

**Longitudinal Statistics for New
Supplemental Security Income
Beneficiaries**

Final Report

November 2012

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ACRONYMS

AWI	Average Wage Index
BPAO	Benefits Planning Assistance and Outreach
CDR	Continuing Disability Review
DAC	Disabled Adult Child
DCF	Disability Control File
DI	Social Security Disability Insurance (under Title II of the Social Security Act)
DWB	Disabled Widow/Widower
ED	Department of Education
EIE	Earned Income Exclusion
EN	Employment Network
IRS	Internal Revenue Service
IRWE	Impairment-Related Work Expenses
MEF	Master Earnings File
NSTW	Nonpayment Status Following Initial Suspension or Termination for Work
OASI	Old Age and Survivor Insurance
P&A	Protection and Advocacy
PCE	Positive Countable Earnings
PRWORA	Personal Responsibility and Work Opportunity Reconciliation Act of 1996
RSA	Rehabilitation Services Administration
SDW	Special Disability Workload
SEIE	Student Earned Income Exclusion
SGA	Substantial Gainful Activity
SSA	Social Security Administration

SSI	Supplemental Security Income (Title XVI of the Social Security Act)
SVRA	State Vocational Rehabilitation Agency
TANF	Temporary Assistance for Needy Families
TRF	Ticket Research File
TTW	Ticket to Work
TWP	Trial Work Period
VR	Vocational Rehabilitation
WIPA	Work Incentives Planning and Assistance

ABSTRACT

This paper presents findings from a longitudinal analysis of the extent to which new Supplemental Security Income (SSI) disability beneficiaries return to work and use SSI work incentives, based on Social Security Administration (SSA) data. We focus on those who were first awarded SSI benefits as adults in 1996 and follow them for the next 11 years. We also compare the experiences of more recent annual SSI cohorts (1997 through 2006), to the extent observed. Because the period of our analysis precedes SSA's implementation of the new Ticket to Work (TTW) regulations (effective July 2008), the paper reflects experiences under the original TTW rules as well as before TTW.

Most commonly cited statistics on work-related activities are cross-sectional and based on all beneficiaries in any given year or month. In contrast, longitudinal statistics follow a group of beneficiaries over a sustained period and, as shown in this paper, paint a somewhat more positive picture of SSI beneficiaries' return-to-work efforts. For instance, although 1.9 percent of working-age SSI beneficiaries had their benefits suspended for work under the 1619(b) work-incentive program in the month of December 2009, by the 11th year after award (2007), 11.9 percent of those in the 1996 SSI award cohort had been in 1619(b) status for at least one month. The cross-sectional and longitudinal statistics are fully consistent with each other; they are different only because they look at the same phenomenon from different perspectives. The longitudinal statistics add information about the dynamics of the return-to-work process that is not apparent in the cross-sectional statistics.

We also found that a substantial share of SSI awardees receives DI, although they might receive their initial DI award at a different time than their initial SSI award. For instance, we found that 31 percent of the 1996 SSI award cohort received DI benefits during their award year. By 2007, almost 40 percent of the same cohort had received a DI benefit in at least one month. DI receipt also affects the meaning of statistics on the extent to which beneficiaries give up SSI cash payments for work. For instance, we found that only 7.4 percent of the 1996 SSI award cohort were in 1619(b) and also not receiving DI payments in at least one month by the end of 2007, compared to the 11.9 percent who were in 1619(b) in at least one month.

The longitudinal 1619(b) statistics above understate the extent to which SSI awardees forgo cash payments for work, because some leave SSI altogether without entering 1619(b) first. They might earn above the 1619(b) threshold, prefer to leave to avoid asset restrictions or reporting requirements, be unaware of 1619(b), or not understand the provision's value. Additional data on suspensions and terminations for work available in 2001 and later years allowed us to examine the extent of the difference. We found that 9.8 percent of awardees had been suspended or terminated for work in at least one month by the end of 2001, compared to a cumulative 8.4 percent achieving 1619(b) status in at least one month. Once more, substantial minorities of those who had their benefits suspended or terminated for work were receiving DI benefits during those months. Still, 5.5 percent of the 2001 SSI award cohort had their benefits suspended or terminated for work and were not receiving DI benefits in at least one month by December 2007.

Young beneficiaries were much more likely to work and eventually forgo cash benefits for work than older awardees. For example, 61 percent of 1996 SSI awardees who were ages 18 or 19 at award and 41 percent of members who were ages 20 to 39 at award were employed in at least one year from 1998 through 2007; only 9 percent of those ages 50 to 61 at award worked during the

same period. Similarly, 24 percent of awardees ages 18 or 19 and 18 percent of awardees ages 20 to 39 achieved 1619(b) status in at least one month from 1996 through 2007; only 3 percent of those ages 50 to 61 at award had done so during the same period.

The longitudinal statistics also varied widely across states—for the 2001 cohort, less than 15 percent had been employed in some states and almost 30 percent in others, and the benefits of less than 7 percent were suspended or terminated for work in some states versus almost 20 percent in others.

The employment experiences of award cohorts are sensitive to the business cycle and policy changes. The 2001–2003 award cohorts had cumulative 1619(b) and employment statistics that were lower than those in earlier cohorts, holding years since award constant, most likely reflecting the 2001 economic downturn. The drop in cumulative statistics was temporary, however; later cohorts fared better, although not as well as those first awarded benefits during the economic boom of the late 1990s. Comparing award cohorts also shows that first-time enrollment for employment services rose slightly following TTW rollout, which started in 2002 in some states and was completed in all states by the end of 2004.¹ We found other trends in the use of work incentives by cohorts after 2000, but we cannot necessarily attribute them to specific policy, economic, or demographic factors.

This is the fourth in a series of reports that make up the sixth Ticket to Work evaluation report.

¹ Previous TTW evaluation reports have shown more rigorous evidence of small, positive impacts of the TTW rollout on service enrollment (Thornton et al. 2007; Stapleton et al. 2008).

I. INTRODUCTION

The Social Security Administration (SSA) oversees two programs that provide income support to nearly 12 million working-age people with disabilities—the Social Security Disability Insurance (DI) program and the Supplemental Security Income (SSI) program (SSA 2010c). To qualify for either DI or SSI, an applicant must demonstrate that he or she is unable to work at substantial levels due to a long-term, medically determinable impairment. The passage of the Ticket to Work and Work Incentives Improvement Act of 1999 (Ticket Act) prompted numerous changes to these programs intended to encourage and facilitate the return-to-work efforts of disability program participants. Since the passage of the Ticket Act, SSA has instituted initiatives that (1) provide beneficiaries with information about how work affects their benefits, (2) offer them more options for accessing employment services, (3) allow them to return to the disability rolls more easily following unsuccessful work attempts, and (4) facilitate the processing of earnings information by SSA staff. The Ticket Act also established the Ticket to Work (TTW) program, which greatly expanded the types of organizations that SSA would pay to support beneficiaries' employment efforts.

A challenge in assessing the work efforts of SSI and DI beneficiaries—and associated work initiatives such as TTW—is that most published statistics include information on only a monthly or annual cross-section of beneficiaries. For instance, according to annual statistics published by SSA (SSA 2010d), 1.9 percent of working-age SSI beneficiaries had their benefits suspended for work under the 1619(b) work-incentive program in the month of December 2009. Many beneficiaries are on the rolls for many years, however, and longitudinal data on their outcomes provide a more complete picture of their return-to-work efforts and how these may be impacted by changes in policy and the economy. Further, cross-sectional statistics may in some cases be misinterpreted as longitudinal statistics; for example, some might believe that only 1.9 percent of SSI entrants eventually will forgo cash payments for work, at least temporarily, when the real percentage actually is several times higher. A difference in that magnitude could have a substantial bearing on policy or other decisions.

In this report, we use administrative data to examine, from a longitudinal perspective, the extent to which SSI beneficiaries work and eventually stop receiving SSI cash benefits due to work. That is, we follow cohorts of SSI awardees (that is, new beneficiaries between the ages of 18 and 64) for up to 12 years after they enter the rolls and produce longitudinal statistics on employment and use of work incentives. These statistics are quite different from cross-sectional statistics reported over the same period.

The earliest SSI award cohort we follow is the 1996 cohort and the latest is the 2006 cohort. We follow all cohorts through 2007. Because the period of our analysis precedes SSA's implementation of new TTW regulations in July 2008, the paper reflects experiences under the original TTW rules as well as before TTW.² The results reported will serve as a useful baseline for future analyses of the period following the implementation of the revised regulations.

² The new TTW regulations made TTW more financially attractive to providers of employment services by (1) lowering the level of beneficiary earnings needed for the provider to be eligible for payments, (2) increasing the total

The methodology used in this report is similar to that used in an earlier report on DI awardees (Stapleton et al. 2010; Liu and Stapleton 2011). In that report, Stapleton and colleagues showed that significant differences exist between longitudinal and cross-sectional statistics of employment and use of work incentives for cohorts of DI beneficiaries. For example, they found that the percentage of DI awardees who eventually forgo cash benefits for work, at least temporarily, is much higher (over 10 years) than the percentage who do so in any given month. Our approach is to apply a similar methodology to examine the outcomes of cohorts of SSI awardees. The one key difference, however, is that because SSI beneficiaries face different programmatic incentives than DI beneficiaries, some of the outcomes we track are specific to the SSI program. For example, instead of trial work period (TWP) completion (applicable only to DI), we track attainment of 1619(a) and 1619(b) status (applicable only to SSI), as described in more detail in the next chapter.

A key finding of our analysis is that the percentage of 1996 SSI awardees whose benefits were suspended for work under the 1619(b) work-incentive program in at least one month by December 2007 was 11.9 percent, more than six times higher than the cross-sectional statistic of 1.9 percent cited above. However, we also found that a substantial share of SSI awardees received DI benefits during the period, and that many of those who reached 1619(b) were receiving DI payments in those months. Nevertheless, 7.4 percent of the 1996 SSI award cohort had used 1619(b) for at least one month without receiving a DI payment by the end of 2007. Thus, when 1619(b) months in which DI benefits were paid are excluded from the longitudinal statistic, it is almost four times higher than the cross-sectional statistic, and the latter does not exclude 1619(b) months in which DI benefits were paid.

The percentage of SSI awardees who eventually have their benefits suspended or terminated for work provides only partial information about the extent to which awardees forgo benefits for work; it does not convey how long they forgo these benefits. The longitudinal data allow us to produce such information. For SSI award cohorts entering SSI from 2001 onward, we are able to count the number of months in which the beneficiary is in SSI nonpayment status following initial suspension or termination for work (SSI NSTW) and before he or she returns to SSI, attains age 65, dies, or reaches the end of the relevant observation period (hereafter, SSI NSTW months). Many of these months are 1619(b) months, but we also found that a substantial share of these months occurred after SSI termination because of work. We are unable to confirm that beneficiaries were actually engaged in SGA during all such months; we only know that they were engaged in SGA just when their SSI benefits were terminated. We are also unable to identify, and do not count, months in which those whose SSI benefits were terminated for other reasons are later engaged in SGA.

To illustrate the SSI NSTW statistics, for the 2001 cohort we found that 2.5 percent of the months from SSI award through December 2007 were SSI NSTW months. However, SSI awardees received DI payments in roughly half of these months. Hence, only 1.2 percent of the months from SSI award to December 2007 were SSI NSTW months in which no DI payment was received.

(continued)

value of potential payments to providers, and (3) reducing the administrative burden for providers of participating in TTW (Altshuler et al. 2011).

Such longitudinal statistics provide policymakers and agencies, particularly SSA, with a new perspective on the use of work incentives by SSI beneficiaries and their employment outcomes. As in the DI report (Stapleton et al. 2010), the findings here indicate that cross-sectional statistics do not show the full extent of beneficiary return-to-work efforts. A more thorough knowledge of these efforts is particularly important in understanding the broad effects of SSA work initiatives, such as TTW.

The report is organized as follows. In Chapter II, we describe features of the SSI program pertinent to understanding the statistics and also review the relevant findings from previous longitudinal studies. We describe the data and methods used in this paper in Chapter III. In Chapter IV, we first discuss the extent to which the 1996 SSI award cohort also received DI benefits. We then examine longitudinal return-to-work statistics for the 1996 SSI award cohort, taking into account interactions with the DI program where relevant. Additional statistics on the use of work-incentives, available only for later cohorts, are presented in Chapter V. In Chapter VI, we compare selected statistics across cohorts and assess the extent to which these statistics reflect the economy, the introduction of TTW, and other policy changes. In Chapter VII, we present additional findings on earnings based on annual data from a different source: the Master Earnings File (MEF), which contains earnings reported to the Internal Revenue Service (IRS). Unlike the monthly earnings data recorded in the SSI administrative record, the MEF earnings data cover periods when the SSI beneficiary is no longer on the SSI rolls. They also may differ from the earnings data on the SSI record when the beneficiary is on the rolls. We summarize the findings and consider their implications in Chapter VIII. Detailed tables appear in the appendix.

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II. BACKGROUND

In this chapter, we provide important contextual information to support the interpretation of the statistics in the upcoming chapters. We first provide an overview of the SSI eligibility rules, the determination process, and the work-incentive programs available to beneficiaries. We then summarize program changes that have occurred since 1996—the first year of our cohort analysis. We conclude with a brief discussion of previously produced longitudinal statistics on SSI beneficiaries.

A. From SSI Entry to Noncash Status for Work

To qualify for adult SSI disability benefits, an applicant age 18 or older must demonstrate that he or she is unable to engage in SGA due to a medically determinable impairment expected to last at least 12 months or result in death.³ SSI's medical eligibility criteria are identical to those for DI. In 2011, SSA considers SGA to be the equivalent of the work required to have earnings above \$1,000 per month for most applicants.⁴

A major increase in the nonblind SGA amount that occurred in 1999 (the fourth year of our 12-year study period) and subsequent increases tied to the growth in average wages might have had an impact on some of the statistics presented in this paper. From January 1990 through June 1999, the value was fixed at \$500. In July 1999, the value was increased to \$700, and from January 2000 forward it was indexed to SSA's average wage index (AWI).⁵ We discuss the possible implications of these changes on cross-cohort differences in Chapter VI.

SSI is a means-tested program, with federally set limits on income and assets. To receive any federal SSI benefit, countable income and assets must be below federally set limits. In 2011, the countable income limits were \$674 for individuals and \$1,011 for couples.⁶ Countable asset limits, which have not changed since 1989, are \$2,000 for individuals and \$3,000 for couples. The federal SSI payment is the difference between the federal benefit rate and countable income.⁷ Countable income includes all income above \$20 from sources other than work, plus half of earnings in excess of \$65 or any other earnings disregards, such as allowed impairment-related work expenses (IRWE).⁸

³ Since 1996, drug or alcohol addiction per se cannot be considered as a material factor establishing eligibility, although conditions or impairments that are a consequence of drug or alcohol abuse can be the primary contributing factor in the determination of an individual's disability.

⁴ The SGA level for those determined to be blind is higher—\$1,640 in 2010. Impairment-related work expenses, wage subsidies, and some other expenditures can be used to offset earnings for purposes of determining SGA.

⁵ The SGA level for blind beneficiaries had been indexed to AWI since first established in 1975. It was increased at the same rate as the AWI increase in 1999.

⁶ In 2010, the countable income definition for the SSI program, which disregards \$1 out of every \$2 of earned income, implies that an individual whose income was only from wages could earn up to \$1,433 a month before SSI benefits were suspended, compared to \$694 for an individual whose income was not from wages. The same numbers were \$2,107 and \$1,031, respectively, for couples.

⁷ Some states supplement the federal SSI benefit for certain categories of beneficiaries.

⁸ See SSA (2011) for details.

Most SSI beneficiaries also qualify for Medicaid coverage.⁹ This is true even if their labor earnings are so high that their SSI cash payment is zero under Section 1619(b) of the Social Security Act of 1987 (see more details on Section 1619[b] below).

In contrast to SSI, eligibility for DI is not means tested; instead, DI eligibility for “disabled worker” benefits requires the individual to have worked and contributed to the DI Trust Fund via payroll taxes for a sufficient period to attain “disability-insured” status.¹⁰ The level of benefit is based on past earnings—the higher the lifetime earnings of the beneficiary (or other relevant individual), the higher the benefit. DI beneficiaries qualify for Medicare coverage after a 24-month waiting period. In addition, DI beneficiaries with sufficiently low assets and income (including their DI benefits) also are eligible for an SSI payment. SSI beneficiaries may qualify for DI when they become disability insured.

The interactions between SSI and DI eligibility are particularly relevant to the longitudinal analyses presented in this report. The DI benefits of beneficiaries initially determined to be eligible for both SSI and DI are included in SSI countable income. However, DI payments begin only after a five-month waiting period that starts with the first month for which SSA determines the DI beneficiary was unable to engage in SGA (the “disability-onset” month). Because the waiting period does not apply to SSI, an individual who qualifies for both SSI and DI initially may receive just SSI payments and then have his or her SSI payments reduced by the amount of the DI benefit minus \$20 when DI payments start. Following Rupp et al. (2008), we distinguish between those for whom the SSI benefit is reduced to zero when they become eligible for DI (“serial beneficiaries”) and those who continue to receive cash benefits from both programs (“joint beneficiaries”).¹¹ Our award cohorts exclude serial beneficiaries, but many others who receive DI benefits are included. Such beneficiaries are discussed in more detail in Chapter IV.

The most important of the SSI work incentives for this analysis are three related incentives: the earned-income exclusion (EIE), Sections 1619(a) and 1619(b), and the TTW initiative. The EIE excludes the first \$65 of earned income from countable income, plus half of all additional earned income. Section 1619(a) allows SSI beneficiaries to receive SSI cash payments even when their earned income is at or above the SGA level. Section 1619(b) allows those SSI beneficiaries with Medicaid coverage to continue their coverage even if their labor earnings are so high that their SSI

⁹ In 32 states and the District of Columbia, there is a combined application process for SSI and Medicaid, and a person qualifying for SSI is automatically eligible for Medicaid. In 7 states, the same rules used by SSA to determine eligibility for SSI also are used to determine eligibility for Medicaid, but a separate application is needed. The remaining 11 states use their own eligibility rules for Medicaid, which are different from SSA’s eligibility rules for SSI.

¹⁰ A small minority of DI beneficiaries qualify because they are a disabled adult child (DAC) or a disabled widow/widower (DWB) of a Social Security beneficiary. Technically, most DAC and all DWB are Old Age and Survivor Insurance (OASI) beneficiaries, not DI beneficiaries, because the primary beneficiary (parent or deceased spouse) qualifies under OASI. Following common practice, however, we include all DAC and DWB when we refer to DI beneficiaries. We use “DI workers” to distinguish those entitled to DI because of their own work histories from DAC and DWB beneficiaries.

¹¹ The term “joint beneficiaries” refers to a subset of concurrent beneficiaries: those who initially receive SSI-only payments during the five-month waiting period for DI benefits and then continue to receive an SSI payment after DI benefits start.

cash payment is zero, provided that their earnings are below a threshold that varies by state.¹² These programs increase the incentive to work by reducing the risk of losing cash assistance and essential medical coverage when earnings are increased.

SSI beneficiaries also are eligible to enroll for employment services for which SSA will pay if the beneficiary achieves sufficient earnings over a specified period. TTW, which was implemented over three 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 (EN) to obtain services. ENs include all state vocational rehabilitation agencies (SVRAs) and other private and public entities that meet criteria set by SSA and agree to participate. The SVRAs are required to serve beneficiaries under the Rehabilitation Act, but the EN may decline beneficiary requests for services. Before the rollout of TTW (including the entire period from 1996 through 2001), SSA in essence only paid for services provided by SVRAs under a less stringent earnings requirement.¹³ Since the TTW rollout, SVRAs have retained the option to serve beneficiaries under the earlier payment system on a case-by-case basis, rather than under either of TTW’s new payment systems.

As TTW was rolled out, SSA took additional steps to help beneficiaries understand and take advantage of program work incentives. Most important, perhaps, SSA made grants to local organizations to provide beneficiaries with counseling on work incentives, first under the Benefits Planning, Assistance, and Outreach (BPAO) program and then the Work Incentive Planning and Assistance (WIPA) program.

Reflecting the availability of the work incentives described above, several markers of a beneficiary’s progress from benefit award to benefit suspension for work are particularly relevant to our analysis:

- **Award month:** First month in which a beneficiary received an SSI payment as an adult
- **First month with positive countable earnings (PCE):** First month after the award month in which the beneficiary’s earnings exceed all earnings disregards or exemptions for which SSI beneficiaries are eligible, resulting in a reduction in the federal SSI payment received
- **Service enrollment month:** First month after the award month in which the beneficiary enrolls for services with an SVRA (based on Rehabilitation Services Administration [RSA] data) or assigns a ticket to an EN or SVRA (based on SSA data)
- **First month in 1619(a) status:** First month after the award month in which the beneficiary achieves earnings above the SGA limit

¹² The 1619(b) income threshold is determined on an annual basis and varies by state, depending on the state’s Medicaid expenditures for SSI beneficiaries and state supplements. In 2011, the state threshold ranged from \$24,438 in Alabama to \$51,525 in Alaska (SSA 2011). In some states, individual SSI beneficiaries may qualify for an income threshold that is higher than the state’s threshold because their own Medicaid expenditures are higher than the state average.

¹³ Before the Ticket Act, SSA paid a few non-SVRA providers for services delivered to a very small number of beneficiaries under its Alternative Participant program, which was phased out when TTW began.

- **First month in 1619(b) status:** First month after the award month in which the beneficiary’s SSI cash payment is suspended under 1619(b)
- **First month in SSI nonpayment status following initial suspension or termination for work (SSI NSTW):** First month after the award month in which the beneficiary achieves sufficient earnings to result in zero SSI cash benefits regardless of 1619(b) status

Because a substantial minority of SSI awardees also receives DI benefits, it is of particular interest to know whether those SSI beneficiaries who leave SSI cash payment status have left cash payment status for all benefits—that is, have they also forgone DI benefits? Hence, our analysis also includes two additional markers that account for DI payments received by the SSI beneficiary:

- **First month in 1619(b) status and not in DI current pay:** First month after the award month in which (1) the beneficiary’s SSI cash payment is suspended under 1619(b) and (2) the beneficiary is not receiving a DI payment
- **First month in SSI NSTW and not in DI current pay:** First month after the award month in which (1) the beneficiary achieves sufficient earnings to result in zero SSI cash benefits regardless of 1619(b) status and (2) the beneficiary is not receiving a DI payment

Although the path from award to suspension for work under the 1619(b) work incentive suggests a linear progression through four earnings stages, beneficiaries do not necessarily pass through these stages in a linear fashion. For instance, some might initially skip from no countable earnings directly to 1619(a) status or, if they have very high earnings, directly to 1619(b) status. Many likely cycle in and out of PCE, 1619(a), and 1619(b). Some also might stop receiving SSI payments for reasons other than earnings but may re-enter later on. Exit and re-entry occurs more frequently for SSI than for DI, in part because SSI is means tested. Exit and re-entry can result from variation in other income and resources, failure to report required income and resource information in a timely manner, variation in earnings, incarceration, commitment to a mental hospital, and miscellaneous other reasons. Finally, the service enrollment marker need not be passed at all (that is, beneficiaries need not enroll for services) and, if it is passed, it can be passed at any month along the way.

Benefits also might be terminated permanently for reasons other than earnings at any point along the way—most commonly because of mortality and less commonly because of medical recovery and other miscellaneous reasons. In essence, SSI disability benefits also are terminated when the beneficiary attains age 65 and SSI aged benefits begin. For analysis purposes, we treat the transition from SSI disability to SSI aged benefits as if SSI disability benefits are terminated for age.

It is important to recognize two reasons why beneficiaries might not know their position along the path from entry to exit for work. First, they might be unaware, or only vaguely aware, of SSA’s work incentives, or they might not understand the rules. Second, even if they do understand the rules, they might not know exactly what their current status is because it is up to SSA to determine the beneficiary’s status, and SSA’s determinations might be substantially delayed. For instance, when SSA receives reports of earnings by an SSI beneficiary that are indicative of substantial gainful activity, it normally conducts a work-related continuing disability review (“work CDR”) to determine the status of the beneficiary with respect to use of the work incentives, calculates any impact of that work on benefit payments, and makes those adjustments. The earnings report that triggers the work

CDR and such benefit changes might not be timely—beneficiaries do not always report substantial earnings, even though they are required to, and sometimes SSA only learns of earnings increases through later analysis of IRS earnings reports. In addition, work CDR backlogs were high in the early part of our observation period, which begins in 1996 and ends in 2007, because SSA focused its administrative resources on reducing the considerable backlog of benefit applications.

B. Previous Findings

The value of longitudinal statistics on SSI program beneficiaries has long been recognized.¹⁴ However, few studies have focused specifically on the longitudinal work-related experiences of SSI beneficiaries. Those closest to this study are two by Scott (1989, 1992). Scott (1989) produced statistics on SSI disability beneficiaries who were newly awarded SSI disability benefits in the last quarter of 1981, using a one-percent sample file.¹⁵ He estimated that 7.5 percent of these awardees became ineligible for SSI payments due to excess income other than Social Security benefits within the following four years. However, excess income is not necessarily the beneficiary's earnings from work. It might be a spouse's income, for example.

Scott (1992) examined the post-application work experience of all SSI disability beneficiaries on the rolls in December 1988, again using a 1 percent sample-file. He estimated that 22 percent of SSI disability beneficiaries had had some post-application work experience, including 4.3 percent with post-application work experience of five years or more. Years on the rolls varied by beneficiary, however, and the percentage that achieved earnings high enough to result in zero cash payments is not reported.

Two recent studies are particularly relevant to this one, even though they do not specifically focus on employment outcomes or the use of work incentives. Rupp and Riley (2011b) analyzed longitudinal patterns of disability program participation based on interactions between SSI and DI program rules, and Rupp and Riley (2011a) examined the association of longitudinal patterns of disability program participation among SSI and DI awardees with Medicare and Medicaid public health insurance coverage. Throughout the rest of this report, we discuss how interactions between the SSI and DI programs affect some of the central longitudinal statistics examined in our study.

¹⁴ Past longitudinal studies have addressed the length of time spent on the SSI disability rolls among children and working-age adults (Rupp and Scott 1995); differences between newly available longitudinal statistics and previously published point-in-time statistics on SSI applications, caseloads, and awards (Pickett and Scott 1996); the effects of trends in the age and diagnostic composition of cohorts of new DI and SSI awardees on their length of stay on the rolls (Rupp and Scott 1996); and rates of reinstatement for SSI beneficiaries who had their cases closed and payments stopped (Kochhar and Scott 1998).

¹⁵ "New awards" include awards to applicants who previously had applied and were awarded SSI benefits but had since become ineligible and had to reapply.

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III. DATA SOURCES AND METHODS

In this chapter, we provide an overview of the administrative data used in this study, the method for constructing annual SSI award cohorts, initial descriptive statistics on the 11 cohorts constructed, and the ways in which the cross-cohort statistics presented in later chapters are weighted to control for cross-cohort differences in age-sex composition. We also discuss the construction of the annual outcome measures as well as data limitations.

A. Ticket Research File and Other Matched Data

The SSI award cohorts constructed for this study, as well as most of the statistics presented for these cohorts, were developed from analytic administrative data files constructed for the TTW evaluation. The 2008 version of these files used here, collectively called the 2008 Ticket Research File (TRF), contains extensive information on the more than 20 million DI or SSI beneficiaries who received benefits in at least one month from January 1996 through December 2008 (Hildebrand et al. 2010).¹⁶

To obtain information on enrollment for vocational rehabilitation (VR) employment services, we also merged matched records on state VR closures from the RSA-911 files for fiscal years 1998 through 2008 under an interagency agreement between SSA and the U.S. Department of Education (ED). These records contain information on closed VR cases. For the purpose of this analysis, we included only cases closed after eligibility for services was determined.

Earnings are only recorded in SSI administrative data when the cohort member is actually on the SSI rolls, and some earnings might not be reported. Therefore, some of the statistics reported here also required access to SSA's MEF, which includes annual earnings data derived from tax reports under rules established by the IRS. SSA maintains an extract of earnings records for DI and SSI beneficiaries represented in the TRF. To comply with security requirements for the earnings data, qualified SSA staff produced the statistics based on these records and verified that they do not disclose personal information.

Although data are available through 2008, we end the analysis in 2007 because many of the 2008 values for SSA variables will be revised at a later date. These revisions occur because of delays in reporting of earnings and the processing time required for determining work-incentive status. In addition, although we report service enrollment statistics through 2007, the more recent years 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. For example, enrollment by an SSI beneficiary in 2007 will be recognized only if the beneficiary's VR case closed before September 2007 or the

¹⁶ Extracts from several SSA administrative files were merged to create the TRF, including the Disability Control File (DCF), Master Beneficiary Record, Supplemental Security Record, Numerical Identification System (Numident) file, and the 831 and 832/33 Disability files.

beneficiary assigned his or her ticket to the SVRA. Hence, we describe the enrollment estimates for 2005 through 2007 as preliminary.¹⁷

All of the statistics presented in this report are based on 100 percent of the relevant SSI population, including those receiving concurrent DI benefits; that is, they are population statistics rather than estimates. Hence, we present no standard errors and conduct no statistical tests.

B. Construction of Annual Award Cohorts

We began the analysis by developing annual cohort files from 1996 through 2006 based on the month in which the beneficiary began receiving SSI benefits for the first time *as an adult* according to the TRF. Although it is possible for an individual to have multiple periods of benefit receipt, he or she is assigned to just one cohort based on the year that corresponds to the individual's *first* payment as an adult.

Many beneficiaries receive their first SSI benefit as children, based on SSA's definition of disability for children. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) required SSA to redetermine the eligibility of child SSI beneficiaries who reach age 18 by using SSA's definition of disability for adults, a process not required prior to 1996 (Hemmeter and Gilby 2009).¹⁸ Former SSI child beneficiaries who later became eligible for SSI as adults were assigned to the cohort corresponding to the first month in which SSA paid them a benefit as an adult.¹⁹

A substantial number of beneficiaries eligible for both SSI and DI receive SSI benefits only during a five-month DI waiting period, after which they receive DI payments high enough to result in zero SSI payments. As mentioned earlier, we call these individuals "serial beneficiaries," following Rupp et al. (2008). We excluded serial beneficiaries from our cohorts because their behavior is not influenced by SSI work incentives unless they return to the SSI rolls later on. Serial beneficiaries who do return to the SSI rolls were assigned to a cohort based on the first month in which an SSI payment was received after being in nonpayment status for at least 13 months.²⁰

¹⁷ Because RSA-911 data capture 90 percent of closures within five 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 2005 and 2006 also may be underestimated.

¹⁸ PRWORA also increased the restrictiveness of the definition of disability for children.

¹⁹ If a successful age-18 redetermination occurred before the beneficiary's 18th birthday, we assigned the beneficiary to a cohort based on the first month in which an SSI payment was received after turning 18. If a successful age-18 redetermination (or a successful adult reapplication) occurred after the beneficiary's 18th birthday, the beneficiary was assigned to a cohort based on the first month after this decision in which an SSI payment was made. Some SSI former child beneficiaries had received an SSI payment as adults (age 18 and above) but were not found in the administrative records on age-18 redeterminations. Of these, beneficiaries who turned 18 before 1997 were assigned to a cohort based on the first month in which an SSI payment was made after turning 18, because the age-18 redetermination process was not implemented fully before 1997. Remaining beneficiaries who turned 18 in 1997 or later were assigned similarly if they had not been on the SSI rolls in the month before turning 18, suggesting that they had reapplied for SSI benefits as adults. If they were on the SSI rolls in the month before turning 18, they were assigned to a cohort based on the first month in which an SSI payment was received after turning 19.

²⁰ Potentially serial beneficiaries who received an SSI payment after 12 months or less in a nonpayment status were not identified as serials. They were assigned to a cohort based on the first SSI payment observed.

Apart from serial beneficiaries, many other SSI beneficiaries who receive DI benefits are included in our cohorts. Some of them were awarded DI first and later became eligible for SSI, some are nonserial beneficiaries who were awarded SSI and DI at the same time, and others entered DI only after a longer period following SSI award. These groups of beneficiaries are discussed in more detail at the beginning of Chapter IV.

Exhibit III.1 shows the number of SSI beneficiaries who first received an SSI payment as adults by year of first SSI payment as an adult, broken down by whether or not they had a DI benefit history or had received SSI payments as children. The overall numbers of SSI awardees in each year are larger than the award cohorts we used in our study (see Exhibit III.2) because they do not yet exclude serial beneficiaries. Apart from a big dip for the 1997 cohort, there are no major cross-cohort differences in the overall number of SSI awardees.²¹

Just over 50 percent of SSI new adult awardees in each cohort received only SSI benefits during the period examined.²² A large majority of these beneficiaries had never received SSI benefits as a child.

The overall number of former child beneficiaries who converted to adult beneficiaries (not shown) rose rapidly between 1996 and 2006, consistent with the rapid growth in the child SSI program.²³ However, the percentage of former child beneficiaries who converted to adult status before their 20th birthday fell steadily, from 98.1 percent in 1996 (just before the age-18 redetermination was instituted) to 82.5 percent in 2006. This decrease may reflect a rise in the number of beneficiaries who, instead of converting to adult status immediately after their 18th birthday, reapplied for SSI benefits as adults later on; it may also reflect, at least to some extent, a rising backlog of age-18 redetermination cases.

About a third of new SSI adult awardees in each cohort received DI benefits at some point after first receiving SSI benefits. Among these beneficiaries, the percentage of serial beneficiaries fell between 1996 and 1998 but then increased steadily from 45.1 percent in 1998 to 63.9 percent in 2006. This is due to a combination of two factors. First, there was a rapid increase (not shown) in the number of SSI-to-DI beneficiaries receiving DI benefits large enough to result in zero SSI payments (i.e., serial beneficiaries). This trend corresponds to an increase in the percentage of

²¹ These statistics do not match SSA's published statistics exactly because they include the first payment as adults for former child SSI beneficiaries, assign serial beneficiaries who come back on the SSI rolls according to the month in which they returned to SSI rolls, and possibly for other technical reasons. However, the trends in these statistics, including the dip between 1996 and 1997, are quite similar to those for SSA's statistics. See, for example, SSA (September 2010, Table 68).

²² Due to data limitations, we observed information regarding DI benefits only for years 1994 to 2008. Thus, we undercounted both the number receiving DI before SSI (those who received DI payments before 1994 are not counted) and the number receiving DI after SSI (those who might become DI eligible in the future are not counted). The first undercount is more pronounced for the earlier cohorts than for later ones, and the second is more pronounced for the later cohorts.

²³ See SSA (September 2010, Table 68).

Exhibit III.1. SSI Beneficiary Groups, by Year of First Award as Adults

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total	466,304	394,129	417,573	430,532	422,634	438,682	464,317	455,894	474,314	465,834	435,153
SSI Only ^a	248,937	204,990	230,143	235,965	230,086	234,000	244,950	237,445	241,277	239,752	224,501
Percentage of Total	53.4	52.0	55.1	54.8	54.4	53.3	52.8	52.1	50.9	51.5	51.6
Never received SSI as a child	87.1	89.4	89.2	88.1	86.8	86.3	84.7	84.1	83.2	82.3	86.5
Former child beneficiary ^a	12.9	10.6	10.8	11.9	13.2	13.7	15.3	15.9	16.8	17.7	13.5
Age at award as adult: 18-19	98.1	96.0	96.2	93.4	92.5	90.7	89.6	88.3	89.2	88.0	82.5
Age at award as adult: 20+	1.9	4.0	3.8	6.6	7.5	9.3	10.4	11.7	10.8	12.0	17.5
SSI Before DI ^b	149,653	125,726	122,080	136,325	136,908	152,179	163,234	159,861	173,820	159,058	142,321
Percentage of Total	32.1	31.9	29.2	31.7	32.4	34.7	35.2	35.1	36.6	34.1	32.7
SSI-only to joint SSI/DI	53.7	54.0	54.9	51.2	48.9	45.5	43.6	41.2	38.9	38.3	36.1
DI 1-12 months after SSI	59.7	58.5	57.7	60.9	60.9	64.5	68.5	71.8	77.3	80.8	85.8
DI 13-24 months after SSI	3.8	4.1	4.8	5.3	7.5	8.4	7.7	7.9	7.1	7.7	9.0
DI 25+ months after SSI	36.5	37.4	37.5	33.8	31.6	27.1	23.8	20.3	15.6	11.4	5.3
Serial Beneficiaries	46.3	46.0	45.1	48.8	51.1	54.5	56.4	58.8	61.1	61.7	63.9
Never back on SSI ^c	95.2	95.4	95.9	96.0	96.7	97.3	97.8	98.3	99.0	99.7	100.0
Back on SSI by end of period ^d	4.8	4.8	4.2	4.1	3.5	2.8	2.2	1.8	1.1	0.3	0.0
DI Before SSI	67,714	63,413	65,350	58,242	55,640	52,503	56,133	58,588	59,217	67,024	68,331
Percentage of Total	14.5	16.1	15.6	13.5	13.2	12.0	12.1	12.9	12.5	14.4	15.7
DI at least 12 months before SSI	34.1	34.1	34.7	41.4	43.0	46.1	45.3	43.3	44.6	39.8	36.5
DI less than 12 months before SSI	65.9	65.9	65.3	58.6	57.0	53.9	54.7	56.7	55.4	60.2	63.5

Note: Based on an analysis of SSI beneficiary records in the 2008 TRF.

^aExcluding former child beneficiaries not converted to adult status.

^bExcluding those who received SSI as a child and including only those who entered DI by 2008.

^cNot included in cohort analysis.

^dAssigned to cohort according to month in which returned to SSI rolls.

first-time DI awardees age 50 and older.²⁴ Second, SSI entrants in later cohorts had less time to become joint SSI/DI beneficiaries, which explains the steady decrease in the percentage of SSI-to joint SSI/DI beneficiaries who entered DI 25 months or more after they entered SSI. As time passes, a growing share of the later cohorts will enter DI.

The remaining new SSI adult awardees in each cohort received DI benefits before they entered SSI. The percentage gradually fell from a maximum of 16.1 percent in 1997 to a minimum of 12.0 percent in 2001 and then gradually increased to 15.7 percent in 2006. The percentage of this group that had received DI benefits for less than 12 months followed a similar pattern, falling from a high of 65.9 percent in 1996 and 1997 to a low of 53.9 in 2001 and then increasing to 63.5 in 2006. Both patterns may be related to the effects of the business cycle on the income and wealth distributions of SSI and DI awardees, but the mechanism for this effect is not clear.

Exhibit III.2 shows the size and age-sex composition of each cohort included in this analysis.²⁵ The totals differ from those in Exhibit III.1 because we excluded serial beneficiaries who never came back on the SSI rolls and assigned those who did come back on the rolls according to the month in which they returned. Cohort sizes at the state level are provided in Appendix Exhibit A.1. The number of individuals receiving their first SSI payment fell sharply between 1996 and 1997, from about 398,000 to less than 338,000, a 15 percent decrease. This might reflect the introduction of age 18 redeterminations in late 1996, the elimination of eligibility for those whose drug abuse or alcoholism is material to disability, the tightening of noncitizen eligibility, and the strong economic expansion. From 1997 onward, however, the number of first-time SSI beneficiaries varied relatively little, with a high of just above 375,000 in 2002, just after the 2001 recession. The percentage that are female initially rose somewhat, from 54.0 percent in 1996 to 55.9 percent in 1998 and 1999, possibly as a result of a shift from Temporary Assistance for Needy Families (TANF) to SSI for low-income single mothers following the welfare reform of 1996. After that, it decreased steadily, to 52.7 percent in 2005. This trend might reflect a decline in the number of low-income single mothers following the initial growth, but perhaps also a growth in the percentage of women meeting DI earnings history requirements and thus entering the DI rolls instead of the SSI rolls.

The aging of the baby boomers is most noticeable in the 50-to-61 age group, which increased from 28.9 percent of the 1996 cohort to 33.5 percent of the 2006 cohort. In comparison, the percentage of first-time awardees in the 40 to 49 age group increased only slightly, from 21.1 percent in 1996 to 22.2 percent in 2006. There was no increase in the percentage of first-time awardees

²⁴ Stapleton et al. (2010) showed that the percentage of first-time DI awardees between age 50 and retirement rose steadily from 53.8 percent in 1998 to 58.4 percent in 2005. Older DI beneficiaries are more likely to have substantial earning histories. In addition, Rupp and Riley (2011b) found that, compared to SSI to joint SSI/DI beneficiaries, serial beneficiaries are less likely to be ages 18 to 45 and more likely to be ages 46 to 64.

²⁵ The age groups were chosen to be consistent with the grouping used in the DI cohort analysis (Stapleton et al. 2010). In that report, the oldest age group (those ages 62 to 64 at award) was constructed to reflect the availability of early retirement benefits at age 62. The one difference is that we separated ages 18 to 19 at award from the original group of those ages 18 to 39 at award, because those ages 18 to 19 were the most likely to be affected by the introduction of age-18 redeterminations. It is also noteworthy that this group has the longest opportunity to take advantage of the fact that only six quarters of coverage are required to obtain disability-insured status for those under age 24.

Exhibit III.2. Size and Age-Sex Composition of Annual SSI Award Cohort, by Award Year (percentages)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Total	397,917	337,668	364,334	366,057	354,860	358,187	375,123	365,129	371,475	371,179	347,887
Male	44.4	43.1	43.0	43.1	44.1	44.6	45.0	45.5	46.1	47.0	47.0
Female	54.0	55.6	55.9	55.9	55.0	54.7	54.3	53.9	53.6	52.7	52.8
18-19	14.9	13.9	14.0	15.0	16.2	16.5	17.3	17.4	18.0	17.9	14.6
Male	59.1	57.0	56.8	56.7	57.0	57.4	58.1	57.8	58.1	58.4	58.7
Female	40.3	42.4	42.6	42.7	42.4	42.1	41.3	41.6	41.4	41.1	40.9
20-39	30.8	30.3	28.6	27.9	27.2	26.9	26.5	26.5	25.8	25.1	25.4
Male	46.8	44.8	44.0	43.6	44.2	44.3	44.8	45.2	45.6	46.6	47.2
Female	51.9	54.3	55.2	55.7	55.2	55.3	54.9	54.5	54.2	53.3	52.7
40-49	21.1	21.5	22.0	22.2	22.0	22.1	22.1	22.1	21.9	21.5	22.2
Male	39.8	38.8	39.3	39.6	41.1	41.1	40.9	41.6	41.8	43.0	42.7
Female	57.8	59.5	59.2	59.0	57.7	58.1	58.3	57.9	57.9	56.8	57.1
50-61	28.9	30.2	30.6	30.1	29.9	29.9	29.9	29.8	30.3	31.4	33.5
Male	38.6	38.9	39.3	39.5	40.5	41.4	41.7	42.4	43.4	44.5	45.2
Female	59.4	59.6	59.4	59.3	58.2	57.7	57.4	56.8	56.2	55.2	54.6
62-64	4.3	4.1	4.9	4.8	4.7	4.5	4.3	4.1	4.1	4.1	4.2
Male	37.2	37.7	37.4	37.1	36.7	38.3	38.1	39.1	39.8	40.8	42.2
Female	62.0	61.6	61.8	62.2	62.7	61.4	61.6	60.6	60.0	59.0	57.7

Note: Based on an analysis of SSI beneficiary records in the 2008 TRF, including those receiving concurrent DI benefits but excluding serial beneficiaries who never returned to SSI after joining the DI rolls. Percentages for males and females do not add up to 100 because information on sex is missing for some beneficiaries.

in the 62 to 64 age group. The percentage in the youngest age group initially dropped between 1996 and 1997, perhaps due to the introduction of the age-18 redetermination process at the end of 1996. However, without more information on trends prior to 1996, it is difficult to attribute this drop to any specific policy change. The subsequent rise in this percentage, from 13.9 percent in 1997 to 18.0 percent in 2004, was likely due to a growing child SSI caseload.

We present many results by age at award but not by other characteristics. This reflects the fact that age consistently has been by far the strongest predictor of beneficiary employment and work-related activity in cross-sectional studies. Examination of how longitudinal statistics vary with other beneficiary characteristics, such as primary impairment, sex, and receipt of SSI as a child, might be fruitful but is left for future research.

C. Weighting to Control for Age-Sex Composition

The above changes in age-sex composition suggest that, even if return-to-work behavior does not change across cohorts, employment outcomes are likely to change simply because of age and sex composition changes, combined with differences in employment outcomes across age and sex groups. To control for these demographic differences, all of the cross-cohort statistics presented in this study were adjusted for age and sex using the 2001 cohort (the last year before TTW) as the index cohort. Specifically, beneficiaries were divided into categories by sex and five age groups (18–19, 20–39, 40–49, 50–61, and 62–64), and each age-sex group was assigned a weight equal to the proportion of the 2001 national cohort it represented.²⁶ Outcome measures then were developed for each age-sex group, and the cross-cohort statistics presented are weighted averages of these group-specific measures. We adjusted state series using the same weights so that cross-state comparisons are not influenced by differences in age-sex composition. As a result, differences in statistics across national or state cohorts reflect what we would expect to have observed if a given cohort had the same age-sex distribution as the 2001 national cohort.²⁷

D. Annual Outcome Measures

For each cohort, we developed a series of annual outcome measures based on the return-to-work progress markers discussed above. More specifically:

From Program Data

For all cohorts:

- Positive countable earnings, or PCE, were identified when beneficiaries had earnings that exceed all earnings disregards or exemptions for which SSI beneficiaries are eligible, resulting in a reduction in the federal SSI payment.

²⁶ The sex of the beneficiary was missing in a very small fraction of cases. We treated these cases as a third sex category, in addition to male and female.

²⁷ We compared weighted and nonweighted results for the cross-cohort analyses. The findings indicate that age-sex composition differences have little effect on cross-cohort comparisons; the statistics are not very sensitive to use of the weights.

- 1619(a) status was identified when beneficiaries had earnings over the SGA limit while still receiving SSI cash benefits.
- 1619(b) status was identified when beneficiaries had earnings high enough to result in zero SSI cash benefits while maintaining Medicaid eligibility under 1619(b).
- 1619(b), no DI, status was identified when beneficiaries were in 1619(b) status and also not receiving DI payments.
- 1619(b) months are all months in 1619(b) status following the first 1619(b) month and before the beneficiary died, reached age 65, or reached the end of the relevant observation period.
- 1619(b), no DI, months are all 1619(b) months in which beneficiaries were also not receiving DI payments.

For 1998 and later cohorts:

- First-time service enrollment was identified when beneficiaries assigned their ticket to a provider (according to TRF) or were determined eligible for rehabilitation services (according to RSA-911 files), whichever occurred earlier.²⁸ This variable captured enrollment only for services that potentially will be paid for by SSA.

For 2001 and later cohorts:

- SSI nonpayment status following initial suspension or termination for work (SSI NSTW) was identified when beneficiaries achieved earnings high enough to result in zero SSI cash payments, regardless of whether they maintained Medicaid eligibility under the 1619(b) incentive program.
- SSI NSTW, no DI, was identified when SSI NSTW occurred and the beneficiary received no DI payment.
- SSI NSTW months were all months in nonpayment status following SSI suspension or termination for work and before the beneficiary dies, reaches age 65, or reaches the end of the relevant observation period.
- SSI NSTW, no DI, months were all SSI NSTW months in which beneficiaries were also not receiving DI payments.

From Earnings Data

- We defined employment as having annual earnings of at least \$1,000 in 2007 dollars based on data from the MEF (inflation adjusted using 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 pre-award jobs, but no subsequent

²⁸ As noted in the previous section, data for this variable from 2005 to 2007 should be considered preliminary because VR service entrants who did not assign their tickets and continued to receive services through the end of fiscal year 2007 will not have a record in the RSA-911 data file.

earnings, are not included in the statistics.²⁹ Depending on the analysis, mean earnings were calculated either for all beneficiaries (including those with zero earnings) or for those with positive earnings (including earnings less than \$1,000), as indicated. The earnings statistics do not reflect any earnings not reported to the IRS.³⁰

The above measures were developed annually for each cohort following the award year. In addition to annual statistics for each year (for example, percentage of beneficiaries in the 1996 cohort who engaged in SGA for the first time *during* 2003), we also present cumulative statistics from award year through the current year (for example, percentage of beneficiaries in the 1996 cohort that engaged in SGA *by the end* of 2007; that is, an unduplicated count of individuals who engaged in SGA during at least one month of the 12-year period). Annual statistics for each year show how outcomes change as the cohort ages. Cumulative statistics show the extent to which beneficiaries in the cohort have attained outcomes in the interval from award through the end of the current year. Cumulative statistics for the employment rate are an exception, however, because of the problem with distinguishing between pre-award and post-award earnings in the award year and the following year. Hence, the cumulative employment rate is for the period from the second year after award through the current year.

E. Data Limitations

The administrative data used for this analysis have limitations, like virtually all data of this kind, stemming from the fact that they are collected for administrative rather than research purposes. The statistics we report all are based on data that have an important administrative purpose and are generally reliable but are subject to errors reflecting the processing of post-entitlement work, as well as alterations because of changes in the post-entitlement processes. For instance, in their analysis of DI award cohorts, Stapleton et al. (2010) found that a small share of records for DI beneficiaries indicates suspension or termination for work, even though there is no documentation of a completed TWP. If such errors reflecting the processing of post-entitlement work occurred consistently over time, they would not affect trends in statistics across award cohorts. This is not the case, however. SSA's administrative efforts to reduce the backlog of post-entitlement work, especially between 1999 and 2002, might mean that some observed trends reflect changes in the processing of post-entitlement work rather than changes in policy or the economic environment, and that the size of any effect potentially is substantial.³¹

Our findings also suggest another case in which backlog issues might affect cross-cohort comparisons. The trend in the percentages of former SSI child beneficiaries who receive their first

²⁹ Muller (1992) notes that earnings reported to the 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. For this reason, we did not include the first year after award in our employment and earnings statistics. Our annual estimates for later years likely reflect errors in the timing of work, but it seems much less likely that the cumulative statistics reflect such errors.

³⁰ One potentially important example of earnings not captured in the IRS data is that of beneficiaries who work in sheltered workshops, which are not subject to payroll taxes.

³¹ The backlog of medical and work 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 2010a).

SSI payment as adults at ages 18 to 19 versus at age 20 or over (see Exhibit III.1) is consistent with a possibly increasing backlog in age-18 redeterminations. Such a backlog would mean that former child SSI child beneficiaries make up a decreasing share of our SSI award cohorts—a change not accounted for in our cross-cohort comparisons.

Finally, studies SSA conducted in 1999, 2002, and 2004 identified about 466,000 cases of SSI beneficiaries who potentially were DI insured, based on their earnings (SSA 2006). Consequentially, many SSI beneficiaries, known as special disability workload (SDW) cases, were awarded DI payments retroactively. Because we identify DI participation in our cohorts according to DI payment status, our statistics on DI participation only pick up these cases at the first SDW payment date.

We now turn to the presentation of the work-incentive statistics that can be calculated for the 1996 SSI award cohort, the earliest cohort in our data. In doing so, we first discuss the extent to which the 1996 SSI award cohort also received DI benefits, as this has important implications for the interpretation of the results that follow.

IV. THE 1996 SSI AWARD COHORT

This chapter focuses on statistics for the 1996 SSI award cohort. Because of the importance of interactions with the DI program to the interpretation of the results that follow, we first discuss the extent to which the 1996 SSI award cohort also received DI benefits, broken down by age group. We then review the main return-to-work milestones achieved by the 1996 SSI cohort as of 2007 and go on to present more detailed longitudinal statistics on the return to-work-efforts of the 1996 cohort for the entire cohort, as well as those broken down by age group.

Additional statistics based on data available only for later cohorts are presented in the next chapter.³² Cross-cohort comparisons of selected statistics are discussed in Chapter VI, and additional findings from analysis of data in the MEF are presented in Chapter VII. The MEF data contain information on earnings not recorded in SSI administrative data—either because the cohort member is off the SSI rolls or because of differences between MEF earnings and earnings reported to SSA.

A. Interactions with the DI Program

As shown in Chapter III, numerous SSI awardees receive DI benefits (see Exhibit III.1). Our award cohorts exclude those who only receive SSI during the five-month DI waiting period (serial beneficiaries), but many others are included. Among them are:

- Those awarded DI first who became eligible for SSI only after spending down resources and/or losing other sources of income
- Those awarded SSI and DI at the same time who initially received only SSI during the DI waiting period, but whose DI benefits were so low that they did not preclude continued eligibility for SSI after the DI waiting period
- Those concurrently awarded SSI and Social Security benefits on another beneficiary's record as either a DAC or DWB³³
- Those awarded SSI first who entered DI only after a longer period on SSI, either because they:
 - Accumulated the work experience necessary to qualify them for DI (that is, to become disability insured)³⁴
 - Became eligible for Social Security as a DAC or DWB

³² Because of incomplete data issues, we do not present results on enrollment for employment services before 1998 or on NSTW before 2001.

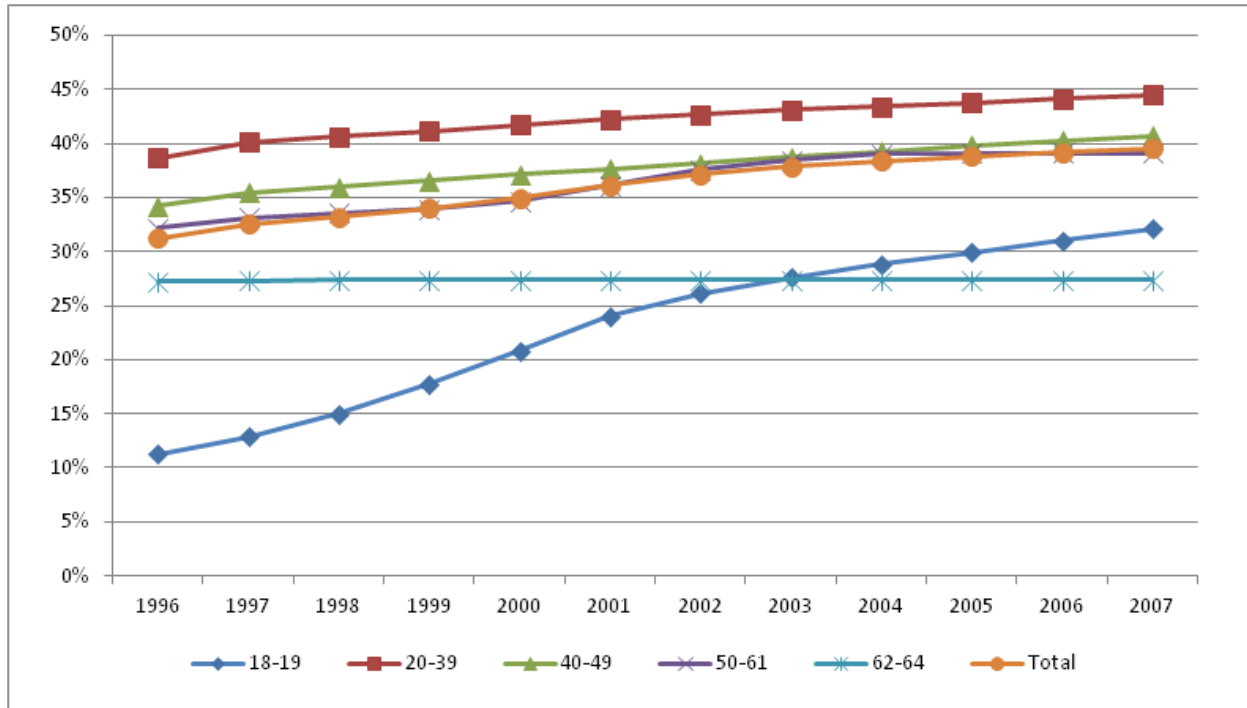
³³ Technically, most DAC and all DWB are OASI beneficiaries, not DI beneficiaries, because the primary beneficiary (parent or deceased spouse) qualifies under OASI. Following common practice, however, we include all DAC and DWB when we refer to DI beneficiaries. We use “DI workers” to distinguish those entitled to DI because of their own work histories from DAC and DWB beneficiaries.

³⁴ Younger workers need relatively few quarters of coverage to qualify for DI—as little as 6 quarters for those younger than 24 years.

Those SSI beneficiaries retroactively awarded DI benefits when SDW cases were processed (see Chapter III) are among those in the groups initially awarded only SSI.

Exhibit IV.1 compares the cumulative percentage of 1996 SSI award cohort members receiving DI benefits in at least one month between SSI award and December 2007 for the whole cohort and across five age groups. More than 30 percent of cohort members received DI payments in at least one month during their SSI award year. By December 2007, 39.6 percent of cohort members had received a DI payment in at least one month.

Exhibit IV.1. Cumulative Percentage of the 1996 SSI Award Cohort in DI Current Pay, by Age at Award, 1996–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 Ticket Research File (TRF).

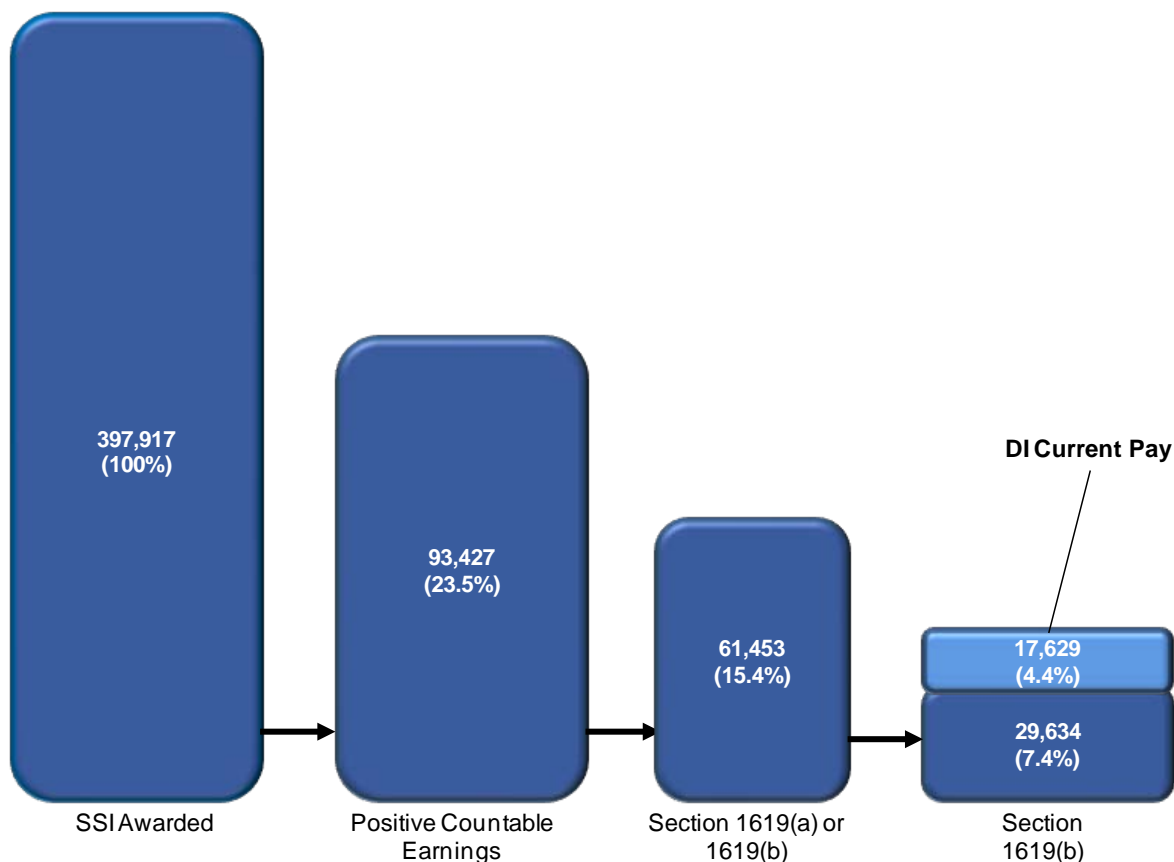
The cumulative statistics show distinctive patterns by age at award. For the three age groups in the middle (those ages 20 to 61 at SSI award), the percentages receiving DI payments in their award year are all above 30 percent, and the cumulative percentages receiving DI payments rise steadily through December 2007. As mentioned above, the DI award might be due to accumulation of the work experience necessary to qualify for DI, or attainment of eligibility as DAC or DWB.

Relatively few (11.3 percent) of SSI beneficiaries ages 18 to 19 at award received DI payments in 1996. However, the cumulative percentage receiving DI payments for this age group experienced a sharp increase during the period observed, reaching 32.1 percent by December 2007. Among those ages 62 to 64 at SSI award, there was virtually no change from 1997 through 2007 in the cumulative percentage receiving DI payments.

B. Longitudinal Work-Incentive Milestones for the 1996 Cohort

Exhibit IV.2 shows how far members of the 1996 SSI award cohort moved toward suspension of benefits under 1619(b).³⁵ By December 2007, 23.5 percent of those in the 1996 cohort made at least some progress toward 1619(b) by achieving positive countable earnings (PCE) and 15.4 percent achieved at least 1619(a); 11.9 percent reached 1619(b)—about half of those who achieved PCE. Notably, a substantial minority (37.3 percent) of those who reached 1619(b) were receiving DI benefits in all months in which they were in 1619(b) status. Still, 7.4 percent of the 1996 SSI award cohort were in 1619(b) and not receiving DI benefits in at least one month by December 2007.

Exhibit IV.2. Return-to-Work Milestones for the 1996 SSI Award Cohort, 1996–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. “DI current pay” shows the number of SSI beneficiaries who received DI payments in all months in which they achieved 1619(b).

³⁵ Appendix Exhibit A.2 provides more detail on the possible paths followed by members of the 1996 SSI award cohort. The numbers in Exhibit A.2 differ somewhat from those in Exhibit IV.2, however. While Exhibit IV.2 shows the percentages of cohort members who achieved each outcome at least in one month by the end of 2007, Exhibit A.2 shows the percentages who achieved PCE, 1619(a) or 1619(b) before having their benefits terminated for the first time. Some beneficiaries achieved these outcomes only during a second or later spell on the rolls, after an earlier termination.

The previous exhibit depicts what the 1996 cohort had achieved over a period of 11 years as well as some information about the paths SSI beneficiaries followed after their first benefit award. However, it does little to illuminate the timing of beneficiaries' progress toward exit for work. We address timing in this chapter by examining series of longitudinal statistics for the 1996 cohort that depict their progress by the end of each year. Some of the statistics presented are annual statistics and refer to activities in the calendar year indicated, but many refer to cumulative activities from the award year through the end of the indicated calendar year. Where relevant, we distinguish between 1619(b) results achieved by beneficiaries in general (that is, regardless of their DI payment status) and those achieved by beneficiaries who were also not receiving DI benefits when achieving 1619(b).

1. Annual Percentage Achieving PCE

Beneficiaries who achieve PCE are taking advantage of the EIE, which excludes the first \$65 of earnings from countable income plus half of all additional earnings. Countable earnings are only recorded in administrative data in months where the cohort member is actually on the rolls, and some earnings might not be reported. Hence, the annual percentage in PCE understates the percentage actually working.³⁶ In Chapter VII, we present employment statistics based on earnings data from the MEF. Those data are also recorded when individuals are not on SSI, and the data complement the PCE statistics presented in this chapter.³⁷

Exhibit IV.3 compares the percentage achieving PCE in a given year for the whole cohort and across five age groups. In the fourth year since award (2000 for the 1996 cohort), 8.9 percent of cohort members achieved PCE in at least one month during that year, more than in any other year observed. After that, the annual PCE percentage gradually decreased to 4.4 percent in 2007 as beneficiaries aged and accumulated more time on the rolls.

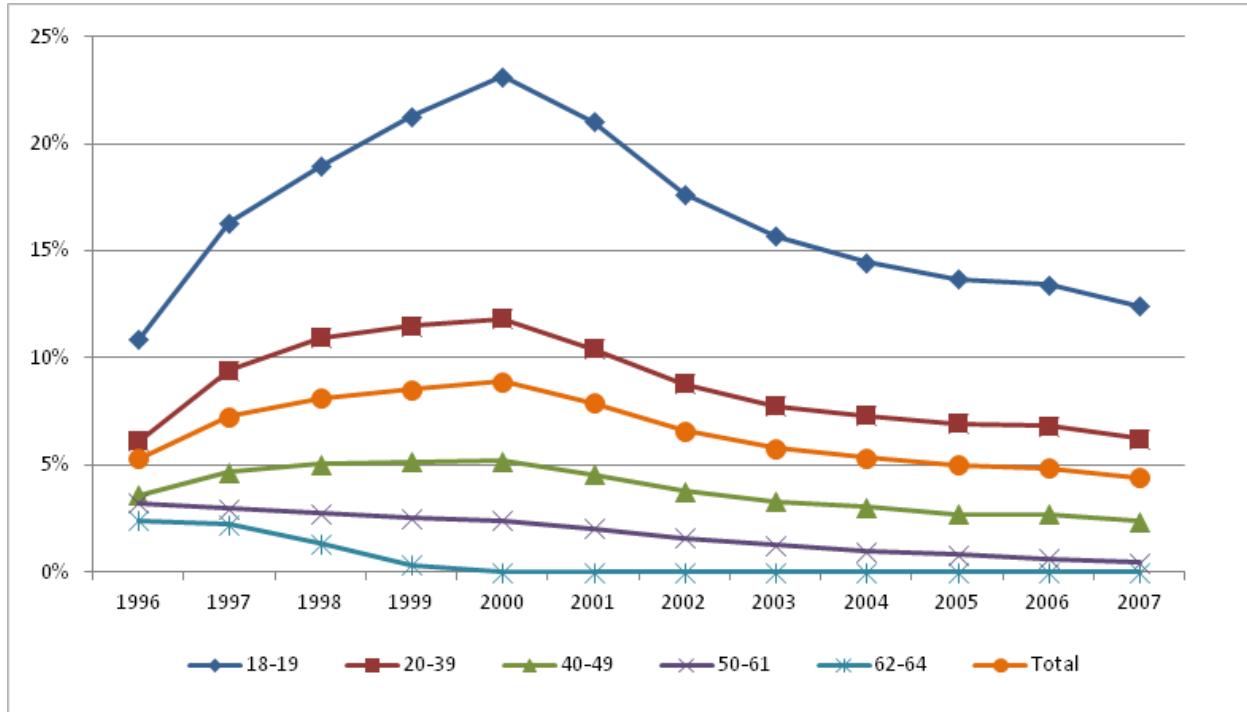
The decline in the annual PCE percentage after 2000 is partly due to a decline in the extent to which earnings are captured in this measure, not solely due to a decline in employment. As will be seen in Chapter VII, annual employment rates based on MEF data are substantially higher and decline more slowly than the annual PCE percentage, reflecting the fact countable income is no longer recorded in administrative data once working beneficiaries leave the rolls entirely, as well as other reasons for differences between these two series. For example, for the 1996 cohort as a whole, the annual percentage employed in the peak year (2000) based on MEF data is about 70 percent higher than the percentage who achieved PCE in that year.³⁸ Furthermore, that percentage falls only slightly after 2000 through December 2007.

³⁶ Kemp (2010) found that between 4 and 7 percent of SSI beneficiaries ages 18 to 21 use the Student Earned-Income Exclusion (SEIE). In 2011, the SEIE allowed an individual under the age of 22 and regularly attending school to exclude from countable earnings up to \$1,640 of monthly earnings and up to \$6,600 of annual earnings. Thus, the PCE and 1619(b) statistics in this report likely understate employment among the two youngest age groups, because some SSI beneficiaries who are students will have all of their earnings offset by the SEIE.

³⁷ Earnings data from the MEF do not exclude the earnings of students using the SEIE and therefore do not understate employment for this group.

³⁸ See Exhibit VII.1.

Exhibit IV.3. Annual Percentage of the 1996 SSI Award Cohort with Positive Countable Earnings, by Age at Award, 1996–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF.

Each year, the PCE percentage for the youngest group was well above that for each of the other four groups, reaching as high as 23.1 percent in the fourth year after award. The PCE percentages for the three younger groups rose from the year of award through year four, but those for the two older groups declined somewhat during the same period. This might reflect differences in the characteristics of younger and older beneficiaries, such as types of impairments. It also might reflect the fact that many younger beneficiaries face the prospect of a long lifetime with very low income and, relative to older beneficiaries, might have stronger incentives and greater supports to establish or re-establish themselves in the labor force. Perhaps younger awardees who recently experienced disability onset also generally are more successful in regaining function or adapting to their impairment than those who are older, reflecting impairment differences and/or differences in incentives and supports. Even for the younger age groups, however, PCE percentages declined after the fourth year. As will be seen from employment series based on MEF data (Chapter VII), part of the reason for the decline in the annual PCE percentage is a decline in measured employment following the 2001 recession, but that decline is nearly reversed by the end of the period. Hence, the dominant reason for the decline over the whole period appears to be reduced reporting of earnings to SSI as these beneficiaries left the SSI rolls.

2. Annual Percentage in 1619(b)

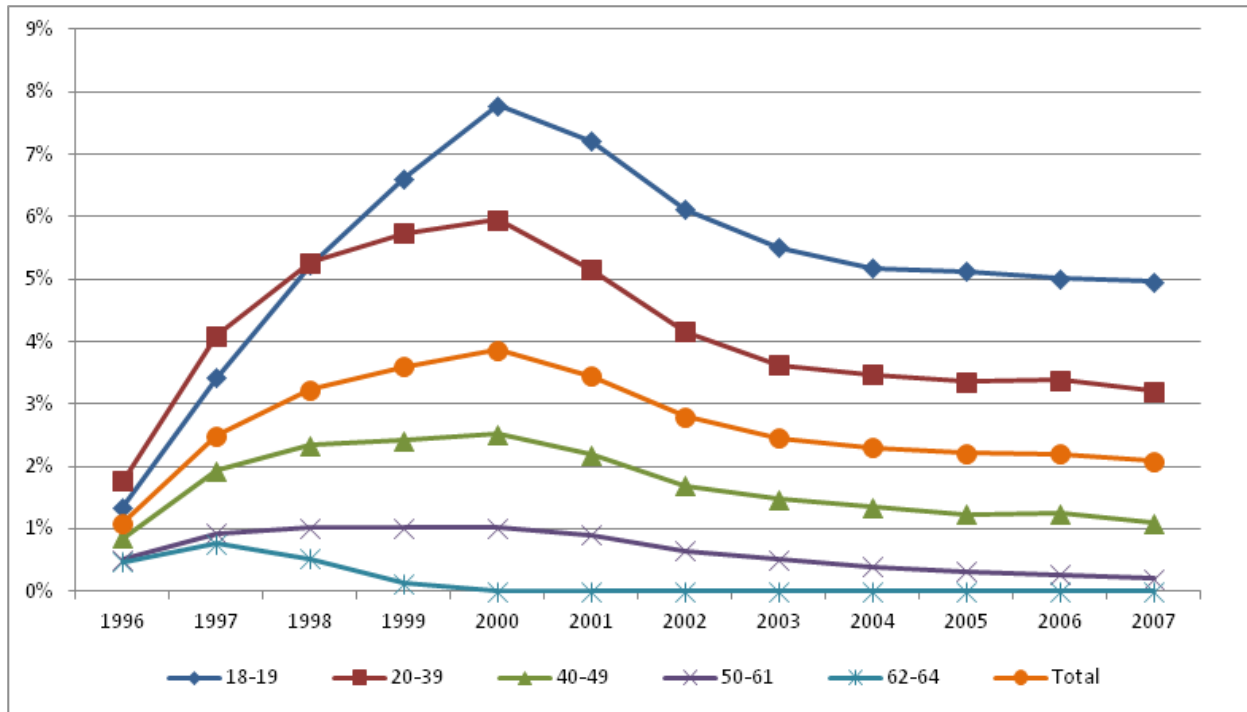
We now turn our attention to 1619(b). Patterns for 1619(a) statistics following award and across age groups are quite similar but are not shown.³⁹ Use of 1619(b) is of special interest because SSI benefits are zero; beneficiaries retain their Medicaid benefits as well as the right to return to current pay status should their earnings fall by a sufficient amount. Those in 1619(b) status do not, however, represent 100 percent of those SSI awardees forgoing all of their benefits for work. Some of these beneficiaries leave SSI altogether. This might happen for several reasons. They might earn above the 1619(b) threshold, prefer to leave to avoid asset restrictions or reporting requirements, be unaware of 1619(b), or not understand the provision's value. As we will show in Chapter V, using the data for the first cohort (2001) with complete data on SSI nonpayment status following initial suspension or termination for work (SSI NSTW), the statistics presented below understate the percentage that have at least one SSI NSTW month.

Exhibit IV.4 presents annual values for the percentage with at least one 1619(b) month. Fewer beneficiaries achieve 1619(b) than achieve PCE. Just below 4 percent of cohort members achieved 1619(b) in at least one month during the fourth year after award. After that, the annual 1619(b) percentage gradually decreased to about 2 percent in 2007. As with PCE, most of this decline is likely due to reduced reporting of earnings to SSI by beneficiaries who left the SSI rolls. The 1619(b) percentages for the two youngest groups are well above those for the three older groups in every year, reaching maximums of 7.8 percent in the fourth year after award for beneficiaries ages 18 to 19 at award and 6.0 percent in the same year for beneficiaries ages 20 to 39 at award. Although 1619(b) percentages steadily increased for the three younger age groups between 1996 and 2000, they increased only slightly between 1996 and 1997 for the two older age groups and then remained steady or declined.

Many SSI beneficiaries who were in 1619(b) in at least one month were receiving DI benefits. This is illustrated by comparing the series in Exhibit IV.5, which show annual values for the percentage of beneficiaries who were in 1619(b) in at least one month in which they were also not in DI current pay status, to the series for all 1619(b) use in Exhibit IV.4. The comparison shows that a substantial share of all beneficiaries who were in 1619(b) in at least one month in a given year was also receiving DI benefits during those months. For example, while 3.9 percent of beneficiaries in the whole 1996 cohort were in 1619(b) in at least one month in 2000, only 59.0 percent of these beneficiaries (constituting 2.3 percent of the cohort) were not receiving DI payments in any of those months. Notably, the percentage not receiving DI benefits while in 1619(b) in at least one month is considerably higher for those ages 18 to 19 at award; of the 7.8 percent of cohort beneficiaries in that age group who achieved 1619(b) in 2000, 77.8 (constituting 6.1 percent of this age group) did so in at least one month in which they were not also receiving DI benefits.

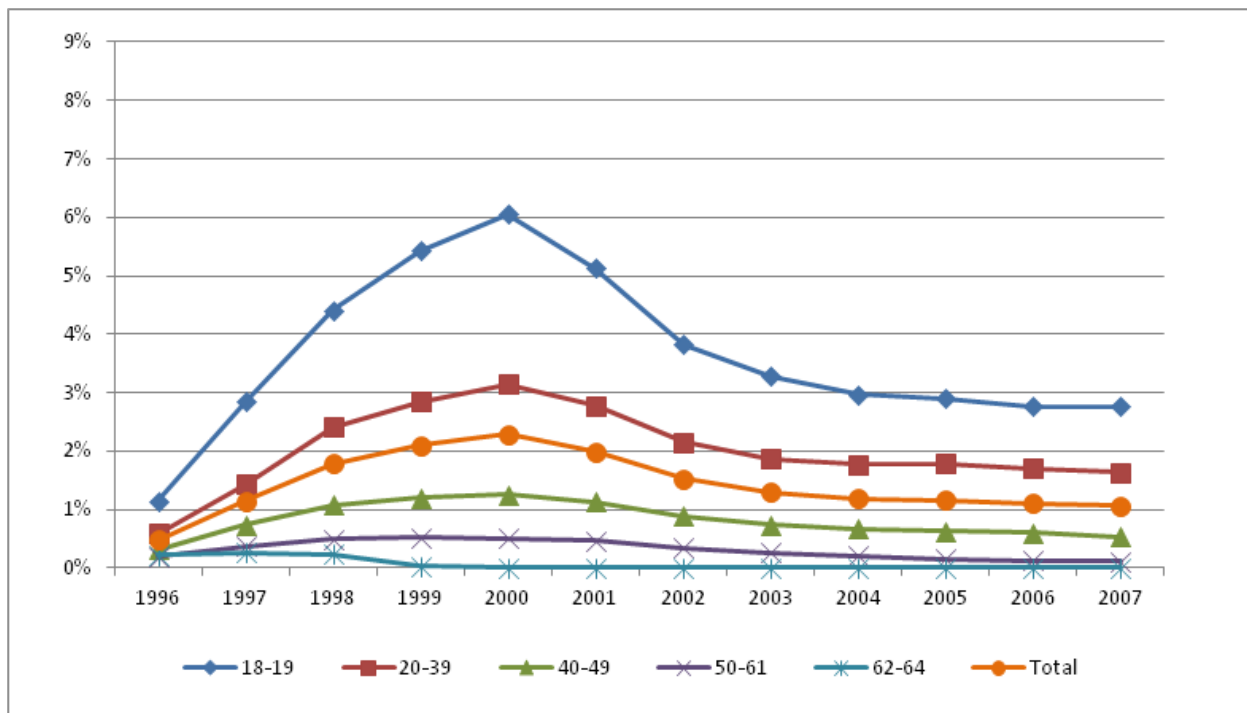
³⁹ Cumulative percentages for those in 1619(a) and either 1619(a) or 1619(b) appear in later exhibits, along with cumulative statistics for other series.

Exhibit IV.4. Annual Percentage of the 1996 SSI Award Cohort in 1619(b) During at Least One Month, by Age at Award, 1996–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF.

Exhibit IV.5. Annual Percentage of the 1996 SSI Award Cohort in 1619(b) and Not in DI Current Pay During at Least One Month, by Age at Award, 1996–2007

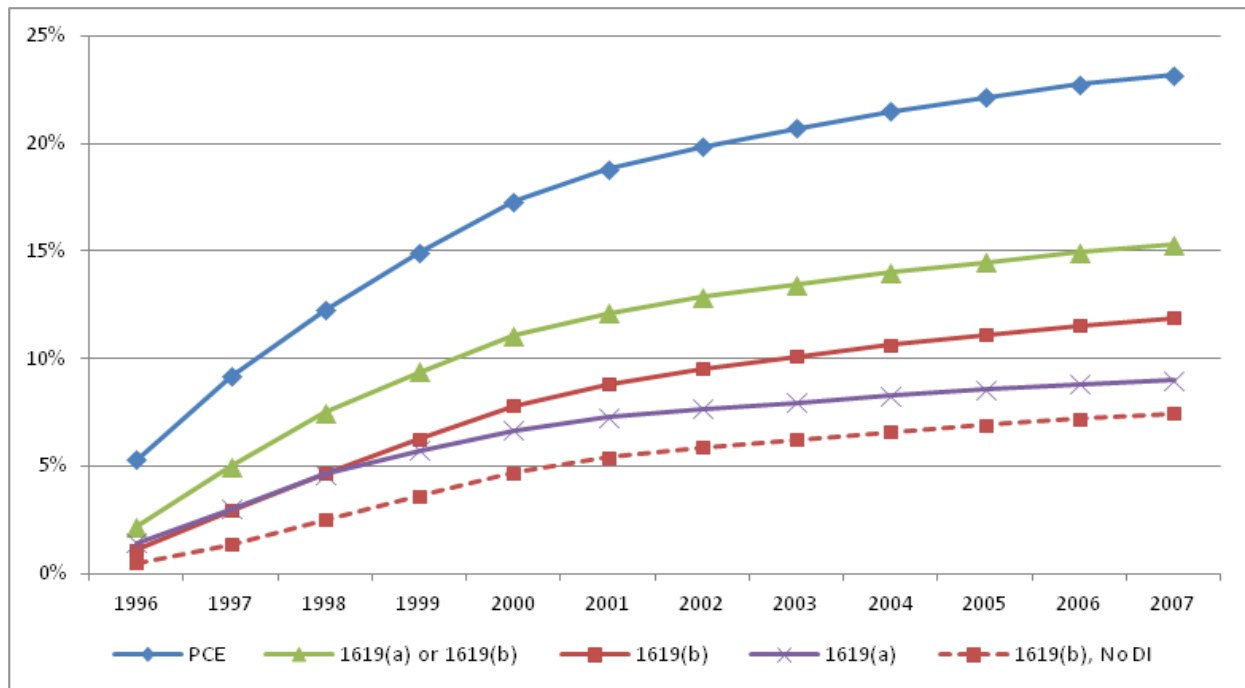


Note: Based on an analysis of SSI beneficiary records in the 2008 TRF.

3. Cumulative Use of Work Incentives

Many more beneficiaries used work incentives in at least one month over the entire period observed than in any given year. This is illustrated in Exhibit IV.6, which presents cumulative percentages for achieving PCE, 1619(a), 1619(b), and either 1619(a) or 1619(b).⁴⁰ An additional dashed line shows the cumulative percentages achieving 1619(b) and also not receiving DI payments. All of these return-to-work markers increased rapidly during the first five years on the rolls and continued to increase, but much more slowly, for the next six years. The continuing increase throughout the period indicates that, in each year, additional beneficiaries were using the work incentives for the first time, but the rate of increase steadily diminished. By December 2007, 23.2 percent of beneficiaries in the 1996 cohort had PCE in at least one month, 15.3 percent had been either in 1619(a) or 1619(b), 11.9 percent had been in 1619(b), and 9.0 percent had been in 1619(a). In addition, 7.4 percent of beneficiaries in the 1996 cohort had been in 1619(b) and not receiving DI benefits in at least one month—this constitutes 62.7 percent of all beneficiaries who achieved 1619(b) during the period.

Exhibit IV.6. Cumulative Longitudinal Work Incentives for the 1996 SSI Award Cohort, 1996–2007

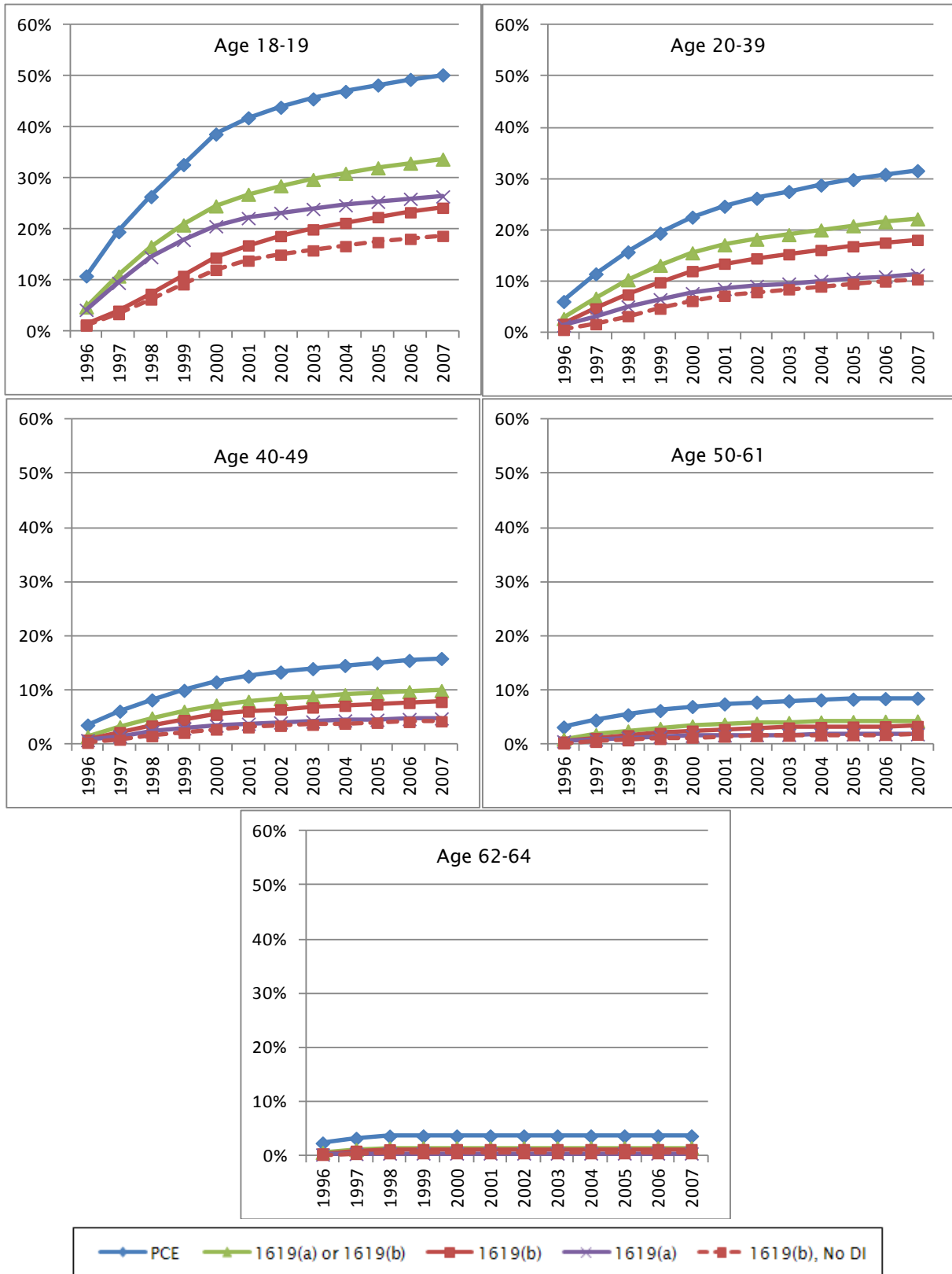


Note: Based on an analysis of SSI beneficiary records in the 2008 TRF.

The pattern observed for the 1996 cohort in Exhibit IV.6 reflects the behavior of all beneficiaries, including the large number of older awardees, who showed much lower employment percentages than their younger counterparts. Statistics for each age group are displayed in Exhibit IV.7. The pattern for the youngest age group is an exaggerated version of the pattern for the

⁴⁰ As mentioned in Chapter II, Section 1619(a) allows SSI beneficiaries to receive SSI cash payments even when their earned income is at or above the SGA level.

Exhibit IV.7. Cumulative Longitudinal Work Incentives for 1996 SSI Awardees, by Age at Award, 1996-2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. See Appendix Exhibit A.4 for detailed cumulative results by cohort and age group.

whole cohort. By the end of the fourth year after award (2000), 38.6 percent of beneficiaries in the group had PCE in at least one month. From that point to the end of the period, only an additional 11.6 percent of the group did so. The increase in the percentage of those ages 18–19 at award achieving 1619(b) was less skewed toward the earlier years, however. For this age group, we found that 14.4 percent had been in 1619(b) status for at least one month by 2000, and an additional 9.8 percent of the group reached this status from that point on to the end of the period. Of the 24.2 percent who had achieved 1619(b) in this age group, 77.3 percent (18.7 percent of this age group) had been in 1619(b) with no DI payments by the end of the period. The patterns observed for the older age groups are similar to those for the youngest, but at increasingly lower levels. For example, by 2007, only 15.9 percent of those in the 40–49 age group had PCE and just 8.5 percent in the 50–61 age group had done so.

Notably, the youngest age group is the only one for which the cumulative percentage having participated in 1619(a) exceeded the percentage who participated in 1619(b), perhaps reflecting the importance of this work incentive for younger beneficiaries who need to build up their work experience before earning enough to achieve 1619(b). In general, the percentage achieving 1619(b) relative to the percentage achieving 1619(a) increased with age at award, presumably because greater pre-SSI work experience leads to higher earnings after SSI award.

4. The Extent of 1619(b) Use

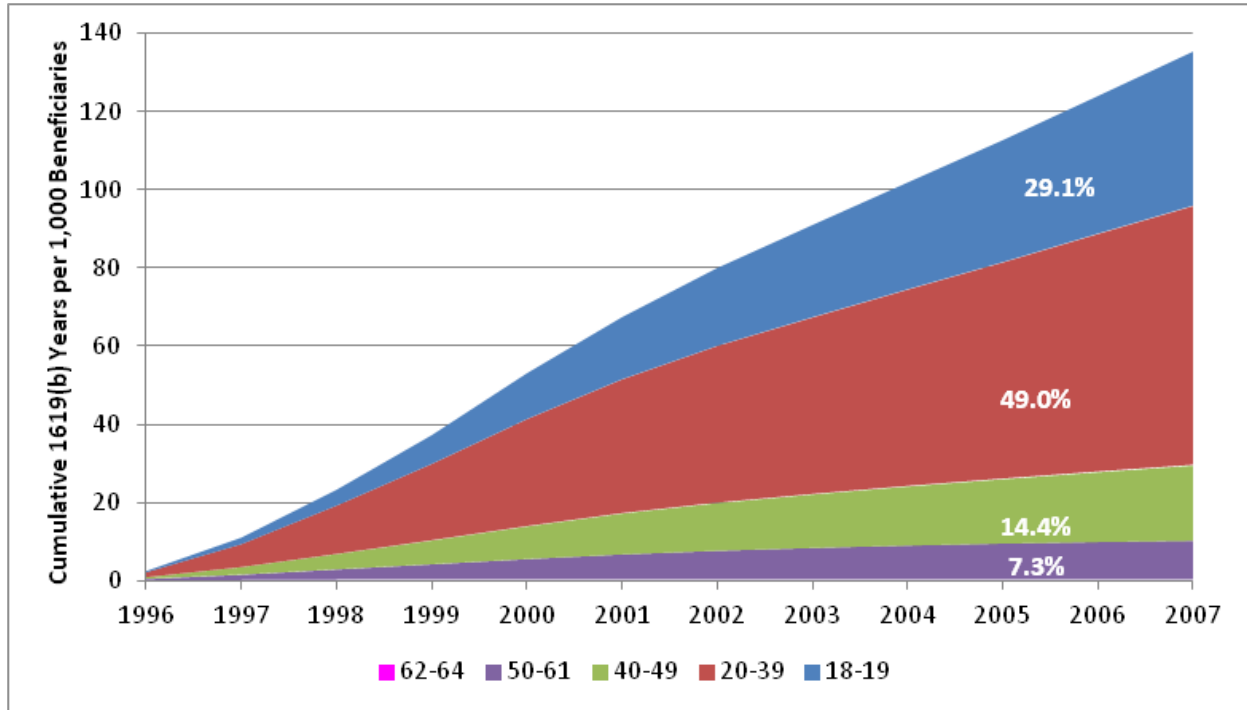
As discussed in the introduction, the cumulative percentage of SSI awardees that eventually have their benefits suspended under 1619(b) does not fully convey the extent to which beneficiaries use the 1619(b) work incentive. We now turn to some results that provide a fuller picture, by considering the incidence of 1619(b) combined with duration on 1619(b).

Exhibit IV.8 shows the cumulative number of years in 1619(b) status (cumulative months divided by 12) per thousand awardees in the 1996 cohort, by age group. As of December 2007, the 1996 cohort had accumulated 135 years in 1619(b) per thousand beneficiaries—about 1.6 months per beneficiary over 11+ years, and 1.2 percent of all possible months.⁴¹

The two youngest age groups accounted for a large majority of cumulative months in 1619(b) (78.1 percent as of 2007). Those ages 20–39 at award contributed the largest share of years in 1619(b) (49.0 percent), while accounting for 30.8 percent of the 1996 cohort. The youngest group contributed 29.1 percent of 1619(b) months and accounted for less than 15.0 percent of the cohort. The contribution of the oldest age group was so small that it is not clearly visible in the exhibit. Only 21.7 percent of cumulative years in 1619(b) were accounted for by those ages 40–49 or 50–61 at award, even though these two groups accounted for 50.0 percent of all beneficiaries in the cohort. This age-group pattern reflects higher levels of employment and lower mortality among younger beneficiaries, along with the fact that many surviving beneficiaries in the two older cohorts reached age 65 during the 12-year observation period.

⁴¹ The number of months per beneficiary spent in 1619(b) was $(135/1,000)*12=1.6$ months. If we assume that, on average, members of the 1996 cohort spent six months on the rolls in 1996, the percentage of all possible months spent in 1619(b) is $135/(11.5*1,000)=1.2$ percent.

Exhibit IV.8. Cumulative Years in 1619(b) per 1,000 Beneficiaries for the 1996 SSI Award Cohort, by Age at Award, 1996–2007

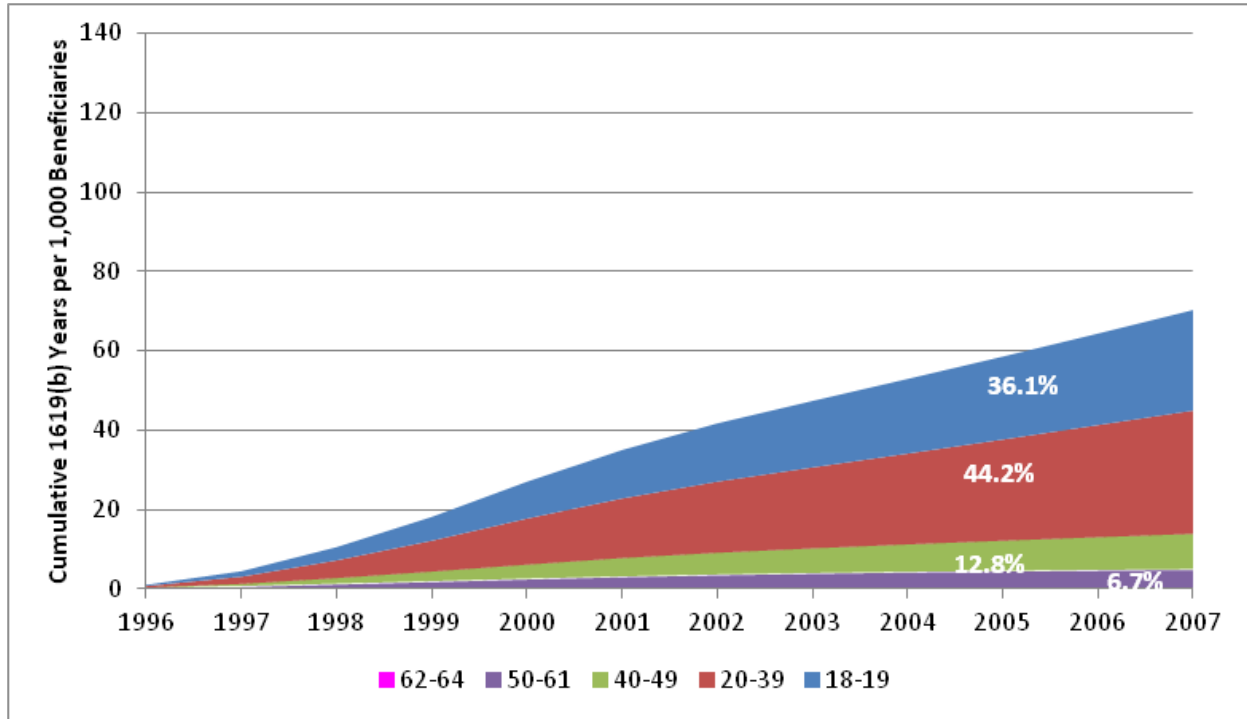


Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. The contribution of the oldest age group was so small that it is not clearly visible in the exhibit.

Exhibit IV.9 shows the cumulative number of years in 1619(b) status for the 1996 cohort, as in Exhibit IV.8, but excludes months in which beneficiaries were in DI current pay status. Out of the 135 years in 1619(b) status, only 70 consist of months in which the beneficiary was not receiving a DI benefit—less than a month per beneficiary over this time period. Overall, in 48.0 percent of months in 1619(b), beneficiaries were receiving DI payments. The 20–39 age group contributed a smaller share of cumulative years in 1619(b) months without DI benefits (44.2 percent) than for all 1619(b) months, while the 18–19 age group contributed a larger share (36.1 percent). This reflects the fact that the share of the 20–39 age group in 1619(b) with DI benefits was larger than the corresponding share of the 18–19 age group in 1619(b).

This completes the presentation of the work-incentive series that can be calculated for the earliest of our award cohorts, the 1996 cohort. In the next chapter, we present additional series that can be calculated only for the later cohorts.

Exhibit IV.9. Cumulative Years in 1619(b) When Not in DI Current Pay Status per 1,000 Beneficiaries, for the 1996 SSI Award Cohort, by Age at Award, 1996–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. The contribution of the oldest age group was so small that it is not clearly visible in the exhibit.

V. ADDITIONAL STATISTICS FOR LATER COHORTS

In this chapter, we take a more in-depth look at the return-to-work efforts of new SSI awardees, based on data available only for cohorts later than the 1996 cohort. We first examine the extent of enrollment for employment services by the 1998 cohort, the first cohort with complete service enrollment data, with particular attention given to the use of employment services by those who had their benefits suspended for at least one month under 1619(b). We then shift focus to the 2001 cohort, the first cohort with complete information on SSI NSTW (nonpayment status following initial suspension or termination for work). We present longitudinal statistics for the 2001 cohort on SSI NSTW, including cumulative SSI NSTW years. Where relevant, we distinguish between SSI NSTW results achieved by beneficiaries in general (that is, regardless of their DI payment status) and those achieved by beneficiaries who were also not receiving DI benefits when achieving SSI NSTW. Cross-cohort comparisons are discussed in Chapter VI, while cross-state comparisons are presented at the end of Chapter VII.

A. Enrollment for Employment Services by the 1998 Award Cohort

Exhibit V.1 presents the number of 1998 cohort members who had enrolled for employment services at least once after award, as of December 2007; it also shows the extent to which service enrollees achieved other return-to-work milestones—such as positive countable earnings (PCE), 1619(a), and 1619(b)—and whether they achieved them before or after enrollment for employment services. We found that 38,369 beneficiaries (10.5 percent of the 1998 cohort) enrolled for services at some point during the first 11 years. Most (59.4 percent) had PCE; 38.9 percent had been in 1619(a), 1619(b), or both; and 31.7 percent had been in 1619(b) by the end of the period. Most of those who had PCE, 1619(a), or 1619(b) achieved them after service enrollment, but many enrolled for services only after achieving one or more of these milestones.

Exhibit V.1. Return-to-Work Milestones for Service Enrollees in the 1998 SSI Award Cohort, as of 2007

	Number	Percentage of Service Enrollees
Service Enrollees	38,369	100.0
PCE	22,803	59.4
After service enrollment	12,083	31.5
Before service enrollment	10,720	27.9
No Countable Earnings	15,566	40.6
Achieved 1619(a) ^a	14,928	38.9
After service enrollment	9,012	23.5
Before service enrollment	5,916	15.4
Did Not Achieve 1619(a)	23,441	61.1
Achieved 1619(b)	12,163	31.7
After service enrollment	8,085	21.1
Before service enrollment	4,078	10.6
Did Not Achieve 1619(b)	26,206	68.3

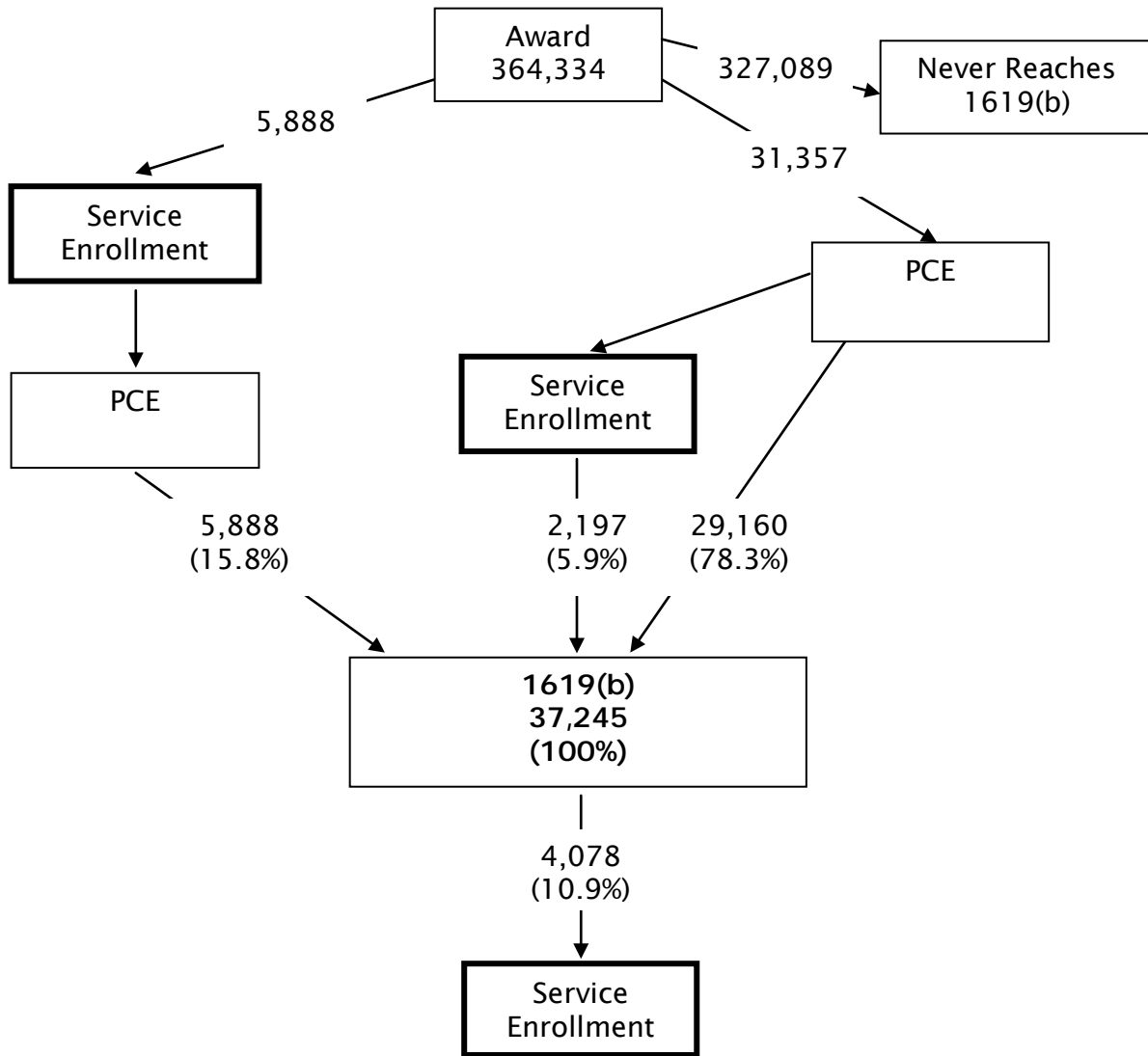
Note: Based on analysis of SSI beneficiary records in the 2008 Ticket Research File (TRF) matched to RSA-911 data.

^aIncludes beneficiaries who achieved 1619(b) without going through 1619(a) first.

The statistics on the return-to-work efforts of service enrollees are well above the statistics for the 1998 award cohort as a whole (not shown). It could be that services received were instrumental to the outcomes for those who achieved PCE, moved beyond PCE to 1619(a) or 1619(b) status, or exited the rolls for work. However, we do not know the extent to which more favorable outcomes for service enrollees simply reflect beneficiary interest and related efforts to achieve higher earnings—factors that likely explain their enrollment for services.

Exhibit V.2 shows where service enrollment occurred along different paths for 1998 cohort members who achieved 1619(b), relative to when they achieved that milestone. A large majority of those who achieved 1619(b) did not enroll for employment services prior to achieving it, or at least did not do so with providers eligible for payment from SSA. Approximately 80 percent of the nearly 38,000 individuals who achieved 1619(b) (representing 10.2 percent of the 1998 cohort) did not enroll for services previously, although another 10.9 percent enrolled for services later on.

Exhibit V.2. The Timing of Service Enrollment in Relation to Achievement of 1619(b) for the 1998 SSI Award Cohort



Note: Based on analysis of SSI beneficiary records in the 2008 TRF matched to RSA-911 data.

These exhibits do not convey the variety, complexity, and duration of the paths that SSI awardees follow. Appendix Exhibit A.3 provides details on 22 pathways the 1998 cohort took toward exiting the rolls by the end of 2007. The exhibit also shows the average time (in months) it took for them to reach one marker after attaining the previous marker.⁴² For example, the 27,649 awardees who enrolled in services before reaching PCE or 1619(b) did so an average of 27 months after award. After service enrollment, 12,083 of these beneficiaries achieved PCE an average of 22 months later; of these, 7,173 achieved at least 1619(a) 8 months later; and of those, 5,888 achieved 1619(b) an average of 4 months after achieving 1619(a).⁴³ A beneficiary in this last group who spent the average number of months along each segment of this illustrative path would have achieved 1619(b) in the 61st month after award—the beginning of their sixth year after award.

Exhibit V.3 shows the percentage of beneficiaries enrolling for services for the first time in a given year for the entire 1998 cohort and across the five age groups. For the cohort as a whole, first-time enrollment percentages initially increased from 1.8 percent in 1998 to 2.5 percent in 1999, in part because most beneficiaries in the 1998 award cohort spent only a fraction of 1998 on the SSI rolls. Following the first year after award (1999), first-time enrollment percentages fell steadily through the end of the period observed. Notably, first-time enrollment percentages for the youngest age group were well above those for the older groups, reaching 7.6 percent in 1999, and percentages for those ages 20–39 at award peaked at 3.3 percent. In contrast, annual percentages for the three older groups were well below 2.0 percent for the entire period.

B. Selected Statistics for the 2001 Award Cohort

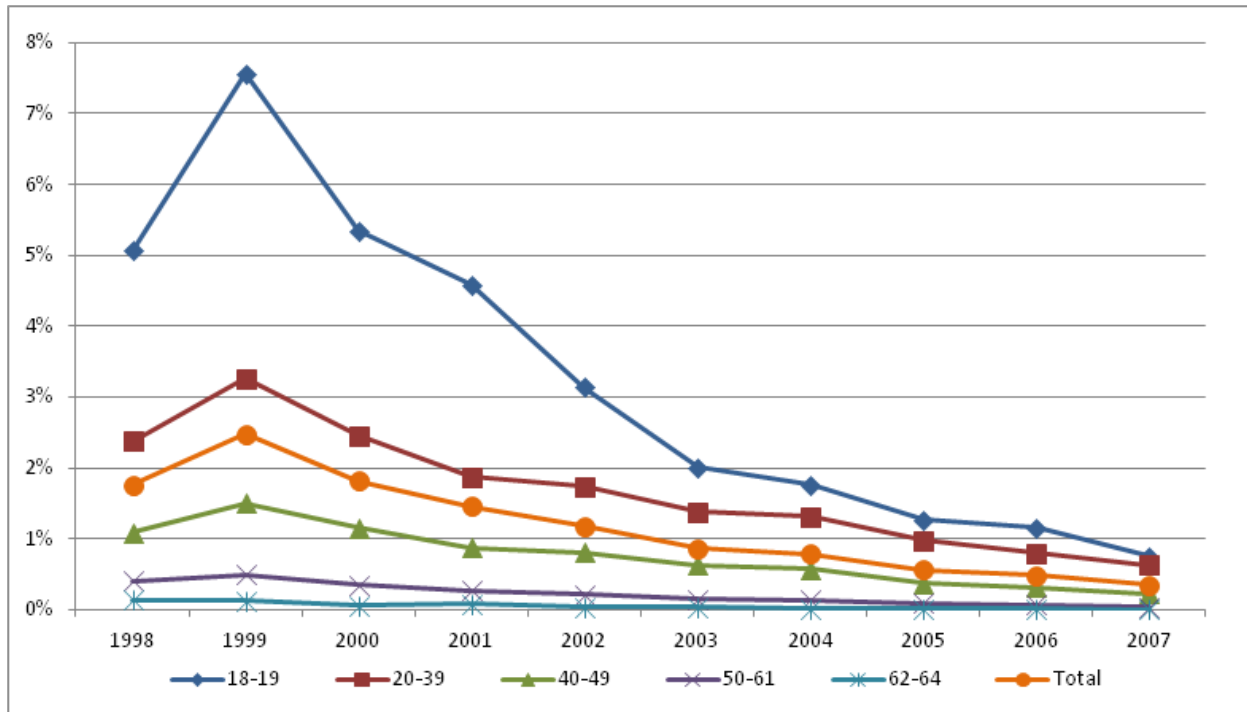
1. Return-to-Work Milestones for the 2001 Cohort

Exhibit V.4 shows how far members of the 2001 SSI award cohort moved toward suspension or termination of SSI benefits because of work (SSI NSTW). By December 2007, 19.4 percent of those in the 2001 cohort made at least some progress toward SSI NSTW by achieving PCE, and 10.4 percent achieved at least 1619(a). We found that 8.4 percent reached 1619(b)—less than half of those who achieved PCE.

⁴² The average time to reach a marker is through a given point in time and is therefore conditional on the period observed. Averages would go up if awardees were followed for a longer period of time.

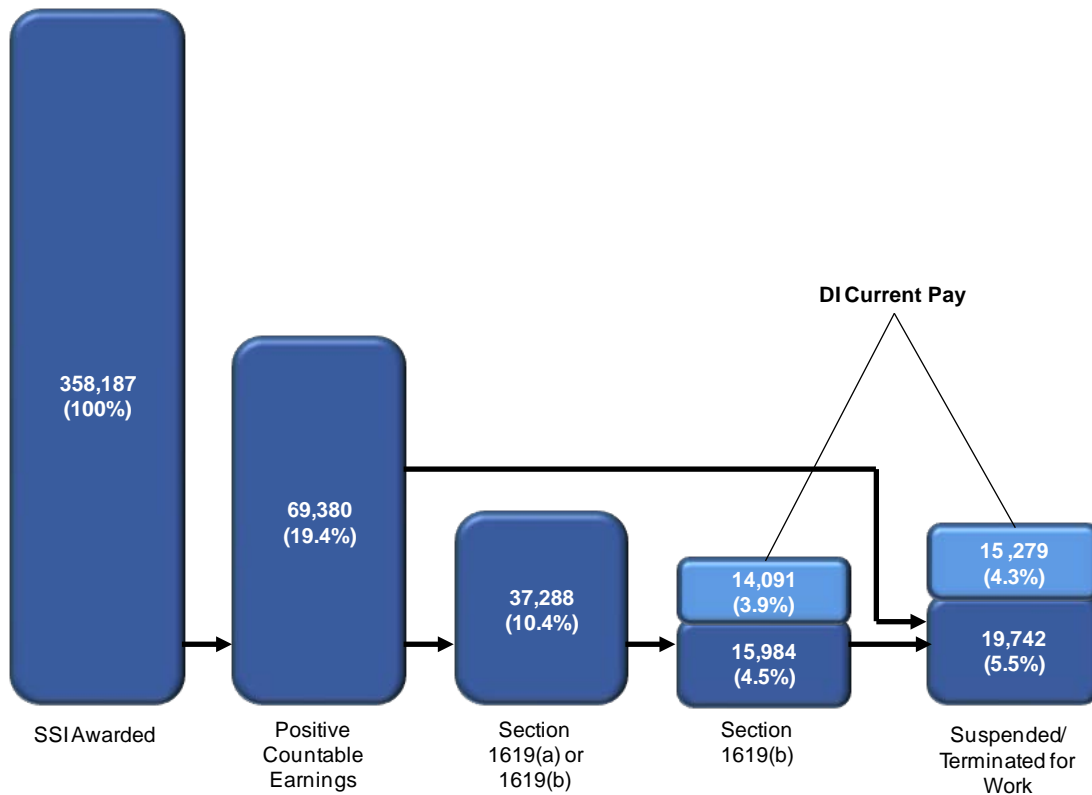
⁴³ A beneficiary who achieved 1619(b) without achieving 1619(a) is assumed to have had zero months between achievement of 1619(a) and 1619(b) status.

Exhibit V.3. Annual Percentage of the 1998 SSI Award Cohort Enrolled for Services for the First Time, by Age at Award, 1998–2007



Note: Based on analysis of SSI beneficiary records in the 2008 TRF matched to RSA-911 data.

Exhibit V.4. Return-to-Work Milestones for the 2001 SSI Award Cohort, 2001–2007



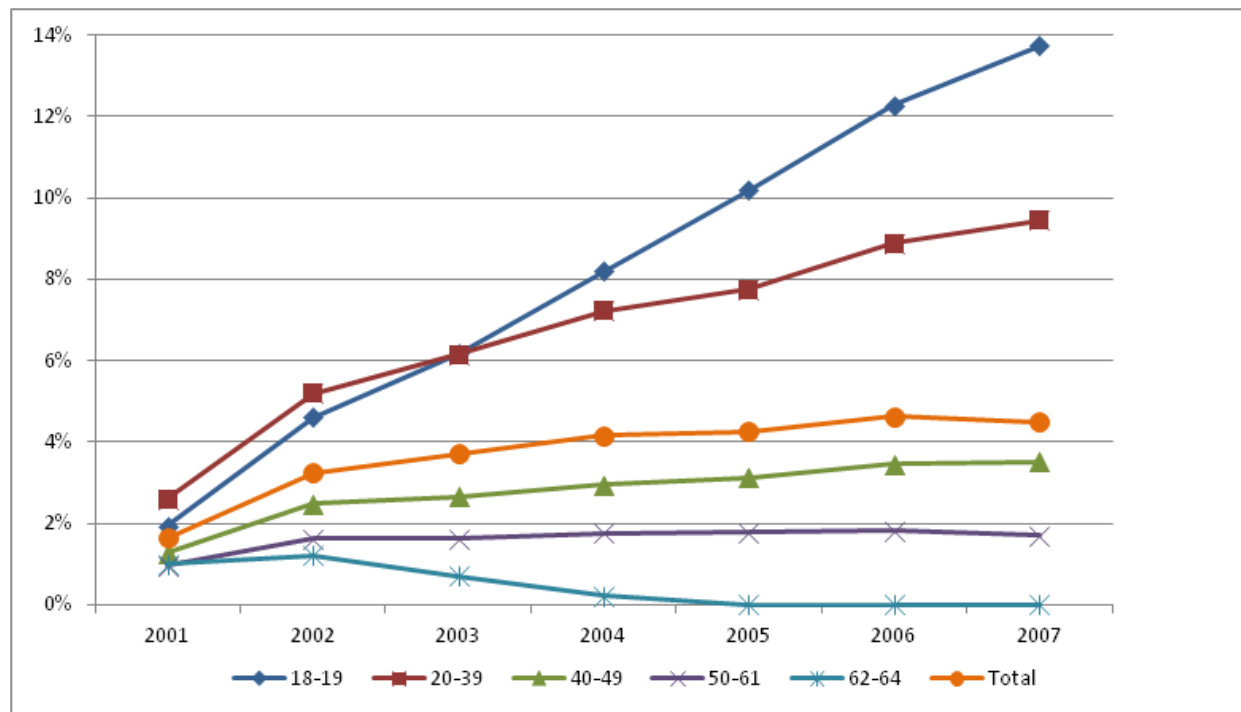
Note: Based on analysis of SSI beneficiary records in the 2008 TRF. “DI current pay” shows the number of SSI beneficiaries who received DI payments in all 1619(b) and SSI NSTW months.

Notably, more beneficiaries (9.8 percent) were in SSI NSTW in at least one month by 2007 than had achieved 1619(b) during that time. In addition, substantial minorities (46.9 percent and 43.6 percent, respectively) of those who reached 1619(b) and SSI NSTW were receiving DI benefits during those months. Still, 5.5 percent of the 2001 SSI award cohort were in SSI NSTW and not receiving DI benefits in at least one month by December 2007. The difference between the cumulative percentages for SSI NSTW and 1619(b) implies that some SSI beneficiaries entered SSI NSTW without first going through 1619(b). This might have happened for several reasons, as discussed in Chapter IV.

2. Annual SSI NSTW

Exhibit V.5 shows the percentage of beneficiaries from the entire 2001 SSI award cohort who were in SSI NSTW in at least one month in a given year compared to percentages for the five age groups. In the fifth year since award (i.e., 2006 for the 2001 cohort), 4.6 percent of cohort members were in SSI NSTW in at least one month, the highest percentage in the years observed. The steady increase in the SSI NSTW percentage from the year of award through 2006 was driven mostly by increases for the two youngest age groups. For those ages 18–19 at award, the annual SSI NSTW percentage increased rapidly from 1.9 percent in the year of award to 13.7 percent in 2007. For those ages 20–39 at award, this percentage increased more slowly, from 2.6 percent to 9.5 percent during the same period.

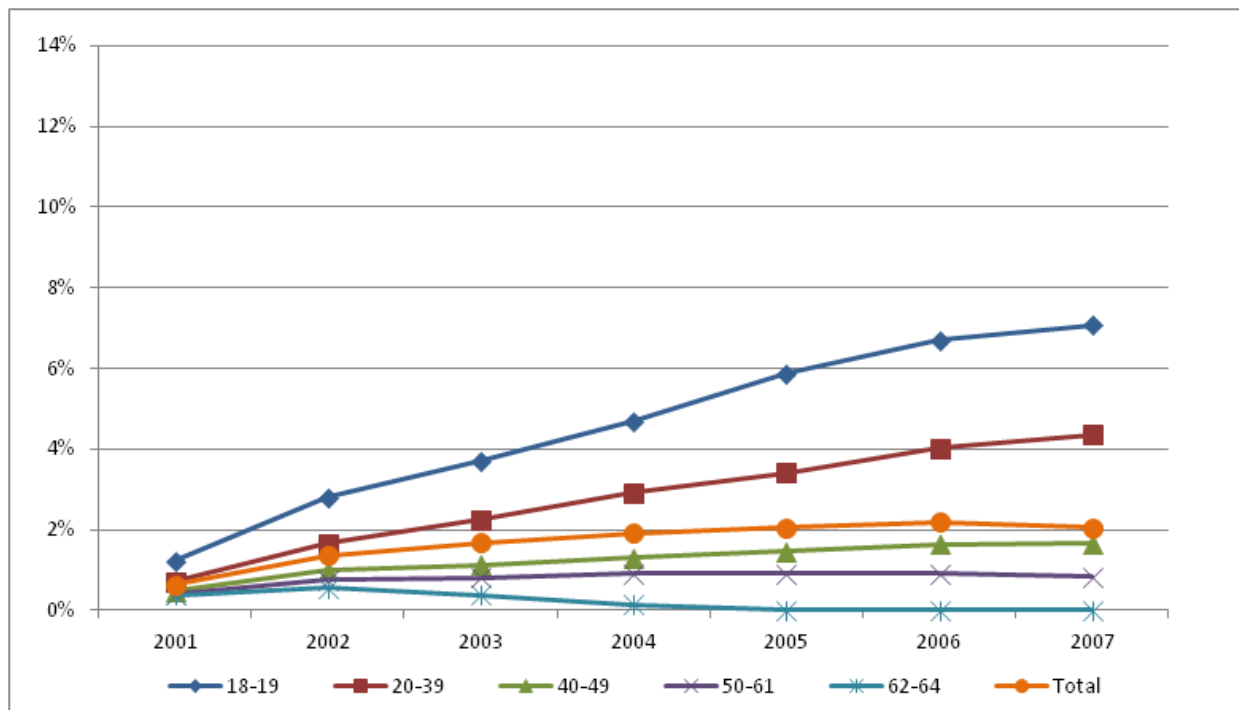
Exhibit V.5. Annual Percentage in SSI NSTW for at Least One Month for the 2001 SSI Award Cohort, by Age at Award, 2001–2007



Note: Based on analysis of SSI beneficiary records in the 2008 TRF.

Many SSI beneficiaries who were in SSI NSTW in at least one month were receiving DI benefits during those months. This is illustrated by comparing the series in Exhibit V.6, which show annual percentages of beneficiaries who were in SSI NSTW in at least one month in a given year and not in DI current pay status, to those in Exhibit V.5. The comparison implies that more than half of all beneficiaries who were in SSI NSTW in at least one month in a given year were also receiving DI benefits during those months. For example, while 4.6 percent of beneficiaries in the whole 2001 cohort were in SSI NSTW in at least one month in 2006, only 47 percent of these beneficiaries (constituting 2.2 percent of the cohort) were not receiving DI benefits in each of those months.

Exhibit V.6. Annual Percentage in SSI NSTW and Not in DI Current Pay for at Least One Month for the 2001 SSI Award Cohort, by Age at Award, 2001–2007



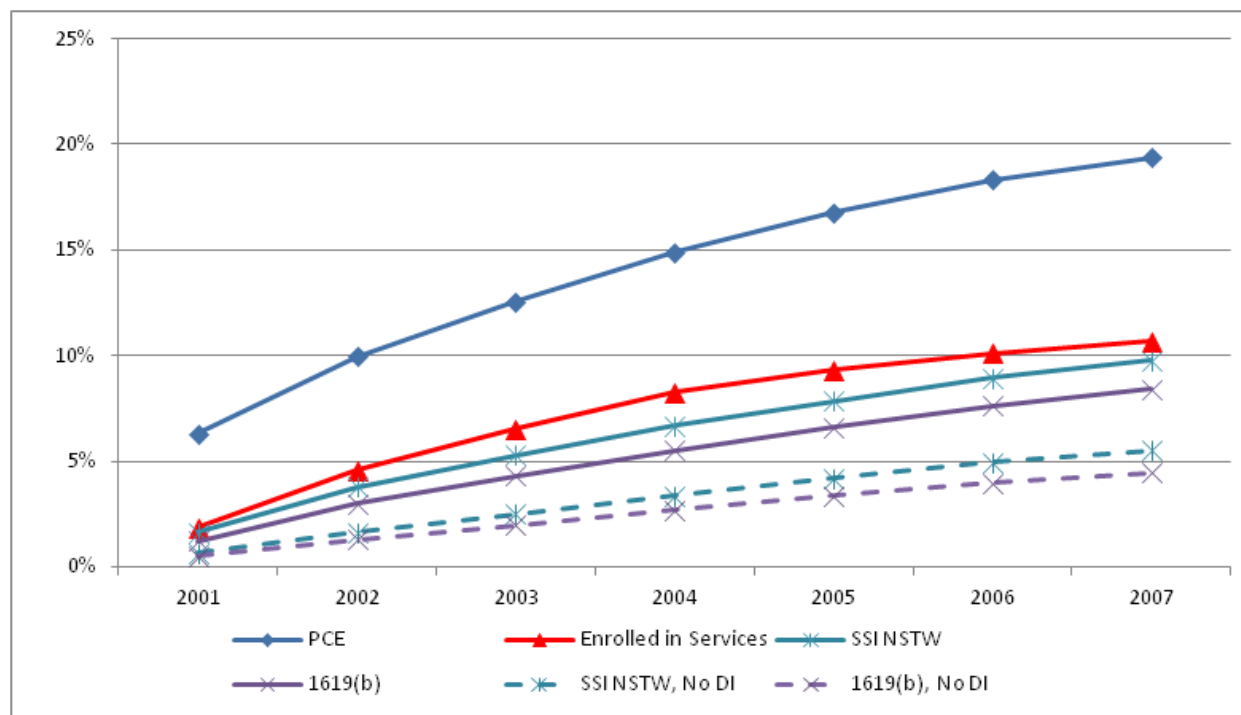
Note: Based on analysis of SSI beneficiary records in the 2008 TRF.

3. Cumulative Use of Work Incentives

Exhibit V.7 presents cumulative percentages for PCE, 1619(b), at least one SSI NSTW month, and enrollment in employment services for the 2001 cohort. Additional dashed lines show the cumulative percentages achieving 1619(b) and SSI NSTW and also not receiving DI payments. By the end of 2007, in at least one month, 19.4 percent of beneficiaries in the 2001 cohort had achieved PCE, 9.8 percent had been in SSI NSTW, and 8.4 percent had been in 1619(b). In addition, 5.5 percent of beneficiaries in the 1996 cohort had been in SSI NSTW and were not receiving DI benefits in at least one month (constituting 56.4 percent of all beneficiaries achieving SSI NSTW), and 4.5 percent had been in 1619(b) and were not receiving DI benefits in at least one month

(constituting 53.1 percent of all beneficiaries achieving 1619[b]). During the same period, 10.7 percent of beneficiaries in the 2001 cohort had enrolled for services in at least one month.⁴⁴

Exhibit V.7. Cumulative Longitudinal Work-Incentive Statistics for the 2001 SSI Award Cohort, 2001–2007



Note: Based on analysis of SSI beneficiary records in the 2008 TRF.

4. Cumulative Years in SSI NSTW

The number of months in which beneficiaries in the 2001 cohort had forgone their SSI benefit payments completely for work includes 1619(b) months plus any other months that are SSI NSTW months. Exhibit V.8 shows the cumulative number of SSI NSTW years in which all 2001 cohort awardees were in SSI NSTW per thousand beneficiaries—similar to Exhibit IV.8 for 1619(b) years per thousand beneficiaries in the 1996 cohort. As of December 2007, the 2001 cohort had accumulated 164 SSI NSTW years per thousand beneficiaries—less than two months per beneficiary over 6+ years and 2.5 percent of all possible months.⁴⁵

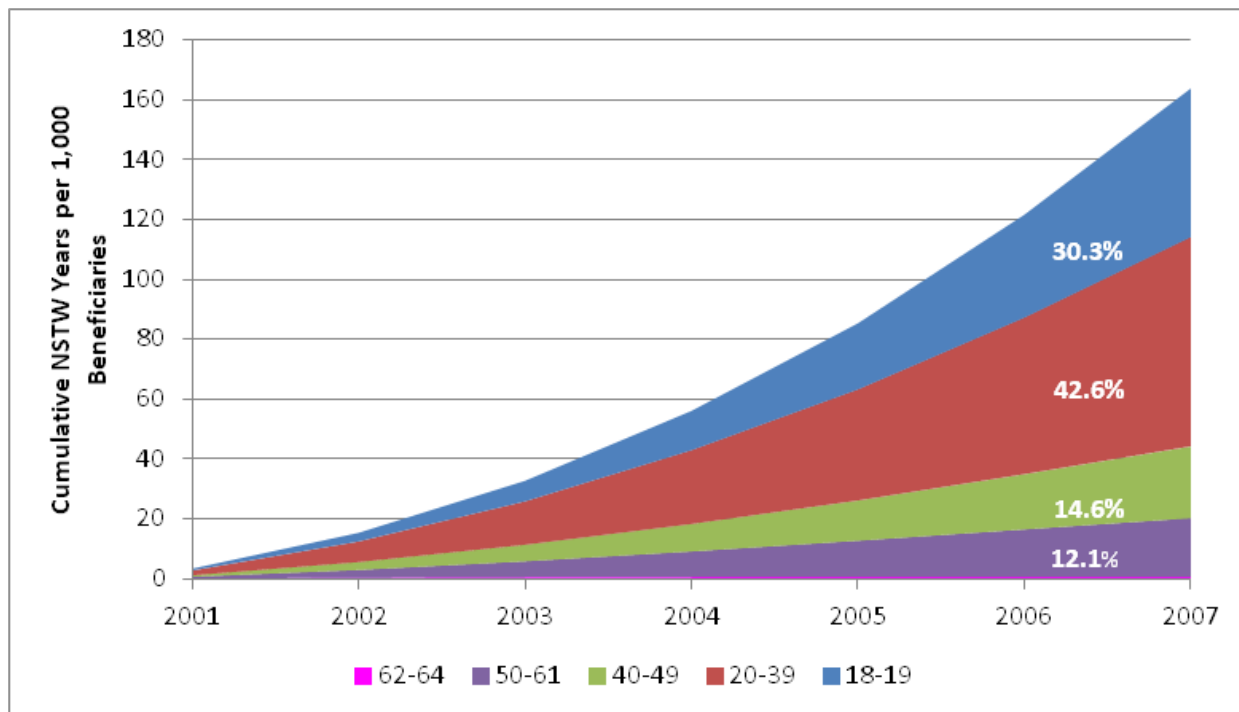
Just as with 1619(b), the two youngest age groups accounted for a large majority of cumulative SSI NSTW years—about 73 percent as of 2007. Those ages 20–39 at award contributed the largest share of SSI NSTW years (42.6 percent) while accounting for less than 27 percent of the 2001 cohort. The youngest group contributed 30.3 percent of SSI NSTW years and accounted for less

⁴⁴ See Appendix Exhibit A.5 for cumulative work-incentive statistics for the 2001 cohort by age.

⁴⁵ The number of months per beneficiary spent in NSTW is $(164/1,000) \times 12 = 1.97$ months. If we assume that, on average, members of the 2001 cohort spent 6 months on the rolls in 2001, then the percentage of all possible months spent in NSTW is $164 / (6.5 \times 1,000) = 2.5$ percent.

than 17 percent of the cohort. Only 26.8 percent of SSI NSTW years were accounted for by those ages 40–49 or 50–61 at award, even though these two groups accounted for almost 50 percent of all beneficiaries in the cohort. The contribution of the oldest age group was so small that it is not clearly visible in the exhibit.

Exhibit V.8. Cumulative SSI NSTW Years per 1,000 Beneficiaries in the 2001 SSI Award Cohort, by Age at Award, 2001–2007

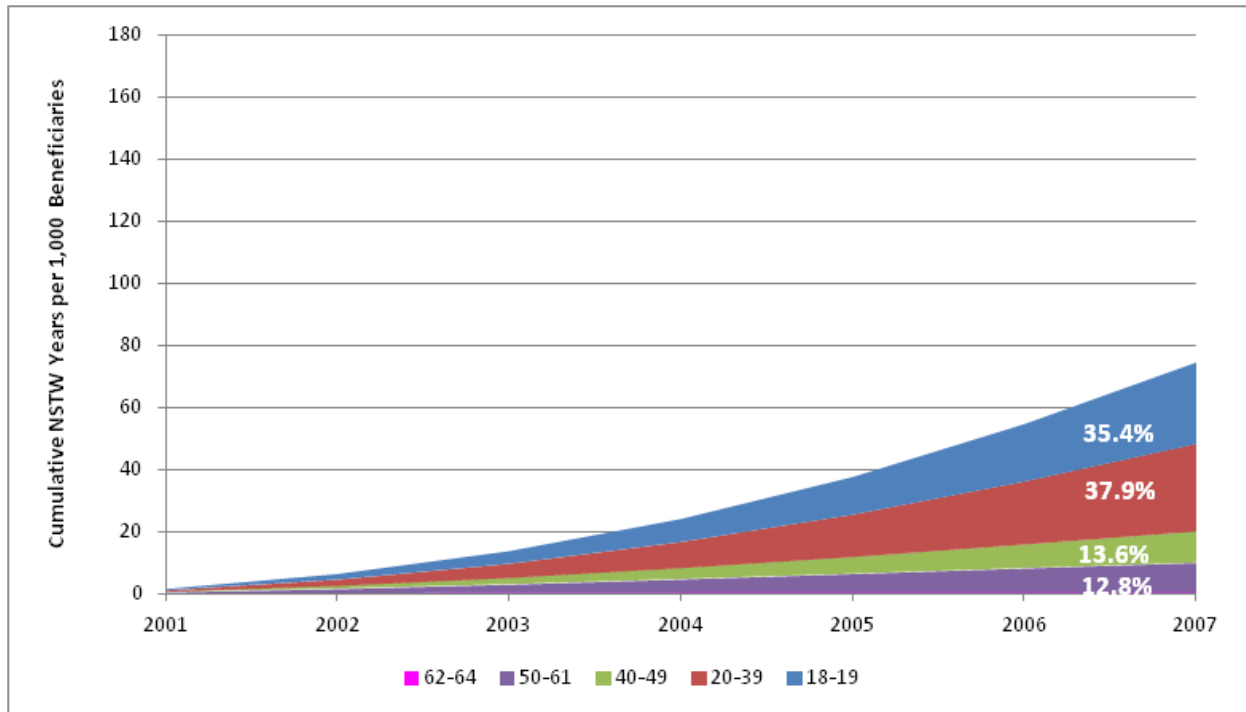


Note: Based on analysis of SSI beneficiary records in the 2008 TRF. The contribution of the oldest age group was so small that it is not clearly visible in the exhibit.

Exhibit V.9 shows the cumulative number of SSI NSTW years in which 2001 cohort awardees were in SSI NSTW per thousand excluding months in which beneficiaries were in DI current pay status. The number of SSI NSTW months exclusive of months in DI current pay was only 75—less than one month per beneficiary over this time period. Overall, 54.4 percent of SSI NSTW months were months in which beneficiaries were receiving DI payments. As with 1619(b) years (See Exhibit IV.9), the shares contributed by the two youngest age groups imply that a higher portion of the 20–39 group than of the 18–19 group was on the DI rolls when in SSI NSTW status.

This completes the presentation of the work-incentive series for the earliest cohorts for which they are available. In the next chapter, we consider how these series have evolved over more recent cohorts.

Exhibit V.9. Cumulative SSI NSTW Years When Not in DI Current Pay Status per 1,000 Beneficiaries in the 2001 SSI Award Cohort, by Age at Award, 2001–2007



Note: Based on analysis of SSI beneficiary records in the 2008 TRF. The contribution of the oldest age group was so small that it is not clearly visible in the exhibit.

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VI. CROSS-COHORT COMPARISONS

In this chapter, we compare selected statistics across annual award cohorts from 1996 to 2006. The primary purpose is to assess how more recent cohorts have fared relative to earlier ones and whether changes in SSA policies, policies external to SSA, or the economic environment have contributed to any cross-cohort differences observed.

All of the statistics are age-sex weighted to control for the effects of changes in the age-sex distribution of awardees across cohorts. Each exhibit in this chapter includes comparisons across up to 11 cohorts, with the calendar year on the horizontal axis, outcome measure on the vertical axis, and each series corresponding to a cohort.⁴⁶ The series for the different cohorts can be identified by the starting point of the series (e.g., series starting in 1996 are for the weighted 1996 cohort) as well as by the key. Moving from left to right, as the cohort becomes more recent, there are fewer years of data to show.

To facilitate cross-cohort comparison of outcomes for the same post-award year without overcrowding the exhibit, in exhibits depicting cumulative statistics we connect the points representing the second-year values for each cohort (corresponding to the first full post-award year) and then repeat this for the fourth-year values (corresponding to the third full post-award year), thus creating two cross-cohort lines in each exhibit. In the absence of any change in SSA policies, policies external to SSA, or the economic environment, we would expect these cross-cohort lines to be almost horizontal. We will discuss the potential causes for some of the observed changes. It is also possible that changes in the composition of personal characteristics, such as impairment type (but not age and sex, for which we already have adjusted the series), affect the shape of these lines, but such changes seem likely to occur gradually, relative to changes in policy or the economic environment.

As in Chapter IV, because of the importance of interactions with the DI program to the interpretation of the results regarding 1619(b) and SSI NSTW (nonpayment status following initial suspension or termination for work), we first discuss the extent to which each SSI award cohort also received DI benefits. More specifically, we examine how the percentage of each SSI award cohort that received a DI benefit at least once changed from SSI award through 2007, and we consider why the pattern for this series changed across cohorts.

A. Cumulative Percentage in DI Current Pay Status

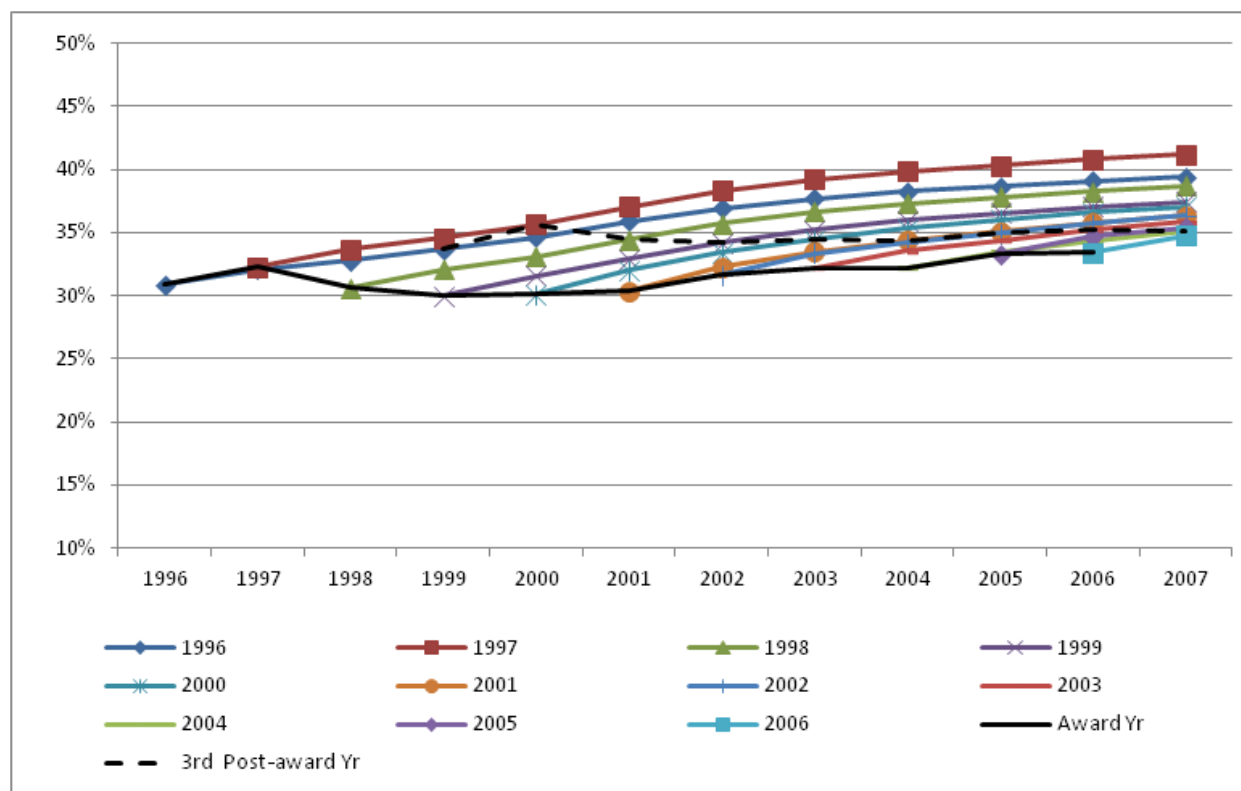
First, we examine the cumulative percentages of SSI award cohort members receiving DI benefits in at least one month between SSI award and December 2007. We consider all 11 cohorts in this study, adjusted for difference in sex-age composition (Exhibit VI.1).⁴⁷ For all cohorts, the percentage of SSI beneficiaries who received a DI payment in at least one month of their award year is at least 30 percent. The award-year percentage for the 1997 cohort is exceptionally high relative to

⁴⁶ There are fewer cohorts for employment-service enrollment and SSI NSTW statistics because data on these outcomes are not available for all cohorts.

⁴⁷ In Exhibits VI.1 to VI.3, we include a cross-cohort line connecting the points representing the award-year values for each cohort instead of the second-year values emphasized in later exhibits.

the corresponding values for adjacent cohorts. This relatively high value might be due to the tightening of SSI eligibility rules following PRWORA (concerning age-18 redeterminations, eligibility if drug abuse or alcoholism is material to disability, and citizenship status). These likely had a disproportionately negative effect on SSI-only awards. The economy also might have played a role. However, without more information on trends before 1996, it is difficult to attribute this change to any specific policy, economic, or demographic factors.

Exhibit VI.1. Cumulative Percentage of Beneficiaries in DI Current Pay, by SSI Award Cohort, 1996–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 Ticket Research File (TRF). Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

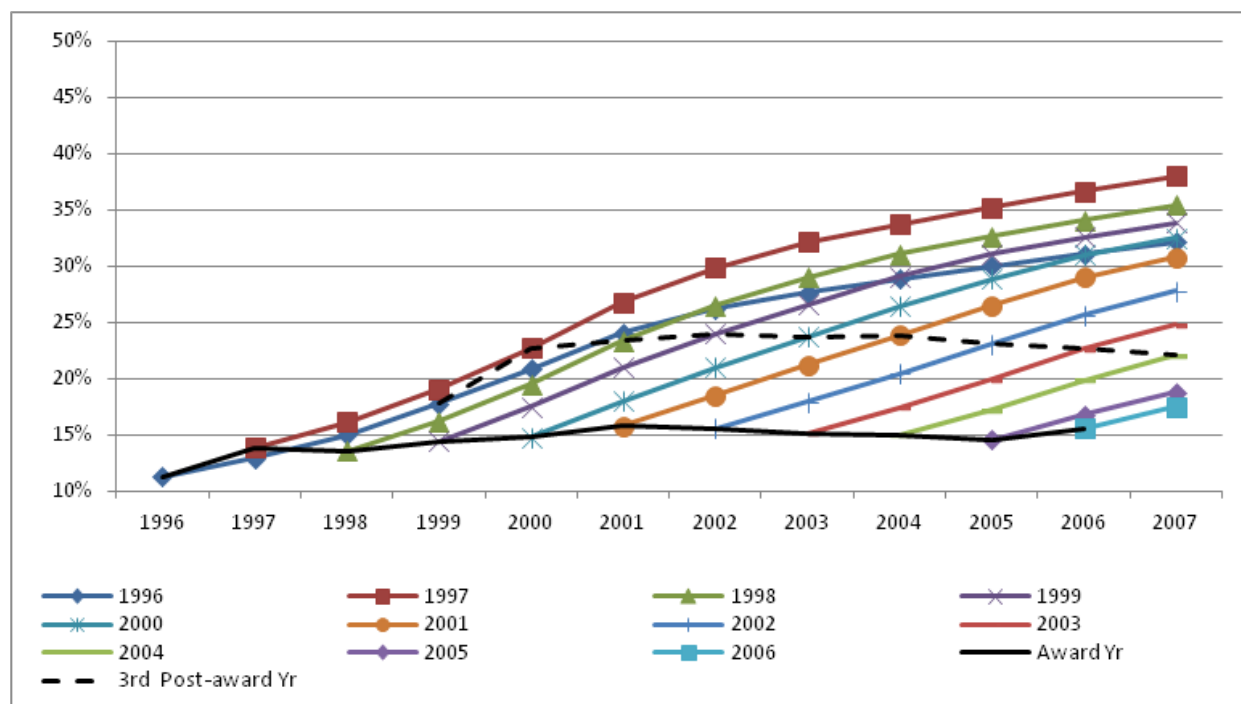
From 1998 through 2001, the award-year percentage in DI (the solid line) was very close to 30 percent in each year. The percentage increased to 31.6 percent for the 2002 cohort and continued to rise gradually after that, reaching 33.4 percent for the 2006 cohort.

Exhibit VI.2 presents cumulative DI percentages for SSI awardees ages 18 to 19 at award. The award-year pattern differs from that in Exhibit VI.1 for all awardees. From this exhibit, it appears that the PRWORA changes permanently shifted the first-year percentage upward. The value increased from 11.3 percent for the 1996 cohort to 13.9 percent for the 1997 cohort. The first-year percentage continued to rise through the 2001 cohort, reaching 15.5 percent. After that, the first-year percentage falls slightly but remains at approximately 15 percent in every year through 2005.

The gap between the cumulative DI percentage for the 1996 cohort and the corresponding percentage for the later cohorts widened in the years following award. This might reflect an effect of PRWORA on the percentage of SSI awardees ages 18 to 19 who are former SSI child beneficiaries. SSI child beneficiaries are likely to come from less socioeconomically advantaged backgrounds than

those who first enter SSI at age 18 or 19; the latter likely were ineligible for SSI as children because of their parents' income and other resources. PRWORA, because of the introduction of age-18 redeterminations, likely reduced the percentage of former SSI children among those who became adult SSI beneficiaries at ages 18 or 19 in 1997 or later years. Such a shift could explain why the cumulative percentage receiving DI benefits rose more rapidly for cohorts after the 1996 cohort; if awardees of this age in later cohorts came from less disadvantaged backgrounds, on average, than in those in the 1996 cohort, they likely had better opportunities to work their way onto DI. It is also possible that those from more advantaged backgrounds were more likely to become DAC beneficiaries during the observation period than those who were child SSI beneficiaries.⁴⁸

Exhibit VI.2. Cumulative Percentage in DI Current Pay Among SSI Awardees Ages 18–19 at Award, by SSI Award Cohort, 1996–2007



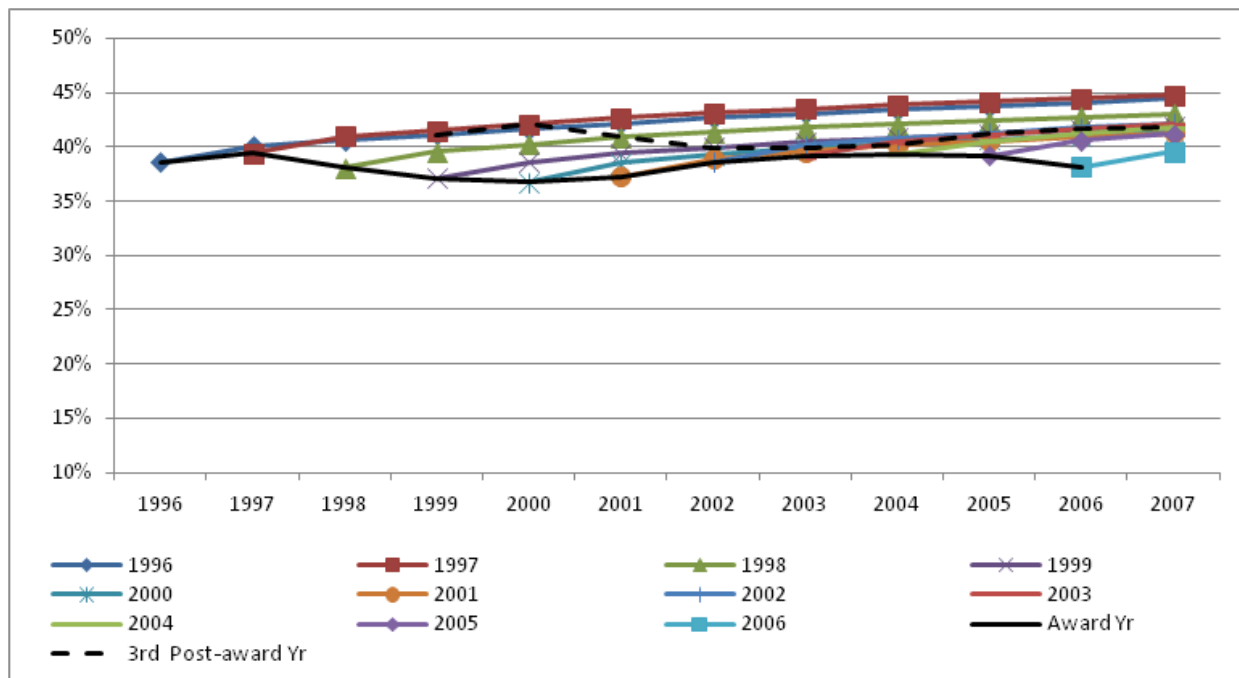
Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

Exhibit VI.3 presents cumulative DI percentages for SSI awardees ages 20 to 39 at award. Compared to the younger age group, awardees in this age group were substantially more likely to receive DI benefits in their award year and less likely to work their way onto DI as years passed. There is a smaller shift between the 1996 and 1997 cohorts for this age group compared to the shift for the 18-to-19 age group, possibly reflecting differences in the effects of PRWORA changes. Perhaps because of that, there also appears to be evidence of a business cycle effect. The decrease in the first-year percentage on DI between 1997 and 2000 is consistent with fewer existing DI beneficiaries receiving SSI awards during that period's economic expansion, while the increase in the

⁴⁸ Supplemental analyses (not shown) indeed indicate a significant increase from the 1996 cohort to the 1997 cohort in the percentage of SSI cohort members ages 18 to 19 at award who were DAC at the time of award or became DAC by the end of the period.

percentage from 2000 through 2003 might reflect increased DI entry during the recession, especially among those who eventually qualify for SSI after spending down their resources.

Exhibit VI.3. Cumulative Percentage in DI Current Pay Among SSI Awardees Ages 20-39 at Award, by SSI Award Cohort, 1996-2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

B. Cumulative SSI Program Statistics for SSI Cohorts 1996 Through 2006

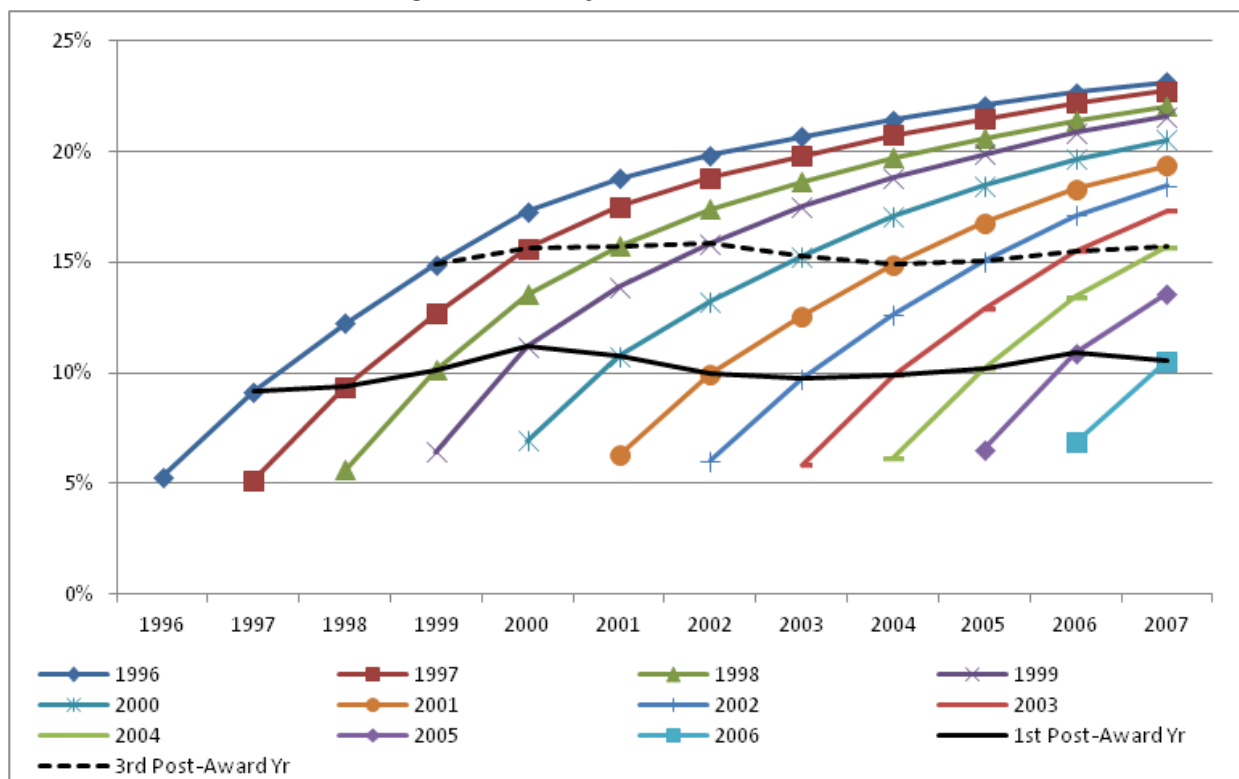
In Exhibit VI.4, we compare the cumulative percentage of beneficiaries achieving positive countable earnings (PCE) after award across cohorts. Looking at first-year values for PCE, we find a small but steady increase between the 1996 cohort and the 2000 cohort, followed by a drop for the 2001 cohort. Thereafter, the first-year PCE percentage kept decreasing through the 2003 cohort but started increasing again with the 2004 cohort. A closer examination shows that the increase between calendar years 1998 and 2000 was not associated only with cohorts in their year of award; the second-year values (the lower horizontal line) for the 1997, 1998, and 1999 cohorts were increasing steadily during this time, as were the third-year values for the 1996, 1997, and 1998 cohorts. We attribute this increase primarily to the economic boom during the late 1990s.

The drop in first-year values in 2001 also is seen when comparing second-year values (the horizontal line) between the 1999 and 2000 cohorts; it is not seen for earlier cohorts, however. Thus, beneficiaries in the 2000 and 2001 cohorts, who joined the SSI rolls just before or during the economic recession of 2001, eventually were behind earlier cohorts in terms of attaining PCE, as seen in the fourth-year line. Later cohorts fared better.

Compared to the results for PCE, the cross-cohort statistics based on MEF data presented in Chapter VII show that the cumulative percentage employed, as defined for the purpose of this study and keeping years since award fixed, is somewhat higher than the cumulative percentage achieving

PCE, and falls between the 1996 cohort and the 2000 cohort (see Exhibit VII.6). We discuss possible explanations for this unexpected result in that chapter.

Exhibit VI.4. Cumulative Percentage with PCE, by SSI Award Cohort, 1996–2007

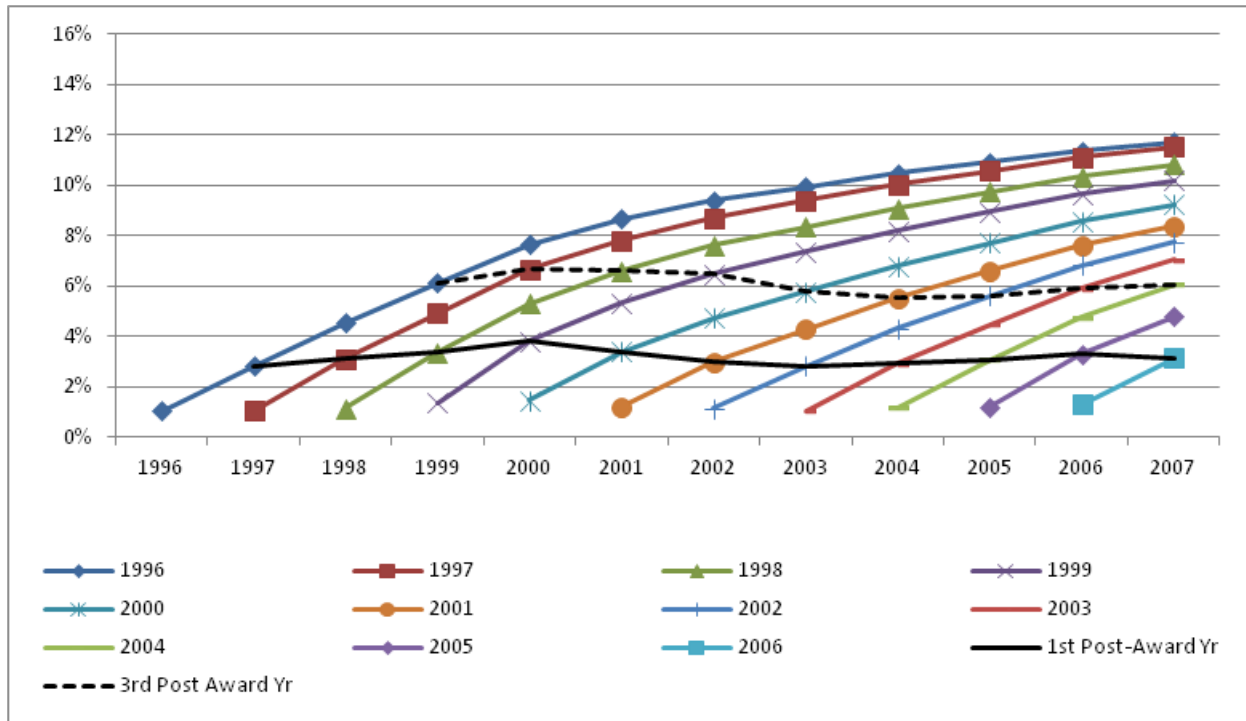


Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

Exhibit VI.5 compares the cumulative percentage of awardees achieving 1619(b) status across the 11 study cohorts. The longitudinal patterns seen here largely resemble those seen in Exhibit VI.4 for PCE, indicating cross-cohort improvements between calendar years 1998 and 2000 and cross-cohort declines for the more recent cohorts following the recession of 2001. A cross-cohort comparison of the cumulative percentage achieving 1619(b) and also not receiving DI payments (Exhibit VI.6) reveals a similar longitudinal pattern, although at substantially lower levels.

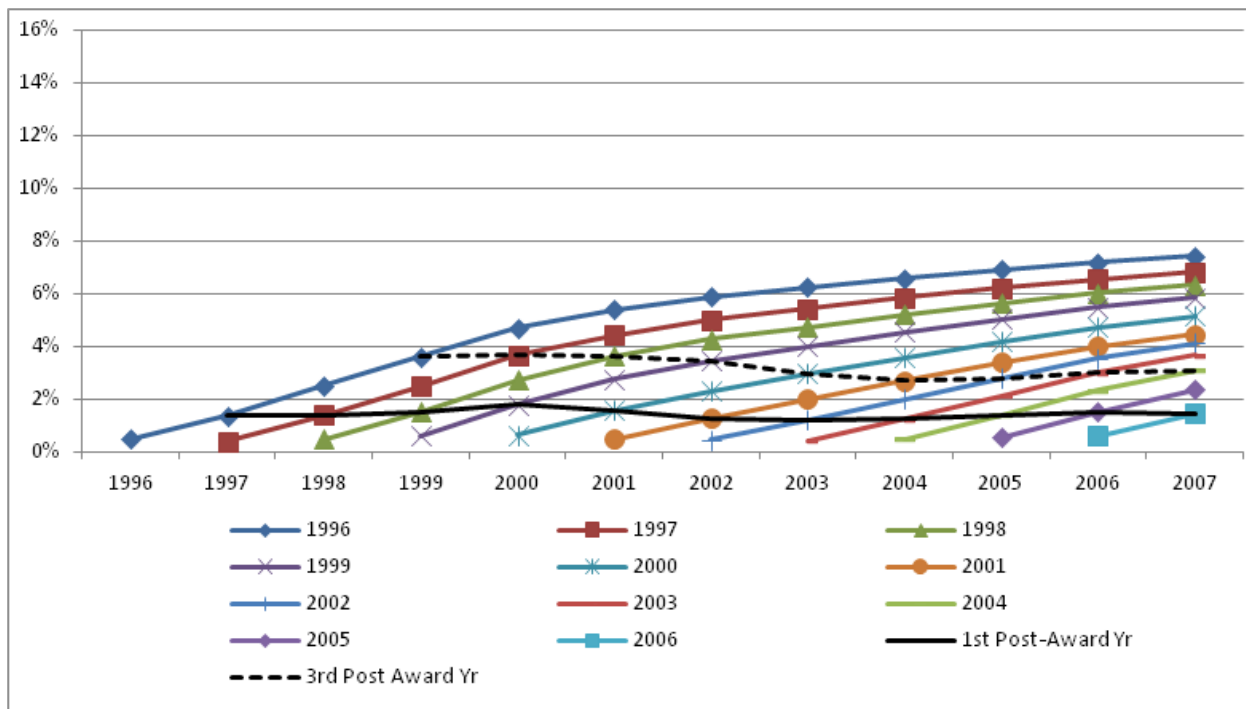
The cumulative percentage in either 1619(a) or 1619(b) (Exhibit VI.7) in the first post-award year increased by less between calendar years 1998 and 2000 than the increase in the cumulative percentage in 1619(b) in the first post-award year. It then fell even more through the 2003 cohort, and the 2007 cohort's value in the year after award remained well below the corresponding values for the earliest cohorts.

Exhibit VI.5. Cumulative Percentage of Beneficiaries in 1619(b), by SSI Award Cohort, 1996–2007



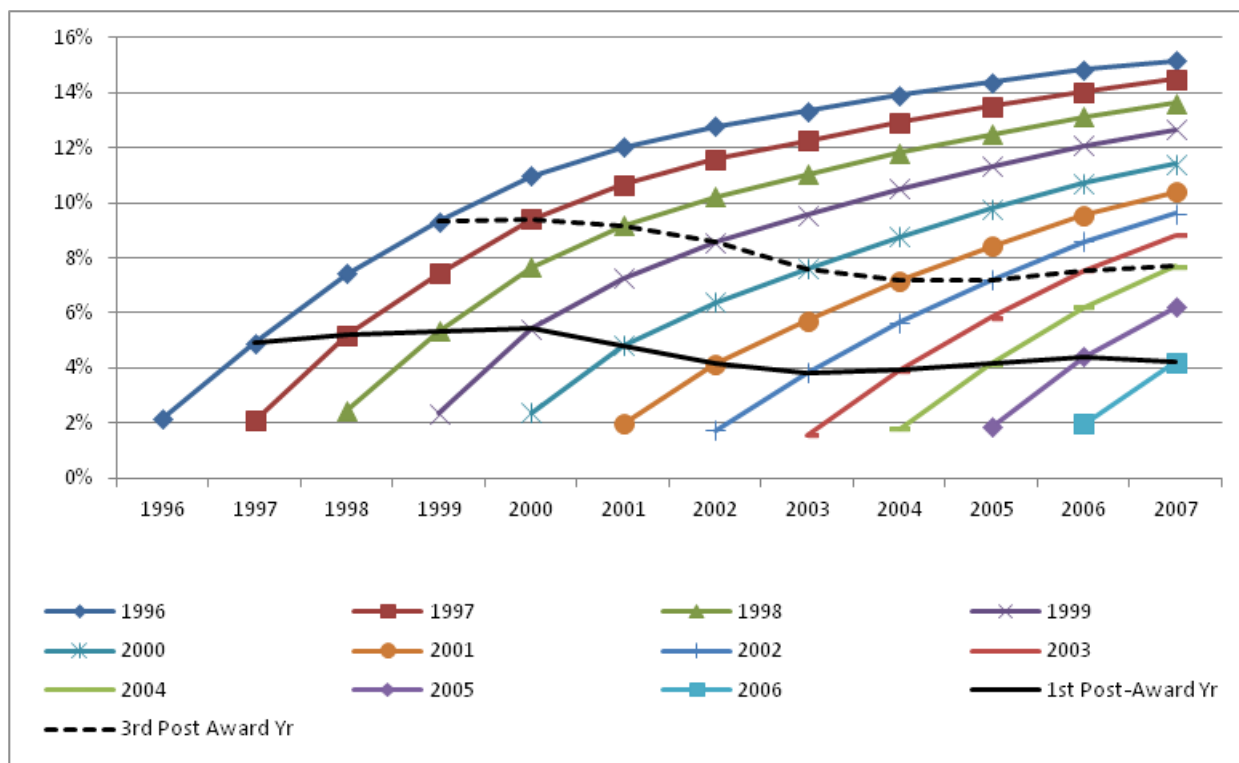
Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

Exhibit VI.6. Cumulative Percentage of Beneficiaries in 1619(b) and Not in DI Current Pay, by SSI Award Cohort, 1996–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

Exhibit VI.7. Cumulative Percentage of Beneficiaries in 1619(a) or 1619(b), by SSI Award Cohort, 1996–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

We attribute the difference between the two series (cumulative percentage in 1619[b] and cumulative percentage in either 1619[a] or 1619[b]) in the early years to the substantial change in the nonblind SGA, which increased from \$500 to \$700 in mid-1999.⁴⁹ As a result, numerous months that would have been counted as 1619(a) months under the \$500 amount were not counted as 1619(a) months when SGA increased to \$700. Because the \$700 amount was first applied during the second half of 1999 and then applied for all of 2000, the decrease in 1619(a) months is spread between the 1999 and 2000 calendar years.

The change in the nonblind SGA was fully in place by 2000, apart from the increases caused by indexation to the AWI thereafter. Hence, it seems likely that some other factor contributed to the sharper decline in the percentage in 1619(a) or (b) after 2000. One possibility is that the trend for the percentage in 1619(b) status reflects SSA's efforts to identify SSI beneficiaries also eligible for DI during this period—the SDW cases described in Chapter III. The processing of this workload might have increased the number of SSI beneficiaries in 1619(b) status among those who had earnings below SGA—not because their earnings increased but because their SSI benefits fell to zero due to the DI increase. DI awards because of SDW processing presumably would have less affect on the percentage in 1619(a) because those engaged in SGA (as required for 1619(a) status) would only be eligible for a DI benefit if they became eligible before engaging in SGA and until they had used up

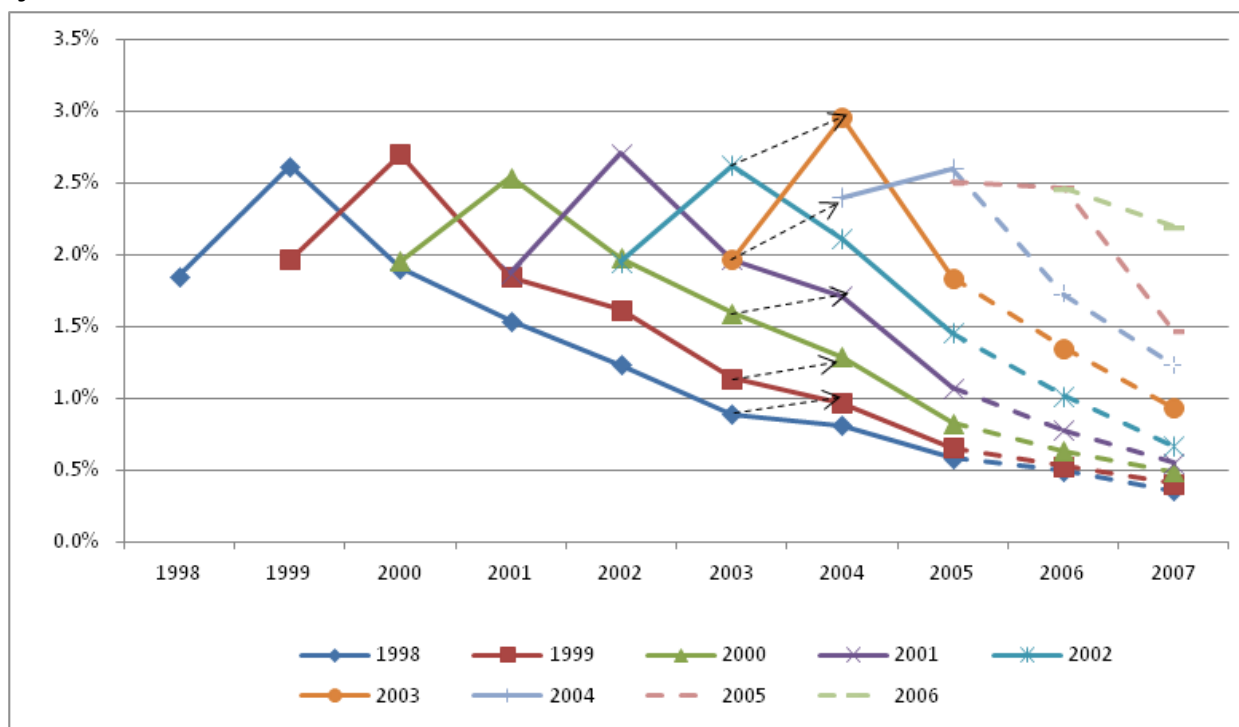
⁴⁹ The nonblind SGA was increased from \$500 to \$700 in the second half of 1999 and remained at \$700 for all of 2000. Since then, it has been adjusted according to increases in the national AWI.

their TWP grace period months. Another possible explanation of the difference in trends during this period is that the adverse impact of the weak economy was greater for those who would have achieved only 1619(a) status in a stronger economy than for those who would have attained 1619(b) status.

C. Employment-Service Enrollment for Cohorts 1998 Through 2006

Exhibit VI.8 shows the annual percentage of beneficiaries enrolling in employment services for the first time after award, starting with the 1998 cohort—the first cohort with complete service enrollment data. For all cohorts prior to the 2004 cohort, there is a noticeable pattern of the highest first enrollment percentage occurring in the first post-award year, after which annual first-enrollment rates steadily decreased. Between calendar years 2003 and 2004, there was a substantial cross-cohort increase in first enrollment rates in both the award year (for the 2003 and 2004 cohorts) and the first post-award year (for the 2002 and 2003 cohorts), as illustrated by the top two dashed arrows between 2003 and 2004 shown in the exhibit. The lower dashed arrows illustrate that first-time enrollment also increased across all pairs of earlier cohorts in the same years, but by lesser amounts.

Exhibit VI.8. Annual Percentage of Beneficiaries Enrolling in Employment Services for the First Time, by SSI Award Cohort, 1998–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF matched to RSA-911 data. The lines connecting points from 2005 to 2007 reflect our expectation that actual values for later years are likely somewhat higher than those shown because some VR cases had not closed by the end of fiscal year 2008, the last fiscal year for which we had RSA data. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

It seems likely that this increase reflects the TTW rollout. As mentioned earlier, the rollout started in 2002, but TTW was not available in all states until 2004. Furthermore, this finding is consistent with previous research (Stapleton et al. 2008; Thornton et al. 2007) demonstrating that TTW had a positive impact on service enrollment for both SSI and DI beneficiaries. The statistics after 2004 might be deceptive because of incomplete reporting of enrollment in the available RSA-911 closure data.⁵⁰ The analysis here suggests that the immediate impact of TTW on enrollment was largest for those in their first or second year on the rolls. This might be due in part to more members of earlier cohorts being enrolled for services before they received their tickets.

D. Cumulative NSTW Statistics for SSI Cohorts 2001 Through 2007

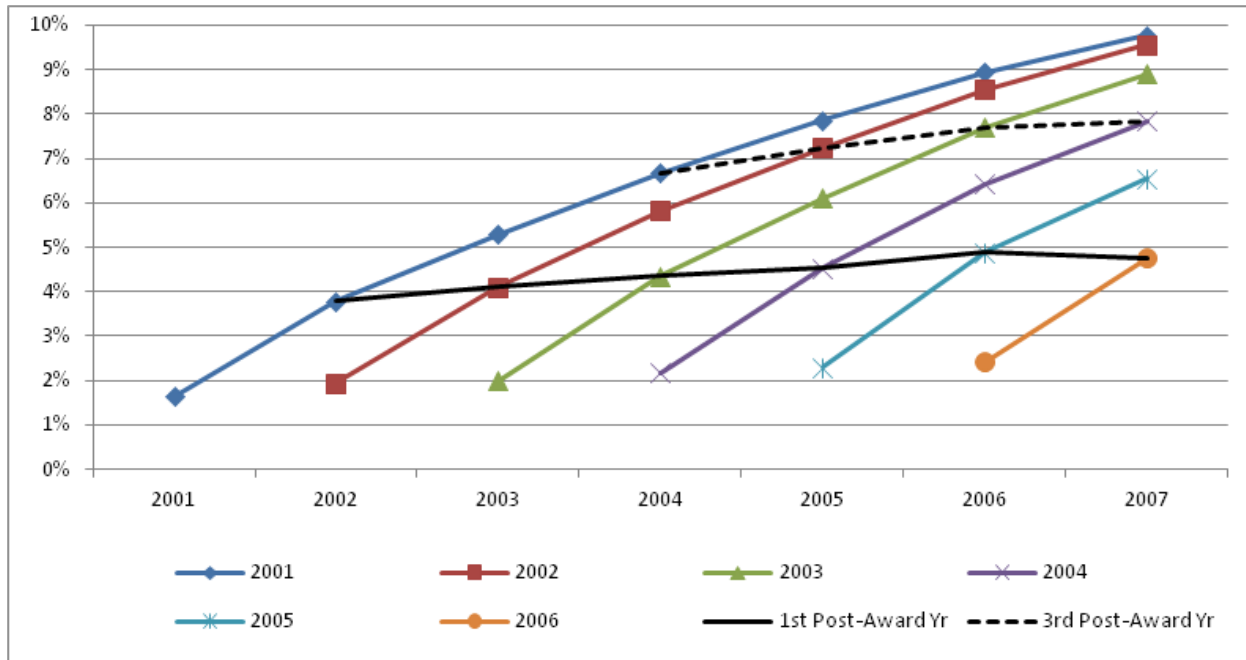
Exhibit VI.9 compares the cumulative percentage of all SSI awardees having at least one month in SSI nonpayment status following initial suspension or termination for work (SSI NSTW) across the six study cohorts for which this measure is available. There is a notable cross-cohort increase in the percentage achieving SSI NSTW within a given number of years. The cross-cohort increase for the 2001–2003 cohorts in the percentage achieving SSI NSTW in the year of award seems surprising, given the economic recession during that period, and suggests that some other factor or factors were involved. One possibility is that SDW processing increased the number of working SSI beneficiaries in SSI NSTW because of the effect of the DI benefit award on the SSI benefit.

An additional possibility, however, is that the cross-cohort increase in the percentage achieving SSI NSTW is due to cross-cohort differences in the proportion of awardees receiving DI benefits before they were awarded SSI benefits for the first time. Following the economic recession of 2001, more DI-only beneficiaries may have spent down their assets and thus become SSI-eligible, compared to pre-recession cohorts. Indeed, as shown in Exhibit III.1 (and also reflected in Exhibit VI.1), the number of SSI awardees with previous DI experience increased steadily from the 2001 cohort to the 2006 cohort—this was not the case for other groups of awardees. To the extent that these awardees were more likely to have had SSI NSTW months than those awarded SSI before DI (or awarded both simultaneously), any increase in the percentage of awardees in this group would increase the percentage of the cohort achieving SSI NSTW, other factors being constant.

Exhibit VI.10 compares the cumulative percentage of all SSI awardees having at least one SSI NSTW month while not in DI current pay status across the six study cohorts (adjusted for changes in the sex-age composition of the cohorts). The cross-cohort increase in the percentage achieving SSI NSTW while not in DI current pay, holding years since award constant, was notably weaker than the respective increase in the percentage achieving SSI NSTW overall. The difference in trends between these two statistics implies that most of the observed cross-cohort increase in SSI NSTW rates was among SSI beneficiaries who were concurrent DI beneficiaries and remained on DI when SSI payments ceased, or whose SSI benefits were ceased when they attained disability-insured status and became eligible for DI.

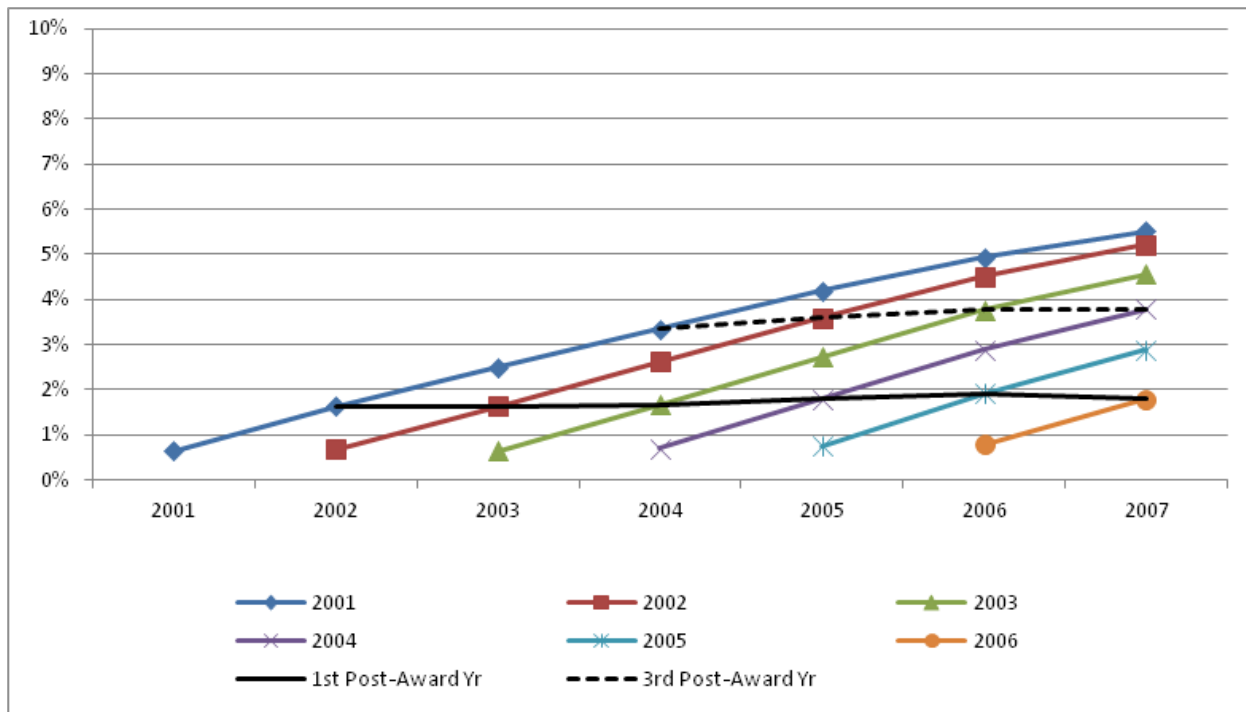
⁵⁰ The “jump” in first-time enrollment between the year of award and the first year after award observed for cohorts 1998 to 2003 is at least partly explained by the fact that most beneficiaries have only part of the award year to enroll in services after receiving their award. The disappearance of this jump, starting with the 2004 cohort, might reflect the fact that the 2008 RSA-911 data are an incomplete source on enrollment in calendar years more recent than 2004.

Exhibit VI.9. Cumulative Percentage in SSI NSTW for at Least One Month, by SSI Award Cohort, 2001–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

Exhibit VI.10. Cumulative Percentage of Beneficiaries in SSI NSTW and Not in DI Current Pay for at Least One Month, by SSI Award Cohort, 2001–2007

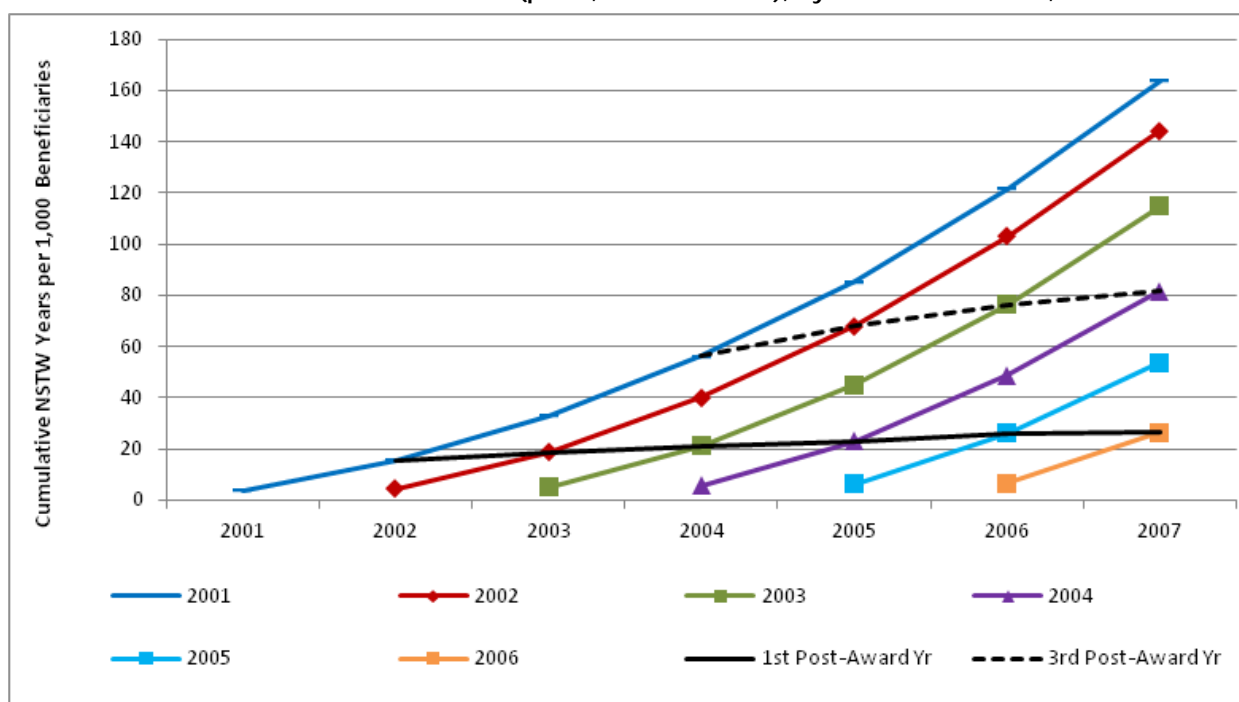


Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

Whatever the cause of the differences in the trends for the two series, the series for the percentage achieving SSI NSTW without receipt of DI is a better gauge of the extent to which SSI beneficiaries are fully giving up their benefits because of work than the series for the percentage achieving SSI NSTW. The most recent cohorts achieved this result just slightly more often by the end of their first post-award year than those in the first cohorts for which we can observe this outcome.

We also compare cumulative SSI NSTW years across cohorts, beginning with the 2001 cohort (Exhibit VI.11). Since 2001, each successive cohort has had more SSI NSTW years per 1,000 beneficiaries, holding the years since award constant. As of the third year since award, 56 years of SSI benefits had been suspended or terminated for every 1,000 beneficiaries in the 2001 cohort, compared to 81 years (45 percent higher) for the 2004 cohort. This trend is consistent with the trend for those with at least one SSI NSTW month (Exhibit VI.9).

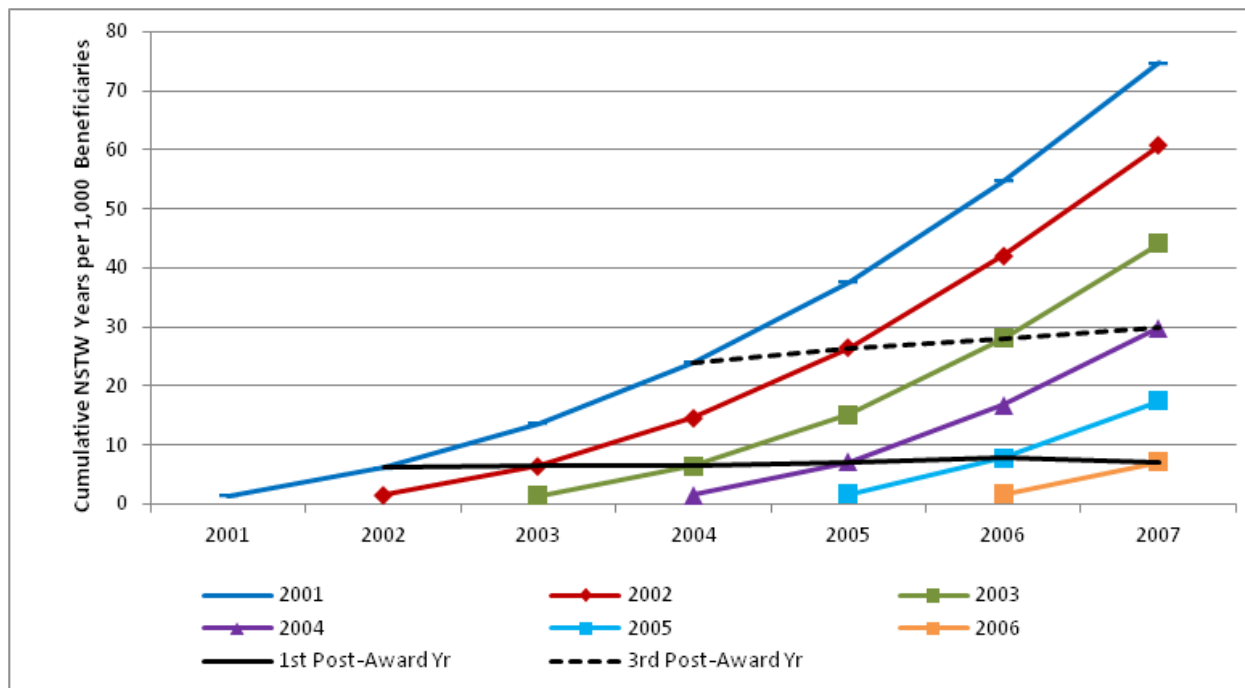
Exhibit VI.11. Cumulative SSI NSTW Years (per 1,000 Awardees), by SSI Award Cohort, 2001–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

Exhibit VI.12 compares cumulative SSI NSTW years while not in DI current pay across cohorts. Cross-cohort growth in this figure, holding the number of years since award constant, was lower than cross-cohort growth in all cumulative SSI NSTW years. Once more, SSI NSTW years while not in DI current pay per 1,000 seems the better gauge of the extent to which awardees completely forgo benefits because of work, compared to all SSI NSTW years. The steady gain by successive cohorts as of the third post-award year is notable, from 24 years for the 2001 cohort (in 2004) to 30 for the 2004 cohort (in 2007). Potential explanations of this growth include the economic recovery and the TTW rollout. Changes in the composition of the cohorts other than changes in age-sex composition also might contribute to the trend, but we have not examined this possibility further.

Exhibit VI.12. Cumulative SSI NSTW Years When Not in DI Current Pay (per 1,000 Awardees), by SSI Award Cohort, 2001–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort.

Up to this point, we have examined statistics based on SSA administrative records only. It is evident from the SSI NSTW statistics, however, that some SSI awardees work and eventually leave the SSI rolls entirely, at which point their earnings are not recorded in the TRF. We present further evidence of their employment success in the next chapter based on earnings reports to the IRS, which include information on earnings for those who have left the SSI rolls as well as for those who have not.

VII. EMPLOYMENT AND EARNINGS STATISTICS FROM THE MASTER EARNINGS FILE

The earnings data in the SSI administrative files are incomplete, as mentioned in Chapter IV, and statistics based on these data are therefore likely to understate employment and earnings. The SSI files contain countable earnings only for months in which the cohort member is actually on the rolls, and earnings disregards are not included in positive countable earnings (PCE). In addition, at least some earnings reported to the IRS are not reflected in the SSI records. However, the opposite might also be true: some earnings in the SSI records might not appear in the IRS data. In fact, as indicated previously, the annual percentage with PCE is substantially lower than the actual percentage employed, defined for the purpose of this study as annual earnings of at least \$1,000 in 2007 dollars.⁵¹ Hence, to complement the PCE statistics, we present employment and earnings statistics based on earnings data from the MEF that are recorded regardless of SSI status. Note that the MEF earnings include earnings for those who left the SSI rolls for any reason, including reasons other than work.

The employment and earnings statistics presented here start from the second post-award year for each cohort because, for some awardees, MEF earnings in the first two years include earnings for work performed before the beneficiary was on the SSI rolls. Thus, the series for the 1996 cohort start in 1998, and the last series in cross-cohort comparisons are for the 2005 cohort, showing the 2007 value for that cohort only.

A. Annual and Cumulative Employment

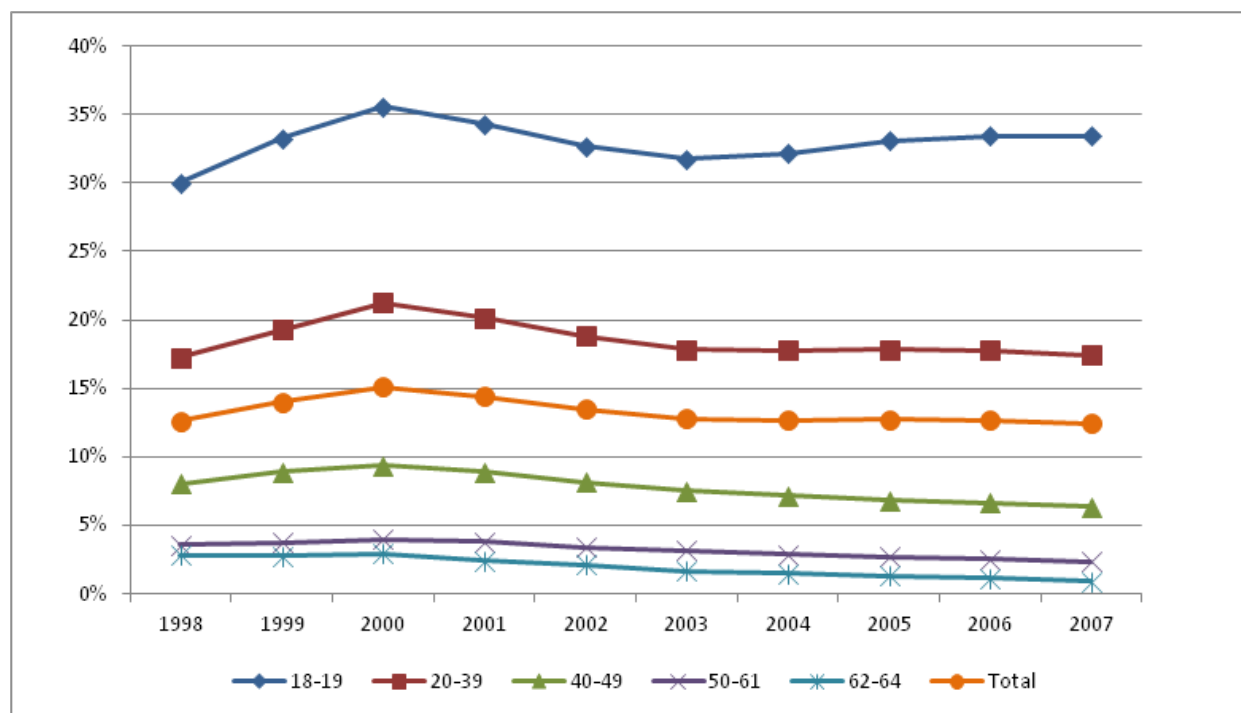
Exhibit VII.1 shows the percentage employed in a given year for the whole 1996 cohort and across the five age groups. The employment percentage for the cohort as a whole was highest (15.1 percent) in 2000, the fourth year after award. After that, the annual employment percentage gradually decreased to 12.4 percent in 2007 as beneficiaries aged and accumulated more time on the rolls. The decline seen in the annual percentage employed was notably less rapid than that seen for annual PCE (in Exhibit IV.3). This is expected, because earnings are recorded in the MEF for cohort members who have left the SSI rolls, whereas their PCE is not recorded in SSA records. Further, in each year that both were observed, the annual percentage with PCE was much lower than the annual percentage employed. In 1998, for instance, 8.1 percent of the cohort achieved PCE, whereas 12.6 percent were employed; the corresponding values for 2007 were 4.4 and 12.4 percent, respectively. The absolute differences might occur for any of the reasons previously mentioned.

As with PCE, the employment percentage for the youngest group was well above that for each of the other four groups in each year, reaching as high as 35.6 percent in the fourth year after

⁵¹ The minimum earnings disregard is \$65 per month, or \$780 per year; adding the \$20 income disregard (available in the absence of other income) increases the annual total to \$1,020. These disregards are not adjusted for inflation each year. They were just barely large enough on their own to result in no PCE for someone with \$1,000 MEF earnings in 2007. In earlier years, however, they might provide a more important explanation of the difference between the percentage employed and the percentage with PCE, as the nominal equivalent of \$1,000 in earnings in 2007 was lower. Other disregards (for instance IRWE and, for students, SEIE) likely help account for some of the difference as well.

award.⁵² Employment percentages for the four younger groups rose from the year of award through year four, but that of the oldest group did not. Notably, employment percentages started rising again between 2003 and 2007 for the youngest group, but not for the four older age groups. A possible explanation is that those in the youngest group initially were more likely to invest in their own human capital. Another possibility is that the economic expansion from 2003 to 2007 had differential effects by age at award.

Exhibit VII.1. Annual Percentage of the 1996 SSI Award Cohort with Employment, by Age at Award, 1998–2007



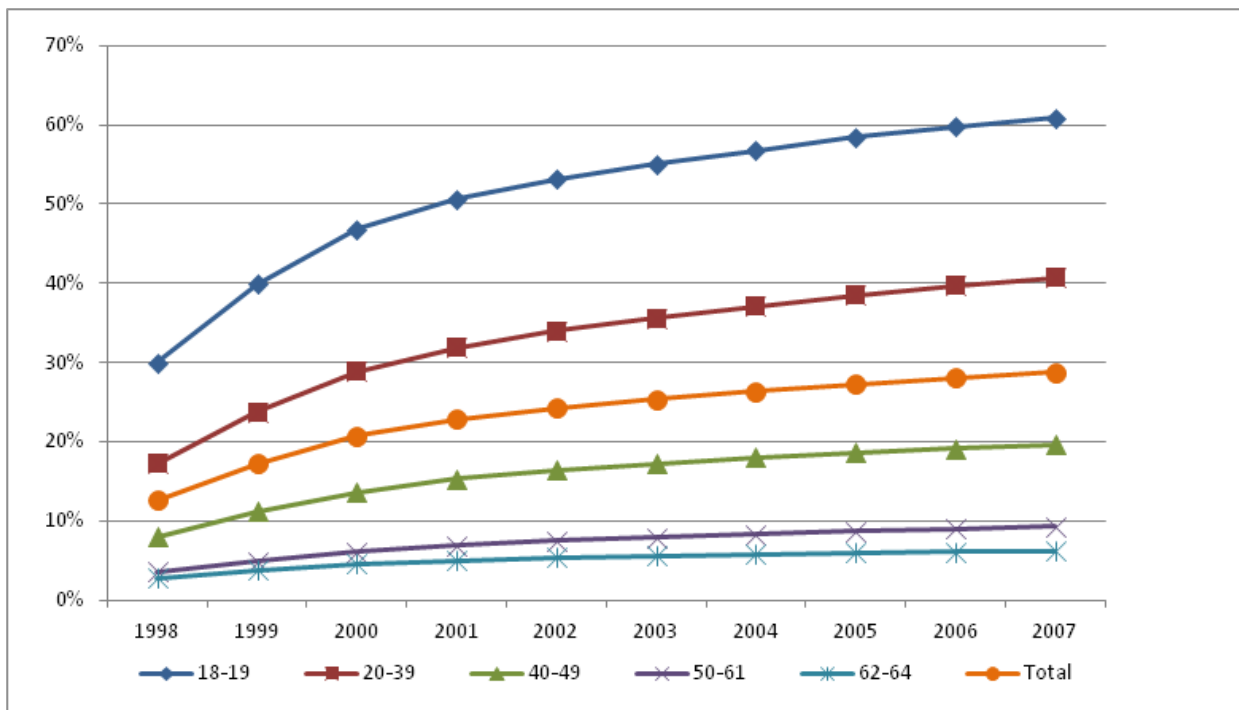
Note: Based on an analysis of SSI beneficiary records in the 2008 Ticket Research File (TRF) matched with MEF earnings data.

Many more beneficiaries worked during at least one year over the entire period observed than in any given year, as illustrated by Exhibit VII.2. By 2007, 28.7 percent of the beneficiaries in the 1996 cohort had worked in at least one year since the second post-award year. Cumulative employment percentages increased each year, indicating that beneficiaries not employed previously were becoming employed for the first time, but the rate of increase steadily diminished. By the fifth year after award (2001), the cumulative percentage was 22.8 percent; from there it increased by only 5.9 percentage points through the 11th year (2007). Not surprisingly, cumulative employment percentages for the two youngest groups were much higher than for all older groups: 60.9 percent and 40.7 percent of those ages 18–19 and 20–39 at award, respectively, had worked in at least one year by 2007, compared to 19.7 percent, 9.3 percent, and 6.2 percent for those ages 40–49, 50–61, and 62–64 at award, respectively.

⁵² A person working 20 hours a week at the minimum wage (below \$6/hour in 2007) for eight weeks would earn less than \$1,000 and would not meet our earnings threshold. Therefore, our measure of employment might exclude some part-time seasonal employment, perhaps especially summer employment by younger beneficiaries.

The cumulative percentage employed by 2007 (28.8 percent) is only a few percentage points larger than the cumulative percentage with PCE by 2007 (23.2 percent). The percentage difference between these two statistics is lower than the percentage difference between any pair of annual statistics for the two variables. This is not surprising because it is likely that a very large share of beneficiaries employed in at least one year had PCE in at least one month before separating from SSI. Some might have separated from SSI before becoming employed (by our definition), but there are other plausible reasons for the remaining difference in the longitudinal statistics, namely earnings exclusions (including the SEIE for students) and some underreporting of earnings.⁵³

Exhibit VII.2. Cumulative Percentage of the 1996 SSI Award Cohort with Employment, by Age at Award, 1998–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF matched with MEF earnings data.

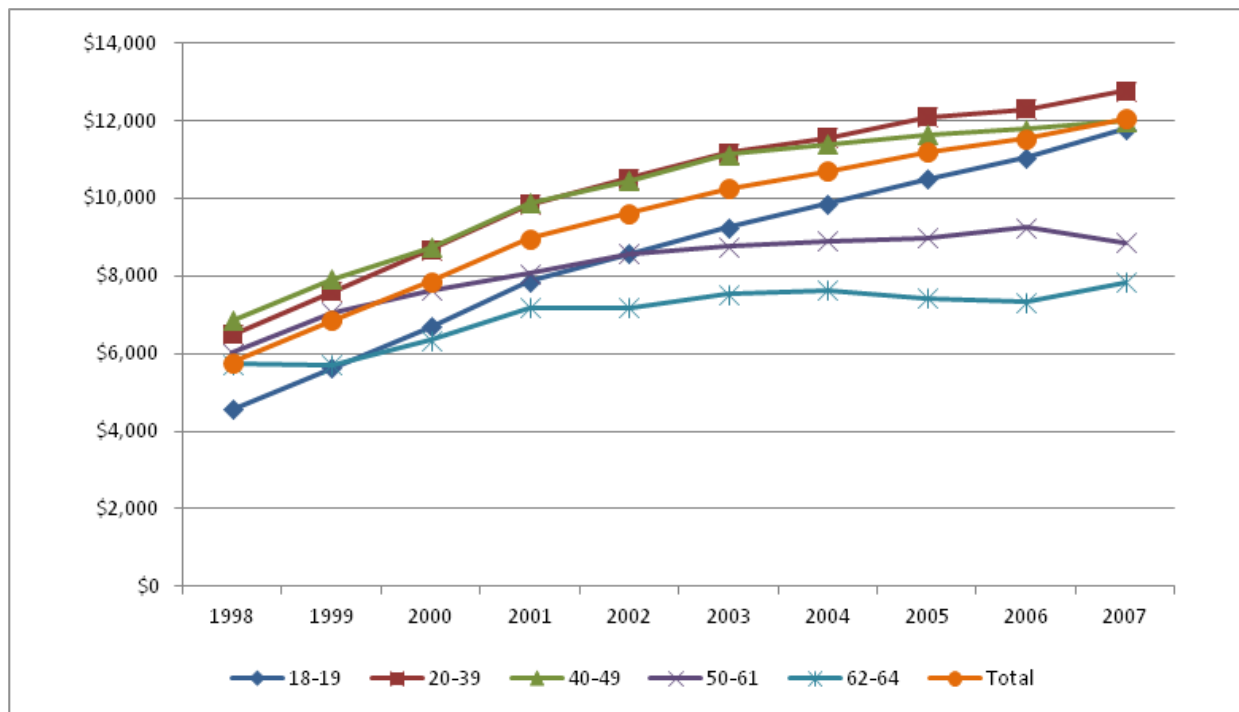
B. Annual Earnings

Inflation-adjusted average annual earnings, for those with positive earnings, are presented in Exhibit VII.3. In contrast to employment rates, average earnings were highest for beneficiaries who were ages 20–39 or 40–49 at award. In addition, average earnings increased rapidly from the second year after award (1998) through 2007 for beneficiaries in the three youngest age groups. Average annual earnings increased from \$4,600 to just below \$12,000 for those ages 18–19 at award, from \$7,100 to \$12,800 for those ages 20–39 at award, and from \$6,900 to \$11,900 for those ages 40–49

⁵³ For the 2001 cohort, the cumulative percentage in PCE by 2007 (19.4 percent) exceeded the cumulative percentage for employment (18.6 percent). This may be due to an improvement in the accuracy of the earnings reported to SSA or to reported earnings of the employed being greater than any earning exclusions, so that those who were employed always achieved PCE.

at award. Within these age groups, it is likely that those beneficiaries with higher earnings continued to work longer than those with lower earnings. This would explain at least part of the continued rise in average annual earnings among those with positive earnings, including when the economy was weak, from 2001 through 2003.

Exhibit VII.3. Average Annual Earnings (in 2007 dollars) for the 1996 SSI Award Cohort with Positive Earnings, by Age at Award, 1998–2007



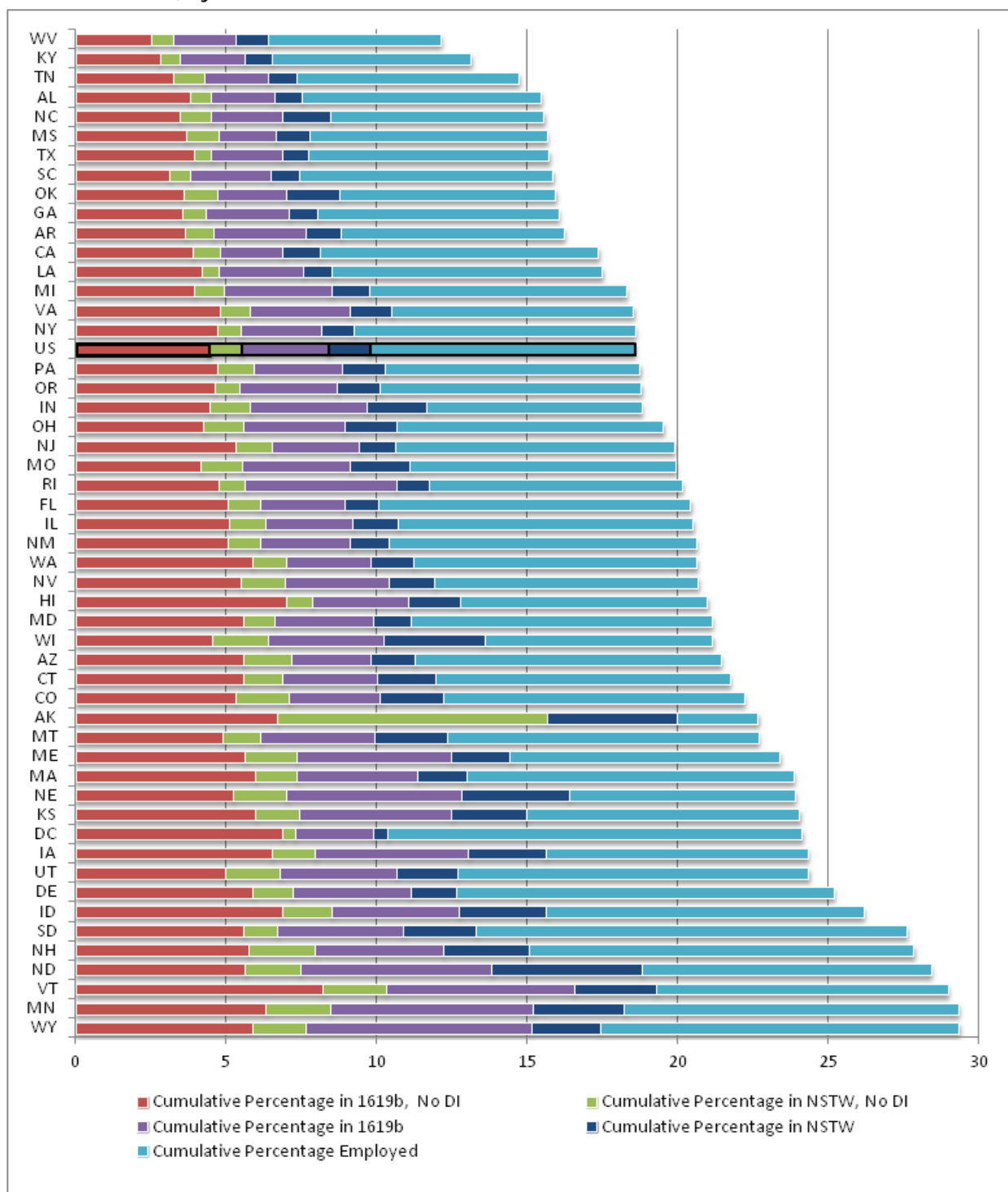
Note: Based on an analysis of SSI beneficiary records in the 2008 TRF matched with MEF earnings data.

C. Cross-State Comparisons

1. Cross-State Relationship Between 1619(b), SSI NSTW, and Employment

We now examine the cross-state variation in employment and work-incentive statistics for the 2001 award cohort as of 2007, the sixth full year after award. All state statistics are weighted to reflect the 2001 national award cohort’s age-sex distribution, so that differences across states cannot be attributed to differences in the age-sex composition. Statistics for the cumulative percentage ever in 1619(b) and ever in 1619(b) with no DI payments, ever in SSI nonpayment status following initial suspension or termination for work (SSI NSTW) and ever in SSI NSTW with no DI payments, and ever employed, are presented in Exhibit VII.4. The full length of each bar (i.e., the length of all five components combined) is the cumulative percentage employed for the corresponding geographic area (individual state, District of Columbia, or entire U.S.), and the areas have been ordered from lowest to highest by this measure. As for other sub-measures, moving from left to right, the first component of each bar represents the percentage ever in 1619(b) with no DI payment, the combined first and second components represent the percentage ever in SSI NSTW with no DI payment, the combined first three components represent the percentage ever in 1619(b), and the combined first four components represent the percentage ever in SSI NSTW. Taking New York as

Exhibit VII.4. Cumulative Work-Incentive Statistics Through December 2007 for the Weighted 2001 SSI Award Cohort, by State



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF matched with MEF earnings data. Statistics are adjusted for age and sex to reflect the age-sex composition of the entire 2001 cohort. The cumulative percentage in 1619(b) is not shown for Alaska because the cumulative percentage in NSTW, but not DI, was larger than the cumulative percentage in 1619(b). One possible reason is that SSI counts the annual dividend from the Alaska Permanent Fund as income. The dividend varies from year to year; the median value from 1996 to 2007 was \$1,419. High wages in Alaska relative to those in the rest of the country might also play a role.

an example, we found that 4.7 percent of its 2001 weighted award cohort had ever been in 1619(b) with no DI payments, 5.5 percent had ever been in SSI NSTW with no DI payments, 8.2 percent had ever been in 1619(b), 9.2 percent had ever been in SSI NSTW, and 18.6 percent had been employed at some point between 2001 and 2007. The respective percentages for the U.S. overall were similar: 4.5 percent, 5.5 percent, 8.4 percent, 9.8 percent, and 18.6 percent.⁵⁴

Variation in the cumulative percentage employed is high—from 12.2 percent in West Virginia to 29.3 percent in Wyoming. The median percentage employed is 20.6 percent (for New Mexico). The three most populous states (California, Texas, and New York) have values below the median.

The percentage in SSI NSTW during at least one month ranges from 6.4 percent in West Virginia to 19.9 percent in Alaska and 18.6 percent in Vermont; and the percentage in 1619(b) ranges from 5.3 percent in West Virginia to 16.6 percent in Vermont. Variation across states in SSI NSTW and 1619(b) follows the same general pattern seen in cumulative percentage employed. For the most part, states that have higher (lower) employment also have higher (lower) percentages ever in 1619(b) and SSI NSTW, whether or not months with DI payments are excluded.

2. Cross-State Relationship Between Cumulative Service Enrollment and SSI NSTW Years

The cross-state relationship between cumulative percentage enrolled for services and cumulative SSI NSTW years (with and without excluding months with DI payments) is depicted in the scatter diagram of Exhibit VII.5.⁵⁵ There is high variation across states, both in the cumulative percentage enrolled for services and in cumulative SSI NSTW years. The cumulative percentage enrolled for services ranges from 6.8 percent in West Virginia and Mississippi to 22.8 percent in Vermont and 22.2 percent in South Dakota. Cumulative SSI NSTW years per thousand beneficiaries ranges from 97 years in West Virginia to 489 years in Minnesota and 476 years in New Hampshire. Cumulative SSI NSTW years per thousand beneficiaries excluding months with DI payments ranges from 41 years in West Virginia to 189 years in New Hampshire and 187 years in Vermont. There is a strong positive relationship between service enrollment and SSI NSTW years.⁵⁶ This relationship might reflect the effectiveness of employment services in helping beneficiaries attain SSI NSTW but also might reflect greater demand for services by those who eventually attain SSI NSTW.

D. Cross-Cohort Cumulative Employment for Cohorts 1996 Through 2006

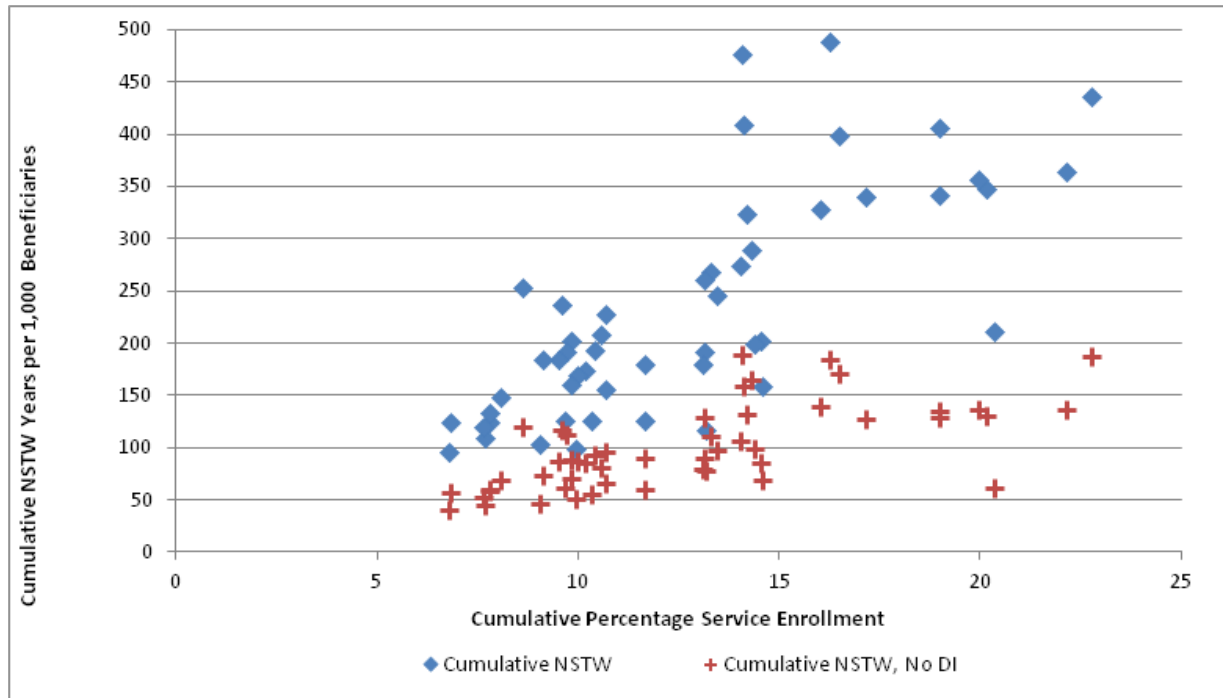
Exhibit VII.6 compares the cumulative percentage of beneficiaries employed by 2007 across cohorts. To facilitate cross-cohort comparison of outcomes for the same post-award year without overcrowding the exhibit, we connect the points representing the fourth-year values for each cohort (corresponding to the third full post-award year) and then repeat this for the sixth-year values (corresponding to the fifth full post-award year), thus creating two cross-cohort lines in the exhibit.

⁵⁴ Northern Mariana Islands (NMI) is included in the national statistics but is not shown in the chart because of the small number of beneficiaries in the cohort. Residents of other U.S. territories are not eligible for SSI.

⁵⁵ All state statistics used in the scatter diagram (see Appendix Exhibit A.3) are weighted to reflect the 2001 award cohort's age-sex distribution, so that differences across states cannot be attributed to differences in the sex-age composition.

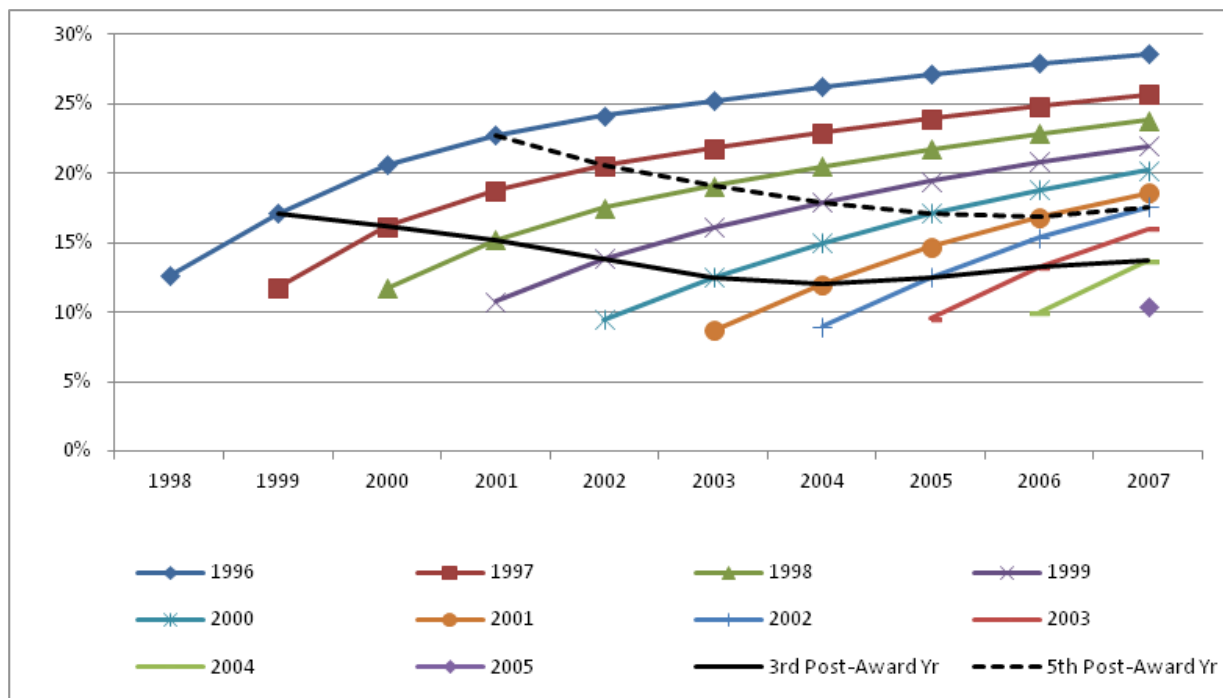
⁵⁶ The simple correlation coefficient for cumulative enrollment and NSTW years is 0.75. The simple correlation coefficient for cumulative enrollment and NSTW years excluding months with DI payments is 0.67.

Exhibit VII.5. Cross-State Relationship Between Cumulative Percentage Enrolled for Services and Cumulative SSI NSTW Years for the Weighted 2001 SSI Award Cohort



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF matched to RSA-911 data. Statistics are adjusted for age and sex to reflect the age-sex composition of the entire 2001 cohort. See Appendix Exhibit A.6 for detailed results by state.

Exhibit VII.6. Cumulative Percentage of Beneficiaries Employed Since Second Post-Award Year, by SSI Award Cohort, 1998–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF matched with MEF earnings data. Statistics are adjusted for age and sex to reflect the age-sex composition of 2001 cohort.

Notably, the cumulative percentages employed by the second post-award year (the starting point of each series) were lower for the 1997 and 1998 cohorts than for the 1996 cohort. This is unexpected because of the strong economy during those years, the findings presented in Chapter VI showing growth in the cumulative percentages in PCE and 1619(b), and earlier findings that comparable statistics for DI award cohorts increased during this period.⁵⁷

We have considered various possible explanations for the apparent differences between the initial trend seen for employment rates of SSI awardees and the trends seen for PCE and 1619(b), as well as for employment rates of DI awardees during the same time. No explanation seems completely satisfactory, however. Growth in the PCE and 1619(b) percentages and simultaneous decline in the percentage employed can occur because a growing share of those employed is remaining on the SSI rolls. Those in current pay status or in suspense for work must report income to remain on the rolls, while those whose benefits have been terminated have no reason to do so; that is, only those still attached to SSI can have PCE and be in 1619(b) status. In fact, the percentage of successive cohorts remaining on the rolls (i.e., not terminated) (not shown) was rising somewhat during this period. We also found that the PCE and 1619(b) percentages rose for those on the rolls. We do not know the cause of this shift, nor why the cumulative percentage employed declines across cohorts during a period of economic expansion. One possibility is that a change in the composition of entrants in successive cohorts reduced the percentage employed even as the percentage with PCE and 1619(b) increased. The three PROWRA changes to SSI eligibility and the influx of former TANF recipients are possible explanations.

More recent trends in the percentage employed are consistent with the recession that began in 2001 and the recovery starting in 2003. We see a continued drop in employment rates across the cohorts until the 2003 cohort, while employment rates began to increase for more recent cohorts, starting with the 2004 cohort. When comparing the annual percentage employed across cohorts (Appendix Exhibit A.7), we also see that annual employment rates dropped for all cohorts between 2000 and 2003. The drop in employment rates appears to have slowed down for the earlier cohorts as the economy recovered after 2003, while employment rates for more recent cohorts began to increase during that time.

⁵⁷ See Stapleton et al. (2010), Exhibit V.1.

VIII. CONCLUSIONS

In our concluding chapter, we first highlight key characteristics of the longitudinal measures for SSI award cohorts presented in Chapters IV through VII. We then highlight findings from cross-state and cross-cohort comparisons. We also compare and contrast these findings to those for DI award cohorts from Stapleton et al. (2010). We close with a discussion of the implications for efforts to measure the employment activities of SSI and DI beneficiaries and their use of work incentives.

A. Longitudinal Measures of SSI Awardee Work-Incentive Use and Employment

1. Work Incentives and Months Without Benefits

Our analysis illustrates that rates of work-incentive use among SSI beneficiaries are substantially higher over a multiyear period compared to annual or monthly cross-sectional estimates. We found that 23.2 percent of the 1996 SSI award cohort had positive countable earnings (PCE) in at least one year by the end of 2007. In contrast, only 7.1 percent of working-age SSI beneficiaries had earnings from work in the month of December 2009, according to annual statistics published by SSA (SSA 2010d). Similarly, we found that 11.9 percent of the 1996 SSI award cohort had their benefits suspended for work under the 1619(b) work-incentive program in at least one month by the end of 2007, whereas only 1.9 percent of working-age SSI beneficiaries were in 1619(b) in the month of December 2009, according to SSA statistics.

The differences between the longitudinal and cross-sectional statistics are not surprising because they describe beneficiary activities from two different perspectives. The cross-sectional statistics have all current beneficiaries in the denominator, including millions of beneficiaries who have been on the rolls for many years and failed to exit for work in the past, and counts beneficiaries with PCE or in 1619(b) in a single month only. The longitudinal statistics include in the denominator only those who entered SSI 11 years ago and count all who ever achieved PCE or 1619(b) during any month of the 11-year period. The higher numbers for the longitudinal statistics do not imply that more beneficiaries work than is suggested by the cross-sectional statistics. Instead, they offer a more complete picture—one that is important for the understanding of the dynamic return-to-work process.

A substantial number of SSI awardees receive DI, although they might receive their initial DI award at a different time than their initial SSI award. Our award cohorts exclude those who receive SSI only during the five-month DI waiting period; all others are included. We found that 31.3 percent of the 1996 SSI award cohort received DI benefits during their award year. By 2007, 39.6 percent of the same cohort had received a DI benefit in at least one month. Thus, many of those who reached 1619(b) were receiving DI payments in those months. Nevertheless, 7.4 percent of the 1996 SSI award cohort was in 1619(b) and without DI payments in at least one month by December 2007—almost four times higher than the cross-sectional statistic of 1.9 percent, which includes some unknown number of SSI beneficiaries in DI current pay status.

The longitudinal 1619(b) statistics above understate the extent to which SSI awardees earn so much that they receive no SSI benefits. The reason is that some leave SSI altogether without entering 1619(b) first. They might earn above the 1619(b) threshold, prefer to leave to avoid asset restrictions or reporting requirements, be unaware of 1619(b), or not understand the provision's value. Using data available for 2001 and later years, we were able to identify beneficiaries who

attained SSI nonpayment status following either suspense or termination for work (SSI NSTW), even if they did not enter 1619(b). For the 2001 cohort, we found that 9.8 percent had achieved this status in at least one month by the end of 2001, compared to a cumulative 8.4 percent achieving 1619(b) status in at least one month. As with 1619(b), a substantial minority of those who reached SSI NSTW were receiving DI benefits during those months. Still, 5.5 percent of the 2001 SSI award cohort were in SSI NSTW and not receiving DI benefits in at least one month by December 2007. Over the period observed, the 2001 cohort accumulated 164 years' worth of SSI NSTW months per 1,000 awardees, amounting to just below two months per beneficiary over six-plus years. The number of SSI NSTW months exclusive of months in DI current pay was only 75—less than one month per beneficiary over this time period.

SSI awardees in the two youngest age groups used work incentives much more often than did those in the three oldest. For instance, 50.2 percent of 1996 awardees ages 18 or 19 at award had PCE in at least one month by the end of 2007, and 18.7 percent had at least one 1619(b) month with no DI payment. Similarly, 31.6 percent of 1996 awardees ages 20 to 39 at award had PCE in at least one month by the end of 2007 and 10.1 percent had at least one 1619(b) month with no DI payment. For both these age groups, the PCE and 1619(b) percentages were well above those for the 1996 cohort as a whole. For the 2001 cohort, the two youngest groups accounted for a large majority of SSI NSTW months.

2. Employment Services

For the 1998 and later cohorts, we have been able to use matched data from RSA to produce statistics on enrollment in employment services for which SSA potentially would pay. Just over 10 percent of the 1998 award cohort had enrolled for services as of 2007. Less than 60 percent of those ever achieved PCE, often before they had enrolled for services; just under 32 percent had at least one 1619(b) month by the end of the period—a third of whom enrolled for services only after having at least one 1619(b) month. A large majority of those who had at least one month under 1619(b) (78 percent) had not enrolled for services first. Young awardees, especially those ages 18 or 19, were much more likely to enroll for services than older awardees. For the 1998 cohort, almost 33 percent of those ages 18 or 19 at award had enrolled for services by the end of 2007.

The rates of return-to-work efforts among service enrollees are well above the rates for the 1998 award cohort as a whole. It could be that the services indeed facilitated these efforts. However, more favorable outcomes for service enrollees may reflect, at least to some extent, higher beneficiary interest in achieving higher earnings to begin with—a factor that likely explains their enrollment for services in the first place.

3. Employment and Earnings

IRS earnings data encompass all earnings reported to the IRS, including those recorded after the beneficiary leaves SSI and potentially some other earnings not reflected in PCE, although the reverse may also be true for some beneficiaries. We found that employment and earnings statistics based on earnings data from the MEF are substantially higher than the PCE statistics, and have more favorable trends as each cohort ages. For the 1996 cohorts, 28.7 percent were employed (that is, had annual earnings of at least \$1,000 in 2007 dollars) in at least one year from 1998 through 2007, compared to 23.2 percent for cumulative PCE. The difference likely reflects employment following SSI exit, allowable earnings disregards, and underreporting of earnings to SSA by the beneficiary. The MEF-based employment percentages were much higher for those in the two youngest two age groups: 60.9 percent for those ages 18 or 19 and 40.7 percent for those ages 20 to

39. Further, as beneficiaries age, the annual MEF-based employment percentages decline by less than the annual PCE percentages, likely reflecting termination of SSI eligibility for some workers.

Mean annual earnings were low among those with earnings but nearly doubled over the period observed, from about \$6,000 in 1998 to about \$12,000 in 2007. We do not know the extent to which this increase represents growth in earnings for individuals versus changes in the composition of those with earnings; it is likely that those beneficiaries with higher earnings continued to work longer than those with lower earnings. Mean earnings for those with earnings grew the most among the youngest members of the cohort, perhaps reflecting more investment in human capital in the earlier years of the observation period.

B. Cross-State Comparisons

We compared outcomes across states for the 2001 cohort, the earliest cohort for which we were able to produce all of the statistics, after adjusting for cross-state differences in the age-sex composition. Cross-state variation is high for all of the statistics. For instance, for the 2001 cohort, the cumulative percentage employed in at least one year as of 2007 ranged from just over 12 percent in West Virginia to almost 30 percent in Wyoming. The cross-state patterns for cumulative employment, 1619(b), and SSI NSTW all were highly correlated. Cumulative service enrollment also was correlated with cumulative SSI NSTW years (whether or not months with DI payments are excluded). The latter correlation likely reflects both greater beneficiary demand for services in states where beneficiaries were most likely to work and the effect of service receipt on employment.

C. Cross-Cohort Comparisons

To assess how more recent cohorts have fared relative to earlier cohorts, we also compared age-sex adjusted statistics across cohorts, starting with the earliest cohort for which each statistic is available and continuing through the 2006 cohort—the second for which all awardees were mailed a ticket shortly after their award. Holding years since award constant, the first three award cohorts after the 1996 cohort (1997 through 1999) achieved PCE and 1619(b) status at gradually increasing rates—not surprising, given economic growth during that period. What is surprising, however, is that the percentage employed, based on IRS earnings and starting in the second year after award, declined for the same cohorts during that period. We do not have a definitive explanation for this difference.

The 2001–2003 award cohorts had cumulative PCE, 1619(b), and employment statistics lower than those in earlier cohorts, holding years since award constant, most likely reflecting the 2001 economic downturn. By the sixth year after award, just 8.4 percent of the 2001 cohort had at least one 1619(b) month, compared to 9.4 percent of the 1996 cohort. (These percentages are 4.6 percent and 5.9 percent, respectively, when months with DI payments are excluded.) The downturn in the cumulative statistics was temporary, and later cohorts fared better.

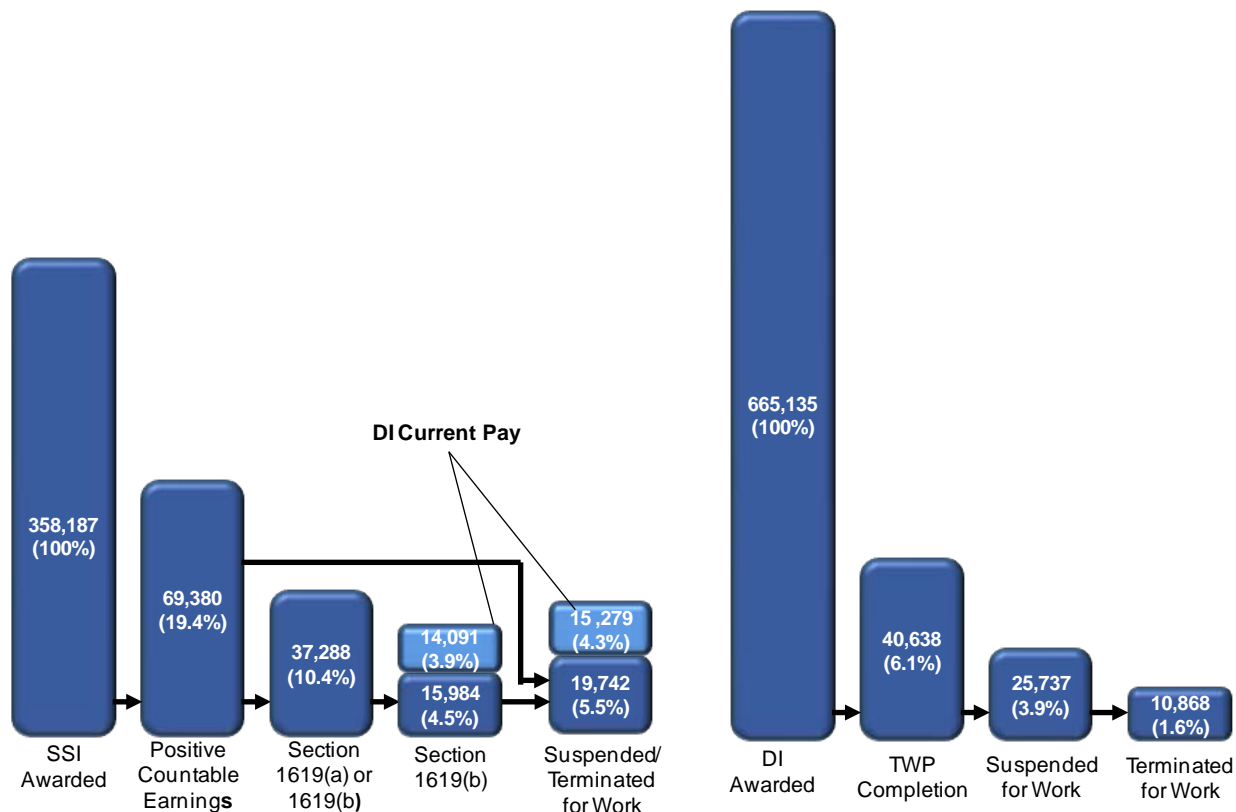
The cumulative percentage achieving at least one SSI NSTW month, first observed for the 2001 cohort, rose consistently for each successive award cohort, holding years since award constant, even during the economic downturn that started in 2001. This unexpected trend might be related to the increase in the share of SSI awardees that were also DI awardees during those years and are more likely, on average, to work. Indeed, the cross-cohort increase in the percentage achieving SSI NSTW while not in DI current pay, holding years since award constant, was notably weaker than the respective increase in the percentage achieving SSI NSTW overall.

D. Comparison of Longitudinal Statistics to Similar Statistics for DI Award Cohorts

We now compare the longitudinal SSI award-cohort statistics to similar statistics presented for the DI award cohorts in Stapleton et al. (2010) to show how the experiences of SSI beneficiaries compare to those of DI beneficiaries.

Exhibit VIII.1 shows, side by side, how far members of the 2001 SSI award cohort (left panel) and the 2001 DI award cohort (right panel) moved towards suspension of benefits because of work. Note that those who received their first SSI and their first DI award in 2001 are represented in both panels.

Exhibit VIII.1. Return-to-Work Milestones for the 2001 SSI and DI Award Cohorts, 2001–2007



Note: Based on an analysis of SSI and DI beneficiary records in the 2008 Ticket Research File (TRF). “DI current pay” shows the number of SSI beneficiaries who received DI payments in all 1619(b) and SSI NSTW months. The numbers of DI beneficiaries who received SSI payments in all months in which they were suspended or terminated for work are negligible and are therefore not shown.

Both sets of statistics show that the percentage of awardees who eventually forgo benefits for work—a longitudinal statistic—is far larger than the percentage of all current beneficiaries who forgo benefits for work in a given year—a cross-section statistic. For instance, we found that 8.4 percent of the 2001 SSI award cohort had at least one 1619(b) month by the end of 2007 (4.5 percent if months in DI current pay are excluded). This is approximately four and a half times the percentage of working-age SSI beneficiaries in 1619(b) status in December 2009 (1.9 percent). Analogously, 3.9 percent of the 2001 DI award cohort had their benefits suspended because of work

in at least one month by the end of 2007, almost eight times the percentage of DI worker beneficiaries whose benefits were in suspense for work in December 2009 (0.5 percent; SSA 2010b).

As previously mentioned, a substantial minority of SSI beneficiaries who had their benefits suspended or terminated in at least one month were receiving DI payments during those months. Of the 9.8 percent in the 2001 SSI award cohort who had their benefits suspended or terminated, 44 percent (constituting 4.3 percent of the 2001 SSI award cohort) received DI payments in all months in which their SSI payments were suspended or terminated. For comparison, we also calculated the number of DI awardees who were receiving SSI payments in all months in which their DI benefits were suspended or terminated. Those numbers were very low (161 and 102, respectively) and are therefore not visible in Exhibit VIII.1.

This asymmetry likely reflects the programs' differing work incentives, for two reasons. First, concurrent beneficiaries have a strong incentive to keep their earnings below the SGA amount: to maintain their eligibility for DI and Medicare. That incentive does not apply to SSI and Medicaid because of Section 1619. Second, the level of earnings associated with being in SSI NSTW and not DI NSTW (necessarily below the SGA amount) is lower than the level associated with being in DI NSTW and not SSI NSTW (necessarily above the SGA amount); hence, it is easier to attain.

Both sets of statistics also show that the percentage of awardees who forgo all of their benefits because of work at some point is far smaller than the percentage of awardees who return to work (in both cases, defined as having annual earnings of at least \$1,000 in 2007 dollars based on data from the MEF). Our finding that 28.1 percent of the 1996 SSI award cohort was employed in at least one year from 1998 to 2006 is almost identical to the corresponding percentage for the 1996 DI cohort (28.0 percent) reported in Stapleton et al. (2010); these percentages do not account for differences in sex-age composition between the two programs, however. Each of these statistics is much larger than the corresponding statistic on, respectively, the cumulative 1619(b) percentage (SSI) and cumulative suspense for work (DI) cited in the previous paragraph.

In addition, both sets of statistics show that a large majority of those awardees who return to work and earn enough to give up all or (in the case of SSI) part of their benefits do so within the first five years after their award. For example, for the 1996 SSI award cohort, the cumulative percentage with at least one 1619(b) month by the end of the fifth year after award, 8.9 percent, is equal to 77 percent of the corresponding percentage by the end of 2006, the 10th full year after award (11.5 percent). Stapleton et al. (2009) found that 4.8 percent of the 1997 DI award cohort had at least one month of suspense for work by the end of the fifth year after award, also equal to 77 percent of the comparable figure at the end of 2006 (6.2 percent).

Both sets of statistics show that the relatively young awardees account for a very large share of those who forgo benefits for work. For instance, we found that 1996 SSI awardees under the age of 40 at the time of award accounted for 78.1 percent of all 1619(b) months accumulated by that cohort by the end of 2007. Stapleton et al. (2010) found that 1996 DI awardees under age 40 accounted for 62 percent of their DI cohorts' DI NSTW months. These findings partly reflect the fact that the older members of each cohort were more likely to attain age 65 or die during the observation period.

Both sets of statistics show high variation across states. The cumulative percentage of the 2001 SSI award cohort with at least one SSI NSTW month by the end of 2007 ranged from a low of 6.4 percent to a high of 19.9 percent—a more than three-fold difference. Stapleton and colleagues (2010) report that the cumulative percentage with at least one DI NSTW month in the 1996 DI

award cohort by the end of 2006 ranged from 3.2 percent to 10.0 percent, also a more than three-fold difference. We also found that the rank ordering of the states with respect to these statistics was quite similar for the two programs. For example, North Dakota, South Dakota, Minnesota, and Wyoming all were among the highest six states for cumulative employment statistics for each program, and Alabama, Kentucky, and West Virginia were among the lowest five.

For both programs, the longitudinal statistics on return-to-work efforts for the 1997 through 1999 cohorts increased, holding years since award constant, but the 2000 and 2001 cohorts fell substantially behind the earlier ones. There is an unexplained exception, however: the cumulative percentage employed starting in the second year after award actually declined somewhat for the SSI awardees (though not for the DI awardees) also for the earlier cohorts. The statistics for both programs started to increase again after the 2001 cohort, but did not reach the same level as those for the 1999 cohort before the end of the respective observation periods.

E. The Value of Longitudinal Statistics

The current report on SSI awardees and the earlier report on DI awardees both demonstrate the value of longitudinal employment and work-incentive statistics for SSI and DI award cohorts. The longitudinal statistics paint a substantially different picture of work and work-incentive use than do annual cross-section statistics—not because more beneficiaries are working than is suggested by the cross-sectional statistics, but because they provide richer information on beneficiaries' work efforts. This information gives us a better understanding of many important return-to-work outcomes. For example, the longitudinal statistics show that the percentage of beneficiaries engaged in work after program entry is much higher than the percentage of all SSI beneficiaries doing so in a given month, a cross-sectional statistic frequently used in SSI statistical reports. They also show that those who worked enough to eventually forgo part or all of their benefits for work mostly were under age 40 when they entered the rolls and mostly had forgone benefits for the first time during the first five years after they received their award.

As Stapleton et al. (2010) previously pointed out, these findings have important implications for SSA's efforts to help beneficiaries earn enough to forgo their benefits. One implication is that such efforts might have a substantial base cost to the government, depending on how they are designed; that is, they might provide new support to the considerable number of beneficiaries who already forgo their benefits for work. Any such base cost adds to the cost of providing support to those who would not leave the rolls without support. Another implication is that it might be most efficient to target recent awardees under age 40. They are the most likely to forgo benefits for work, and if they do so, they might forgo them for several decades.

The longitudinal statistics also shed light on how programmatic changes and external factors affect successive award cohorts, although they often are not definitive. Both studies identify trends in statistics that appear to be related to the 2001 recession. Stapleton et al. (2010) point to evidence of the effect of the 2001 increase in the TWP income amount and possible evidence of the effect of the 1999 SGA increase. We have seen evidence of this increase in this study, as well, in the 1619(a) statistics across successive award cohorts. PRWORA—particularly the resultant age-18 redeterminations—also may have had impacts on longitudinal statistics for the SSI award cohorts. Other factors that might explain some of the observed trends across cohorts are the retroactive processing of SDW cases, SSA support for work incentives counseling, and the rollout of TIW. We cannot, however, definitively attribute any specific amount of change to these factors.

The SSI statistics point to the importance of considering interactions between SSI and DI. If we had not developed the statistics on DI participation for the SSI award cohorts, we would have concluded that gains for successive SSI cohorts in giving up benefits for work were far larger than they actually were, as many of those giving up SSI benefits still receive DI benefits.

If SSA continues to invest in longitudinal data for award cohorts, consideration should be given to developing statistics for combined DI and SSI award cohorts. In other words, identify all first-time DI and/or SSI awardees in each year and follow them together, through both programs, in successive years. This is more complex than simply combining the SSI award cohorts identified here with the DI award cohorts identified by Stapleton et al. (2010) because some SSI awardees receive DI awards in earlier years and vice versa. The TRF is well suited to this task, however, as it combines historical data from the two programs.⁵⁸ Within that framework, subgroups defined by initial program status, age, prior SSI child receipt, and perhaps other characteristics could be followed throughout the sample period, and the effects of changes in the initial composition of the full cohort on future outcomes could then be better understood.

As new data become available, it would definitely be interesting to extend the longitudinal statistics for the same DI and SSI award cohorts as well as produce and examine statistics for later cohorts. Those who received their awards in 2009 were the first full cohort to receive tickets under the July 2008 TTW regulations. Whether they enroll for services at substantially higher rates than past cohorts will be revealing. Effects on earnings and benefits are likely to take much longer to emerge, however, because the 2009 cohorts entered at the bottom of a business cycle that is clearly the worst since the Great Depression. Given the experience of those who entered during the much weaker downturn from 2000 to 2002, it seems likely that we will see a substantial decline in the employment rates of new awardees in both programs, 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.

F. Additional Research

The DI and SSI longitudinal award-cohort files developed from the TRF to produce the longitudinal employment and work-incentive statistics could be exploited further. We have not, for instance, examined how beneficiary characteristics other than age affect longitudinal outcomes. Primary impairment seems likely to play an important role, and differences in the distributions of primary impairments across award cohorts and states within cohorts might help explain cross-cohort and cross-state variation in longitudinal outcomes, respectively.

There is great interest in improving policies to support the employment of younger beneficiaries so that they do not end up living their lives in poverty and heavily dependent on public support. SSA's Youth Transition Demonstration represents a significant investment in the development of

⁵⁸ Rupp and Riley (2011b) have examined one annual cohort of first-time entrants to both programs (the 2000 entry cohort) but they included beneficiaries based on the first month in which a benefit is due, whereas we date our cohorts by the first month in which a benefit is paid. Both dating methods are of interest for different reasons, and there would be little difference if awards usually were made in or shortly after the entry month. In fact, however, awards often are made well after the first month for which a benefit is due. We focused on award rather than entry cohorts because the award is the event that changes the beneficiary's options, and we are interested in how the beneficiary behaves after that event.

such policies, as do the anticipated grants for Promoting Readiness of Minors on SSI (PROMISE). Our findings that awardees under age 40 are the most likely to work and use the programs' work incentives are encouraging in that regard; additional longitudinal analysis of employment and work incentives for these awardees might be particularly useful in informing the development of policy and creating a baseline against which to measure progress. For example, it would be interesting to know more about awardees who eventually leave both the DI and SSI rolls because of work—their characteristics, where they live, the extent to which they use the work incentives before they leave the rolls, how high their earnings are after they leave the rolls, how long they remain off the rolls, and whether their numbers have increased in successive cohorts as the government increases its efforts to help beneficiaries return to work and eventually leave the rolls.

SSA also might find it interesting to explore the extent to which DI entry of young SSI awardees occurs because they earn enough to qualify for DI rather than because they receive a DAC award, and how that has changed with successive cohorts. There are anecdotal reports of counselors and others advising their SSI clients to earn enough to enter DI, if only so they eventually will be eligible for Medicare. Expansion of access to counseling (under the BPAO and WIPA grants) and employment services (under TTW) might have increased the number of SSI awardees who do so. The youngest adult awardees can become disability insured by accumulating as few as six quarters of coverage (QC) even if they have none when they enter SSI. In 2010, earnings of \$4,480 in a year were sufficient to accrue four QC (SSA 2011a, Table 2.A7). Hence, the earnings hurdle is not very high, and jumping that hurdle can take less than two years. It also would be interesting to see what happens to the earnings, SSI benefits, and Medicaid eligibility of such SSI awardees once they become eligible for DI and, 24 months later, Medicare, and to compare these outcomes with outcomes for those who are awarded DAC benefits, who have different characteristics and face different incentives.

SSA also might find it valuable to know more about the importance of the various reasons that SSI awardees are more likely to be employed, based on the IRS data, than to have positive countable earnings, based on SSA administrative records. As indicated earlier, differences might be explained by employment following SSI exit, allowable earnings disregards, and underreporting of earnings to SSA by the beneficiary.

Other outcomes of interest to SSA and recorded in administrative data could also be tracked longitudinally. Mortality is an obvious example. Another is incarceration. We know that the prevalence of disabilities is high among the incarcerated population (see Stapleton et al. 2012), and that a substantial share of SSI children experience arrests (Hemmeter et al. 2009). Information on the extent to which young adult beneficiaries become incarcerated, the characteristics of those who do, and the extent to which they re-enter SSI and/or DI later, after discharge, would help inform policies designed to reduce criminal activity and incarceration by young adults with disabilities. Such policies may include efforts to address their impairments and provide them with more attractive, legitimate opportunities, including work. Analogous observations apply for commitment to long-term psychiatric hospitals.

These suggestions likely just scratch the surface of the possibilities for recovering useful information from longitudinal data on award cohorts. SSA's plan to enhance the agency's ability to link TRF data to Medicare and Medicaid records, via the creation of linkable Medicare and Medicaid files, will open up additional possibilities related to health, health insurance coverage, and use of health services. Rupp and Riley (2011a) already have started to demonstrate the utility of such linkages to longitudinal analysis of DI and SSI entry cohorts.

REFERENCES

- Altshuler, Norma, Sarah Prenovitz, Bonnie O'Day, and Gina Livermore. "Provider Experiences Under the Revised Ticket to Work Regulations." Washington, DC: Mathematica Policy Research, 2011.
- Government Accountability Office. "Vocational Rehabilitation: Better Measures and Monitoring Could Improve the Performance of the VR Program." Report to Congressional Committees. No. GAO-05-865. Washington, DC: GAO, 2005.
- Hemmeter, Jeffrey, and Elaine Gilby. "The Age-18 Redetermination and Postredetermination Participation in SSI." *Social Security Bulletin*, vol. 69, no. 4, 2009, pp. 1–25.
- Hemmeter, Jeffrey, Jacqueline Kauff, and David Wittenburg. "Changing Circumstances: Experiences of Child SSI Recipients Before and After Their Age-18 Redetermination for Adult Benefits." *Journal of Vocational Rehabilitation*, vol. 30, September 2009, pp. 201–221.
- Hildebrand, Lesley, Laura Kosar, Jeremy Page, Miriam Loewenberg, Dawn Phelps, and Natalie Hazelwood. "Data Dictionary for the Ticket Research File (TRF08)." Washington, DC: Mathematica Policy Research, 2010.
- Kemp, Mary. "Recipients of Supplemental Security Income and the Student Earned Income Exclusion." *Social Security Bulletin*, vol. 70, no. 2, 2010, pp. 31–61.
- Kochhar, Satya, and Charles G. Scott. "SSI Case Closures." *Social Security Bulletin*, vol. 61, no. 1, 1998, pp. 20–33.
- Liu, Su, and David Stapleton. "Longitudinal Statistics on Work Activity and Use of Employment Supports for New Social Security Disability Insurance Beneficiaries." *Social Security Bulletin*, vol. 71, no. 3, 2011, pp. 35–60.
- Livermore, Gina, David Stapleton, and Allison Roche. "Characteristics, Employment, and Sources of Support Among Working-Age SSI and DI Beneficiaries." Report No. 2 in *Work Activity and Use of Employment Supports Under the Original Ticket to Work Regulations*. Washington, DC: Mathematica Policy Research, April 2009.
- Muller, Scott L. "Disability Beneficiaries Who Work and Their Experience Under Program Work Incentives." *Social Security Bulletin*, vol. 55, no. 2, 1992, pp. 2–19.
- Pickett, Clark D., and Charles G. Scott. "Reinventing SSI Statistics: SSA's New Longitudinal File." *Social Security Bulletin*, vol. 59, no. 1, 1996, pp. 31–56.
- Rupp, Kalman, and Charles G. Scott. "Length of Stay on the Supplemental Security Income Disability Program." *Social Security Bulletin*, vol. 58, no. 1, 1995, pp. 29–47.
- Rupp, Kalman, and Charles G. Scott. "Trends in the Characteristics of DI and SSI Disability Awardees and Duration of Program Participation." *Social Security Bulletin*, vol. 59, no. 1, 1996, pp. 3–21.

- Rupp, Kalman, and Gerald F. Riley. "Longitudinal Patterns of Medicaid and Medicare Coverage Among Participants in the Supplemental Security Income and Social Security Disability Insurance Disability Programs." Paper presented at the 2011 Annual Meetings of the Allied Social Sciences Associations, Denver, CO, January 8, 2011a.
- Rupp, Kalman, and Gerald F. Riley. "Longitudinal Patterns of Participation in the Social Security Disability Insurance and Supplemental Security Income Programs for People with Disabilities." *Social Security Bulletin*, vol. 71, no. 2, 2011b, pp. 25–51.
- Rupp, Kalman, Paul S. Davies, and Alexander Strand. "Disability Benefit Coverage and Program Interactions in the Working-Age Population." *Social Security Bulletin*, vol. 68, no. 1, 2008, pp. 1–30.
- Scott, Charles G. "A Study of Supplemental Security Awardees." *Social Security Bulletin*, vol. 52, no. 2, 1989, pp. 2–13.
- Scott, Charles, G. "Disabled SSI Recipients Who Work." *Social Security Bulletin*, vol. 55, no. 1, 1992, pp. 26–36.
- Social Security Administration. "The Social Security Administration's Identification of Special Disability Workload Cases." Evaluation Report. Office of the Inspector General, January 2006.
- Social Security Administration. "Annual Statistical Supplement, 2011." Baltimore, MD: Social Security Administration, 2011a.
- Social Security Administration. "2011 Red Book." Baltimore, MD: Social Security Administration, 2011b.
- Social Security Administration. "Full Medical Continuing Disability Reviews: Evaluation Report." A-07-09-29147. Baltimore, MD: Social Security Administration, Office of the Inspector General, March 2010a.
- Social Security Administration. "Annual Statistical Report on the Social Security Disability Insurance Program, 2009." Baltimore, MD: Social Security Administration, July 2010b.
- Social Security Administration. "Fast Facts & Figures About Social Security, 2010." Baltimore, MD: Social Security Administration, August 2010c.
- Social Security Administration. "SSI Annual Statistical Report, 2009." Baltimore, MD: Social Security Administration, September 2010d.
- Social Security Advisory Board. "Annual Report 2005." Washington, DC: Social Security Advisory Board, September 2006.
- Stapleton, David, Todd Honeycutt, and Bruce Schechter. "Out of Sight, Out of Mind: Including Group Quarters Residents with Household Residents Can Change What We Know About Working-Age People with Disabilities." *Demography*, vol. 49, no. 1, 2012, pp. 267–289.

- Stapleton, David, Gina Livermore, Bonnie O'Day, Craig Thornton, Robert Weathers, Krista Harrison, So O'Neil, Emily Sama Martin, David Wittenburg, and Debra Wright. "Ticket to Work at the Crossroads: A Solid Foundation with an Uncertain Future." Report submitted to the Social Security Administration. Washington, DC: Mathematica Policy Research, September 2008.
- Stapleton, David, Su Liu, Dawn Phelps, Sarah Prenovitz. "Work Activity and Use of Employment Supports Under the Original Ticket to Work Regulations: Longitudinal Statistics for New Social Security Disability Beneficiaries." Final Report. Washington, DC: Mathematica Policy Research, 2010.
- Thornton, Craig, Gina Livermore, Thomas Fraker, David Stapleton, Bonnie O'Day, David Wittenburg, Robert Weathers, Nanette Goodman, Timothy Silva, Emily Sama Martin, Jesse Gregory, Debra Wright, and Arif Mamun. "Evaluation of the Ticket to Work Program: Assessment of Post-Rollout Implementation and Early Impacts." Report submitted to the Social Security Administration. Washington, DC: Mathematica Policy Research, May 2007.

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APPENDIX

ADDITIONAL SUPPORTING EXHIBITS

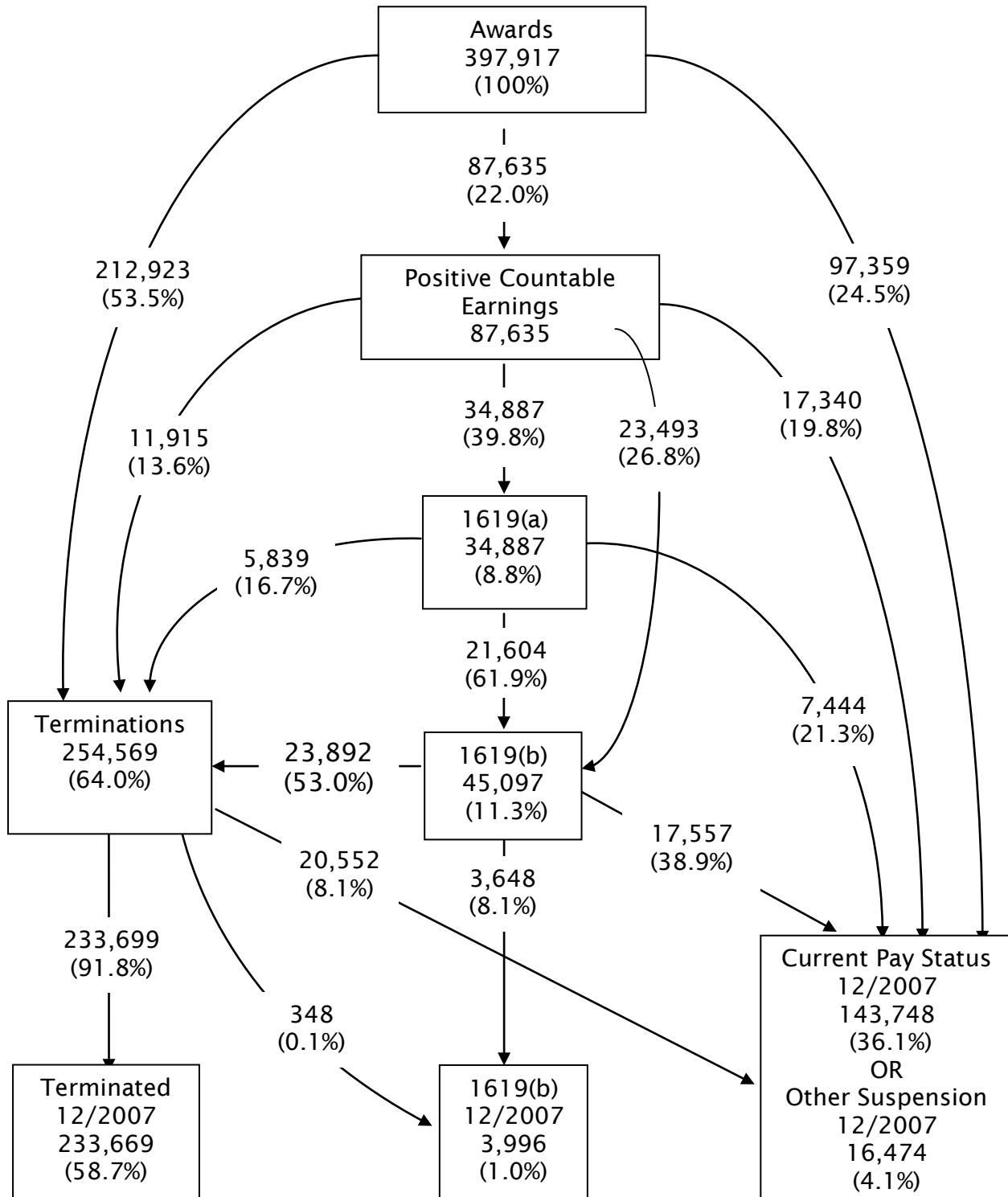
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Exhibit A.1. Number of SSI Awardees, by Award Year and State, 1996–2006

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2007
US	397,917	337,668	364,334	366,057	354,860	358,187	375,123	365,129	371,475	371,179	347,887
AK	624	642	1,059	655	740	780	838	759	795	757	752
AL	9,853	8,043	7,861	8,644	8,599	9,853	9,943	8,587	8,940	8,634	8,199
AR	4,882	3,917	4,183	4,234	3,859	4,423	4,935	5,014	5,277	5,519	4,797
AZ	5,347	4,924	5,290	5,295	5,689	5,908	6,136	6,102	6,359	6,183	4,771
CA	47,998	40,310	50,197	52,128	50,469	49,585	53,607	53,925	55,550	52,335	46,906
CO	3,792	3,117	2,858	2,768	2,473	2,788	2,929	2,716	2,775	3,127	3,068
CT	3,948	3,199	3,123	3,323	3,358	3,218	3,121	2,921	3,012	2,795	2,871
DC	1,497	1,177	1,275	1,380	1,261	1,150	1,405	1,205	1,354	1,377	1,503
DE	805	724	802	768	779	747	835	771	938	830	835
FL	22,962	20,258	21,950	21,383	20,485	20,423	20,388	20,596	19,461	20,418	18,818
GA	11,999	11,091	10,978	10,854	10,617	10,714	10,334	10,293	9,876	9,995	9,150
HI	1,272	1,052	1,125	1,335	1,568	1,276	1,405	1,210	1,419	1,301	1,410
IA	2,863	2,439	2,674	2,442	2,410	2,526	2,576	2,226	2,510	2,478	2,140
ID	1,370	1,120	1,259	1,401	1,378	1,306	1,457	1,498	1,548	1,653	1,509
IL	15,943	12,674	13,676	13,031	12,344	12,255	14,048	13,271	12,271	12,162	11,610
IN	6,265	5,430	5,597	5,397	4,895	4,807	5,736	6,060	5,854	6,098	5,649
KS	2,865	2,041	2,380	2,621	2,316	2,144	2,241	2,210	2,503	2,446	2,116
KY	11,404	9,437	10,716	9,372	9,575	8,691	8,827	8,856	8,689	8,210	8,197
LA	9,561	7,740	7,568	8,053	8,222	8,857	9,321	8,870	9,868	9,352	7,737
MA	11,284	9,532	9,802	9,670	9,345	8,684	8,864	8,804	9,049	9,097	9,214
MD	5,309	5,020	5,234	4,993	5,493	5,011	5,094	5,226	6,014	5,965	5,529
ME	2,522	2,166	2,170	2,069	2,066	1,850	2,115	2,127	1,895	1,754	1,793
MI	13,517	12,439	12,804	11,739	11,851	11,305	12,713	12,324	12,051	11,893	11,274
MN	4,198	3,869	3,980	4,085	4,030	4,057	4,239	4,156	4,351	4,235	4,423
MO	8,200	6,259	6,738	7,101	7,442	7,202	7,132	6,792	7,323	7,016	7,046
MS	7,610	5,993	6,137	6,609	5,982	6,083	5,731	5,283	5,418	5,695	4,899
MT	1,001	835	993	885	922	1,017	1,017	949	982	978	997
NC	11,895	10,565	10,716	10,105	9,674	9,787	10,171	10,039	9,916	10,720	9,875
ND	441	431	447	397	389	410	418	429	426	429	454
NE	1,526	1,305	1,412	1,373	1,468	1,447	1,288	1,303	1,447	1,405	1,224
NH	1,000	903	925	899	912	973	1,113	1,089	1,098	1,371	1,379
NJ	8,302	7,521	7,398	8,535	7,831	7,292	8,130	8,161	7,833	7,965	7,415
NM	2,596	2,365	2,372	2,575	2,745	2,660	3,182	3,048	3,129	3,768	3,141
NV	1,762	1,511	1,763	1,892	1,981	2,083	2,344	2,238	2,180	1,964	2,015
NY	38,758	29,900	33,612	34,834	32,577	31,055	29,779	25,467	28,328	27,922	25,281
OH	16,856	13,987	14,401	12,974	12,011	12,565	12,160	12,475	13,683	13,663	12,675
OK	4,240	3,866	3,803	4,398	4,414	4,717	4,904	4,981	5,433	5,418	5,343
OR	3,660	3,070	3,236	3,791	3,491	3,742	3,907	3,603	3,432	3,707	3,354
PA	18,028	16,530	18,271	18,411	18,741	19,836	19,099	18,820	17,957	17,759	16,971
RI	1,837	1,473	1,644	1,684	1,680	1,777	1,542	1,754	1,811	1,681	1,515
SC	6,180	5,509	5,448	5,309	5,222	5,394	5,096	5,252	4,849	5,022	4,593
SD	851	668	714	642	630	655	643	586	627	651	584
TN	10,150	8,380	8,674	8,510	7,459	7,224	7,705	7,623	7,863	7,716	8,052
TX	23,273	20,341	21,797	21,845	21,083	24,630	30,447	29,496	29,188	30,559	30,651
UT	1,439	1,118	1,242	1,250	1,195	1,222	1,440	1,133	1,220	1,513	1,586
VA	7,731	6,680	7,523	7,598	6,880	6,854	6,644	7,146	7,413	8,114	7,434
VT	824	716	769	807	701	694	718	790	809	808	863
WA	7,046	6,342	6,460	6,957	7,151	7,258	7,646	7,198	7,200	7,385	7,166
WI	5,017	3,991	3,979	3,849	3,884	4,112	4,719	4,798	4,742	4,780	4,662
WV	5,052	4,598	4,591	4,520	3,994	4,568	4,505	4,408	4,260	4,034	3,988
WY	438	378	382	395	373	410	356	364	414	454	395
Other	124	72	326	272	206	162	180	177	135	68	58

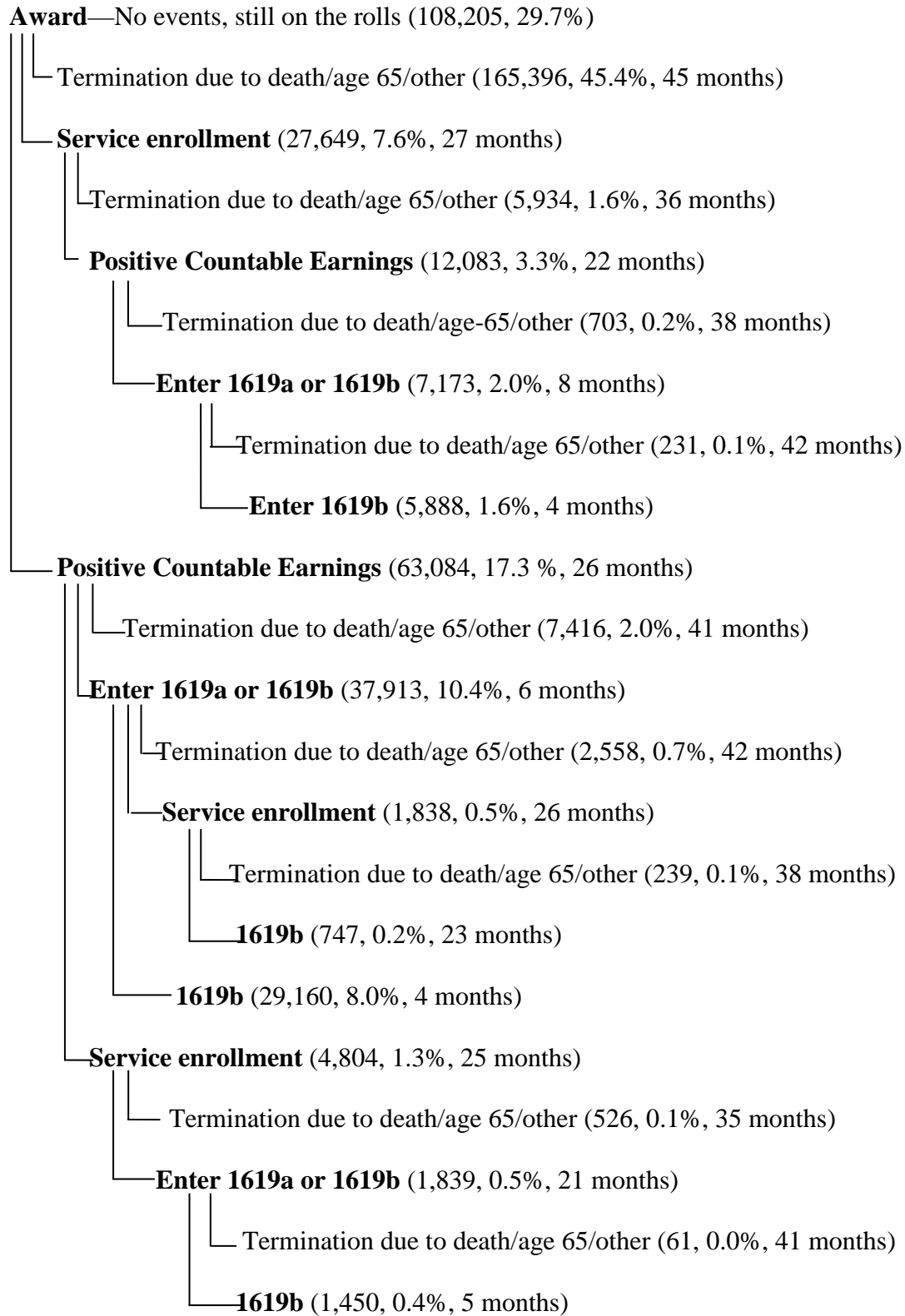
Note: Based on an analysis of SSI beneficiary records in the 2008 TRF.

Exhibit A.2. Paths to Exit for the 1996 SSI Award Cohort, as of December 2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. Of the 23,892 beneficiaries who achieved 1619(b) and eventually had their benefits terminated, 1,759 (7.4 percent) were in SSI current pay or a suspended status in December 2007.

Exhibit A.3. Paths Followed by Members of the 1998 SSI Award Cohort, as of 2007 (Total N=364,334)



Note: Each branch represents a path with different end events. The numbers in parentheses represent the number and percentage of beneficiaries on the path and the average length of time they took to go from the previous event to the end event.

Exhibit A.4. Cumulative Longitudinal Work-Incentive Statistics for 1996 SSI Awardees, by Age Group, 1996–2007

	PCE	1619(a)	1619(b)	1619(a) or 1619(b)
Age 18–19				
1996	10.9	4.2	1.3	4.8
1997	19.5	9.5	4.1	10.8
1998	26.4	14.5	7.4	16.6
1999	32.7	17.9	10.9	20.8
2000	38.6	20.6	14.4	24.6
2001	41.8	22.2	16.8	26.8
2002	43.9	23.2	18.7	28.5
2003	45.5	24.0	20.0	29.8
2004	47.0	24.7	21.2	31.0
2005	48.2	25.4	22.4	32.0
2006	49.3	26.0	23.3	32.9
2007	50.2	26.4	24.2	33.7
Age 20–39				
1996	6.1	1.4	1.8	2.8
1997	11.5	3.2	4.8	6.8
1998	15.8	5.1	7.5	10.3
1999	19.4	6.5	9.9	13.2
2000	22.5	7.7	12.0	15.6
2001	24.7	8.6	13.5	17.2
2002	26.2	9.1	14.5	18.3
2003	27.5	9.6	15.3	19.1
2004	28.8	10.1	16.1	20.1
2005	29.8	10.6	16.9	20.9
2006	30.9	11.0	17.6	21.7
2007	31.6	11.3	18.1	22.2
Age 40–49				
1996	3.6	0.8	0.8	1.5
1997	6.1	1.5	2.3	3.3
1998	8.2	2.4	3.5	4.9
1999	10.0	3.0	4.5	6.1
2000	11.5	3.5	5.5	7.3
2001	12.6	3.8	6.1	8.0
2002	13.4	4.1	6.5	8.4
2003	14.0	4.2	6.8	8.8
2004	14.6	4.4	7.1	9.2
2005	15.0	4.5	7.4	9.5
2006	15.5	4.7	7.7	9.7
2007	15.9	4.8	7.9	9.9
Age 50–61				
1996	3.2	0.6	0.5	1.0
1997	4.5	0.9	1.2	1.8
1998	5.5	1.2	1.7	2.5
1999	6.2	1.4	2.1	3.0
2000	7.0	1.6	2.5	3.4
2001	7.5	1.7	2.8	3.7
2002	7.8	1.7	3.0	3.9
2003	8.0	1.8	3.1	4.0
2004	8.2	1.8	3.2	4.2
2005	8.3	1.8	3.3	4.2
2006	8.5	1.9	3.3	4.3
2007	8.5	1.9	3.4	4.3

	PCE	1619(a)	1619(b)	1619(a) or 1619(b)
Age 62-64				
1996	2.4	0.3	0.5	0.6
1997	3.3	0.4	1.0	1.2
1998	3.7	0.5	1.2	1.5
1999	3.7	0.5	1.2	1.5
2000	3.7	0.5	1.2	1.5
2001	3.7	0.5	1.2	1.5
2002	3.7	0.5	1.2	1.5
2003	3.7	0.5	1.2	1.5
2004	3.7	0.5	1.2	1.5
2005	3.7	0.5	1.2	1.5
2006	3.7	0.5	1.2	1.5
2007	3.7	0.5	1.2	1.5

Note: Based on an analysis of SSI beneficiary records in the 2008 TRF.

Exhibit A.5. Cumulative Longitudinal Work-Incentive Statistics for 2001 SSI Awardees, by Age Group, 2001-2007

	PCE	1619(b)	SSI NSTW	SSI NSTW and Not in DI Current Pay	Enrollment
Age 18-19					
2001	10.8	1.5	1.9	1.2	4.9
2002	19.5	4.3	5.3	3.3	12.4
2003	25.6	6.8	8.3	5.3	17.8
2004	31.7	9.6	11.3	7.4	22.7
2005	36.8	12.4	14.4	9.6	25.3
2006	40.1	14.8	17.1	11.3	27.1
2007	42.3	16.8	19.2	12.7	28.2
Age 20-39					
2001	8.0	2.1	2.6	0.7	2.4
2002	12.9	5.0	6.0	1.9	6.0
2003	16.5	7.2	8.4	3.1	8.6
2004	19.6	9.1	10.5	4.4	10.7
2005	22.1	10.7	12.2	5.5	12.3
2006	24.4	12.1	13.7	6.7	13.5
2007	26.0	13.3	14.9	7.6	14.4
Age 40-49					
2001	4.5	1.0	1.3	0.5	1.2
2002	6.8	2.3	2.9	1.2	2.7
2003	8.4	3.1	3.8	1.7	3.9
2004	9.8	3.8	4.7	2.2	5.0
2005	10.8	4.4	5.3	2.6	5.6
2006	11.9	5.0	5.9	3.1	6.1
2007	12.7	5.4	6.3	3.4	6.5
Age 50-61					
2001	4.0	0.6	1.0	0.4	0.5
2002	5.3	1.3	2.0	0.9	1.0
2003	6.1	1.7	2.5	1.2	1.4
2004	6.7	2.0	2.9	1.5	1.8
2005	7.2	2.3	3.2	1.7	2.0
2006	7.7	2.5	3.5	1.9	2.1
2007	7.9	2.7	3.7	2.0	2.2
Age 62-64					
2001	3.2	0.6	1.0	0.4	0.1
2002	4.0	1.0	1.6	0.7	0.3
2003	4.4	1.2	1.8	0.8	0.3
2004	4.4	1.2	1.8	0.8	0.4
2005	4.4	1.2	1.8	0.8	0.4
2006	4.4	1.2	1.8	0.8	0.4
2007	4.4	1.2	1.8	0.8	0.5

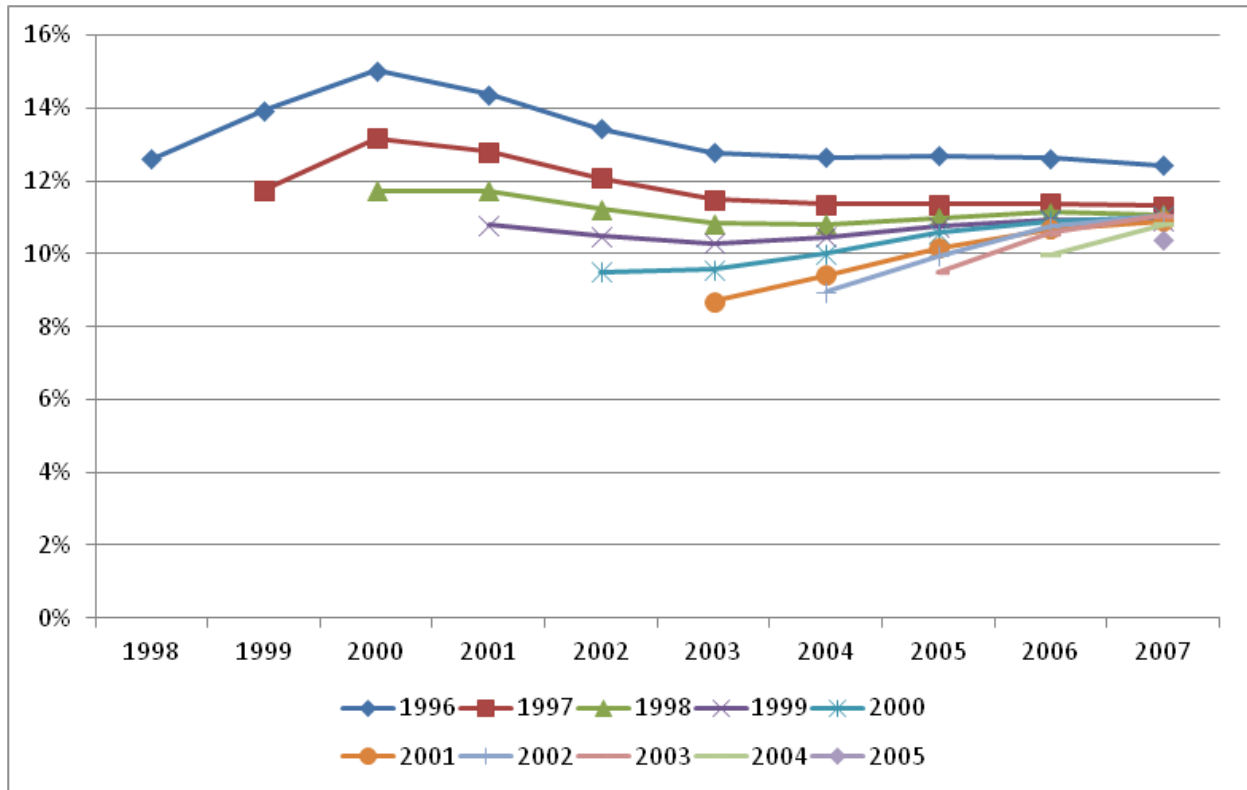
Note: Based on an analysis of SSI beneficiary records in the 2008 TRF matched to RSA-911 data.

Exhibit A.6. Cross-State Variation in Enrollment and NSTW Years, per 1,000 Awardees in the 1996 SSI Award Cohort as of 2006

	Cumulative Percentage Enrolled in Services	Cumulative SSI NSTW Years, per 1,000 Beneficiaries	Cumulative NSTW Years and Not in DI Current Pay, per 1,000 Beneficiaries
VT	22.8	436	187
SD	22.2	364	136
MT	20.3	211	61
ID	20.2	347	130
UT	20.0	357	136
WY	19.0	406	135
ND	19.0	342	128
WI	17.1	340	128
IA	16.5	398	170
MN	16.3	489	184
KS	16.0	328	139
OR	14.6	158	68
MO	14.6	202	85
WA	14.4	200	98
AK	14.3	289	165
ME	14.2	324	132
NE	14.1	409	158
NH	14.1	476	189
DE	14.1	274	107
IN	13.4	246	97
MA	13.3	268	111
DC	13.2	116	78
CO	13.2	261	129
MD	13.1	192	89
HI	13.1	180	79
NJ	11.7	180	90
NY	11.7	125	60
NC	10.7	156	66
OH	10.7	227	96
US	10.7	164	75
RI	10.6	208	80
NV	10.4	193	93
SC	10.3	125	55
NM	10.2	174	85
FL	10.0	169	87
CA	9.9	99	50
OK	9.8	160	71
VA	9.8	202	88
AZ	9.7	192	112
TN	9.7	126	61
IL	9.6	236	117
PA	9.5	185	86
MI	9.1	184	74
TX	9.1	103	46
CT	8.6	253	119
AR	8.1	148	69
AL	7.8	124	59
LA	7.8	133	60
KY	7.7	109	45
GA	7.7	120	52
MS	6.8	124	57
WV	6.8	97	41

Note: Based on an analysis of SSI beneficiary records in the 2008 TRF matched to RSA-911 data. The data in the table are sorted by cumulative percentage ever enrolled in services.

Exhibit A.7. Annual Percentage of Cohort Employed Since the Second Post-Award Year, by SSI Award Cohort, 1998–2007



Note: Based on an analysis of SSI beneficiary records in the 2008 TRF. The statistics are adjusted for age and sex to reflect the age-sex composition of the 2001 cohort

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