPP collects much more detailed information on income for all family members than is collected in the NBS. The NBS only collects data on income sources for SSI and DI beneficiaries, and the poverty rate is based on responses to a question regarding total family income and the number of family members, rather than on a detailed accounting of family member resources. Thus, the poverty rates measured in the NBS are likely to be less accurate than those based on the SIPP.

Despite the potential shortcomings of the poverty measure in the NBS, it was collected in a consistent manner across survey rounds and allows us to assess beneficiaries' personal income, especially earnings, over time. Although the poverty measure is based on the annual income of all family members, personal income may be the only income source for many TTW participants. In 2004, 43 percent of Phase 1 TTW participants were in living arrangements that qualified as single-person families for purposes of computing poverty status (Thornton and others 2006).[29] Thus,

changes in personal income that result from changes in earnings—and the consequences of earnings on benefits—potentially affect the likelihood of experiencing poverty for many TTW participants.[30]

In Table 15, we examine the poverty status of Phase 1 TTW participants during 2003–2005. Overall, the likelihood of having family income below the federal poverty level remained fairly stable, at about 50 percent over the 3 years, although there was a small decline in 2004 (49 percent) relative to 2003 and 2005 (53 percent). EN clients experienced a much greater decline from 2003 to 2004 (from 52 percent to 42 percent) than SVRA clients did (from 53 percent to 50 percent). The poverty rate for EN clients also remained lower in 2005 (at 45 percent) than that of SVRA clients (54 percent). In general, the percentages of TTW participants both entering and leaving poverty each year was between 10 percent and 15 percent. EN clients were the exception—in 2004, a larger share (22 percent) left poverty, which contributed to the marked decline in the poverty rate among those TTW participants in that year.

To see if there was a relationship between employment and poverty among TTW participants, we also examined poverty rates by employment status during the same years. Poverty rates among those who were employed at some point in each year were substantially lower (by about 10 to 15 percentage points) than the rates for those who were not employed, and these differences were statistically significant in 2 of 3 years analyzed. Although many factors contribute to a beneficiary's poverty status, employment appears to be correlated with lower poverty rates among TTW participants.

Table 15.
Poverty rates and changes in poverty status, 2003–2005 (in percent)

Poverty indicator	2003	2004	2005
All			
Household income below poverty level	53	49	53
Left poverty from prior year	…	14	10
Entered poverty from prior year	…	10	14
EN clients[a]			
Household income below poverty level	52	42*	45
Left poverty from prior year	…	22**	12
Entered poverty from prior year	…	12	15
SVRA clients[a]			
Household income below poverty level	53	50	54
Left poverty from prior year	…	13	10
Entered poverty from prior year	…	10	14
Employed during year			
Household income below poverty level	44***	43***	47
Left poverty from prior year	…	13	13
Entered poverty from prior year	…	12	18
Not employed during year			
Household income below poverty level	60	55	58
Left poverty from prior year	…	15	8
Entered poverty from prior year	…	9	11

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTES: Sample size = 767.

Poverty rates are based on the respondent's annual household income during the calendar year preceding the NBS interview, compared with the federal poverty standard for that year, household size, and household composition.

… = not applicable.

* = Significantly different from the corresponding 2003 value at the 0.05 level, two-tailed test.

** = Significantly different from SVRA clients at the 0.05 level, two-tailed test.

*** = Significantly different from those not employed during the year at the 0.05 level, two-tailed test.

a. Determined by the type of provider to which the participant's ticket was assigned the longest as of December 2006.

Experiences of Subgroups Defined by Employment Success

We have presented numerous statistics depicting the 3- to 5-year experiences of the early cohort of TTW participants. The findings indicate that over time, service use and unmet service needs declined, but the percentage employed remained fairly constant. The findings also indicate that a large share of participants experienced significant year-to-year changes in health status and income, that poor health might have contributed to disenrollment from TTW, and that employment is correlated with lower rates of poverty.

Here, we examine selected patterns of TTW participant service use, health status, employment, income, and poverty over the three survey rounds according to employment and earnings outcomes.[31] We do so to assess whether the patterns differed significantly among those who experienced varying degrees of employment success, and whether the patterns suggest factors that might be correlated with employment success among TTW participants.

For this analysis, we divided our sample of TTW participants into three subgroups:

1. Those who worked and had earnings above the SGA level for 12 or more total months during 2003–2005
2. Those who were employed at some point during 2003–2005, but who did not have 12 or more total months with earnings above the SGA level during that period
3. Those who did not report any employment during 2003–2005

The first subgroup comprises 20 percent of TTW participants (Table 16). Given that employment is the goal of the TTW program, and that earnings above the SGA level are required for providers to receive significant payments under TTW, this subgroup achieved a significant level of success under TTW. The second subgroup, comprising 39 percent of the participants, achieved some employment success over the 3-year period. The third subgroup, comprising the remaining 41 percent of participants, did not engage in any employment during 2003–2005 and thus had the least successful outcome.

Several of the 3-year patterns of TTW enrollment, service use, health, employment, income, and poverty differed significantly across the three subgroups. The findings suggest stylized, if perhaps oversimplified, characterizations of the three TTW subgroups:

- Subgroup 1**.** The large majority of the most successful TTW participants reported being in fair or better health, had steady employment, and also had relatively high personal income. The latter two factors might have contributed to their significantly lower poverty rates. Members of this group can potentially reduce their reliance on disability benefits and generate significant payments to TTW providers.
- Subgroup 2. These participants were somewhat more likely to report poor health than the first group. They were also the most likely of the three groups to have used TTW services. Although about two-thirds were employed at some time during each of the 3 years, only one-third were employed at each interview, suggesting that their employment was more sporadic or temporary than the first group's members. This unsteady employment might have contributed to their lower average personal income and higher poverty rates; the former did not differ from those who did not work at all, and the latter did not differ from the poverty rates among all beneficiaries. Members of this group might generate some TTW payments to providers and some might reduce their reliance on disability benefits, but they also appear to have greater service needs and more limited earnings capacity than the first group.
- Subgroup 3. A large share of those with no earnings during 2003–2005 reported being in poor or very poor health in each year, which probably contributed to their increased likelihood of leaving the TTW program, as well as to the lack of employment success during the 3 years analyzed. This group experienced the highest poverty rates, much higher even than the rates among all disability beneficiaries.[32] The very high poverty rates and poor health suggest the presence of significant barriers that must be overcome before employment is viable. This rather large group of TTW participants (41 percent of our sample) does not appear to have the potential to substantially reduce their reliance on disability benefits through employment, or to generate significant TTW payments to providers.

Discussion

As noted above, the early cohort of TTW participants followed in this analysis is a select group of Social Security disability beneficiaries who were sufficiently interested in pursuing employment that they assigned a ticket to a service provider to improve their ability to

Table 16.
Selected outcomes for TTW participant subgroups defined by degree of employment success during 2003–2005

Characteristic and year	All TTW Participants	Employed with earnings above SGA level— 12 months or more	Employed with earnings above SGA level— Fewer than 12 months	Not employed at any time
Total (weighted) (%)	100	20	39	41
Enrolled in TTW at interview (%)				
2004	91	91	[a] 96	87
2005	[b] 90	89	[a] 94	[b] 85
2006	[b] 87	[b] 88	[a,b] 91	[b] 83
Used any services (%)				
2003	61	64	[a] 66	54
2004	58	[b] 46	[a] 68	55
2005	[b] 52	[b] 49	[a] 60	[b] 46
Used 50 or more hours of service (%)				
2003	25	23	30	22
2004	24	20	29	22
2005	[b] 19	[b] 12	24	17
Self-reported health poor or very poor (%)				
2004	19	[a] 8	[a] 15	27
2005	21	[a] 11	[a] 17	29
2006	21	[a] 9	[a] 18	30
Employed during year (%)				
2003	46	[a] 90	[a] 71	0
2004	46	[a,b] 99	[a] 67	0
2005	45	[a,b] 99	[a] 65	0
Total personal income month before interview ($)				
2004	1,090	[a] 1,495	988	989
2005	[b] 1,142	[a] 1,647	1,009	1,019
2006	[b] 1,178	[a,b] 1,740	[b] 1,065	1,005
Poverty (%)				
2003	53	[a] 32	[a] 52	63
2004	49	37	48	[b] 56
2005	53	[a] 39	52	61

SOURCE: 2004 NBS Phase 1 longitudinal TTW sample members responding to all three NBS rounds.

NOTE: Sample size = 767.

a. Significantly different from those not employed at the 0.05 level, two-tailed test.

b. Significantly different from base year (2003 or 2004) value at the 0.10 level, two-tailed test.

work and increase their earnings. The findings suggest that they are exceptional, even among disability beneficiaries with work goals and expectations, in terms of their employment success. Based on IRS data, in each year from 2003 to 2007, about half of the TTW participants had earnings, and 75 percent had earnings in at least 1 of the 5 years. By comparison, research shows that annual employment rates among all beneficiaries who report work goals or expectations are about 25 percent, or about one-half the rate of TTW participants.

Although TTW participants are exceptional in terms of employment rates, only one-third were able to achieve at least 1 month of earnings above the SGA level during a 3-year period, and only one-fifth were able to do so for 12 months or more. Relative to the

employment experiences of SSI and DI beneficiaries in general, and given that all of these individuals have significant disabilities, these employment figures are remarkable. However, when viewed in the context of the requirements for provider payments under TTW, the employment success of these participants appears less remarkable. Although providers under the milestone-outcome payment system can receive some payments when their beneficiary clients return to work at levels below SGA, the bulk of the potential TTW provider payments accrue when beneficiaries work above the SGA level (and DI or SSI benefits go to zero) for an extended period. These findings suggest that only a minority of participants might be able to achieve employment at levels that would be considered significant under TTW.

Health factors appear to create significant barriers to work. Many TTW participants experienced significant changes in physical and mental health status from year to year, and "health conditions preventing work" was the most commonly cited employment barrier, reported by 80 percent of TTW participants who had been employed at some point during the 3 years they were followed in the survey.

In addition to instability in their health status, many TTW participants experienced great employment and income instability over the short period we observed them. At each interview, approximately as many participants lost employment as gained it. The changes in employment likely contributed to the large year-to-year changes in income experienced by many participants. A small group of participants achieved stable employment over several years. Just over one-quarter worked for 25 or more months of the 36 months observed in the survey. The IRS data indicate that a much greater share (about 60 percent) had earnings in 2 or more of the 5 years analyzed. However, far fewer participants worked at levels that reduced their disability benefits to zero; 19 percent did so for at least 1 month during a 4-year period, but only 10 percent did so for 13 months or longer.

The rather modest levels of service use by the participants in our sample (both inside and outside the auspices of the TTW program) call into question the degree to which TTW could be expected to have contributed to the success of the participants who became employed, or to potentially do so in the future. In each year, only 20–25 percent of participants received services at a level equivalent to about 1 or more hours per week (50 or more hours per year). Among EN clients, even fewer received that level of service. However, EN clients had much better employment outcomes than SVRA clients in terms of earnings and of leaving the disability benefit rolls because of work. It may be that TTW's expansion of access to services provided by ENs produced positive employment outcomes for a relatively small group of beneficiaries who otherwise might not have obtained services.

Previous studies provide evidence that TTW had a positive and significant impact on service enrollment (Thornton and others 2007; Stapleton and others 2008). However, many TTW participants might have achieved the same employment outcomes in the absence of the program. To date, studies have found no significant impacts of TTW on beneficiary employment. TTW, as originally structured, may have provided insufficient support to participants who, although highly motivated to work, faced substantial barriers. It remains to be seen whether the revised TTW payment systems, implemented in July 2008, will have a significant effect on the provision of services to and employment outcomes of disability beneficiaries.

This study's findings also suggest that earnings can reduce poverty among beneficiaries. For most individuals with or without disabilities, earnings obviously offer a primary avenue of escape from a life of poverty. SSA disability beneficiaries experience extremely high poverty rates relative to other working-age subpopulations.[33] However, for disability beneficiaries, earnings can affect benefit payments in such a way that increased earnings might not necessarily directly reduce poverty. This study finds that the poverty rate for TTW participants who worked was lower than that for participants who did not, and the poverty rate for those who sustained earnings above the SGA level for at least 12 months was significantly lower than that for participants who did not. Most of these TTW participants were still receiving at least some of their disability benefits. Although their earnings may not have been sufficient to allow many TTW participants to completely leave the disability rolls, it appears that employment was still an important means for reducing poverty.

The findings presented here are limited in that they are purely descriptive, do not examine potentially important differences in outcomes across subgroups of beneficiaries (such as DI beneficiaries, SSI recipients, and those working prior to TTW participation), and do not control for other factors affecting outcomes. Although we cannot assign causality to any of the

patterns or relationships observed, the findings provide an interesting and informative look at the longitudinal experiences of a select group of disability beneficiaries who work or seek employment support services. They also suggest avenues for future research aiming to disentangle the relative importance of specific characteristics, and of changes in service use, health, and income sources, on the economic well-being of SSI and DI beneficiaries who work.

Notes

[1] For example, compared with all work-oriented beneficiaries, the TTW participants studied here were much more likely to be employed at interview (32 percent versus 21 percent), and more likely to have cash benefits discontinue because of earnings for at least 1 month during 2004–2007 (19 percent versus 10 percent) (Livermore 2011).

[2] Holding all other characteristics constant, and conditional on TTW participation, SSI-only recipients are 70 percent more likely than DI beneficiaries to assign their tickets to an EN. The likelihood of assignment to an EN increases with age; those in the oldest age group (55 or older) are 4.7 times more likely than those in the youngest age group (18 to 24) to assign their tickets to an EN. Hispanics are 80 percent more likely than non-Hispanics to assign their tickets to an EN. Those with less than a high school education are 90 percent more likely than those who completed high school to assign their tickets to an EN; unmarried parents with children are 70 percent more likely than others to assign their tickets to an EN; and all parents with children younger than age 6 are 2.9 times more likely than others to assign their tickets to an EN (Thornton and others 2007).

[3] The 9 months need not be consecutive but must occur within a rolling 60-month period.

[4] During the 36 consecutive months following the completion of the trial work period, the beneficiary is eligible for full DI benefits in any month in which earnings fall below the SGA level. This is referred to as the extended period of eligibility. If a beneficiary works at the SGA level after completing the extended period of eligibility, benefits will be terminated. However, if that beneficiary's earnings then fall below SGA, expedited reinstatement provisions allow benefit resumption without filing a new application if certain criteria are met.

[5] Other programs and resources developed or enhanced in response to the act include the Work Incentives Planning and Assistance program, expedited reinstatement for SSI or DI, extended Medicare coverage, Area Work Incentive Coordinators, and state Medicaid Buy-In programs.

[6] Under the original milestone-outcome payment system, outcome payments made to an EN for a particular beneficiary were reduced based on the number of milestone payments made to the provider for that beneficiary (by an amount equal to 1/60th of the milestone payments).

[7] In addition, SVRAs now could serve beneficiaries under the traditional cost-reimbursement system without requiring the beneficiary to assign the ticket. Both SVRAs and ENs could receive payment for serving a beneficiary sequentially (SVRAs under traditional cost reimbursement and ENs under the elected TTW EN payment system) after the SVRA closed the beneficiary's case and the ticket was subsequently assigned to an EN. However, ENs using the milestone-outcome system and accepting a ticket from a beneficiary for whom an SVRA already has been paid are only eligible for a subset of milestone payments.

[8] A fourth round of the NBS was administered in 2010.

[9] The Phase 1 states are Arizona, Colorado, Delaware, Florida, Illinois, Iowa, Massachusetts, New York, Oklahoma, Oregon, South Carolina, Vermont, and Wisconsin.

[10] Approximately 75 percent of the Phase 1 TTW longitudinal sample responded to all three rounds of the survey. The weights used for this sample account for nonresponse across the three survey rounds.

[11] Because access to the IRS data is restricted, the IRS-NBS record linkage and earnings data analyses presented in this report were performed by SSA staff.

[12] The primary source of information for the Master Earnings File is the W-2 form sent by employers directly to SSA. W-2 forms arrive at SSA continuously and the Master Earnings File is updated with new W-2 information on a weekly basis. The unposted detail segment contains detailed records of earnings not subject to FICA tax, such as deferred Medicare earnings, self-employment earnings, and earnings paid into retirement plans. Two variables from this detailed earnings record are used: W2_BOX5_WGE_MED, corresponding to the amount contained in Box 5 of the form W-2, which includes taxable tips; and SEI_MED, corresponding to any Medicare-covered self-employment. The detailed earning record includes multiple employers per year; for the analysis, these are summed to obtain total wages per year and total self-employment earnings per year. These total annual wage and self-employment values then are summed to obtain total earnings for the year.

[13] SSA cost-of-living adjustments are based on changes in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

[14] To meet the objectives of the survey efficiently, the sample design incorporates geographic primary sampling units and strata defined by TTW rollout phase and payment system. The relevant weights and primary sampling units and strata indicators must be used to produce statistics representative of Phase 1 TTW participants enrolled in the program during the first half of 2003 and to generate standard errors of the estimates that are adjusted for the sample design. See Bethel and Stapleton (2002) and Thornton and

others (2007, Appendix B) for detailed descriptions of the survey objectives and sample design.

[15] At the time this analysis was conducted, only administrative data through December 2006 were available. Analyses of employment and use of work incentives presented later in this article use administrative data through December 2007, as those data became available subsequently and allowed us to compare TTW participant outcomes with those of other work-oriented beneficiaries using data through December 2007 (Livermore 2011). We retained the December 2006 end date for the enrollment analysis as it corresponds to the calendar year in which the round 3 interviews were conducted.

[16] The fact that a large share of EN clients remained enrolled in TTW for fewer than 24 months seems not to be a factor in this outcome. Comparisons between EN clients enrolled in TTW for fewer than 24 months and their counterparts enrolled in TTW for 25 or more months (not shown) indicate that, across all years, both groups were equally likely to have used any services (67 percent and 68 percent, respectively). There were some differences in individual years, however. EN clients enrolled in TTW for the shorter period were less likely to use services in 2003 but more likely to use them in 2004, relative to those enrolled for the longer period. Both groups used services at equal rates during 2005.

[17] The eight items provide respondent ratings of their general health and the degree to which physical health, mental health, and bodily pain interfered with specific activities during the previous 4 weeks. A scoring algorithm is applied to the individual item respondent ratings to construct the PCS and MCS scores. The SF-8 questions and scoring algorithm were developed based on the longer SF-36v2 instrument. The SF-36v2 was originally developed by RAND as part of the Medical Outcomes Study, a multiyear, multisite study designed to explain variations in patient outcomes. Factor analyses identified eight items from the SF-36v2 that best discriminated between good and poor health in each of eight domains (general health, physical functioning, role physical, bodily pain, vitality, social functioning, mental health, and role emotional). Regression analyses based on data from large general population samples were used to develop scoring weights. Responses to the eight items in the SF-8 are weighted (using the scoring weights provided by QualityMetric, Inc.) and summed to derive the PCS and MCS scores. The weights norm the scores to a scale such that both the PCS and MCS have a mean of 50 and a standard deviation of 10 in the general adult population (based on testing in 2000), and make the SF-8 scores directly comparable to scores derived using the SF-36v2 instrument. The validity and reliability of the SF-8 and SF-36v2 instruments have been extensively tested, and the instruments are now widely used by researchers and others to monitor population health and to assess patient outcomes. For information about the development and interpretation of the SF-36v2, see Ware, Kosinski, and Keller (1994). For specific information about the SF-8, see Ware and others (2001).

[18] One-year changes in the SF-36v2 for a sample of Medical Outcomes Study patients with five chronic conditions (depression, congestive heart failure, diabetes, hypertension, and recent myocardial infarction) provide some context for interpreting the changes experienced by TTW participants. As noted above, the scoring algorithms used for the SF-8 and SF-36v2 make the average scores from the two instruments directly comparable (Ware and others 2001). The SF-36v2 findings reported by Ware, Kosinski, and Keller (1994) indicate that, among the sample of adults with chronic conditions, about 57 percent had no change in physical health, 23 percent experienced physical health decline, 62 percent had no change in mental health, and 16 percent experienced mental health declines. The change thresholds used were similar, but not identical, to those used here. The year-to-year changes experienced by TTW participants appear to be comparable to or even greater than those experienced by the Medical Outcomes Study's older (mean age = 61) population.

[19] For more detailed information comparing the assessment of current and previous year's health according to changes in PCS and MCS scores across rounds, see Appendix Table B-2 of Livermore, Roche, and Prenovitz (2010). The findings suggest that there is general consistency between self-reported health status changes and changes in PCS and MCS scores; however, the largest percentage of those who experienced changes in either the MCS or PCS scores, regardless of the direction of the change, reported their overall health to be the same as in the previous year. About 20–25 percent of those who experienced a change in a PCS or MCS score reported a change in health status in the opposite direction. This inconsistency may in part be because the general health assessment encompasses both physical and mental health status, while the PCS and MCS scores capture only one or the other. However, among the small subgroup of beneficiaries who experienced a change in both the PCS and MCS scores, similar percentages reported changes in health status that were inconsistent with the direction of the change in the scores.

[20] ENs can be more selective than SVRAs in choosing who they will serve. Although SVRAs are required to serve those with the most severe disabilities, they also have access to funds from other sources to pay for services if a client does not generate payments under TTW. ENs typically do not have alternative funding sources and so have incentives to serve clients who are most likely to work at levels that will generate TTW payments.

[21] Previous reports have presented similar statistics on the reasons for not working for the cross-sectional national beneficiary and TTW participant samples (Thornton and others 2006; Livermore, Stapleton, and Roche 2009). The statistics reported here differ in that they are for the subsample of Phase 1 TTW participants who were employed

at some point during 2003–2005 but not employed at one or more NBS interviews. Also, the statistics reported here reflect all reasons reported at any of the three NBS interviews.

[22] The TRF variables used to identify those whose cash benefits were discontinued because of work are monthly indicators based on administrative data showing that DI or SSI cash benefits were either suspended or terminated because of earnings. For concurrent beneficiaries to be classified as having discontinued cash benefits because of work, both SSI and DI cash benefits must have ceased in a given month, and the cessation in at least one of the programs must be due to work.

[23] Note that the TRF variables used to construct the indicators of leaving DI and SSI because of work may be imprecise for two primary reasons: work activity not reported by beneficiaries or not processed by SSA at the time the TRF file was created will not be reflected in the indicators; and, in some instances, the reason noted for benefit cessation may be other than work (for example, medical improvement) but employment could have been concurrent with or material to the documented reason for benefit cessation. Both factors will lead to underestimates of months off the rolls due to work.

[24] Non–Social Security benefits include pensions, private disability insurance, public cash assistance or welfare (other than DI and state and federal SSI), veterans' benefits, workers' compensation, unemployment insurance, and other nonearnings sources.

[25] We chose $50 as the threshold for income increases and declines for the statistics in Table 14 to reflect fairly significant changes in monthly benefits and ensure that observed changes were not an artifact of the adjustments we applied to convert the values to 2007 dollars.

[26] We were able to observe changes in monthly income for only two intervals: from the month before the round 1 interview to the month before the round 2 interview, and from the month before the round 2 interview to the month before the round 3 interview. Data on income for every month during 2004–2006 would have helped us associate specific changes in earnings to subsequent changes in benefit income.

[27] Information about non–Social Security benefits was based on respondent reports, whereas information about SSA benefits was based on administrative data.

[28] The SIPP includes only noninstitutionalized individuals in its sample. The NBS sample included beneficiaries regardless of where they resided, and proxy interviews were permitted for those who could not be contacted directly because they were institutionalized.

[29] They were living alone, living with friends or roommates, or living in a group setting with nonrelatives.

[30] As the NBS does not collect information on spousal or other family member earnings and income, it is not possible to assess how other sources might change with beneficiary earnings; for example, the extent to which spousal earnings might decline in response to an increase in beneficiary earnings. Thus, the findings presented are limited and purely descriptive, and cannot attribute causality to the associations observed.

[31] For outcomes measured over the calendar year prior to interview (service use, annual employment, and poverty) we present statistics for 2003–2005. For outcomes measured at interview or the month prior to interview (health status, employment, and personal income) we present statistics for 2004–2006.

[32] Based on the NBS national cross-sectional samples, poverty rates for all beneficiaries were 49 percent in 2003 (Thornton and others 2007), 47 percent in 2004 (Stapleton and others 2008), and 50 percent in 2006 (Livermore, Roche, and Prenovitz 2009).

[33] For example, the poverty rate among adults aged 18 to 64 in single female-headed households with children is about 33 percent (Census Bureau 2010) compared with a poverty rate of 50 percent among working-age SSA disability beneficiaries.

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NOTE

Introduction and Overview of the 2011 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds

I. INTRODUCTION

The Old-Age, Survivors, and Disability Insurance (OASDI) program in the United States makes available a basic level of monthly income upon the attainment of retirement eligibility age, death, or disability by insured workers. The OASDI program consists of two separate parts that pay benefits to workers and their families—Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI). Under OASI, monthly benefits are paid to retired workers and their families and to survivors of deceased workers. Under DI, monthly benefits are paid to disabled workers and their families.

The Board of Trustees was established under the Social Security Act to oversee the financial operations of the OASI and DI Trust Funds. The Board is composed of six members. Four members serve by virtue of their positions in the Federal Government: the Secretary of the Treasury, who is the Managing Trustee; the Secretary of Labor; the Secretary of Health and Human Services; and the Commissioner of Social Security. The other two members are public representatives, appointed by the President. The Deputy Commissioner of the Social Security Administration (SSA) is designated as Secretary of the Board.

The Social Security Act requires that the Board, among other duties, report annually to the Congress on the actuarial (financial) status of the OASI and DI Trust Funds. This annual report, for 2011, is the 71st such report.

Reprinted from *The 2011 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds.* The full report is available at http://www.socialsecurity.gov/OACT/TR/2011.

II. OVERVIEW

A. HIGHLIGHTS

The report's major findings are summarized below.

In 2010

At the end of 2010, about 54 million people were receiving benefits: 37 million retired workers and dependents of retired workers, 6 million survivors of deceased workers, and 10 million disabled workers and dependents of disabled workers. During the year, an estimated 157 million people had earnings covered by Social Security and paid payroll taxes. Total expenditures in 2010 were $713 billion. Total income was $781 billion ($664 billion in non-interest income and $117 billion in interest earnings), and assets held in special issue U.S. Treasury securities grew to $2.6 trillion.

Short-Range Results

The assets of the OASI Trust Fund and of the combined OASI and DI Trust Funds are projected to be adequate over the next 10 years under the intermediate assumptions. However, the assets of the DI Trust Fund are projected to steadily decline under the intermediate assumptions, and would fall below 100 percent of annual cost by the beginning of 2013 and continue to decline until the trust fund is exhausted in 2018. The DI Trust Fund does not satisfy the short-range test of financial adequacy, which requires that the trust fund remain above 100 percent of annual cost throughout the short-range period.

The combined assets of the OASI and DI Trust Funds are projected to grow throughout the short-range period, from $2,609 billion at the beginning of 2011, or 353 percent of annual cost, to $3,526 billion at the beginning of 2020, or 284 percent of annual cost, under the intermediate assumptions. This increase in assets indicates that annual cost is less than total income throughout the short-range period. However, annual cost exceeds non-interest income in 2011 and remains higher throughout the remainder of the short-range period. For last year's report, combined assets were projected to be 353 percent of annual cost at the beginning of 2011 and 299 percent at the beginning of 2020.

Long-Range Results

Under the intermediate assumptions, OASDI cost generally increases more rapidly than non-interest income through 2035 because the retirement of the baby-boom generation increases the number of beneficiaries much faster than subsequent lower-birth-rate generations increase the labor force. From 2035 to 2050, the cost rate declines due principally to the aging of the already retired baby-boom generation. Thereafter, increases in life expectancy generally cause OASDI cost to increase relative to non-interest income, but more slowly than prior to 2035. Annual cost is projected to exceed non-interest income in 2011 and remain higher throughout the remainder of the long-range period. However, total income, including interest earnings on trust fund assets, will be sufficient to cover annual cost until 2023. The dollar level of the combined trust funds is projected to be drawn down beginning in 2023 until assets are exhausted in 2036. Individually, the DI Trust Fund is projected to be exhausted in 2018 and the OASI Trust Fund in 2038.

The OASDI annual cost rate is projected to increase from 13.35 percent of taxable payroll in 2011 to 17.01 percent in 2035 and to 17.56 percent in 2085, a level that is 4.24 percent of taxable payroll more than the projected income rate for 2085. For last year's report, the OASDI cost for 2085 was estimated at 17.47 percent, or 4.16 percent of payroll more than the annual income rate for that year. Expressed in relation to the projected gross domestic product (GDP), OASDI cost is estimated to rise from the current level of 4.8 percent of GDP to about 6.2 percent in 2035, then to decline to 6.0 percent by 2050, and to remain between 5.9 and 6.0 percent through 2085.

For the 75-year projection period, the actuarial deficit is 2.22 percent of taxable payroll, 0.30 percentage point larger than in last year's report. The open group unfunded obligation for OASDI over the 75-year period is $6.5 trillion in present value and is $1.1 trillion more than the measured level of a year ago. If the assumptions, methods, starting values, and the law had all remained unchanged, the unfunded obligation would have risen to about $5.8 trillion due to the change in the valuation date.

Conclusion

Under the long-range intermediate assumptions, annual cost for the OASDI program is projected to exceed non-interest income in 2011 and remain higher throughout the remainder of the long-range period. The combined OASI and DI Trust Funds are projected to increase through 2022, and then to decline and become exhausted and unable to pay scheduled benefits in full on a timely basis in 2036. However, the DI Trust Fund is projected to become exhausted in 2018, so legislative action will be needed as soon as possible. At a minimum, a reallocation of the payroll tax rate between OASI and DI would be necessary, as was done in 1994.

For the combined OASDI Trust Funds to remain solvent throughout the 75-year projection period, the combined payroll tax rate could be increased during the period in a manner equivalent to an immediate and permanent increase of 2.15 percentage points,[1] scheduled benefits could be reduced during the period in a manner equivalent to an immediate and permanent reduction of 13.8 percent, or some combination of these approaches could be adopted. Significantly larger changes would be required if current beneficiaries and those close to retirement age were to be held harmless, or if trust fund asset levels were to be stabilized at the end of the 75-year projection period.

The projected trust fund shortfalls should be addressed in a timely way so that necessary changes can be phased in gradually and workers and beneficiaries can be given time to adjust to them. Implementing changes sooner would allow the needed revenue increases or benefit reductions to be spread over more generations. Social Security will play a critical role in the lives of 56 million beneficiaries and 158 million covered workers and their families in 2011. With informed discussion, creative thinking, and timely legislative action, Social Security can continue to protect future generations.

[1] The necessary tax rate increase differs from the 2.22 percent actuarial deficit for two reasons. First, the necessary tax rate is the rate required to maintain solvency throughout the period that would not result in any trust fund reserve at the end of the period. Second, the necessary tax rate is increased based on the expectation that any change in tax rates will affect the proportion of employee compensation paid in wages. For proposed changes in law that would alter payroll tax rates, an increase in payroll taxes is presumed to result in a small shift of wages and salaries to forms of employee compensation that are not subject to the payroll tax.

B. TRUST FUND FINANCIAL OPERATIONS IN 2010

The table below shows the income, expenditures, and assets for the OASI, the DI, and the combined OASDI Trust Funds in calendar year 2010.

Table II.B1.—Summary of 2010 Trust Fund Financial Operations
[In billions]

	OASI	DI	OASDI
Assets at the end of 2009	$2,336.8	$203.5	$2,540.3
Total income in 2010	677.1	104.0	781.1
Net payroll tax contributions	544.8	92.5	637.3
Reimbursements from General Fund of the Treasury	2.0	.4	2.4
Taxation of benefits	22.1	1.9	23.9
Interest	108.2	9.3	117.5
Total expenditures in 2010	584.9	127.7	712.5
Benefit payments	577.4	124.2	701.6
Railroad Retirement financial interchange	3.9	.5	4.4
Administrative expenses	3.5	3.0	6.5
Net increase in assets in 2010	92.2	-23.6	68.6
Assets at the end of 2010	2,429.0	179.9	2,609.0

Note: Totals do not necessarily equal the sums of rounded components.

In 2010, net payroll tax contributions accounted for 82 percent of total trust fund income. Net payroll tax contributions consist of taxes paid by employees, employers, and the self-employed on earnings covered by Social Security. These taxes are paid on covered earnings up to a specified maximum annual amount, which was $106,800 in 2010. The tax rates scheduled under current law for 2010 and later are shown in table II.B2.

Table II.B2.—Payroll Tax Contribution Rates for 2010 and Later

	OASI	DI	OASDI
Payroll tax contribution rate for employees and employers, each (in percent)	5.30	0.90	6.20
Payroll tax contribution rate for self-employed persons (in percent)	10.60	1.80	12.40

Note: Under Public Law 111-147, most employers were exempt from paying the employer share of OASDI payroll tax on wages paid during the period March 19, 2010 through December 31, 2010, to certain qualified individuals hired after February 3. Under Public Law 111-312, the OASDI payroll tax rate is reduced for 2011 by 2 percentage points for employees and for self-employed workers. These temporary reductions in 2010 and 2011 payroll tax revenue due to lower payroll tax rates have been and will be made up by reimbursements from the General Fund of the Treasury to the OASI and DI Trust Funds.

Less than one percent of OASDI Trust Fund income in 2010 came from reimbursements from the General Fund of the Treasury. The primary reimbursement for the year resulted from Public Law 111-147, the Hiring Incentives to Restore Employment (HIRE) Act, which specified general fund reimbursement for temporary reductions in employer payroll taxes on behalf of certain qualified individuals.

Three percent of OASDI Trust Fund income in 2010 came from subjecting up to 50 percent of Social Security benefits above specified levels to Federal personal income taxation, and 15 percent of OASDI income came from interest earned on investment of OASDI Trust Fund reserves. Trust fund assets are invested in interest-bearing securities of the U.S. Government. In 2010, the combined trust fund assets earned interest at an effective annual rate of 4.6 percent. More than 98 percent of expenditures from the combined OASDI Trust Funds in 2010 were retirement, survivor, and disability benefits totaling $701.6 billion. The financial interchange with the Railroad

Retirement program resulted in a net payment of $4.4 billion from the combined OASDI Trust Funds, or about 0.6 percent of total expenditures. The administrative expenses of the Social Security program were $6.5 billion, or about 0.9 percent of total expenditures.

Assets of the trust funds provide a reserve to pay benefits whenever total program cost exceeds income. Trust fund assets increased by $68.6 billion in 2010 because total income to the combined funds, including interest earned on trust fund assets, exceeded total expenditures. At the end of 2010, the combined assets of the OASI and the DI Trust Funds were 353 percent of estimated expenditures for 2011, down from an actual level of 357 percent at the end of 2009.

C. ASSUMPTIONS ABOUT THE FUTURE

Future income and expenditures of the OASI and DI Trust Funds will depend on many factors, including the size and characteristics of the population receiving benefits, the level of monthly benefit amounts, the size of the workforce, and the level of covered workers' earnings. These factors will depend in turn on future birth rates, death rates, immigration, marriage and divorce rates, retirement-age patterns, disability incidence and termination rates, employment rates, productivity gains, wage increases, inflation, interest rates, and many other demographic, economic, and program-specific factors.

The intermediate demographic and economic assumptions shown in table II.C1 reflect the Trustees' best estimates of future experience, and therefore most of the figures in this overview depict only the outcomes under the intermediate assumptions. Any projection of the future is, of course, uncertain. For this reason, alternatives I (low-cost) and III (high-cost) are included to provide a range of possible future experience. The actual outcome for future costs is very unlikely to be as extreme as either of the outcomes portrayed by the low- and high-cost projections. The assumptions for these two alternatives are also shown in table II.C1, and their implications are highlighted in a separate section, beginning on page 15, on the uncertainty of the projections.

Assumptions are reexamined each year in light of recent experience and new information. This annual review helps to ensure that the assumptions provide the Trustees' best estimate of future possibilities.

Table II.C1.—Long-Range Values[a] of Key Demographic and Economic Assumptions for the 75-year Projection Period

Long-range assumptions	Intermediate	Low-cost	High-cost
Total fertility rate (children per woman), starting in 2035	2.0	2.3	1.7
Average annual percentage reduction in total age-sex-adjusted death rates from 2010 to 2085	.78	.32	1.31
Average annual net immigration (in thousands) for years 2011-85	1,075	1,385	785
Productivity (total U.S. economy), starting in 2021	1.7	2.0	1.4
Average annual percentage change in average wage in covered employment from 2020 to 2085	4.0	3.6	4.4
Consumer Price Index (CPI), starting in 2019	2.8	1.8	3.8
Average annual real-wage differential (percent) for years 2021-85	1.2	1.8	.6
Unemployment rate (percent), starting in 2021	5.5	4.5	6.5
Annual trust fund real interest rate (percent), starting in 2022	2.9	3.6	2.1

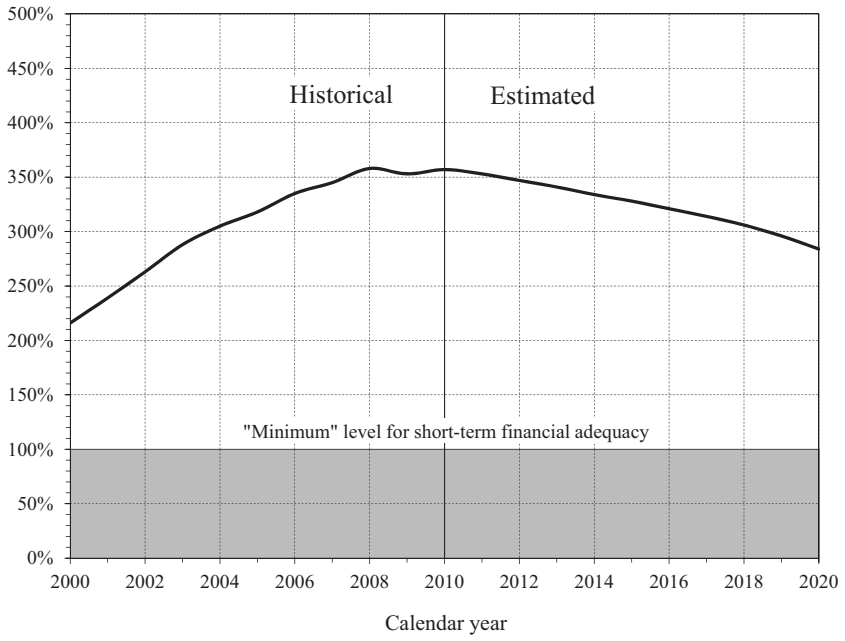
[a] See chapter V for details, including historical values and projected values.

D. PROJECTIONS OF FUTURE FINANCIAL STATUS

Short-Range Actuarial Estimates

For the short range (2011-20), the Trustees measure financial adequacy by comparing projected assets at the beginning of each year to projected program cost for that year under the intermediate set of assumptions. A trust fund ratio of 100 percent or more—that is, assets at the beginning of each year at least equal to projected cost for the year—is a good indication of a trust fund's ability to cover most short-term contingencies. The projected trust fund ratios for OASI alone, and for OASI and DI combined, under the intermediate assumptions exceed 100 percent throughout the short-range period, and therefore OASI and OASDI satisfy the Trustees' short-term test of financial adequacy. However, the DI Trust Fund fails the Trustees' short-term test of financial adequacy. Its trust fund ratio is projected to fall below the 100 percent level by the beginning of 2013. After 2013, the DI trust fund ratio continues to decline until the trust fund is exhausted in 2018. Figure II.D1 below shows that the trust fund ratios for the combined OASI and DI Trust Funds decline gradually after 2010.

Figure II.D1.—Short-Range OASDI Trust Fund Ratio
[Assets as a percentage of annual expenditures]



For 2010 and throughout the remainder of the short-range period, cost will exceed non-interest income but will be less than total income, including interest earned on trust fund assets. Trust fund assets are projected to grow more slowly than cost, which causes the trust fund ratio to decline, as shown in figure II.D1.

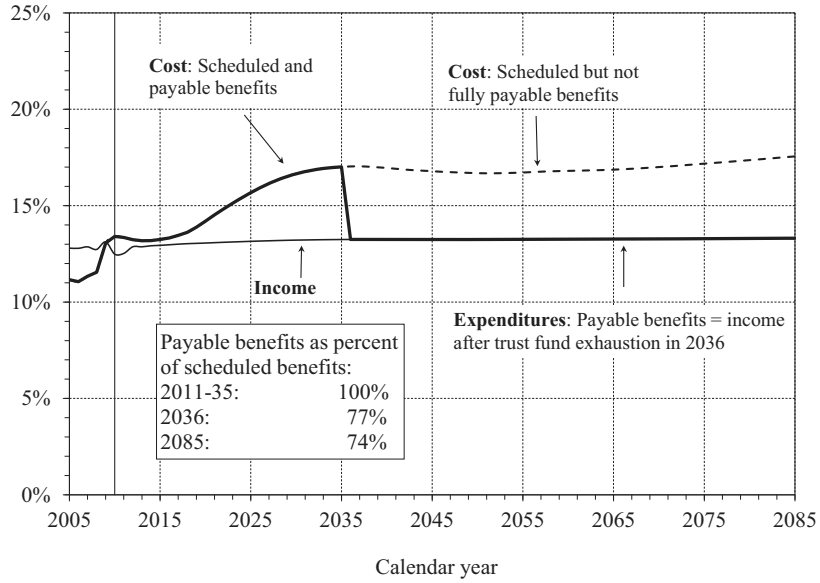
Long-Range Actuarial Estimates

The actuarial status of the program over the next 75 years is measured in terms of annual cost and income as a percentage of taxable payroll, trust fund ratios, the actuarial balance (also as a percentage of taxable payroll), and the open group unfunded obligation (expressed in present-value dollars, as a percentage of taxable payroll, and as a percentage of gross domestic product (GDP)). Consideration of Social Security's annual cost and income as a percentage of the total U.S. economic output or GDP provides an additional important perspective.

The year-by-year relationship among income (excluding interest), cost (including scheduled benefits), and expenditures (including payable benefits) for the OASDI program is illustrated in figure II.D2 for the full 75-year period. All values are expressed as percentages of taxable payroll and, in the case of income and cost, are referred to as the income rate and the cost rate, respectively. Under the intermediate assumptions, demographic factors would by themselves cause the cost rate to rise rapidly for about the next two decades before leveling off in about 2035. For the next 5 years, this effect will be obscured by the sharp increase in the cost rate that occurred when the recent recession led to a reduction in the tax base and a surge in beneficiaries. The projected income rate is stable at about 13 percent throughout the 75-year period except for a dip in 2011 due to an expected $10 billion downward adjustment to 2011 income that corrects for excess payroll tax revenue credited to the trust funds in earlier years.

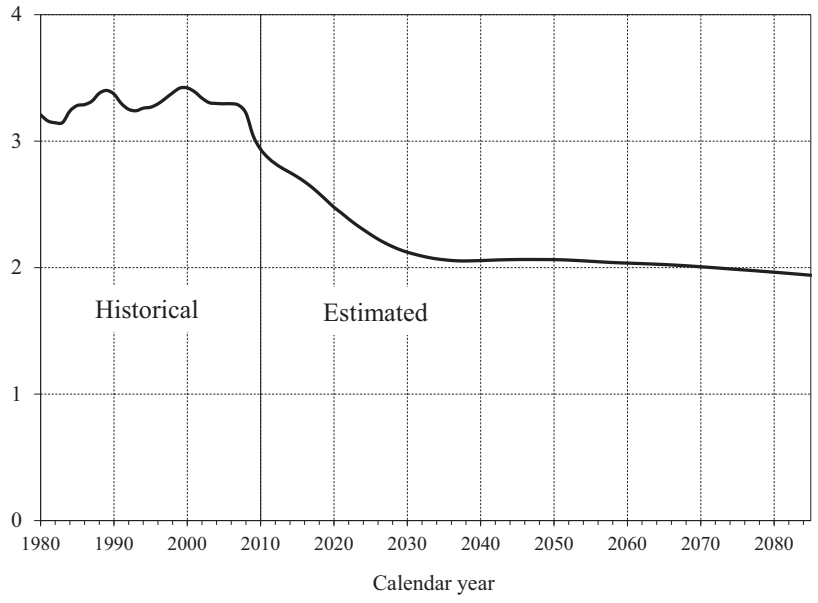
Annual cost exceeded non-interest income in 2010 and is projected to continue to be larger throughout the remainder of the 75-year valuation period. Nevertheless, from 2010 through 2022, total trust fund income, including interest income, is more than is necessary to cover costs, so trust fund assets will continue to grow during that time period. Beginning in 2023, trust fund assets will diminish until they become exhausted in 2036. Non-interest income is projected to be sufficient to support expenditures at a level of 77 percent of scheduled benefits after trust fund exhaustion in 2036, and then to decline to 74 percent of scheduled benefits in 2085.

Figure II.D2.—OASDI Income, Cost, and Expenditures as Percentages of Taxable Payroll
[Under Intermediate Assumptions]



The estimated number of workers per beneficiary is shown in figure II.D3. There were about 2.9 workers for every OASDI beneficiary in 2010. This ratio had been extremely stable, remaining between 3.2 and 3.4 from 1974 through 2008, and is lower for 2009 and 2010 due to the economic recession. The projected future increase in the cost rate reflects a projected decline in the number of covered workers per beneficiary. The ratio of workers to beneficiaries is projected to decline, even as the economy recovers, because the workers of the baby-boom generation are being replaced in the workforce by lower-birth-rate generations. This ratio reaches 2.1 by 2035 when the baby-boom generation will have largely retired, with a further gradual decline thereafter due to increasing longevity.

Figure II.D3.—Number of Covered Workers Per OASDI Beneficiary



The projected maximum trust fund ratios during the long-range period for the OASI, DI, and combined funds appear in table II.D1. The table also shows the year in which the maximum projected trust fund ratio is attained and the year in which the assets are projected to be exhausted.

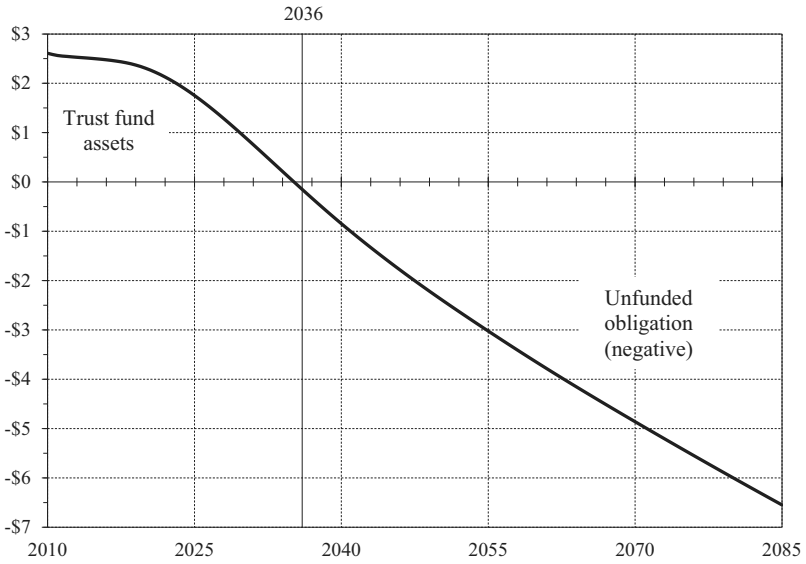
Table II.D1.—Projected Maximum Trust Fund Ratios During the Long-Range Period and Trust Fund Exhaustion Dates
[Under the Intermediate Assumptions]

	OASI	DI	OASDI
Maximum trust fund ratio (percent)	401	136	353
Year attained	2011	2011	2011
Year of trust fund exhaustion	2038	2018	2036

The actuarial balance is a summary measure of the program's financial status through the end of the 75-year valuation period. It is essentially the difference, expressed as a percentage of taxable payroll during the valuation period, between income and cost of the program from 1937 through the end of the valuation period. When the actuarial balance is negative, the actuarial deficit can be interpreted as the percentage that could be added to the current-law income rate for each of the next 75 years, or subtracted from the cost rate for each year, to bring the funds into actuarial balance. More generally, this measure is the average amount of change in income or cost that is needed over the valuation period in order to achieve actuarial balance. In this report, the actuarial balance under the intermediate assumptions is a deficit of 2.22 percent of taxable payroll for the combined OASI and DI Trust Funds. The actuarial deficit was 1.92 percent in the 2010 report and has been in the range of 1.70 percent to 2.23 percent for every year beginning with the 1994 report. If the assumptions, methods, starting values, and the law had all remained unchanged from last year, the actuarial deficit in this report would have increased to 1.97 percent of payroll due to adding one year to the projection period.

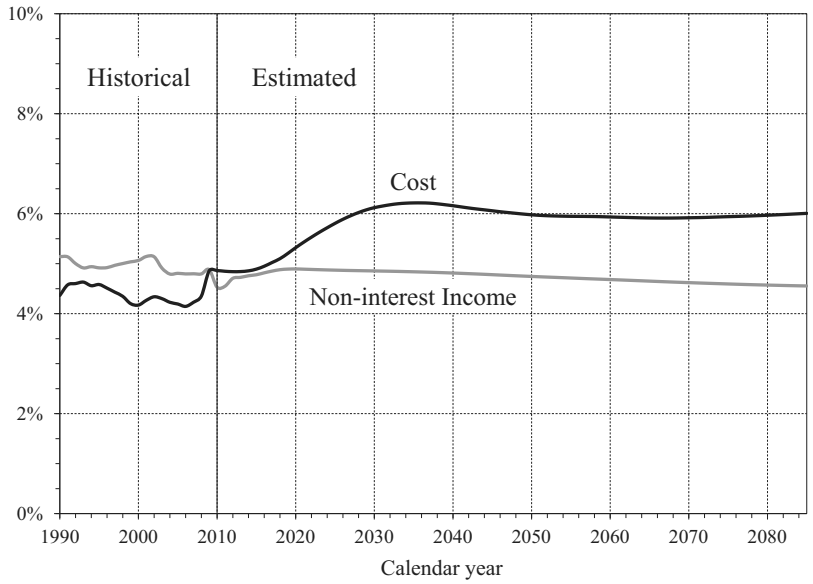
Another way to illustrate the financial shortfall of the OASDI program is to examine the cumulative present value of scheduled income less cost. Figure II.D4 shows the present value of cumulative OASDI income less cost from the inception of the program through 2010 and through each of the next 75 years. A positive cumulative value represents the level of trust fund assets through the end of the selected year. A negative value is referred to as the unfunded obligation through the selected year. The balance of the combined trust funds is $2.6 trillion at the end of 2010. This cumulative amount declines after 2010 in present value, but continues to be positive through 2035. However, after 2035 this cumulative amount becomes negative, which means that the OASDI Trust Funds have a net unfunded obligation through each year after 2035. Through the end of 2085, the combined funds have a present-value unfunded obligation of $6.5 trillion. This unfunded obligation represents 2.1 percent of taxable payroll and 0.7 percent of GDP during the 75-year valuation period. The 0.14 percentage point difference between the unfunded obligation as a share of taxable payroll (2.08 percent) and the actuarial deficit (2.22 percent) reflects the additional requirement of an ending trust fund balance equal to one year's cost for the actuarial balance measure.

Figure II.D4.—Cumulative Scheduled OASDI Income Less Cost, From 1937 Through Selected Years
[Present value as of January 1, 2011, in trillions]



Another important way to look at Social Security's future is to view its annual cost and non-interest income as a share of U.S. economic output. Figure II.D5 shows that Social Security's cost as a percentage of GDP is projected to continue growing from 4.4 percent in 2008 to about 6.2 percent in 2035, then to decline to 6.0 percent by 2050, and to remain between 5.9 and 6.0 percent through 2085. As the economy recovers, Social Security's non-interest income, which reflects scheduled tax rates, is projected to increase from its current level of about 4.5 percent of GDP to about 4.9 percent of GDP for 2020. Thereafter, non-interest income as a percent of GDP declines gradually, until it reaches about 4.6 percent by 2085. Future non-interest income declines generally in relation to GDP because the share of employee compensation provided in fringe benefits is projected to increase gradually, which will make wages a declining share of GDP.

Figure II.D5.—OASDI Cost and Non-interest Income as a Percentage of GDP



Figures II.D2, II.D4, and II.D5 show that the program's financial condition is worsening at the end of the projection period. Trends in annual balances and cumulative values toward the end of the 75-year period provide an indication of the program's ability to maintain solvency beyond 75 years. Consideration of summary measures alone for a 75-year period can lead to incorrect perceptions and to policy prescriptions that do not achieve sustainable solvency.

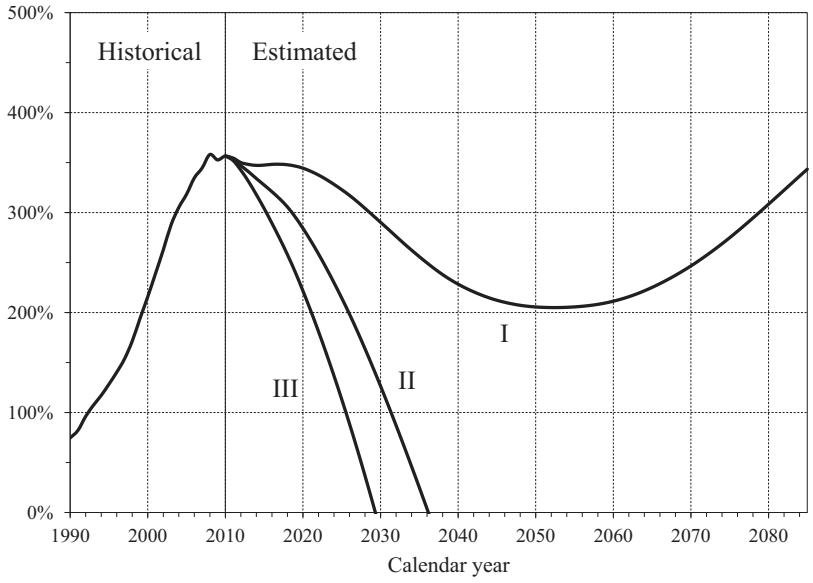
Summary measures for a time period that extends over the infinite horizon are also included in this report. These measures provide an additional indication of Social Security's very long-run financial condition, but are subject to much greater uncertainty. These calculations show that extending the horizon beyond 75 years increases the unfunded obligation. Over the infinite horizon, the shortfall (unfunded obligation) amounts to $17.9 trillion in present value, 3.6 percent of future taxable payroll, or 1.2 percent of future GDP. The summarized shortfalls for the 75-year period and the infinite horizon both reflect annual shortfalls only for years after trust fund exhaustion. The annual shortfalls after trust fund exhaustion rise slowly and reflect increases in life expectancy after 2036. The summarized shortfalls for the 75-year period, as percentages of taxable payroll and GDP, are lower than those for the infinite horizon principally because only about two-thirds of the years in the 75-year period have unfunded annual shortfalls.

The measured unfunded obligation over the infinite horizon is increased from $16.1 trillion in last year's report. If the assumptions, methods, starting values, and the law had all remained unchanged, the unfunded obligation over the infinite horizon would have risen to $16.9 trillion due to the change in the valuation date. Expressed as a percentage of taxable payroll, the measured unfunded obligation over the infinite horizon increased from 3.3 percent in last year's report to 3.6 percent for this year's report. As a percentage of GDP, the measured unfunded obligation over the infinite horizon of 1.2 percent is the same as it was in last year's report.

Uncertainty of the Projections

Significant uncertainty surrounds the intermediate assumptions. The Trustees use several methods to help illustrate that uncertainty. One approach is the use of low-cost (alternative I) and high-cost (alternative III) sets of assumptions. Figure II.D6 shows the projected trust fund ratios for the combined OASI and DI Trust Funds under the intermediate, low-cost, and high-cost assumptions. The low-cost alternative reflects a set of assumptions that improves the projected financial status of the trust funds relative to the financial status under the intermediate set of assumptions. The low-cost alternative includes a higher ultimate total fertility rate, slower improvement in mortality, a higher real-wage differential, and lower unemployment. The high-cost alternative, in contrast, includes a lower ultimate total fertility rate, more rapid improvement in mortality, a lower real-wage differential, and higher unemployment. These alternatives are not intended to suggest that all parameters would be likely to differ from the intermediate values in the same direction, but are intended to illustrate the effect of clearly defined scenarios that are, on balance, very favorable or unfavorable for the program's financial status. The actual outcome for future costs is very unlikely to be as extreme as either of the outcomes portrayed by the low- and high-cost projections. The method for constructing these low- and high-cost projections does not provide an estimate of the probability that actual experience will lie within or outside the range they define.

Figure II.D6.—Long-Range OASDI Trust Fund Ratios Under Alternative Assumptions
[Assets as a percentage of annual cost]

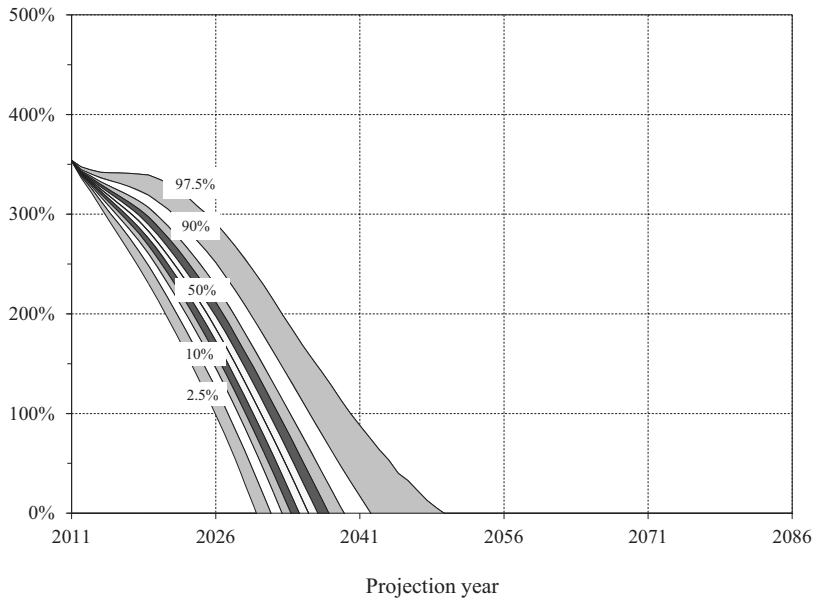


In appendix D, this report also provides long-range sensitivity analysis for the OASDI program, by varying one parameter at a time. These estimates provide further illustrations of the uncertainty surrounding projections into the future.

A third approach that measures uncertainty uses stochastic simulations to develop a range of projections and provides estimates of the probability that future outcomes will fall within or outside a given range. The results of the stochastic simulations, discussed in more detail in appendix E, suggest that trust fund exhaustion is highly probable by mid-century (see figure II.D7).

The stochastic results suggest that outcomes as good as the low-cost alternative or as bad as the high-cost alternative are unlikely. However, the relationship between the stochastic results and the low- and high-cost alternatives may change as the methodology for the stochastic simulations is further developed. As noted in appendix E, future improvements and refinements are expected to be more likely to expand rather than reduce the indicated range of uncertainty.

Figure II.D7.—Long-Range OASDI Trust Fund Ratios From Stochastic Modeling



Changes From Last Year's Report

The long-range OASDI actuarial deficit of 2.22 percent of taxable payroll for this year's report is larger than the deficit of 1.92 percent of taxable payroll shown in last year's report under intermediate assumptions. Changes in mortality projections, due to new starting values and revised methods, are the most significant of several factors contributing to the increase in the deficit. These mortality changes resulted in lower death rates for the population age 65 and over. Adding to this negative effect are near-term lower levels of net other immigration and real earnings than assumed in last year's report. For a detailed description of the specific changes identified in table II.D2 below, see section IV.B.7 on page 72.

Table II.D2.—Reasons for Change in the 75-Year Actuarial Balance, Based on Intermediate Assumptions
[As a percentage of taxable payroll]

Item	OASI	DI	OASDI
Shown in last year's report:			
Income rate	12.09	1.92	14.01
Cost rate	13.71	2.22	15.93
Actuarial balance	**-1.62**	**-.30**	**-1.92**
Changes in actuarial balance due to changes in:			
Legislation / Regulation	.00	.00	.00
Valuation period[a]	-.04	-.01	-.05
Demographic data and assumptions	-.14	.00	-.14
Economic data and assumptions	-.05	-.01	-.06
Disability assumptions	.00	.00	-.01
Methods and programmatic data	-.06	+.02	-.05
Total change in actuarial balance	-.30	.00	-.30
Shown in this report:			
Actuarial balance	**-1.92**	**-.30**	**-2.22**
Income rate	12.11	1.91	14.02
Cost rate	14.04	2.21	16.25

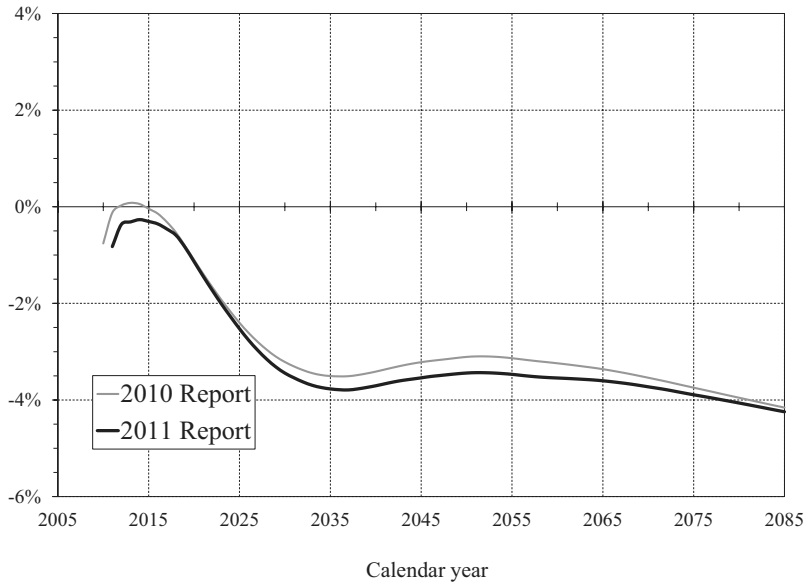
[a] In changing from the valuation period of last year's report, which was 2010-84, to the valuation period of this report, 2011-85, the relatively large negative annual balance for 2085 is included. This change in the valuation period results in a larger long-range actuarial deficit. The fund balance at the end of 2010, i.e., at the beginning of the projection period, is included in the 75-year actuarial balance.

Note: Totals do not necessarily equal the sums of rounded components.

The open group unfunded obligation over the 75-year projection period has increased from $5.4 trillion (present discounted value as of January 1, 2010) to $6.5 trillion (present discounted value as of January 1, 2011). The measured unfunded obligation would be expected to increase by about $0.4 trillion due to advancing the valuation date by 1 year and including the additional year 2085. Legislative changes, changes in methods, revisions in assumptions, and updated data increased the measured unfunded obligation by about $0.7 trillion.

This year's projections of annual balances (non-interest income minus cost) are lower than those in last year's report throughout the 75-year projection period. See figure II.D8.

Figure II.D8.—OASDI Annual Balances: 2010 and 2011 Trustees Reports
[As a percentage of taxable payroll, under the intermediate assumptions]



E. CONCLUSION

Under current law, the cost of Social Security will generally increase faster than the program's income because of the aging of the baby-boom generation, continuing low fertility compared to the baby-boom period, and increasing life expectancy. Based on the Trustees' best estimate, program cost will exceed non-interest income in 2011, as it did in 2010, and remain higher throughout the remainder of the 75-year projection period. Social Security's combined trust funds are projected to increase with the help of interest income through 2022 and allow full payment of scheduled benefits on a timely basis until the trust funds become exhausted in 2036. At that time, annual non-interest income to the trust funds is projected to equal about 77 percent of program cost. By 2085, annual non-interest income is projected to be about 74 percent as large as the annual cost of the OASDI program.

The OASI Trust Fund and the DI Trust Fund are projected to have sufficient funds to pay full benefits on time until 2038 and 2018, respectively. Given that the DI Trust Fund is projected to become exhausted in 2018, legislative action will be needed as soon as possible. At a minimum, a reallocation of the payroll tax rate between OASI and DI would be necessary, as was done in 1994.

Over the full 75-year projection period, the actuarial deficit estimated for the combined trust funds is 2.22 percent of taxable payroll—0.30 percentage point larger than the 1.92 percent deficit projected in last year's report. Solvency of the combined OASDI Trust Funds for the next 75 years could be restored under the intermediate assumptions if increases in revenue were made equivalent to immediately and permanently increasing the Social Security payroll tax from its current level of 12.40 percent (for employees and employers combined) to 14.55 percent.[1] Alternatively, changes could be made that are equivalent to reducing scheduled benefits by about 13.8 percent. Other ways of reducing the deficit include other sources of revenue or some combination of these approaches.

If no substantial action is taken for several years, then changes necessary to maintain Social Security solvency will be concentrated on fewer years and fewer generations. This possible outcome can be seen by examining the large and sudden changes that would be required if action were deferred until the

[1] The necessary tax rate increase differs from the 2.22 percent actuarial deficit for two reasons. First, the necessary tax rate is the rate required to maintain solvency throughout the period that would not result in any trust fund reserve at the end of the period. Second, the necessary tax rate is increased based on the expectation that any change in tax rates will affect the proportion of employee compensation paid in wages. For proposed changes in law that would alter payroll tax rates, an increase in payroll taxes is presumed to result in a small shift of wages and salaries to forms of employee compensation that are not subject to the payroll tax.

combined trust funds become exhausted in 2036. For example, either of the following two actions would eliminate the shortfall for the 75-year period as a whole by specifically eliminating annual deficits after trust fund exhaustion:

- Payroll taxes could be raised to finance scheduled benefits fully in every year starting in 2036. The payroll tax rate could be increased to about 16.4 percent at the point of trust fund exhaustion in 2036 and continue rising generally thereafter, reaching about 16.9 percent in 2085.
- Similarly, benefits could be reduced to the level that is payable with scheduled tax rates in each year beginning in 2036. Scheduled benefits could be reduced 23 percent at the point of trust fund exhaustion in 2036, with reductions reaching 26 percent in 2085.

Based on the assumption of continued increase in the average age of the population after the 75-year period (due to expected improvement in life expectancy), Social Security's annual cost will very likely continue to grow faster than non-interest income after 2085. As a result, ensuring solvency of the system beyond 2085 would likely require further changes beyond those expected to be needed through 2085.

The projected trust fund shortfalls should be addressed in a timely way so that necessary changes can be phased in gradually and workers and beneficiaries can be given time to adjust to them. Implementing changes sooner would allow the needed revenue increases or benefit reductions to be spread over more generations. Social Security will play a critical role in the lives of 56 million beneficiaries and 158 million covered workers and their families in 2011. With informed discussion, creative thinking, and timely legislative action, Social Security can continue to protect future generations.

For further information related to the contents of this report, see the following websites:

- www.socialsecurity.gov/oact/tr/2011/index.html
- www.cms.gov/ReportsTrustFunds/
- www.treasury.gov/resource-center/economic-policy/ss-medicare/Pages/social_security.aspx

OASDI and SSI Snapshot and SSI Monthly Statistics

Each month, the Social Security Administration's Office of Retirement and Disability Policy posts key statistics about various aspects of the Supplemental Security Income (SSI) program at http://www.socialsecurity.gov/policy. The statistics include the number of people who receive benefits, eligibility category, and average monthly payment. This issue presents SSI data for June 2010–June 2011.

The Monthly Statistical Snapshot summarizes information about the Social Security and SSI programs and provides a summary table on the trust funds. Data for June 2011 are given on pages 150–151. Trust fund data for February 2011 are given on page 151. The more detailed SSI tables begin on page 152. Persons wanting detailed monthly OASDI information should visit the Office of the Chief Actuary's website at http://www.socialsecurity.gov/OACT/ProgData/beniesQuery.html.

Monthly Statistical Snapshot

The most current edition of Tables 1–3 will always be available at http://www.socialsecurity.gov/policy/docs/quickfacts/stat_snapshot. The most current data for the trust funds (Table 4) are available at http://www.socialsecurity.gov/OACT/ProgData/funds.html.

Table 1.
Number of people receiving Social Security, Supplemental Security Income, or both, June 2011 (in thousands)

Type of beneficiary	Total	Social Security only	SSI only	Both Social Security and SSI
All beneficiaries	60,114	52,057	5,299	2,758
Aged 65 or older	38,540	36,491	892	1,158
Disabled, under age 65 [a]	13,596	7,589	4,406	1,601
Other [b]	7,977	7,977	. . .	. . .

SOURCES: Social Security Administration, Master Beneficiary Record, 100 percent data. Social Security Administration, Supplemental Security Record, 100 percent data.

NOTES: Data are for the end of the specified month. Only Social Security beneficiaries in current-payment status are included.

. . . = not applicable.

a. Includes children receiving SSI on the basis of their own disability.

b. Social Security beneficiaries who are neither aged nor disabled (for example, early retirees, young survivors).

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 2.
Social Security benefits, June 2011

Type of beneficiary	Beneficiaries		Total monthly benefits (millions of dollars)	Average monthly benefit (dollars)
	Number (thousands)	Percent		
All beneficiaries	54,815	100.0	59,146	1,079.00
Old-Age Insurance				
Retired workers	35,158	64.1	41,517	1,180.80
Spouses	2,303	4.2	1,342	582.80
Children	596	1.1	346	579.80
Survivors Insurance				
Widow(er)s and parents [a]	4,255	7.8	4,734	1,112.40
Widowed mothers and fathers [b]	154	0.3	130	845.50
Children	1,920	3.5	1,450	755.00
Disability Insurance				
Disabled workers	8,403	15.3	8,988	1,069.50
Spouses	162	0.3	47	287.50
Children	1,862	3.4	594	318.80

SOURCE: Social Security Administration, Master Beneficiary Record, 100 percent data.

NOTES: Data are for the end of the specified month. Only beneficiaries in current-payment status are included.

Some Social Security beneficiaries are entitled to more than one type of benefit. In most cases, they are dually entitled to a worker benefit and a higher spouse or widow(er) benefit. If both benefits are financed from the same trust fund, the beneficiary is usually counted only once in the statistics, as a retired-worker or a disabled-worker beneficiary, and the benefit amount recorded is the larger amount associated with the auxiliary benefit. If the benefits are paid from different trust funds the beneficiary is counted twice, and the respective benefit amounts are recorded for each type of benefit.

a. Includes nondisabled widow(er)s aged 60 or older, disabled widow(er)s aged 50 or older, and dependent parents of deceased workers aged 62 or older.

b. A widow(er) or surviving divorced parent caring for the entitled child of a deceased worker who is under age 16 or is disabled.

CONTACT: Hazel P. Jenkins (410) 965-0164 or oasdi.monthly@ssa.gov for further information.

Table 3.
Supplemental Security Income recipients, June 2011

Age	Recipients: Number (thousands)	Recipients: Percent	Total payments [a] (millions of dollars)	Average monthly payment [b] (dollars)
All recipients	8,057	100.0	4,327	499.40
Under 18	1,269	15.7	794	595.10
18–64	4,738	58.8	2,702	515.10
65 or older	2,050	25.4	831	404.00

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

a. Includes retroactive payments.

b. Excludes retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 4.
Operations of the Old-Age and Survivors Insurance and Disability Insurance Trust Funds, February 2011 (in millions of dollars)

Component	OASI	DI	Combined OASI and DI
		Receipts	
Total	44,878	7,619	52,497
Net contributions	44,724	7,595	52,319
Income from taxation of benefits	13	0	13
Net interest	141	23	165
Payments from the general fund	0	0	0
		Expenditures	
Total	49,345	10,671	60,016
Benefit payments	49,041	10,422	59,464
Administrative expenses	303	249	552
Transfers to Railroad Retirement	0	0	0
		Assets	
At start of month	2,439,749	178,764	2,618,513
Net increase during month	-4,466	-3,052	-7,519
At end of month	2,435,282	175,712	2,610,994

SOURCE: Data on the trust funds were accessed on May 5, 2011, on the Social Security Administration's Office of the Chief Actuary's website: http://www.socialsecurity.gov/OACT/ProgData/funds.html.

NOTE: Totals may not equal the sum of the components because of rounding.

The SSI Monthly Statistics are also available at http://www.socialsecurity.gov/policy/docs/statcomps/ssi_monthly/index.html.

SSI Federally Administered Payments

Awards of SSI Federally Administered Payments

Table 1.
Recipients (by type of payment), total payments, and average monthly payment, June 2010–June 2011

Month	Number of recipients				Total payments [a] (thousands of dollars)	Average monthly payment [b] (dollars)
	Total	Federal payment only	Federal payment and state supplementation	State supplementation only		
2010						
June	7,837,400	5,464,724	2,116,937	255,739	4,269,596	497.50
July	7,831,046	5,460,051	2,114,890	256,105	4,190,076	499.20
August	7,892,141	5,507,862	2,127,986	256,293	4,311,454	498.90
September	7,898,515	5,513,288	2,128,504	256,723	4,256,062	498.30
October	7,905,492	5,518,761	2,129,769	256,962	4,237,780	499.70
November	7,947,752	5,551,970	2,138,811	256,971	4,296,554	499.30
December	7,912,266	5,526,333	2,129,334	256,599	4,273,680	500.70
2011						
January	7,956,362	5,592,029	2,109,226	255,107	4,235,824	499.70
February	8,002,032	5,627,081	2,119,585	255,366	4,342,633	497.60
March	8,001,423	5,628,567	2,118,256	254,600	4,319,855	500.30
April	8,014,930	5,639,114	2,121,078	254,738	4,312,912	500.80
May	8,057,448	5,672,947	2,130,131	254,370	4,399,629	499.80
June	8,056,968	5,673,253	2,129,163	254,552	4,326,804	499.40

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

a. Includes retroactive payments.

b. Excludes retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 2.
Recipients, by eligibility category and age, June 2010–June 2011

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2010						
June	7,837,400	1,189,172	6,648,228	1,227,732	4,570,209	2,039,459
July	7,831,046	1,188,489	6,642,557	1,222,497	4,568,938	2,039,611
August	7,892,141	1,191,591	6,700,550	1,236,644	4,609,849	2,045,648
September	7,898,515	1,191,611	6,706,904	1,235,499	4,616,558	2,046,458
October	7,905,492	1,190,909	6,714,583	1,233,911	4,624,389	2,047,192
November	7,947,752	1,192,920	6,754,832	1,245,812	4,650,603	2,051,337
December	7,912,266	1,183,853	6,728,413	1,239,269	4,631,507	2,041,490
2011						
January	7,956,362	1,188,872	6,767,490	1,249,294	4,657,382	2,049,686
February	8,002,032	1,189,858	6,812,174	1,258,533	4,691,651	2,051,848
March	8,001,423	1,186,985	6,814,438	1,257,045	4,695,846	2,048,532
April	8,014,930	1,187,848	6,827,082	1,257,359	4,707,744	2,049,827
May	8,057,448	1,187,588	6,869,860	1,269,853	4,737,116	2,050,479
June	8,056,968	1,186,668	6,870,300	1,268,840	4,738,185	2,049,943

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 3.
Recipients of federal payment only, by eligibility category and age, June 2010–June 2011

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2010						
June	5,464,724	599,370	4,865,354	981,762	3,349,104	1,133,858
July	5,460,051	598,923	4,861,128	977,452	3,348,671	1,133,928
August	5,507,862	600,387	4,907,475	988,805	3,381,935	1,137,122
September	5,513,288	600,397	4,912,891	987,846	3,387,950	1,137,492
October	5,518,761	599,866	4,918,895	986,399	3,394,511	1,137,851
November	5,551,970	600,942	4,951,028	996,244	3,415,567	1,140,159
December	5,526,333	595,546	4,930,787	990,701	3,401,733	1,133,899
2011						
January	5,592,029	602,169	4,989,860	1,003,631	3,442,049	1,146,349
February	5,627,081	602,354	5,024,727	1,011,085	3,468,989	1,147,007
March	5,628,567	600,628	5,027,939	1,009,961	3,473,468	1,145,138
April	5,639,114	600,780	5,038,334	1,009,818	3,483,783	1,145,513
May	5,672,947	600,406	5,072,541	1,020,116	3,507,222	1,145,609
June	5,673,253	599,687	5,073,566	1,019,432	3,508,722	1,145,099

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 4.
Recipients of federal payment and state supplementation, by eligibility category and age, June 2010–June 2011

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2010						
June	2,116,937	504,818	1,612,119	244,450	1,091,621	780,866
July	2,114,890	504,667	1,610,223	243,521	1,090,373	780,996
August	2,127,986	506,063	1,621,923	246,376	1,098,125	783,485
September	2,128,504	506,017	1,622,487	246,130	1,098,554	783,820
October	2,129,769	505,882	1,623,887	245,967	1,099,625	784,177
November	2,138,811	507,046	1,631,765	248,043	1,104,651	786,117
December	2,129,334	503,206	1,626,128	246,936	1,100,080	782,318
2011						
January	2,109,226	502,505	1,606,721	244,118	1,085,752	779,356
February	2,119,585	503,286	1,616,299	245,874	1,092,963	780,748
March	2,118,256	502,614	1,615,642	245,595	1,092,856	779,805
April	2,121,078	503,294	1,617,784	246,044	1,094,348	780,686
May	2,130,131	503,737	1,626,394	248,228	1,100,226	781,677
June	2,129,163	503,725	1,625,438	247,800	1,099,542	781,821

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 5.
Recipients of state supplementation only, by eligibility category and age, June 2010–June 2011

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2010						
June	255,739	84,984	170,755	1,520	129,484	124,735
July	256,105	84,899	171,206	1,524	129,894	124,687
August	256,293	85,141	171,152	1,463	129,789	125,041
September	256,723	85,197	171,526	1,523	130,054	125,146
October	256,962	85,161	171,801	1,545	130,253	125,164
November	256,971	84,932	172,039	1,525	130,385	125,061
December	256,599	85,101	171,498	1,632	129,694	125,273
2011						
January	255,107	84,198	170,909	1,545	129,581	123,981
February	255,366	84,218	171,148	1,574	129,699	124,093
March	254,600	83,743	170,857	1,489	129,522	123,589
April	254,738	83,774	170,964	1,497	129,613	123,628
May	254,370	83,445	170,925	1,509	129,668	123,193
June	254,552	83,256	171,296	1,608	129,921	123,023

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 6.
Total payments, by eligibility category, age, and source of payment, June 2010–June 2011
(in thousands of dollars)

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			All sources			
2010						
June	4,269,596	476,085	3,793,511	777,075	2,665,250	827,272
July	4,190,076	475,028	3,715,047	768,633	2,595,399	826,044
August	4,311,454	477,380	3,834,075	789,090	2,691,868	830,496
September	4,256,062	476,375	3,779,687	774,470	2,652,224	829,369
October	4,237,780	475,525	3,762,255	775,508	2,633,294	828,978
November	4,296,554	477,366	3,819,188	788,199	2,676,221	832,135
December	4,273,680	474,932	3,798,748	780,109	2,663,101	830,470
2011						
January	4,235,824	474,261	3,761,563	778,155	2,628,084	829,584
February	4,342,633	474,776	3,867,857	792,430	2,718,994	831,209
March	4,319,855	474,564	3,845,290	794,225	2,694,737	830,892
April	4,312,912	474,653	3,838,258	794,140	2,687,773	830,998
May	4,399,629	475,958	3,923,671	808,858	2,757,773	832,999
June	4,326,804	474,311	3,852,493	793,566	2,702,297	830,942
			Federal payments			
2010						
June	3,955,592	395,870	3,559,722	763,468	2,489,337	702,787
July	3,880,991	394,995	3,485,995	755,300	2,423,830	701,861
August	3,996,408	396,847	3,599,561	775,338	2,515,592	705,477
September	3,943,345	396,051	3,547,294	760,966	2,477,787	704,592
October	3,926,458	395,225	3,531,233	762,067	2,460,186	704,205
November	3,982,863	396,728	3,586,135	774,563	2,501,419	706,882
December	3,960,438	394,865	3,565,573	766,520	2,488,151	705,767
2011						
January	3,927,074	394,809	3,532,265	764,861	2,456,382	705,830
February	4,028,230	395,072	3,633,159	778,788	2,542,525	706,918
March	4,007,692	395,013	3,612,678	780,683	2,520,109	706,900
April	4,001,584	395,132	3,606,452	780,620	2,513,975	706,989
May	4,083,720	396,268	3,687,452	794,941	2,580,100	708,678
June	4,014,482	394,933	3,619,549	780,001	2,527,457	707,024

(Continued)

Table 6.
Total payments, by eligibility category, age, and source of payment, June 2010–June 2011 (in thousands of dollars)—*Continued*

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			State supplementation			
2010						
June	314,004	80,215	233,789	13,607	175,913	124,485
July	309,085	80,033	229,052	13,333	171,569	124,183
August	315,046	80,533	234,513	13,752	176,276	125,019
September	312,717	80,324	232,393	13,503	174,437	124,777
October	311,323	80,301	231,022	13,441	173,109	124,773
November	313,691	80,638	233,053	13,636	174,802	125,253
December	313,242	80,067	233,175	13,588	174,950	124,703
2011						
January	308,749	79,451	229,298	13,294	171,701	123,754
February	314,403	79,704	234,699	13,642	176,469	124,292
March	312,163	79,551	232,612	13,541	174,629	123,993
April	311,327	79,521	231,806	13,520	173,798	124,009
May	315,910	79,690	236,220	13,917	177,673	124,320
June	312,322	79,378	232,944	13,565	174,840	123,918

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month and include retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 7.
Average monthly payment, by eligibility category, age, and source of payment, June 2010–June 2011 (in dollars)

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			All sources			
2010						
June	497.50	398.30	515.30	592.40	514.10	403.60
July	499.20	398.50	517.20	600.50	514.80	403.70
August	498.90	398.60	516.80	598.20	514.60	403.80
September	498.30	398.60	516.00	594.20	514.60	403.90
October	499.70	398.40	517.70	600.20	515.50	403.80
November	499.30	398.40	517.10	596.90	515.30	403.90
December	500.70	399.80	518.50	596.70	517.20	405.10
2011						
January	499.70	398.00	517.60	598.30	515.50	403.70
February	497.60	396.80	515.20	590.80	514.10	402.80
March	500.30	398.30	518.10	599.80	515.70	403.90
April	500.80	398.50	518.60	601.80	516.00	404.00
May	499.80	398.60	517.40	596.20	515.50	404.10
June	499.40	398.50	516.90	595.10	515.10	404.00
			Federal payments			
2010						
June	475.40	356.90	495.60	583.00	493.20	365.40
July	477.10	357.00	497.60	591.10	494.00	365.50
August	476.80	357.10	497.20	588.70	493.80	365.60
September	476.20	357.00	496.40	584.80	493.80	365.70
October	477.70	356.80	498.20	590.80	494.80	365.60
November	477.30	356.80	497.60	587.50	494.60	365.70
December	478.70	358.30	498.90	587.30	496.50	367.00
2011						
January	477.90	356.80	498.30	589.00	495.10	365.80
February	475.90	355.50	495.90	581.60	493.60	364.90
March	478.50	356.90	498.80	590.60	495.30	365.90
April	479.00	357.10	499.30	592.50	495.60	366.00
May	478.10	357.20	498.10	587.00	495.10	366.00
June	477.70	357.00	497.60	585.90	494.80	365.90

(Continued)

Table 7.
Average monthly payment, by eligibility category, age, and source of payment, June 2010–June 2011 (in dollars)—*Continued*

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			State supplementation			
2010						
June	124.40	134.70	121.00	50.90	130.60	136.00
July	124.40	134.70	121.00	51.00	130.60	136.00
August	124.30	134.70	120.90	50.90	130.50	136.00
September	124.30	134.70	120.90	50.80	130.40	136.10
October	124.30	134.80	120.90	50.80	130.40	136.10
November	124.20	134.70	120.70	50.70	130.30	136.00
December	124.30	134.90	120.80	50.80	130.40	136.20
2011						
January	124.70	134.30	121.60	50.90	131.40	135.90
February	124.50	134.20	121.40	50.80	131.10	135.80
March	124.70	134.30	121.50	50.90	131.30	135.90
April	124.60	134.20	121.50	50.90	131.20	135.90
May	124.50	134.20	121.40	50.90	131.10	135.80
June	124.40	134.10	121.30	50.90	131.00	135.80

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month and exclude retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 8.
All awards, by eligibility category and age of awardee, June 2010–June 2011

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2010						
June	96,902	8,568	88,334	19,345	68,835	8,722
July	82,460	9,021	73,439	16,520	56,798	9,142
August	101,303	9,525	91,778	19,726	71,896	9,681
September	85,258	9,288	75,970	16,220	59,626	9,412
October	81,317	8,727	72,590	15,697	56,771	8,849
November	91,006	8,958	82,048	18,426	63,450	9,130
December	84,592	8,446	76,146	16,851	59,146	8,595
2011						
January	73,722	8,141	65,581	14,320	51,139	8,263
February	95,679	9,069	86,610	18,895	67,560	9,224
March	84,741	8,319	76,422	16,619	59,648	8,474
April	86,457	9,670	76,787	16,091	60,558	9,808
May [a]	102,985	9,126	93,859	20,227	73,479	9,279
June [a]	85,315	9,148	76,167	16,985	59,054	9,276

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for all awards made during the specified month.

a. Preliminary data. In the first 2 months after their release, numbers may be adjusted to reflect returned checks.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Perspectives—Paper Submission Guidelines

The *Social Security Bulletin* is the quarterly research journal of the Social Security Administration. It has a diverse readership of policymakers, government officials, academics, graduate and undergraduate students, business people, and other interested parties.

To promote the discussion of research questions and policy issues related to Social Security and the economic well being of the aged, the *Bulletin* welcomes submissions from researchers and analysts outside the agency for publication in its Perspectives section.

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To facilitate the editorial process, papers submitted for publication must be prepared in Microsoft Word (**except for tables and charts—see below**) and be formatted as outlined below.

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Questions regarding the mechanics of submitting a paper should be sent to our editorial staff via e-mail at ssb@ssa.gov. For other questions regarding submissions, please contact Michael V. Leonesio, Perspectives Editor, at perspectives@ssa.gov.

OASDI and SSI Program Rates and Limits, 2011

Old-Age, Survivors, and Disability Insurance

Tax Rates (percent)	
Social Security (Old-Age, Survivors, and Disability Insurance)	
Employers	6.20
Employees [a]	4.20
Medicare (Hospital Insurance)	
Employers and Employees, each [a]	1.45
Maximum Taxable Earnings (dollars)	
Social Security	106,800
Medicare (Hospital Insurance)	No limit
Earnings Required for Work Credits (dollars)	
One Work Credit (One Quarter of Coverage)	1,120
Maximum of Four Credits a Year	4,480
Earnings Test Annual Exempt Amount (dollars)	
Under Full Retirement Age for Entire Year	14,160
For Months Before Reaching Full Retirement Age in Given Year	37,680
Beginning with Month Reaching Full Retirement Age	No limit
Maximum Monthly Social Security Benefit for Workers Retiring at Full Retirement Age (dollars)	2,366
Full Retirement Age	66
Cost-of-Living Adjustment (percent)	0.0

a. Self-employed persons pay a total of 13.3 percent—10.4 percent for OASDI and 2.9 percent for Medicare.

Supplemental Security Income

Monthly Federal Payment Standard (dollars)	
Individual	674
Couple	1,011
Cost-of-Living Adjustment (percent)	0.0
Resource Limits (dollars)	
Individual	2,000
Couple	3,000
Monthly Income Exclusions (dollars)	
Earned Income [a]	65
Unearned Income	20
Substantial Gainful Activity (SGA) Level for the Nonblind Disabled (dollars)	1,000

a. The earned income exclusion consists of the first $65 of monthly earnings, plus one-half of remaining earnings.

Social Security Administration
Office of Retirement and Disability Policy
Office of Research, Evaluation, and Statistics
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