What Can We Learn from Analyzing Historical Data on Social Security Entitlements?

by Joyce Manchester and Jae G. Song*

We use data from Social Security administrative records to examine the lifetime patterns of initial entitlement to retired-worker and Disability Insurance (DI) benefits across cohorts born in different years. Breaking out age-at-entitlement patterns for different birth-year cohorts reveals close adherence in entitlement ages to changes in program rules, such as increasing the full retirement age. The proportion of a cohort that becomes newly entitled to DI benefits rises noticeably during recessions and at ages 50 and 55, and cumulative entitlement rate patterns show that more recent cohorts rely increasingly on DI benefits in their late 30s and 40s.

Introduction

The age at which people become entitled to Social Security benefits, both for retirement and for disability, affects not only individual benefit amounts but also the proportion of the population that depends on Social Security. Entitlement to a Social Security retirement or disability benefit implies that a person has met all the eligibility requirements and has applied for that benefit. One way of analyzing entitlement trends is from a cross-sectional perspective—comparing entitlement rates from one year to another. Another way, which receives much less attention, is to analyze age-at-entitlement trends across birth cohorts. Changes in entitlement rates over a birth cohort's lifetime yield information about the interaction of economic conditions, program rules, administrative leniency, societal attitudes toward public programs, and individual behavior. Analysis of age at entitlement also tells us about the share of a particular cohort that receives support from Social Security as that cohort ages. In addition, we can compare entitlement rates at particular ages across birth cohorts to see how dependence on Social Security changes over time.

Two recent developments underscore the importance of understanding rates of Social Security entitlement at different ages. First, the recent recession, with its attendant layoffs and scarcity of job vacancies, has likely led more individuals to apply for Social Security benefits. Decreasing employment opportunities together with the aging of the population have led to higher numbers of applications for both disability and early-retirement benefits (CBO 2010). The recession has also led to a decline in payroll tax revenue, and CBO (2011) projects that the Disability Insurance (DI) Trust Fund will be exhausted in 2016 without legislative action to change the program's finances.[1] Second, the DI program in particular has grown rapidly in recent decades, with notable expansions in the number of beneficiaries with low-mortality diagnoses (Autor and Duggan 2006).[2] Many of those beneficiaries will remain on the rolls for many years to come, drawing both DI and Medicare benefits.

We use data from Social Security administrative records to compare the lifetime patterns of initial

Selected Abbreviations

DI	Disability Insurance
FRA	full retirement age
MBR	Master Beneficiary Record
SSA	Social Security Administration

* *Joyce Manchester is with the Congressional Budget Office. Jae G. Song is with the Office of Quality Performance, Social Security Administration.*

entitlement to retired-worker and DI benefits across birth cohorts. Examining differences between cohorts, we find that age-at-entitlement patterns closely follow program rule changes, such as raising the full retirement age (FRA); the proportion of a cohort that becomes newly entitled to DI benefits rises noticeably during recessions and at ages 50 and 55; and more recent cohorts increasingly become entitled to DI benefits in their late 30s and 40s.

More than 54 million Americans received Social Security benefits at the end of December 2010. Over 37 million beneficiaries were retired workers and their dependents, more than 6 million were survivors of entitled workers, and over 10 million were disabled workers and their dependents (SSA 2011b). This article looks at how many individuals entered the rolls at each age, and for which program.

Data Description

The Social Security Administration (SSA) maintains benefit records in the electronic Master Beneficiary Record (MBR). A record is created for every person with a Social Security number at the time of initial application for benefits of any type. In addition to benefit information, the record includes the beneficiary's sex and date of birth. We use an extract of the MBR encompassing 100 percent of beneficiaries that was created in August 2009. Further details appear in the appendix.

The administrative data on entitlements are not complete for all birth cohorts and all types of benefits. When the MBR system was created in 1963, data for all previous retired-worker entitlements were entered into the system to produce complete retired-worker entitlement records throughout the history of the Social Security program. However, the records for DI benefits are not complete prior to 1964. We analyze cohorts born in 1944 and later for whom the data on retired-worker and DI entitlements are essentially complete. Unfortunately, recent MBR files may not reflect all entitlements because both retired-worker and DI entitlements can change retroactively. As a result, data are incomplete for some months. For this article we generally use data through 2008.

Some of the results presented here are compared with those from SSA's *Annual Statistical Supplement to the Social Security Bulletin*. Our data differ slightly because, in the interest of simplicity, we report only the first entitlement for any type of benefit recorded for each person.[3] If an individual becomes entitled to DI benefits at age 55 and later converts to retired-worker benefits at age 65, or if he or she leaves the DI rolls but subsequently claims retired-worker benefits at age 65, we count that person only once, at the DI entitlement date. Based on the data restrictions cited above, we present initial entitlements for retired-worker benefits for birth cohorts from as early as 1890 through 1942, using data through 2008. New DI entitlements shown here begin with the 1944 cohort for ages 21 through 61 and run through the 1954 cohort for ages 21 through 53.

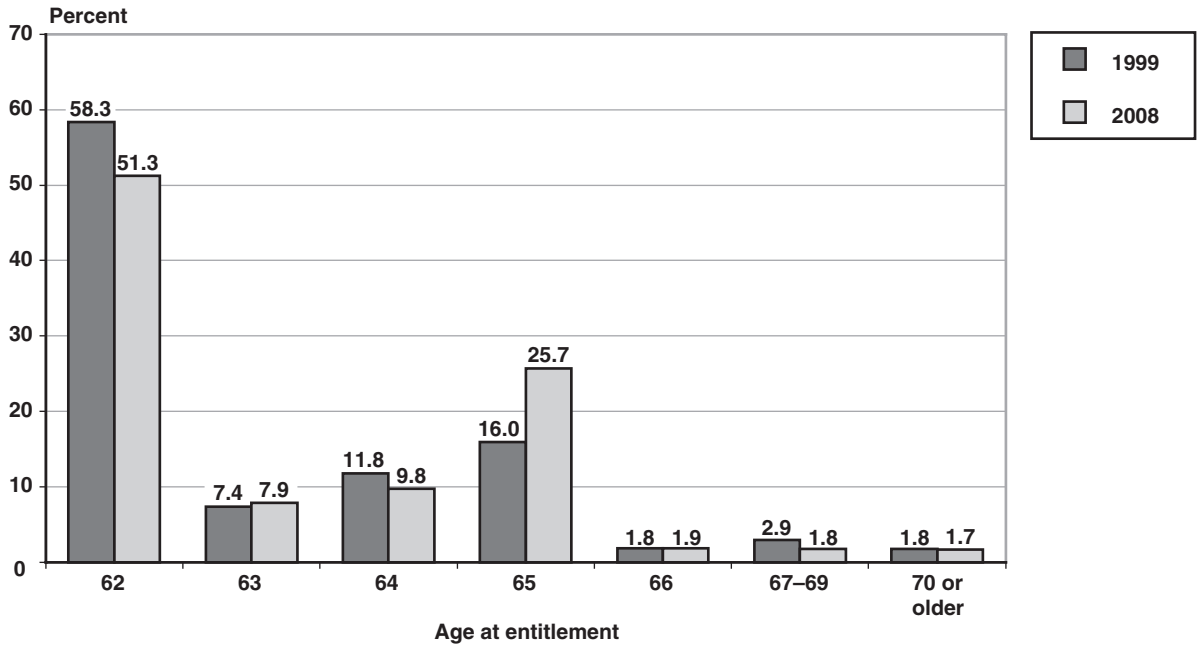
A Cross-Sectional Look at Initial Benefit Entitlements for Retired Workers

Analysts seeking a cross-sectional view examine the number of initial entitlements by age in a given year. Table 6.B5.1 of the 2011 *Annual Statistical Supplement* shows that benefit entitlements for new retired-worker beneficiaries in 1999 and 2008 spike at ages 62 and 65; our Chart 1, although it omits conversions from DI to retired-worker benefits and detail by sex, shows similar results.[4] In 1999, 58.3 percent of new entitlements went to people aged 62 and 16.0 percent went to people aged 65. In 2000, SSA eliminated the retirement earnings test for claimants at FRA or older;[5] and by 2008, the upward adjustment of the FRA implied a larger benefit reduction at age 62.[6] As a result, only 51.3 percent of new entitlements in 2008 went to people aged 62, and the proportion going to people aged 65 rose to 25.7 percent.

Of course, the proportions shown in cross-sectional data refer to all new entitlements in a particular year and do not reflect the distribution of entitlements within each birth cohort by age. The first wave of baby boomers, born in 1946, was eligible to claim retired-worker benefits in 2008 at age 62. Absent any changes to Social Security rules affecting that cohort, we would expect the proportion of entitlements going to claimants aged 62 to be higher in 2008 than in earlier years. In fact, the 2008 proportion was lower than that in 1999, probably due to the higher FRA for the 1946 cohort. The spike at age 65 remained large in 2008, as the FRA for the 1942 birth cohort was 65 years and 10 months, meaning that many in that group did not reach the FRA until 2008. Likewise, because the FRA for the 1943–1959 birth cohorts is 66, entitlements at that age spiked at 14.7 percent in 2009 (not shown).[7]

The newly published SSA data allow us to examine the age at new benefit entitlement in a particular year separately for men and women. The pattern of new entitlements by age and sex for 2008 (Chart 2) reveals that women are more likely than men to be newly entitled as retired-worker beneficiaries at age 62.

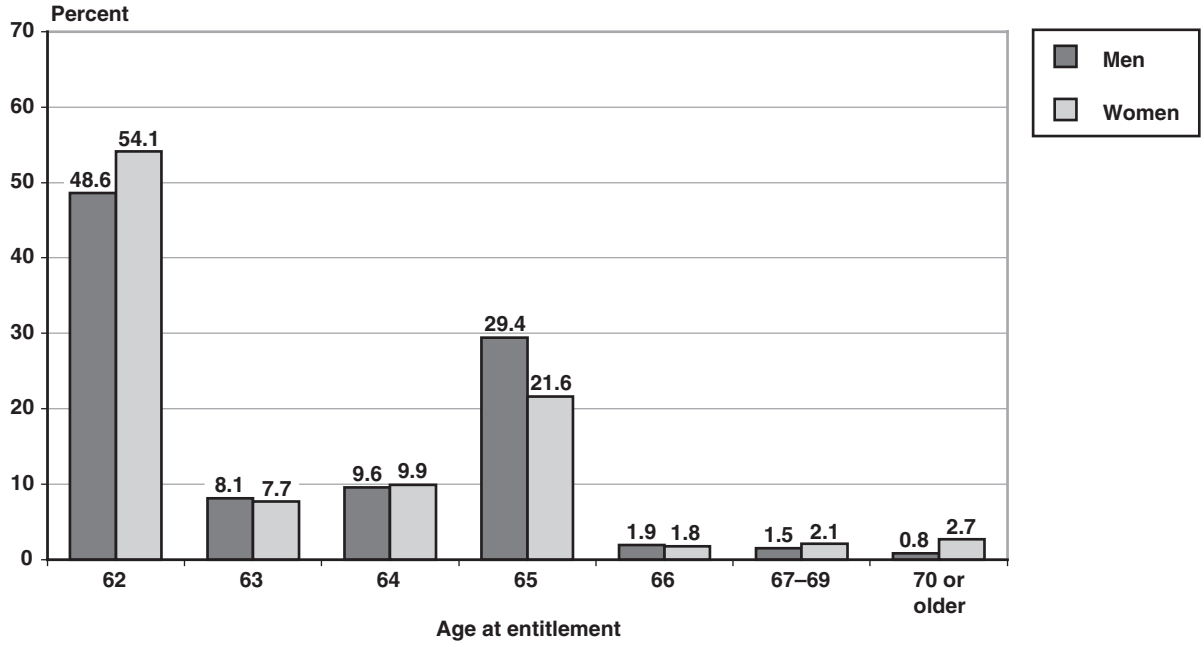
Chart 1.
Percentage distribution of new retired-worker beneficiaries by age at entitlement (excluding individuals automatically converted from DI to retirement benefits at FRA), 1999 and 2008



SOURCE: Authors' calculations based on SSA (2011a, Table 6.B5.1).

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

Chart 2.
Percentage distribution of new retired-worker beneficiaries by age at entitlement (excluding individuals automatically converted from DI to retirement benefits at FRA), by sex, 2008



SOURCE: Authors' calculations based on SSA (2011a, Table 6.B5.1).

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

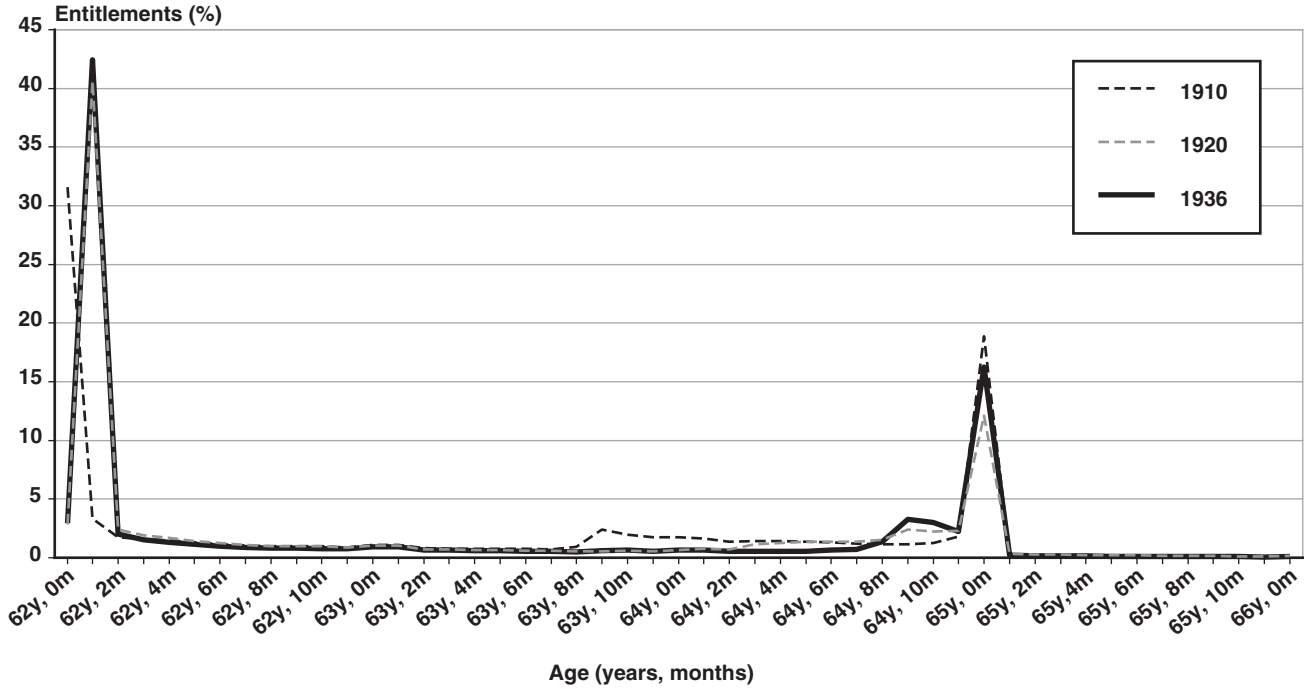
Initial Entitlement to Retired-Worker Benefits by Birth Cohort and Age

A different picture emerges when we examine the pattern of new entitlements to retired-worker benefits by age for each birth cohort. When particularly large or small cohorts reach the earliest Social Security eligibility ages, cohort outcomes differ noticeably from cross-section outcomes. Using the MBR, we examine the population within a particular birth cohort who became newly entitled to retired-worker benefits between ages 62 and 72, by age in years and months.[8] None of our new retired-worker beneficiaries was previously entitled to any other type of Social Security benefit. We compare the age-at-entitlement patterns of the 1910, 1920, and 1936 birth cohorts (Chart 3). The 1910 birth cohort shows a spike in entitlements for claimants in the month they reached age 62. The Social Security Amendments of 1981 changed the entitlement rules such that a person had to be age 62 for a full month to be eligible for retired-worker benefits. With the 1920 birth cohort, the spike in new entitlements moves to age 62 and 1 month. In each of the cohorts studied, between 31.6 percent and 44.5 percent of the workers became entitled to retired-worker benefits in their first month of eligibility.[9]

A smaller spike appears at age 65, the FRA for each of the cohorts studied. Between 11.3 percent and 18.9 percent of the retired-worker beneficiaries in each cohort was initially entitled to retired-worker benefits at age 65. A much smaller rise in initial entitlements occurs between age 64 and 9 months and age 65 for several of the cohorts. Three months prior to turning 65, individuals can sign up for Medicare at their Social Security office. While in the office, some individuals also sign up to become entitled to retired-worker benefits. The 1910 cohort also has a rise in entitlements at age 63 and 9 months, for reasons that are not clear.

Only a small percentage of people in each cohort become newly entitled to retired-worker benefits after age 65, although a small bump appears at age 70. Until a worker turns 70, the delayed retirement credit incrementally boosts the eventual benefit amount for every month past FRA that the person defers claiming. Instituted in 1973, the credit initially equaled 1 percent per year up to age 72. The credit rose to 3 percent per year for the 1917–1924 cohorts. The Social Security Amendments of 1983 reduced the maximum age to 70 and gradually raised the credit for later cohorts until it reached 8 percent per year beginning with the 1943 cohort.

Chart 3.
New retired-worker beneficiaries, by age in years and months at entitlement, 1910, 1920, and 1936 birth cohorts (in percent)



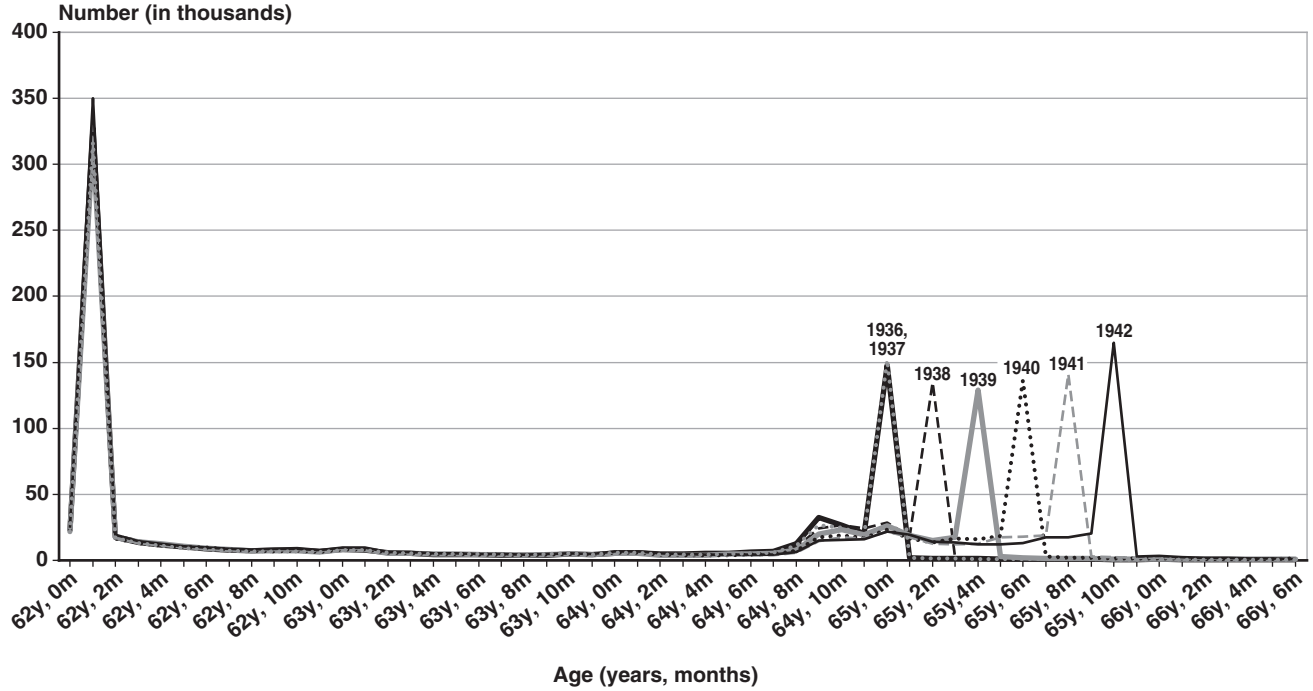
SOURCE: Authors' calculations based on SSA's MBR, 100 percent data.

Examining numbers of new entitlements by month of age for more recent cohorts reveals that age-at-entitlement patterns have paralleled FRA changes. As the FRA increased from 65 for the 1937 and prior cohorts to 65 and 2 months for the 1938 cohort, 65 and 4 months for the 1939 cohort, and so on up to 65 and 10 months for the 1942 cohort, the spike in entitlements for men at age 65 moved with it (Chart 4). The peaks move in step with the FRA increases for every cohort. The story is much the same for women (Chart 5), although the size of the peak at the FRA is smaller relative to the peak at age 62 and 1 month. When our MBR data extract was created in 2009, the numbers were not yet complete for the 1943 cohort, the first whose FRA is 66.

Another way to examine the patterns of entitlement for retired-worker benefits is to look at the cumulative percentage of retired-worker beneficiaries in a particular birth cohort who have become entitled by the time they attain various ages. Program rules prohibited workers born before 1892 from claiming retired-worker benefits before turning 65. However, growing shares of later cohorts did claim once retired-worker benefits became available to women aged 62–64 in 1956 and to men at those ages in 1961 (Chart 6). For example, of the retired-worker beneficiaries in the 1902 cohort, about 35 percent were entitled by age 62 ½. That percentage rose to 55 percent for the 1932 cohort before declining to 52 percent for the 1936 cohort.[10] About 75 percent of retired-worker benefit entitlements in the 1912 cohort had occurred by age 64 ½. That percentage gradually declined over subsequent cohorts, reaching 68 percent for the 1936 cohort.

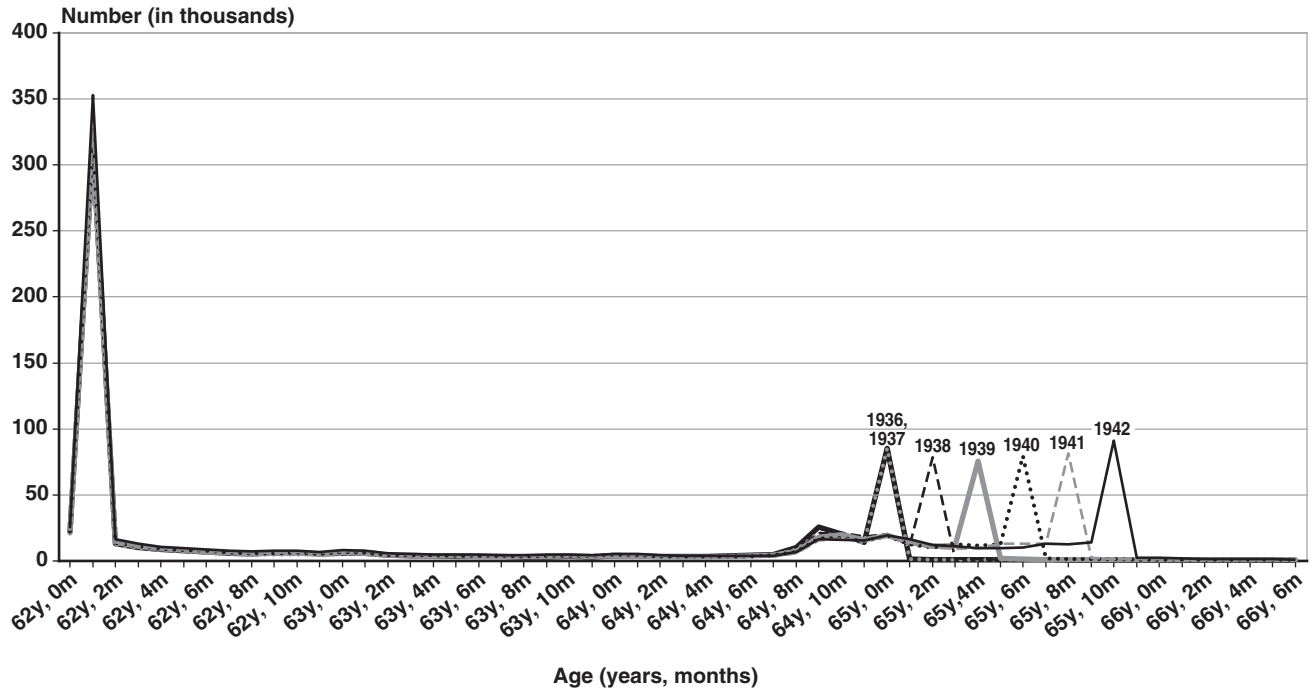
As the Social Security system matured in the middle decades of the 20th century and more groups of workers were covered, greater percentages of the population aged 65 or older became entitled to benefits. At the same time, people were becoming entitled to benefits at younger ages. Only 40 percent of retired-worker beneficiaries in the 1890 birth cohort were entitled by age 65 ½, but that percentage rose to about 93 percent for the 1900 birth cohort, coinciding with the enactment of Medicare in 1965. The percentage rose slightly for subsequent cohorts before declining slowly over time to 90 percent for the 1934 cohort. It then jumped to about 95 percent for the 1935 cohort, whose members reached age 65 in 2000 as the retirement earnings test was eliminated for claimants from FRA (then 65) through age 69 (Song and Manchester 2007, 2008). The percentage entitled by age 67 ½ has changed little across cohorts, at about 97 percent beginning with those born in 1898.

Chart 4.
Number of men initially entitled to retirement benefits by age in months, 1936–1942 birth cohorts



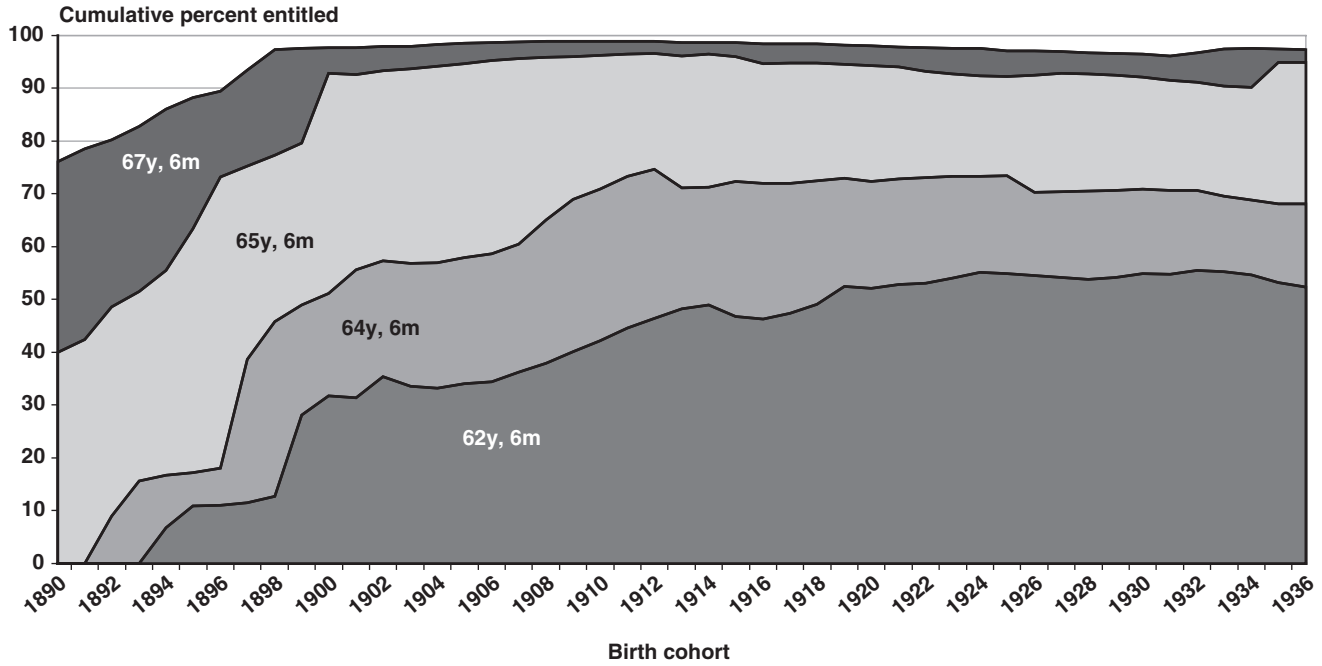
SOURCE: Authors' calculations based on SSA's MBR, 100 percent data.

Chart 5.
Number of women initially entitled to retirement benefits by age in months, 1936–1942 birth cohorts



SOURCE: Authors' calculations based on SSA's MBR, 100 percent data.

Chart 6.
Cumulative shares of each birth cohort entitled to retirement benefits by the time they reach selected ages, 1890–1936 cohorts



SOURCE: Authors' calculations based on SSA's MBR, 100 percent data.

NOTE: Retirement benefits for those aged 62–64 were first offered to women in 1956 and to men in 1961.

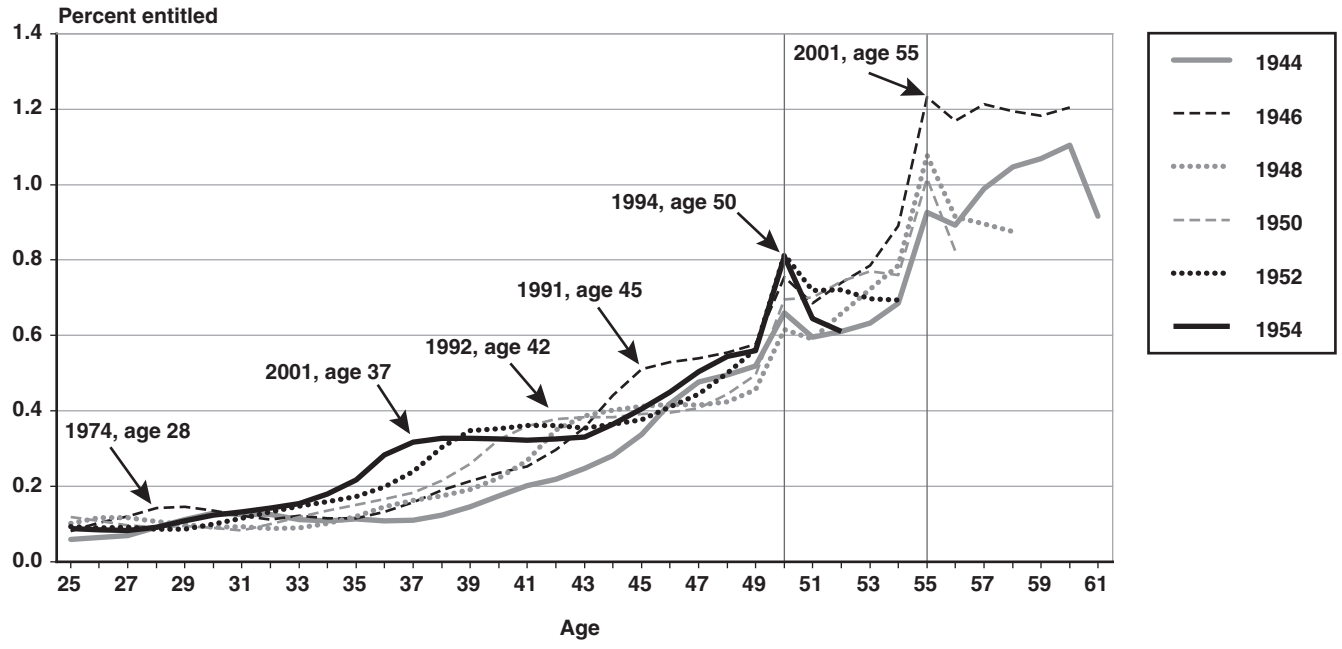
Initial Entitlement to DI Benefits by Birth Cohort and Age

In recent decades, increasing shares of cohorts have become entitled to DI benefits by the time they reach their early 50s.[11] Attention has focused on DI because of the growth in entitlements for that program (Autor and Duggan 2003, 2006). In particular, because the Social Security Disability Benefits Reform Act of 1984 expanded the list of mental and musculoskeletal impairments that qualify a claimant for benefits, the number of DI entitlements has grown rapidly. Moreover, the increase in the FRA and the larger benefit reductions for claiming retired-worker benefits prior to reaching FRA make DI more attractive for individuals born in 1938 or later (Duggan, Singleton, and Song 2007).

To illustrate the growth in preretirement benefit entitlements with an admittedly rough measure, we use the MBR to determine the percentage of a birth cohort that becomes newly entitled to DI benefits at each single year of age and for each birth cohort. We use the number of people in each birth cohort aged 50 as a scaling metric.[12] Part of the change we observe in entitlements by age stems from growing proportions of women who are eligible for DI benefits over time, both within a particular cohort and across successive cohorts. Eligibility rules require a claimant to have not only serious medical problems that prevent work but also a recent work history, with earnings above a minimum threshold in 5 of the last 10 years. Larger proportions of women have become eligible for DI over time as their labor force participation has increased.

We start by showing the percentages of a birth cohort who become initially entitled to DI benefits by single years of age between 25 and 61. We focus on the 1944, 1946, 1948, 1950, 1952, and 1954 birth cohorts (Chart 7), as the MBR contains complete data on entitlements for those cohorts.[13] We use data through 2006, the year in which information for the 1946 cohort at age 60 is complete. A couple of previously documented patterns in entitlement trends stand out. First, incidence rates peak at ages 50 and 55 for each cohort (Chen and van der Klaauw 2008). At both those ages, the vocational guidelines used in the DI screening process change, reflecting lower expectations for claimants to adjust to other work, particularly for individuals with little residual functional capacity, limited education, and a history of work providing no transferable skills.[14] Second, initial DI entitlements in each cohort generally rise during times of economic recession, as in 1974–1975, 1991–1992, and 2001–2002 (Autor and Duggan 2003, Rupp and Stapleton 1995).

Chart 7.
Shares of each birth cohort entitled to DI benefits by age, biennial cohorts 1944–1954



SOURCE: Authors' calculations based on SSA's MBR, 100 percent data.

NOTE: Percentages are scaled to each cohort's age-50 population.

To further investigate the effect of the economy and the stance of the DI program regarding new entitlements, we next examine the incidence of new entitlements by year, 1969–2006, for the same cohorts studied above. Chart 8 shows the effect of the 1974–1975 recession, with a modest increase in entitlement rates across all cohorts. The 1980–1982 double-dip recession is notable in that no increase in new entitlements occurred: Those years correspond to restricted allowance rates. However, the 1984 Social Security Amendments relaxed some of the prior restrictions and extended allowances to people with certain mental and musculoskeletal impairments. That legislation not only changed labor market conditions, it likely contributed to increases in new entitlements in the 3–4 years leading up to the recession of 1990–1991. We also see rising entitlements in the years leading up to 2000–2001. The slow pace of the economic recovery following the 2001 recession corresponds with the continued high incidence of new DI entitlements in 2002–2006.

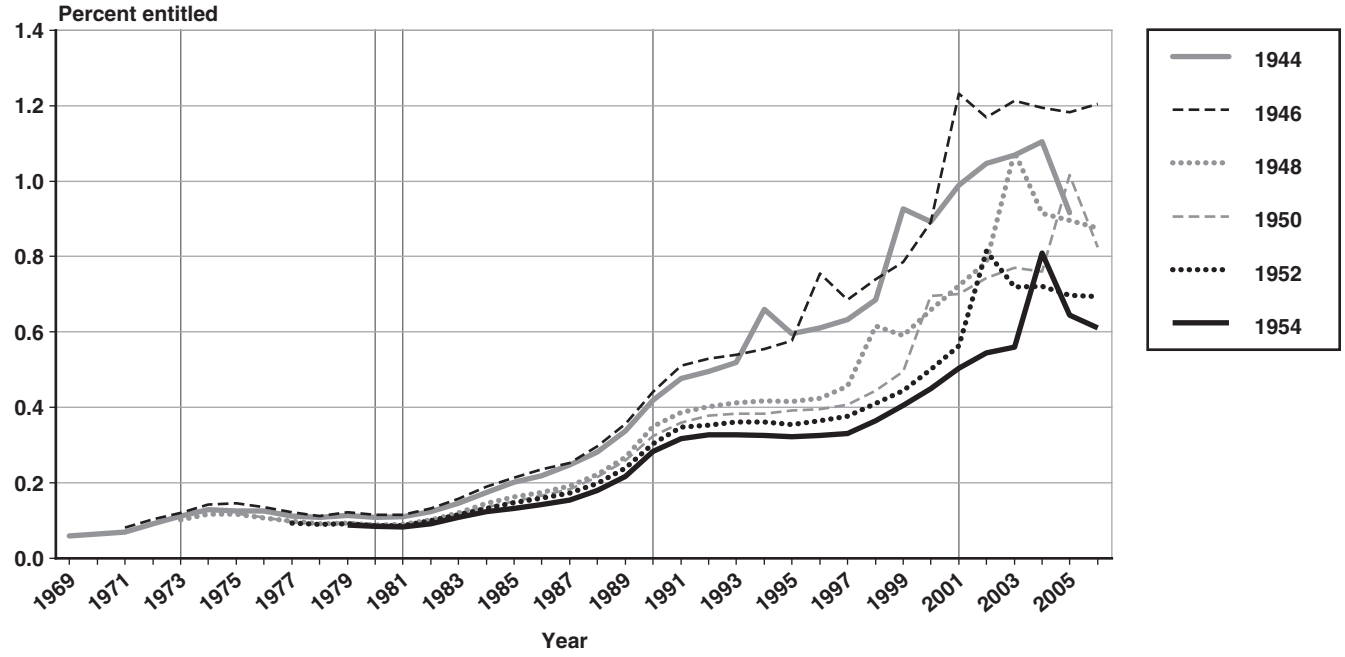
To determine the cumulative share of each birth cohort that becomes entitled to DI benefits by a given age, we divide the number of new entitlements for that age by the number of people in the birth cohort aged 50.[15] We separate the sexes when showing the share of a cohort that is entitled to benefits. In part, differences between men and women reflect the fact that a higher proportion of men are insured for disability benefits. Among men in the 1944 cohort, over 17 percent became entitled to DI benefits by age 61 (Chart 9). Among men born just 2 years later, 21 percent became entitled by age 61. More recent cohorts appear on track to reach similar percentages. Among women, 13 percent of the 1944 cohort became entitled to DI benefits by age 61, as did about 16 percent of the 1946 cohort (Chart 10). Of course, new DI entitlements can occur up to the FRA, so cumulative DI entitlement rates will ultimately exceed the percentages shown here.

Chart 11 highlights the differences between the 1944 and 1954 cohorts. For men the entitlement rate by age 52 rose from about 8 percent for the 1944 cohort to about 10 percent for the 1954 cohort. Among women, corresponding entitlement rates increased from about 5 percent to about 8 percent.

What Have We Learned?

Using administrative data to track initial Social Security benefit entitlements, we make three discoveries. First, age-at-entitlement patterns for particular

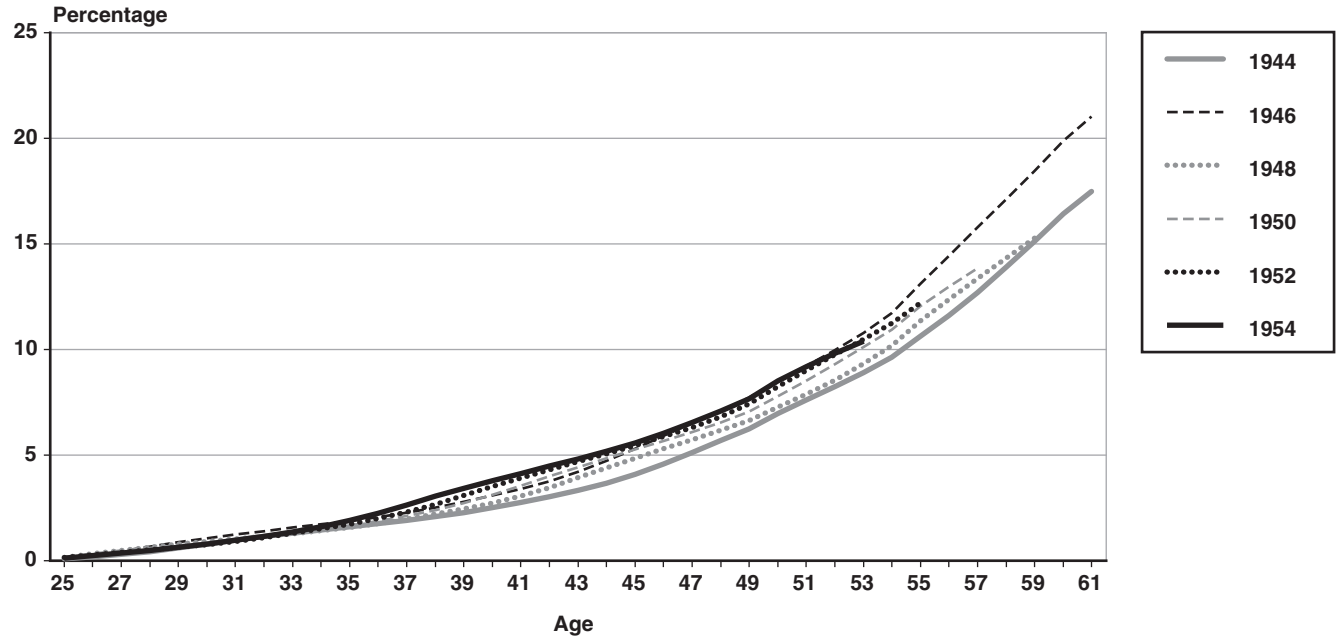
Chart 8.
Shares of each birth cohort entitled to DI benefits in 1969–2006, biennial cohorts 1944–1954



SOURCE: Authors' calculations based on SSA's MBR, 100 percent data.

NOTE: Percentages are scaled to each cohort's age-50 population.

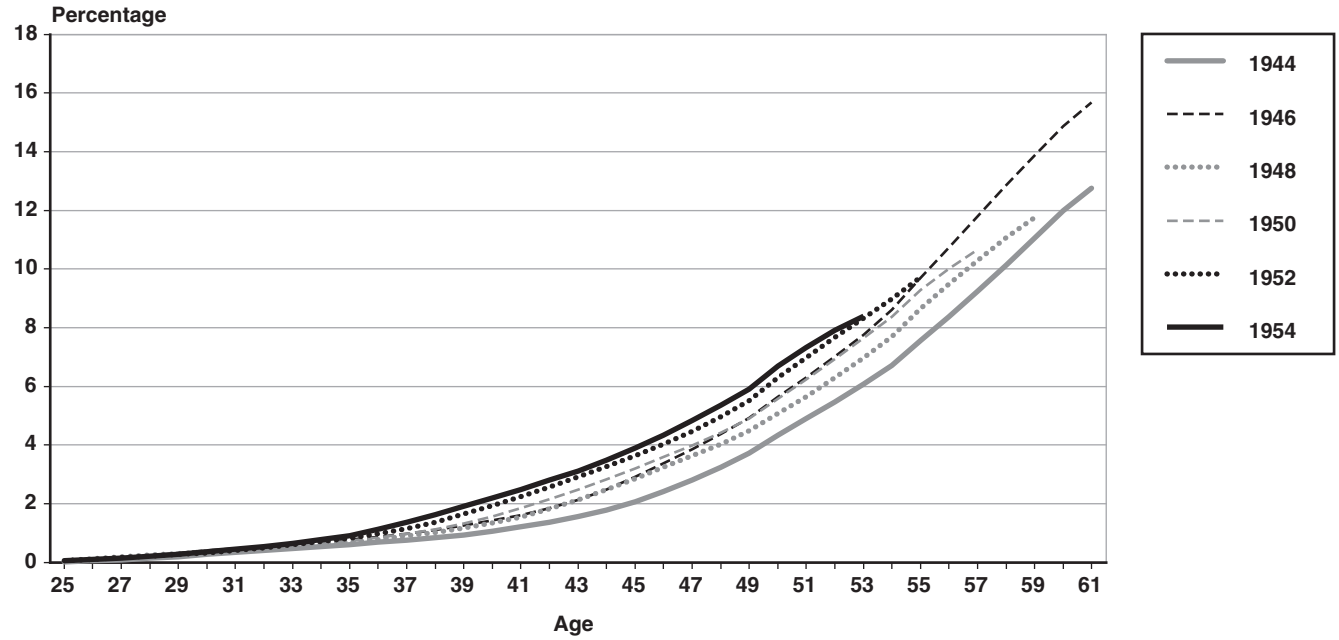
Chart 9.
Cumulative percentage of men entitled to DI benefits by age, biennial birth cohorts 1944–1954



SOURCE: Authors' calculations based on SSA's MBR, 100 percent data.

NOTE: Cumulative percentages are scaled against the cohort's age-50 population.

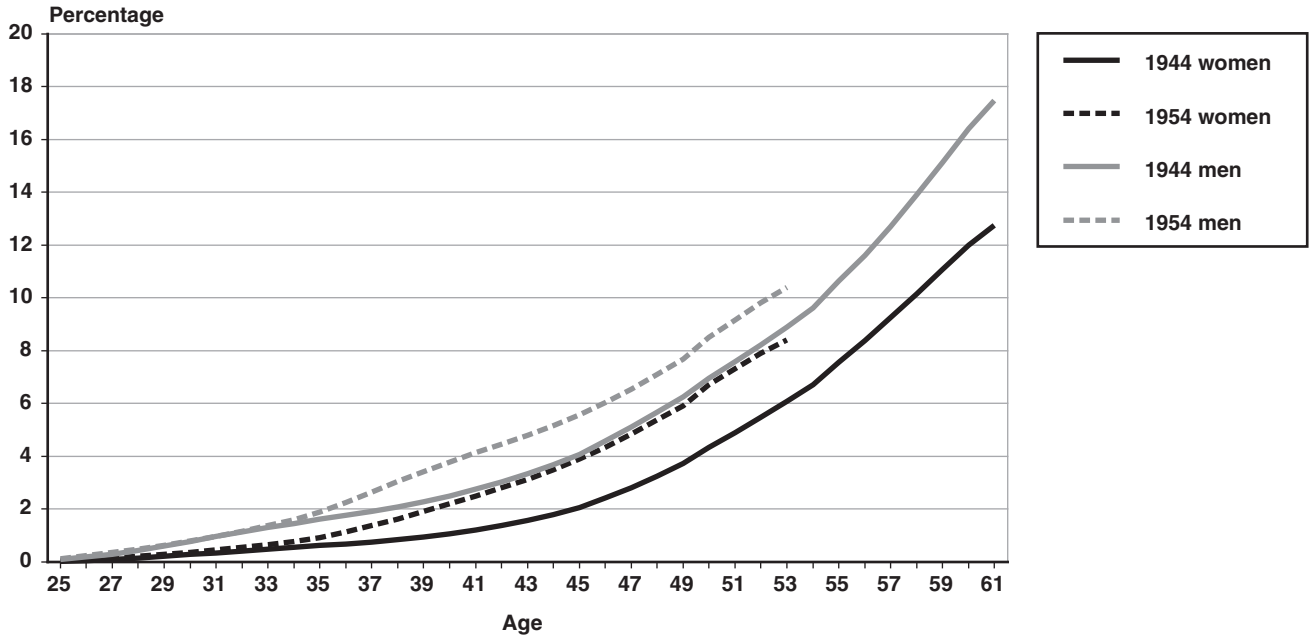
Chart 10.
Cumulative percentage of women entitled to DI benefits by age, biennial birth cohorts 1944–1954



SOURCE: Authors' calculations based on SSA's MBR, 100 percent data.

NOTE: Cumulative percentages are scaled against the cohort's age-50 population.

Chart 11.
Cumulative percentages of workers entitled to DI benefits by age and sex for the 1944 and 1954 cohorts



SOURCE: Authors' calculations based on SSA's MBR, 100 percent data.

NOTE: Cumulative percentages are scaled against the cohort's age-50 population.

birth cohorts offer insights that might be missed when looking only at cross-sectional data. Second, comparing patterns across cohorts furthers our understanding of entitlement trends. Third, we can see how people respond to changes in rules or procedures, such as the change in the FRA or the less stringent vocational guidelines in the disability decision process at ages 50 and 55, when we separate age and cohort characteristics.

As the United States faces the challenges of entitlement growth going forward, better understanding of why people seek Social Security benefits at different ages will help guide program changes. A first step in that process involves recognizing historical entitlement patterns. A second step for future research involves translating demographic and economic factors presently in transition—such as increasing longevity, higher incidence of diabetes or obesity, technological advances, and different skill requirements for jobs—into likely effects on entitlement patterns.

Appendix

This appendix describes the data sources and analytical methods used in this article.

Timing of Initial Entitlement

An extract from the MBR provides the entitlement data used here.[16] To find the age at initial entitlement to retired-worker or DI benefits, we use the following variables:

DOB = Date of birth (month, day, and year)

DOIE = Date of initial entitlement to retired-worker or DI benefits (month and year)

DOEDIB = Date of entitlement to DI benefits (month and year)

TOC = Type of claim (a numeric code, in which codes 6 and 7 denote DI benefits)

We also use the beneficiary identification code (BIC) to identify primary worker beneficiaries.[17] We then derive the age at DOIE, the primary variable of interest for this article, by comparing DOIE with DOB. We identify initially entitled retired-worker beneficiaries as those aged 62 or older at DOIE who have neither a DOEDIB nor a TOC of 6 or 7, or whose earliest instance of DOEDIB is after initial entitlement. We identify initially entitled DI beneficiaries as those aged younger than 62 at DOIE who have a DOEDIB or a TOC of 6 or 7. For individuals with multiple DI

entitlements, the MBR extract we used provides the three most recent DOEDIBs.

Population at Age 50

For each birth cohort we use the population at age 50 to scale the share of the cohort that obtains DI benefits at various ages. We chose population at age 50 because we wanted a denominator that does not shift with age. We use the total population, rather than the population insured for disability benefits, to capture the total increase in DI entitlement relative to the size of the cohort. We use population data from the Census Bureau, *Population Estimates*, Table 1: Annual Estimates of the Resident Population by Sex and Five-Year Age Groups for the United States: April 1, 2000, to July 1, 2008.[18] Those data give us the population aged 50–54. We take an average to get a rough estimate of the age-50 population and then adjust that value by the ratio of births in the cohort's birth-year to the annual average of births over the 5-year interval. Data on births by single year come from various editions of the Census Bureau's *Statistical Abstract of the United States*.

Benchmarking our Numbers against SSA's Published Numbers

The counts of initial entitlements by age will not correspond to published SSA counts of benefit entitlements because we look only at the date of initial entitlement and because the SSA data are generally not available by age in years and months. Counts of initial entitlements and all entitlements differ when, for example, a person becomes entitled to DI at age 45, leaves the rolls after medical recovery at age 55, and then becomes entitled to retired-worker benefits at age 62. We count only the initial entitlement to any Social Security program. In that case, we would report initial entitlement at age 45 but not the entitlement at age 62; SSA data would show both entitlements. Counts by age can differ because we know the age of beneficiaries in years and months at the time of entitlement, whereas the *Annual Statistical Supplement* generally reports age at entitlement only in years. In the *Annual Statistical Supplement,* a person born in January 1937 and entitled to retirement-worker benefits at 62 years and 8 months is entitled in 1999, yet a person born in September 1937 and entitled at 62 years and 8 months is entitled in 2000. Thus, our counts of entitlements by birth cohort do not match those in the *Annual Statistical Supplement*.

To check the numbers of initial entitlements used in this article against published SSA figures, we aggregate our counts of entitlements by age in months to counts by age in years, and compare them to counts in Table 6.B5.1 of the 2011 *Supplement*. For example, we can add the percentages of people in the 1937 birth cohort who became initially entitled to retired-worker benefits from age 62 through 62 and 11 months. We find that 56.4 percent of the 1937 birth cohort became entitled to retired-worker benefits at some time between their 62nd and 63rd birthdays. Some became entitled in 1999 and some became entitled in 2000. We also find that 56.3 percent of the 1936 birth cohort became entitled to retired-worker benefits between their 62nd and 63rd birthdays, some in 1998 and some in 1999. Based on data reported by SSA in *Supplement* Table 6.B5.1, adjusted to omit DI conversions at age 65 and to merge data for men and women, 58.3 percent of people who became entitled to retired-worker benefits in 1999 were aged 62. During 1998–2000, the annual average percentage of people who became entitled to retired-worker benefits at age 62 was 57.3 percent. Our 56.4 percent figure for entitlements at age 62 for the 1936 and 1937 birth cohorts resembles the 58.3 figure for entitlements in 1999 at age 62 (or the 57.3 percent annual average for 1998–2000), lending credibility to our approach. As expected, percentages reported by SSA are a bit higher because the underlying population includes some people who became entitled to retired-worker benefits after a previous entitlement to another type of Social Security benefit.

Notes

Acknowledgments: We thank Susan Grad, Aubrey Johnson, Steve McKay, Chris Motsiopoulos, Scott Muller, David Pattison, David Stapleton, Hilary Waldron, and David Weaver for helpful comments on an earlier draft; Richard Balkus for helpful discussions; and Sarah Axeen for assistance.

[1] The Social Security Board of Trustees (2011) projects that the DI Trust Fund will be exhausted in 2018.

[2] Increasing proportions of new beneficiaries in the 30–44 and 45–60 age groups are being diagnosed with nonlife-threatening musculoskeletal conditions and mental disorders (von Wachter, Song, and Manchester forthcoming, Appendix Table D).

[3] Initial entitlement can occur only after all eligibility requirements are met. The entitlement date often differs from the date of application or the date on which benefit payments actually begin for reasons such as retroactive payment provisions, applicant choice, and varying adjudication periods.

[4] Table 6.B5.1 appears for the first time in the 2011 *Annual Statistical Supplement,* available online at http://www.socialsecurity.gov/policy/docs/statcomps/supplement/2011/6b.html#table6.b5.1. The print edition is forthcoming.

[5] The term "retired-worker benefit" denotes the type of Social Security benefit but does not necessarily imply that the individual has stopped working for pay. It does imply that the benefit is based on the individual's prior earnings. Prior to 2000, the retirement earnings test withheld benefits for beneficiaries who had substantial earnings. For further details, see Song and Manchester (2007, 2008).

[6] Beginning with the 1938 birth cohort, the FRA rose from 65 years to 65 years and 2 months. It continued to rise in 2-month increments for those born each year thereafter until reaching 66 years for the 1943 birth cohort. When the FRA was 65, individuals who claimed retired-worker benefits at age 62 received 80 percent of their full benefit. For those whose FRA is 66, claimants aged 62 receive 75 percent of their full benefit.

[7] The new Table 6.B5.1 in the 2011 *Annual Statistical Supplement* shows entitlements at age 65 that occur before reaching FRA, at FRA, and after reaching FRA. Similarly, it shows entitlements at age 66 at FRA and after reaching FRA.

[8] A retired-worker beneficiary receives benefits based on his or her own earnings history. By contrast, an auxiliary beneficiary receives benefits based on another person's earnings history.

[9] For a comparison of data on initial entitlements by age and birth cohort with the entitlement data in the *Annual Statistical Supplement,* see the appendix.

[10] A similar analysis of claiming by cohort at age 62 appears in Muldoon and Kopcke (2008).

[11] Supplemental Security Income uses the same medical and vocational criteria as DI but is available only to people with low income and assets.

[12] An alternative scaling factor would be the number of people insured for disability benefits in each cohort by single year of age, but we wanted to capture the total growth in DI entitlement. The number of all people in each cohort by single year of age would adjust for changes in mortality at different ages over time, but we took the shortcut of using the population at age 50 for each birth cohort to keep the denominator stable. Consequently, the actual population is larger at ages below 50 and smaller at ages above 50, implying that the charts overstate the percentages at ages younger than 50 and understate them at older ages. See the appendix for further details.

[13] Entitlement rates were higher in the 1970s but especially low during the 1980s as the Reagan administration tightened allowance rates. Individuals in the 1944 cohort were only in their 30s in the 1970s, so we may not fully reflect the higher incidence rates of that decade. Unfortunately, the administrative data for earlier birth cohorts are incomplete.

[14] Individuals approaching advanced age (50–54) may be significantly limited in vocational adaptability if they are restricted to sedentary work. Individuals who have no past work experience or can no longer perform vocationally relevant work and have no transferable skills ordinarily obtain a disability finding (CFR 2010).

[15] We use a denominator that does not shift with age to capture the total increase in DI enrollment. Of course, some people who qualify for DI benefits die within a few years of entitlement, and some members of the birth cohort die prior to age 50 without ever being entitled to DI. In addition, changing shares of each cohort do not have sufficient recent work to be insured for DI.

[16] We used the annual MBR file of SSA's Office of Research, Evaluation and Statistics and examined primary benefits only.

[17] For additional detail, see Panis and others (2000). Primary workers receive benefits based on their own earnings record.

[18] See http://www.census.gov/popest/national/asrh/NC-EST2008-sa.html.

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