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Article

Employment at Older Ages and Social Security Benefit Claiming

by Patrick J. Purcell*

A retired worker's Social Security benefit depends in part on the age at which he or she claims benefits. Working longer and claiming benefits later increase the monthly benefit. Information about trends in employment at older ages and the age at which individuals claim Social Security benefits can help policymakers assess the effectiveness of current policies in influencing the timing of retirement and benefit claims. Both the labor force participation rate among older Americans and the age at which they claim Social Security retirement benefits have risen in recent years. For example, from 2000 through 2015, the labor force participation rate among individuals aged 65–69 rose from 30 percent to 37 percent for men and from 19 percent to 28 percent for women. Since 2000, the proportion of fully insured men and women who claim retirement benefits at the earliest eligibility age of 62 has declined substantially.

Introduction: The Aging U.S. Population

In 2016, the oldest members of the "baby boom" generation—the 75 million living Americans who were born in the period 1946–1964—are 70 years old, and the youngest baby boomers reach age 52. Over the next 20 years, the proportion of Americans who are aged 65 or older will increase substantially. Growth in the number of older Americans will result in higher expenditures for Social Security, Medicare, and Medicaid, and will affect the amounts and sources of income for tens of millions of individuals and families.

The Census Bureau projects that the U.S. population will grow from 321 million in 2015 to 370 million in 2035, an increase of 15.3 percent. Most of the increase will occur among people aged 65 or older, whose numbers will grow from 48 million in 2015 to 79 million in 2035—an increase of 31 million, or 64.6 percent. Over that period, the number of people aged 64 or younger is projected to grow from 274 million to 291 million, an increase of only 17 million, or 6.2 percent. As a result, the proportion of the population that is aged 65 or older is projected to rise from 15.0 percent in 2015 to 21.4 percent in 2035 (Census Bureau 2014).

The growth in the proportion of the population that is aged 65 or older over the next 20 years will reflect recent demographic trends, especially the rise and subsequent fall in birth rates in the second half of the 20th century. Changes in birth rates and death rates typically occur over long periods, and they can take decades to affect the age profile of a nation's population. By contrast, trends in retirement age—and in the age at which individuals claim Social Security benefits—can change substantially in a short time. Choices about retirement and Social Security benefit claiming can affect individuals' retirement income many years into the future. By delaying retirement, for example, workers can continue to accumulate savings instead of beginning to

Selected Abbreviations

BLS	Bureau of Labor Statistics
DI	Disability Insurance
DRC	delayed retirement credit
FRA	full retirement age
LFPR	labor force participation rate
OCACT	Office of the Chief Actuary

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Selected Abbreviations—*Continued*

P.L.	Public Law
RET	retirement earnings test
SSA	Social Security Administration

draw those savings down to pay their living expenses. Additionally, workers who delay claiming their Social Security benefits until after the earliest age of eligibility receive larger monthly benefits for life.

This article presents data on trends in the labor force participation rate (LFPR) of older Americans, in the age at which people claim Social Security retired-worker benefits, and in the proportion of men and women aged 62 or older who receive disabled-worker or retired-worker benefits. The data are summarized in six charts. The first chart shows LFPRs based on data collected in the Current Population Survey (CPS), a monthly survey of households conducted by the Census Bureau. The CPS collects data on employment, unemployment, persons not in the labor force, hours of work, and earnings, along with other demographic and labor force characteristics (Census Bureau, n.d.). It is the primary source of data for estimates of the national unemployment rate published monthly by the Bureau of Labor Statistics (BLS). The remaining five charts illustrate trends in Social Security benefit claiming behavior and in beneficiaries as a percentage of the insured population. Those charts are based on administrative records and estimates prepared by the Office of the Chief Actuary (OCACT) of the Social Security Administration (SSA) for *The 2015 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* (or simply the *Trustees Report*).

The article also includes appendices that provide information on Social Security rules and definitions that are relevant to the decision of when to claim retired-worker benefits. The appendices also address rules changes enacted in 1983 and 2000 that affect workers in earlier and later birth cohorts differently.

Trends in Labor Force Participation at Age 55 or Older

The civilian labor force comprises noninstitutionalized individuals aged 16 or older who are working (full-time or part-time) or are unemployed and looking for work (BLS, n.d.). People aged 16 or older who are neither working nor looking for work are considered to be not in the labor force; those individuals are mainly full-time students, homemakers, persons with disabilities, and retirees.[1] The LFPR is the percentage of civilian noninstitutionalized individuals aged 16 or older who are working or are unemployed and looking for work.

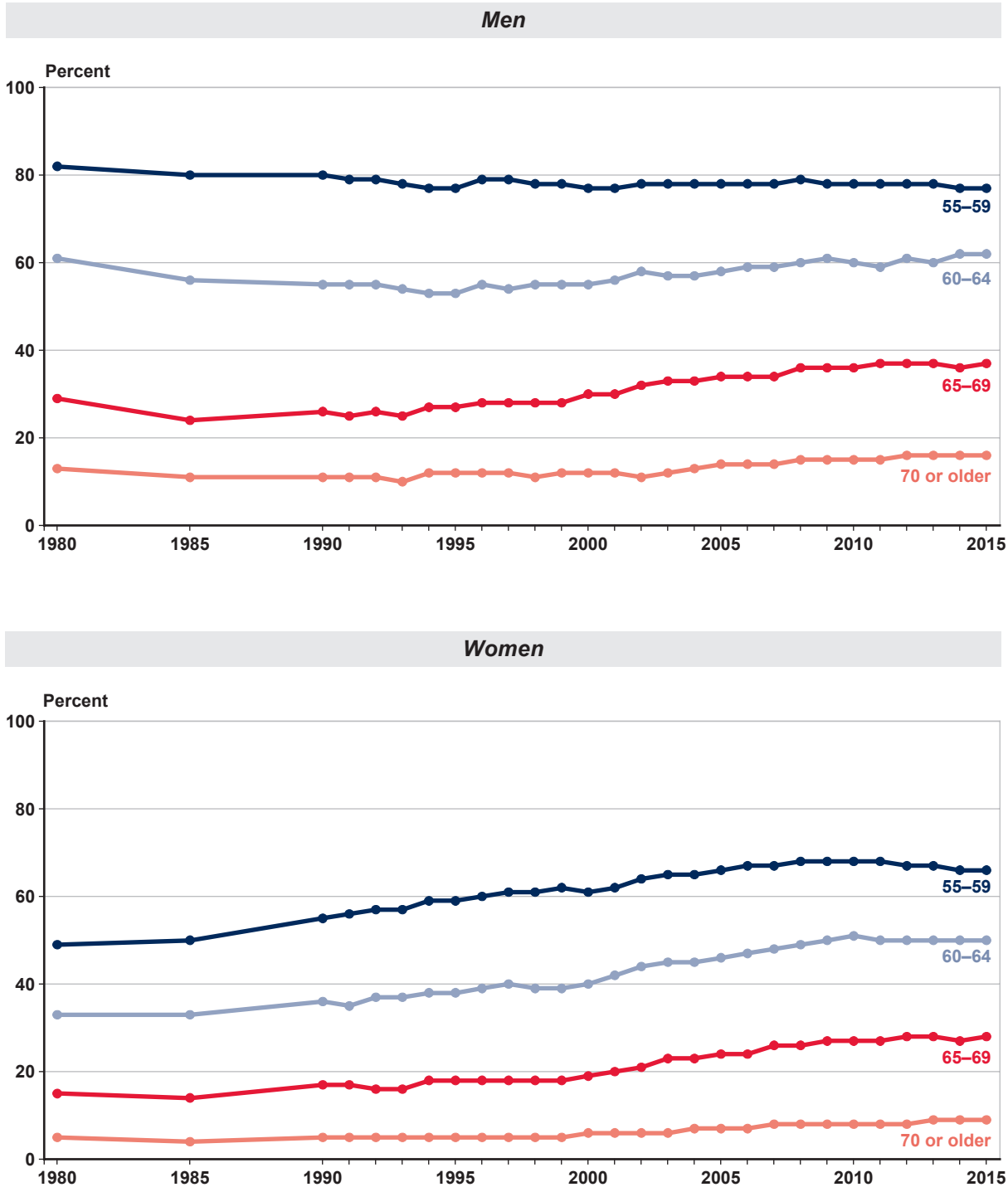
The LFPR is highest at ages 25–54 for both men and women, and it is higher at all ages for men than for women. Over the last 60 years, however, the LFPR among ages 25–54 has fallen for men, while it has risen for women.[2] The LFPR declines as workers age. At ages 55 or older, workers may begin to leave the labor force because of age-related disability or because they choose to retire. However, over the last 30 years, the LFPRs of both men and women aged 55 or older have risen. A number of factors may have contributed to the rising LFPR among older Americans. A partial list includes the long-term shift in employment toward industries and occupations that require relatively less physical stamina, the trend away from defined-benefit pensions to defined-contribution retirement savings plans, the decline in the availability of employer-sponsored retiree health insurance, and the 1983 and 2000 Social Security rules changes (discussed later).

The increase in the LFPR at ages 55 or older has occurred while the number of single-person households has risen, as more people are either divorced or never married when they reach traditional retirement ages. Higher employment rates at older ages could be either a cause or an effect of the increase in single-person households. On one hand, working at older ages may enable greater numbers of older Americans to live alone. On the other hand, the absence of a spouse—and possibly a second source of income—may make it necessary for people who live alone to work longer.

Chart 1 illustrates the LFPRs for 1980, 1985, and 1990–2015 among older men and women in four age groups: 55–59, 60–64, 65–69, and 70 or older. Men aged 55–59 are the only group represented in the chart for whom the LFPR did not rise after 1985. The LFPR among men aged 55–59 fell from 82 percent in 1980 to 77 percent in 1994. Thereafter, it remained relatively stable, fluctuating within a narrow range of 77–79 percent through 2015. The LFPR among men aged 60–64 also fell in the period 1980–1994, from 61 percent to 53 percent. Thereafter, it began to rise slowly but steadily, reaching 55 percent in 2000 and 62 percent in 2015.

Although the LFPR among men and women aged 65 or older has been increasing for the last 20 years, it remains much lower than the rate among men and women aged 55–64. For example, 77 percent

Chart 1.
LFPR for men and women aged 55 or older by age group, selected years 1980–2015



SOURCE: BLS *Employment and Earnings* (January issues).

of men aged 55–59 were in the labor force in 2015, compared with 62 percent of men aged 60–64, 37 percent of those aged 65–69, and 16 percent of those aged 70 or older. In other words, in 2015, the LFPR of men aged 65–69 was less than half that of men aged 55–59.

From 1980 through 1985, the LFPR among men aged 65–69 fell from 29 percent to 24 percent, before rising to 30 percent in 2000 and 37 percent in 2011. From 2008 through 2015, the LFPR among men aged 65–69 averaged 37 percent. Among the four age groups illustrated in Chart 1, 65–69 shows the largest proportional increase in labor force participation from 2000 through 2015. For that group, the LFPR rose from 30 percent in 2000 to 37 percent in 2015, an increase of 23 percent. Among men aged 70 or older, the LFPR averaged 11 percent from 1980 through 1999 and then increased to 16 percent by 2012, where it remained through 2015.

Historically, the LFPR among women aged 55 or older has been lower than the LFPR among men of that age. Although the gap narrowed substantially after 1980, the LFPR among women aged 55 or older remained lower than that of men 55 or older in 2015. For the 55–59 age group, 66 percent of women were in the labor force in 2015, 11 percentage points lower than the rate among men. For ages 60–64, the LFPR among women was 50 percent in 2015, compared with 62 percent among men. Likewise, the women's LFPRs of 28 percent for ages 65–69 and 9 percent for ages 70 or older were lower than the corresponding rates of 37 percent and 16 percent among men in the respective age groups.

After steadily rising from 49 percent in 1980 to 61 percent in 2000 and 68 percent in 2008, the LFPR among women aged 55–59 leveled off and then declined slightly to 66 percent in 2015. Among women aged 60–64, the LFPR rose from 33 percent in 1980 to 40 percent in 2000 and 50 percent in 2009. At that point, it leveled off and remained at 50 percent in 2015. Among women aged 65–69, the LFPR rose from 15 percent in 1980 to 19 percent in 2000 and 27 percent in 2010. From 2011 through 2015, it remained relatively stable, averaging 27 percent. Among all three of those age groups, the increase in LFPR appears to have stopped at least temporarily in the period 2010–2014. Among women aged 70 or older, the LFPR was relatively flat from 1980 through 1999, averaging 5 percent per year; then, from 2000 through 2015, it rose modestly, from 6 percent to 9 percent.

Growth in the Population That Is Fully Insured for Retired-Worker Benefits

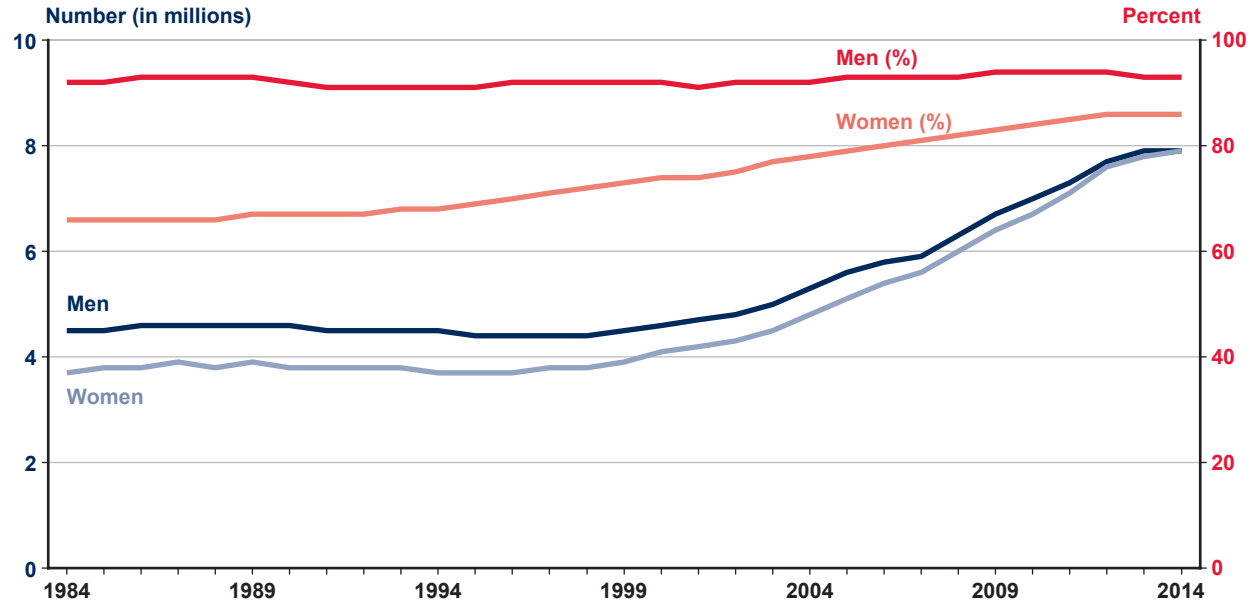
Because of the increase in the LFPR among women of all ages that began in the 1950s, both the number and the proportion of women who are fully insured for Social Security retirement benefits have increased.[3] Chart 2 shows that from 1984 through 2014, the number of women aged 62–66 who were fully insured for retirement benefits rose from 3.7 million to 7.9 million and the proportion of women in that age group who were fully insured increased from 66 percent to 86 percent. Among women aged 40–49, almost 90 percent were fully insured for retired-worker benefits in 2014 (not shown). That fact suggests that the percentage of women aged 62–66 who are fully insured for retirement benefits is likely to rise by 2 or 3 percentage points over the next 20 years.

From 1984 through 2014, the number of fully insured men aged 62–66 rose substantially, from 4.5 million to 7.9 million. However, because the LFPR among men younger than 55 has been slowly but steadily declining for much of the last half-century, the percentage of men aged 62–66 who are fully insured did not increase as it did among women in that age group. From 1984 through 2014, the proportion of men aged 62–66 who were fully insured for retirement benefits averaged 92 percent and ranged from 91 percent in the early 1990s to 94 percent from 2009 through 2012.

Social Security Retired-Worker Benefit Claims by Age

Perhaps the most important consideration for Social Security–insured workers who are deciding whether to retire or to continue working is the potential amount of their benefit. Workers who have earned credit for at least 40 quarters of employment in jobs covered by Social Security can claim a retired-worker benefit at age 62, the earliest eligibility age. However, a worker who claims benefits before attaining full retirement age (FRA) receives permanently reduced benefits. FRAs differ depending on year of birth (Table 1). For people who attained age 62 before 2000 (born in 1937 or earlier), the FRA is 65. For individuals who turn 62 in 2016 (born in 1954), the FRA is 66. For individuals born in each successive year during the period 1955–1960, the FRA is 2 months older than that for members of the preceding birth-year cohort, such that the FRA for individuals who attain age 62 in 2022 or later (born in 1960 or later) is 67. Delayed retirement credits (DRCs) permanently increase the monthly Social

Chart 2.
Number and percentage of men and women aged 62–66 who are fully insured for Social Security retired-worker benefits, 1984–2014



SOURCES: SSA OCACT and Office of Retirement Policy.

NOTES: "Percentage" represents the fully insured share of the population aged 62–66 residing in the United States (adjusted for Census undercount) and outlying areas; federal civilian employees and persons in the U.S. armed forces abroad and their dependents; noncitizens living abroad who are insured for Social Security benefits; and all other U.S. citizens abroad.

Age is as of year-end.

Security benefit for workers who claim after reaching FRA. DRCs accumulate with each month that claiming is deferred until the worker reaches age 70.

In the *Annual Statistical Supplement to the Social Security Bulletin* (or simply the *Annual Statistical Supplement*), SSA publishes data on the number of claims for retired-worker benefits filed by men and women aged 62 or older. From these statistics, one can calculate the percentage of all claims in a given year that were filed by individuals of a given age. The numerator of this fraction is the number of men (or women) of a particular age who claimed retired-worker benefits in the year and the denominator is the total number of claims for retired-worker benefits by all fully insured men (or women) aged 62 or older in that year.[4] Another way to look at the distribution of claims by age is to calculate the percentage of Social Security–insured individuals of a given age who claimed benefits in a given year. The numerator for that calculation is the number of men (or women) of a particular age who claimed retired-worker benefits in the given year and the denominator is the total number of fully insured men (or women) *of that age* in that year. In other words, the first method calculates the probability that a man or woman who claimed benefits in a given year was, for example, 62 years old, and the second method calculates the probability that a fully insured man or woman aged 62 in a given year claimed benefits in that year.

The two methods will yield similar results if the number of people in each age group is roughly similar from year to year. However, if the number of people of a particular age changes substantially over time, results will differ between the two methods (Munnell and Chen 2015). For example, if the population of 62-year-old Social Security–insured men fell from one year to the next but the percentage of 62-year-old men who claimed retired-worker benefits did not change, the first method would show a year-to-year decline in *claims filed by 62-year-old men as a percentage of all claims filed by men*. The second method, on the other hand, would show no change in the *percentage of 62-year-old men who claimed benefits*.

Congress can affect the percentage of eligible individuals of a given age who claim benefits by changing the laws that govern the benefit levels available at

Table 1.
Social Security FRA, by year of birth

Year of birth	FRA	Year in which individual attains—	
		Age 62	FRA
1937 or earlier	65	1999 or earlier	2002 or earlier
1938	65 and 2 months	2000	2003 or 2004
1939	65 and 4 months	2001	2004 or 2005
1940	65 and 6 months	2002	2005 or 2006
1941	65 and 8 months	2003	2006 or 2007
1942	65 and 10 months	2004	2007 or 2008
1943	66	2005	2009
1944	66	2006	2010
1945	66	2007	2011
1946	66	2008	2012
1947	66	2009	2013
1948	66	2010	2014
1949	66	2011	2015
1950	66	2012	2016
1951	66	2013	2017
1952	66	2014	2018
1953	66	2015	2019
1954	66	2016	2020
1955	66 and 2 months	2017	2021 or 2022
1956	66 and 4 months	2018	2022 or 2023
1957	66 and 6 months	2019	2023 or 2024
1958	66 and 8 months	2020	2024 or 2025
1959	66 and 10 months	2021	2025 or 2026
1960 or later	67	2022 or later	2027 or later

SOURCE: SSA.

the earliest eligibility age and at FRA (or later). For example, by replacing the formerly universal FRA of 65 with phased increases in FRAs affecting people born after 1937, Congress increased the financial incentive to delay claiming until after age 62. By contrast, one age group's share of all claims filed in a given year depends on past demographic trends—such as the relative sizes of adjacent birth cohorts—as well as on the financial incentives that influence individual choices. Consequently, the share of fully insured individuals of a given age who file benefit claims in a given year presents a clearer picture of claiming trends than does the share of insured individuals of all ages who file at that given age in that year.

Charts 3–5 show, for each of the six 5-year intervals constituting the period 1985–2014, the number of fully insured men and women eligible to claim retired-worker benefits, the number who claimed benefits, and the percentage of eligible individuals who claimed (the "claiming rate") at ages 62, 65, and 66. Those ages represent, respectively, the earliest eligibility age for retired-worker benefits, the FRA for individuals born before 1938, and the FRA for those born during the period 1943–1954. (The FRAs for individuals born during 1938–1942 vary in 2-month increments; see Table 1.) Because the charts reflect end-of-year ages, they depict the claiming experience of discrete annual birth cohorts.[5]

The data in Charts 3–5 are the annual averages for each 5-year interval. Using annual averages reduces the effects of random year-to-year variations in claims. The ratio of claims to eligible persons (the claiming rate) represents the proportion of those "at risk" of claiming retired-worker benefits at each age who did claim benefits at that age. To be at risk of claiming a retired-worker benefit, an individual must (1) have reached age 62; (2) be fully insured for retired-worker benefits; and (3) not already be receiving retired-worker, spouse, widow(er), or disabled-worker benefits.[6] Among individuals in a given birth cohort, the number at risk of becoming new retired-worker beneficiaries is largest in the year when they attain age 62. At age 62,

individuals who are fully insured and who are not receiving disabled-worker benefits can choose to claim retired-worker benefits. When members of the same birth cohort attain age 63, those who remain at risk of becoming retired-worker beneficiaries consist of all who (1) are fully insured; (2) are not receiving disabled-worker, spouse, or widow(er) benefits; and (3) did not claim retired-worker benefits at age 62. The remainder of this article refers to individuals who meet the applicable three conditions, and are therefore at risk of claiming retired-worker benefits, as *eligible* individuals.

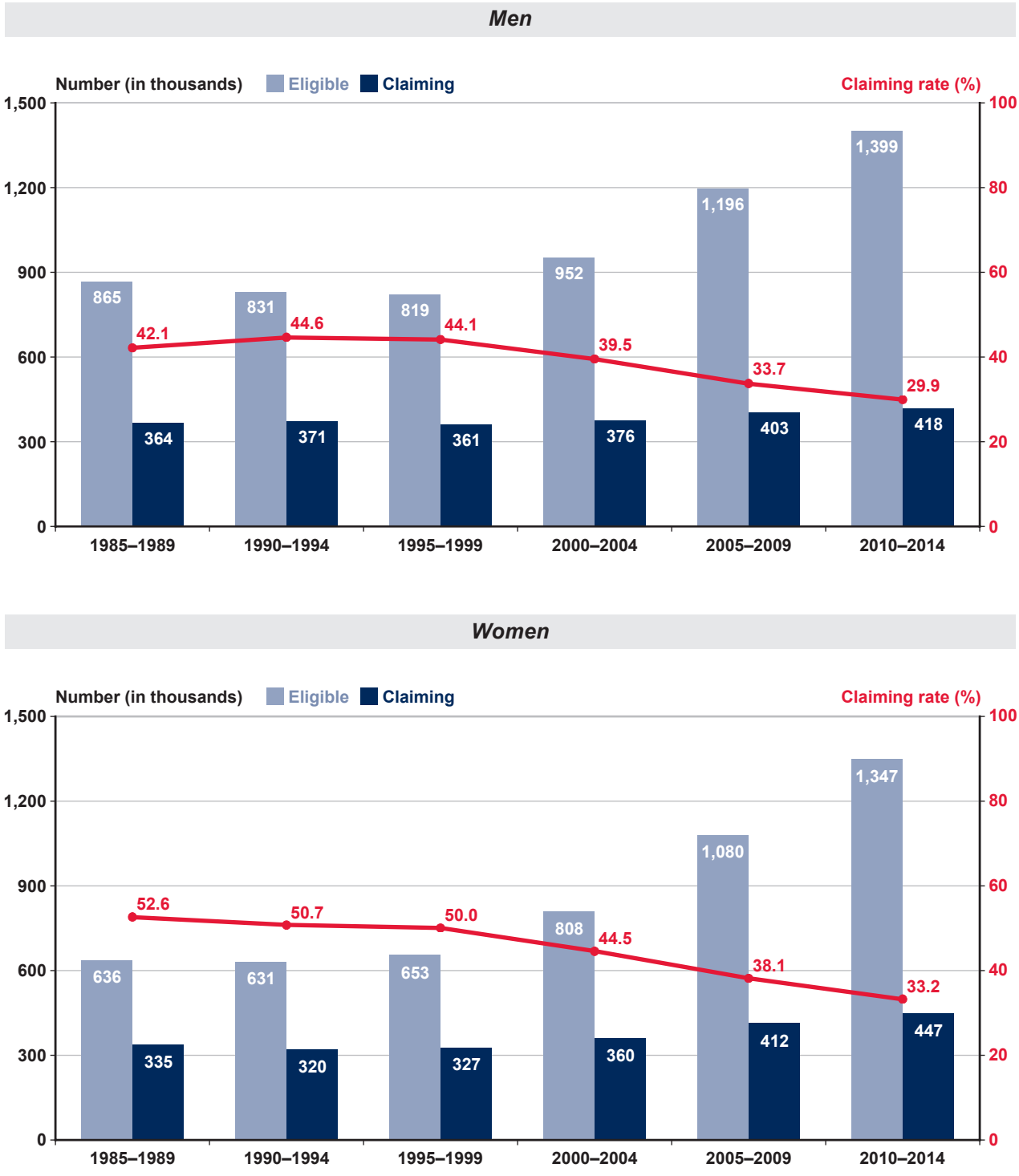
Charts 3–5 show that the pattern of claims by age changed after 2000. Two revisions to the Social Security Act contributed to that change. First, the Social Security Amendments of 1983 (Public Law [P.L.] 98-21) raised the FRA incrementally from 65 to 66 for individuals born during the period 1938–1943, thereby affecting people who would be reaching age 62 over a 6-year period beginning in 2000. As the FRA increased across birth cohorts, the potential reductions to benefits payable for those who claimed before reaching FRA increased. For example, the benefit payable at age 62 decreased from 80 percent of the amount payable at FRA for a person born in 1937 to 75 percent for a person born in 1943. This reduction created a financial incentive for workers in later birth cohorts to delay claiming until after age 62. Second, the Senior Citizens' Freedom to Work Act of 2000 (P.L. 106-182) repealed the retirement earnings test (RET) for a beneficiary who has reached FRA.[7] As a result, since January 1, 2000, the benefits of workers who have attained FRA have not been reduced by any portion of their continued earnings, regardless of the amount they earn. Thus, as of that date, workers who had attained FRA but had deferred claiming retired-worker benefits because the benefit amount would have been reduced by the RET now had incentive to apply for benefits immediately.

Chart 3 shows the number of 62-year-old men and women eligible to claim retired-worker benefits, the number who claimed retired-worker benefits, and the percentage of eligible individuals who claimed retired-worker benefits over six intervals from 1985 through 2014. As noted earlier, the data represent annual averages. The outstanding characteristics of Chart 3 are two post-2000 trends: the increase in the number of persons eligible for retired-worker benefits and the decline in the claiming rate among eligible individuals. The increase in the number of 62-year-olds who were eligible for retired-worker benefits resulted mainly from the gradual increase in the size of birth cohorts starting with the late 1930s and continuing with the baby boom beginning in 1946. The decline in the claiming rate among 62-year-olds coincided with the older FRAs for workers who were born after 1937 and thus attained age 62 after 1999.

During 1985–1989, an annual average of 865,000 men were eligible to claim retired-worker benefits at age 62 and an average of 364,000 eligible 62-year-old men (42.1 percent) claimed benefits. In the next two 5-year intervals (1990–1994 and 1995–1999), the number of eligible 62-year-old men declined slightly and the proportion of eligible 62-year-old men who applied for benefits rose to about 44 percent. After 2000, the number of eligible 62-year-old men rose sharply, averaging 952,000 per year during the 2000–2004 interval, 1,196,000 per year during 2005–2009, and 1,399,000 per year during 2010–2014. The number of claims filed by men at age 62 increased by much less (in both absolute and relative terms) than did the number of men who were eligible, so the proportion of eligible 62-year-old men who claimed benefits trended steadily downward. From 1995–1999 to 2000–2004, the proportion of eligible 62-year-old men who claimed benefits fell by nearly 5 percentage points, from 44.1 percent to 39.5 percent. Over the next two 5-year intervals, the proportion of eligible 62-year-old men who claimed benefits continued to fall, to 33.7 percent in 2005–2009 and 29.9 percent in 2010–2014.

The trend in claiming rates across all six intervals among eligible 62-year-old women was similar to that for men, but the decline was even steeper. During 1985–1989, an annual average of 636,000 women were eligible to claim retired-worker benefits at age 62 and an average of 335,000 eligible 62-year-old women (52.6 percent) did so. In the next two 5-year intervals, the number of eligible 62-year-old women changed relatively little, and the claiming rate among those women fell slightly, to about 50 percent. After 2000, the number of eligible 62-year-old women rose in even greater proportions than did the number of eligible 62-year-old men, from an average of 808,000 per year during 2000–2004 to an annual average of 1,347,000 during 2010–2014. As with men, the number of women who filed claims at age 62 increased by much less, in both absolute and relative terms, than the number who were eligible, which caused the claiming rate to decline. From 1995–1999 through 2000–2004, the proportion of eligible 62-year-old women who claimed benefits fell by 5.5 percentage points, from 50.0 percent to 44.5 percent. Over the next two 5-year intervals, the proportion of eligible 62-year-old women

Chart 3.
Annual average number of men and women aged 62 eligible for and claiming retired-worker benefits, various periods 1985–2014



SOURCES: SSA OCACT and Office of Retirement Policy.

NOTES: Data are for men and women aged 62 at year-end.

"Eligible" population is the number fully insured at the beginning of the given year minus the number who are already receiving retired-worker, widow(er), or spouse benefits.

"Claiming" population is the number of new awards in force, including those withheld or otherwise suspended.

Claiming rates are calculated using unrounded numbers.

who claimed benefits continued to fall, to 38.1 percent in 2005–2009 and 33.2 percent in 2010–2014.

As the number of members of a birth cohort who have claimed retired-worker benefits accumulates with each additional year, the number of those who remain eligible to file a new retired-worker claim falls. In Chart 4, the number of men and women who are still eligible to claim retired-worker benefits at age 65 excludes those who claimed benefits at ages 62–64, and the number of men and women who are eligible to claim at age 66 (Chart 5) excludes all who claimed at ages 62–65. Chart 4 shows that in 2010–2014, an average of 606,000 men remained eligible to claim retired-worker benefits during the year they attained age 65. An average of 117,000 men claimed retired-worker benefits in the year they attained age 65. Therefore, over the 5 years from 2010 through 2014, 19.3 percent of eligible 65-year-old men claimed retired-worker benefits each year, on average.

The outstanding characteristics of Chart 4 are the increase in the average annual number of 65-year-olds who were eligible for retired-worker benefits after 2000 and the concurrent decline in the percentage of eligible individuals who claimed benefits at age 65. From 1985–1989 through 1995–1999, both the number of men who were still eligible to claim retired-worker benefits at age 65 and the number who claimed benefits in the year they turned 65 steadily declined. Across those intervals, the average annual number of eligible 65-year-old men fell from 289,000 to 253,000 and the average annual number of new claims fell from 213,000 to 176,000. Nevertheless, the percentage of eligible 65-year-old men who claimed benefits declined only slightly, from 73.8 percent to 69.5 percent.

After 2000, the average annual number of men who remained eligible to claim retired-worker benefits at age 65 rose sharply, more than doubling from 300,000 in the 2000–2004 interval to 606,000 in the 2010–2014 interval. In the same span, the average number of men who claimed retired-worker benefits in the year that they attained age 65 steadily declined, from 243,000 in the 2000–2004 interval to 117,000 in the 2010–2014 interval. Because the number of eligible 65-year-old men was rising while the number of men who claimed at age 65 was falling, the claiming rate fell sharply after 2000. The proportion declined from an annual average of 81.0 percent in 2000–2004 to 32.1 percent in 2005–2009 and just 19.3 percent in 2010–2014.

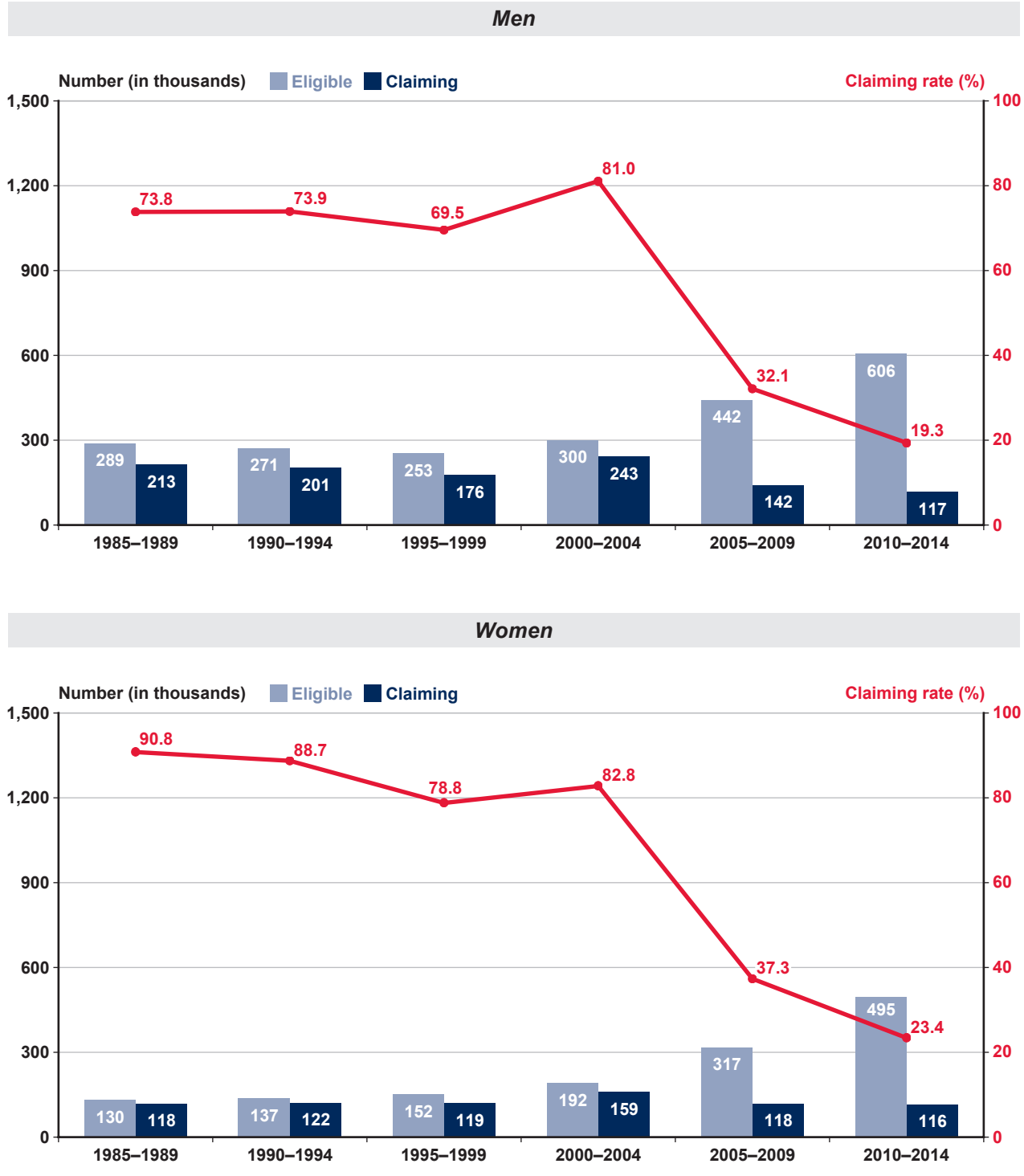
Preceding that 15-year decline, the proportion of eligible 65-year-old men who claimed benefits had risen briefly, from 69.5 percent in 1995–1999 to 81.0 percent in 2000–2004. This increase is attributable in part to the repeal of the RET in 2000 for beneficiaries who had reached FRA. The decline to 32.1 percent in the next 5-year interval and to 19.3 percent in the 2010–2014 interval was most likely due to the increase in the FRA from 65 to 66 for workers who were born after 1937 and thus attained age 62 after 1999.

Among 65-year-old women, the trend in claiming rates across intervals differed only slightly from the trend among men of the same age. Although the number of eligible 65-year-old men declined from 1985–1989 to 1995–1999, it rose slightly among women, from an annual average of 130,000 in the former interval to 152,000 in the latter. The average annual number of eligible 65-year-old women who claimed benefits remained virtually unchanged at about 120,000 in the three earliest intervals. As a result, the proportion of eligible 65-year-old women who claimed retired-worker benefits in the year they attained age 65 fell from an annual average of 90.8 percent in 1985–1989 to 88.7 percent in 1990–1994 and 78.8 percent in 1995–1999.

After 2000, the number of 65-year-old women eligible to claim retired-worker benefits rose in greater proportions than the number of eligible 65-year-old men, more than doubling from an average of 192,000 per year in 2000–2004 to 495,000 in 2010–2014. Over the same span, the annual average number of claims filed by women at age 65 fell from 159,000 to 116,000. Consequently, the proportion of eligible 65-year-old women who claimed retired-worker benefits fell from an annual average of 82.8 percent in 2000–2004 to 37.3 percent in 2005–2009 and 23.4 percent in 2010–2014. The increase in the number of eligible 65-year-old women after 2000 and the decline in the proportion of eligible women who claimed benefits at age 65 coincided with the increase in the FRA from 65 to 66 for birth cohorts that reached age 62 in 2000 and later years.

Most men who are fully insured for retirement benefits have already claimed those benefits by the time they reach age 66. For example, in 1985, an estimated 959,000 fully insured men in the 1923 birth cohort reached age 62 (not shown). From 1985 through 1988—when they were between the ages of 62 and 65—764,000 of those men claimed retired-worker benefits. When the 1923 birth cohort attained age 66 in 1989, only 143,000 of those who were still living and were fully insured had not claimed their benefits.

Chart 4.
Annual average number of men and women aged 65 eligible for and claiming retired-worker benefits, various periods 1985–2014



SOURCES: SSA OCACT and Office of Retirement Policy.

NOTES: Data are for men and women aged 65 at year-end.

"Eligible" population is the number fully insured at the beginning of the given year minus the number who are already receiving retired-worker benefits (including those converted from disabled-worker benefits at FRA), widow(er) benefits, or spouse benefits.

"Claiming" population is the number of new awards in force, including those withheld or otherwise suspended.

Claiming rates are calculated using unrounded numbers.

From 1985 through 1989, an annual average of 147,000 66-year-old men were eligible to claim retired-worker benefits (Chart 5). On average, 38,000 66-year-old men—26.0 percent of those who were eligible—claimed benefits in the year they attained age 66. In the following interval, 1990–1994, annual averages of 125,000 66-year-old men were eligible to claim retired-worker benefits and 41,000 (33.0 percent) did so. The annual average number of eligible 66-year-old men was also 125,000 in 1995–1999, but the number who claimed retired-worker benefits at age 66 fell to 36,000, causing the claiming rate to fall to 28.7 percent.

In the 2000–2004 interval, the number of 66-year-old men who were eligible to claim retired-worker benefits fell to an annual average of 59,000. One reason for the decline was that the repeal in 2000 of the RET for beneficiaries at FRA or older resulted in a spike in claims by men who were still working at age 65. On average, 40,000 eligible 66-year-old men (68.1 percent) claimed benefits each year during this interval. In 2005–2009, the average annual number of 66-year-old men who were eligible to claim retired-worker benefits rose to 257,000—an increase of nearly 200,000 from the previous interval—and the average annual number of claims by 66-year-old men rose to 203,000. Thus, from 2005 through 2009, an annual average of 79.1 percent of eligible 66-year-old men claimed retired-worker benefits. The number of 66-year-old men eligible to claim retired-worker benefits rose again to an annual average of 457,000 in 2010–2014, and the average annual number of claims filed by men who were 66 years old rose to 309,000. Thus, from 2010 through 2014, 67.8 percent of eligible 66-year-old men claimed retired-worker benefits on average.

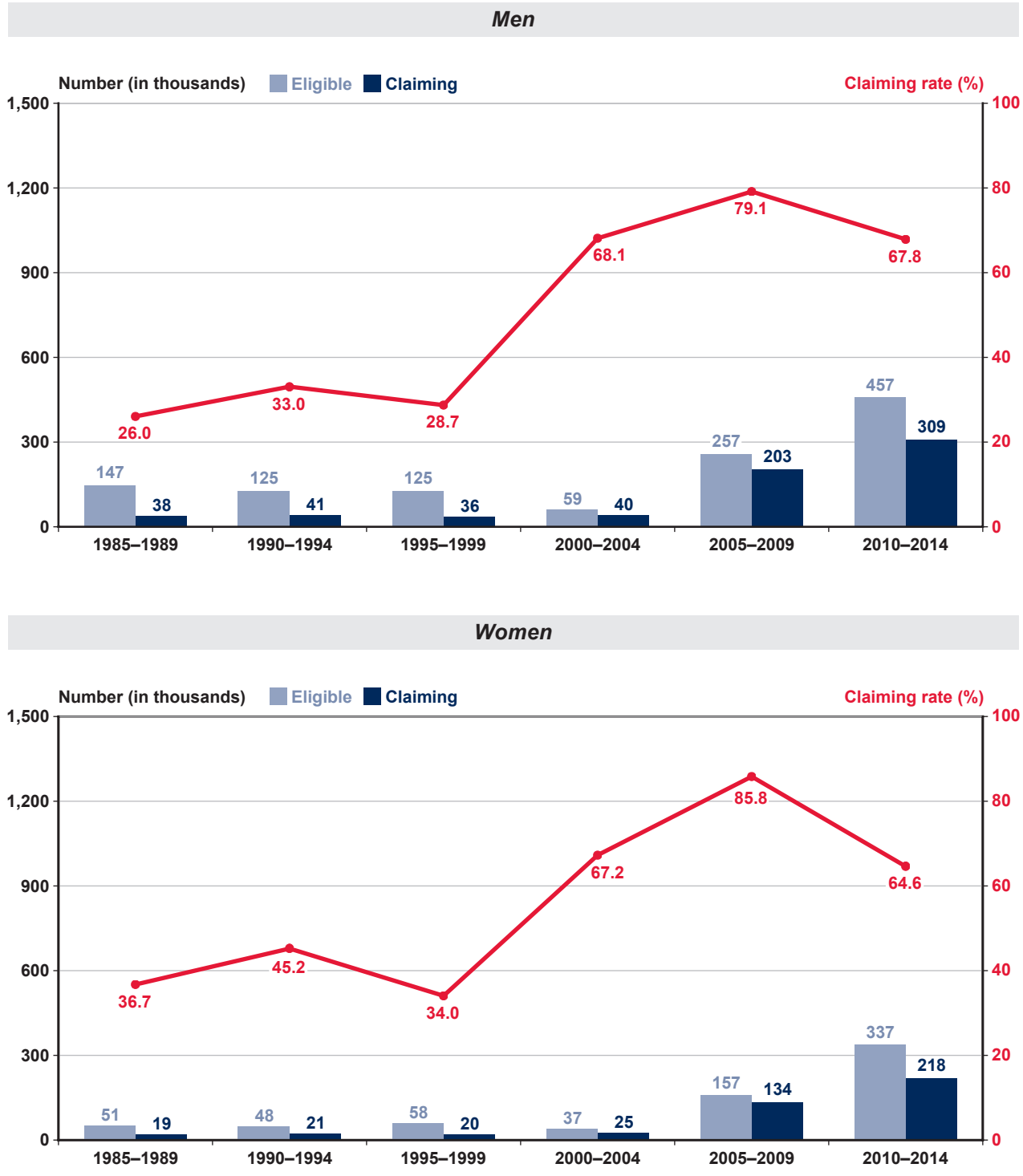
The trend in claims for retired-worker benefits filed by women at age 66 was similar to the trend among men of the same age. From 1985 through 1989, annual averages of 51,000 women were eligible to claim retired-worker benefits at age 66 and 19,000 (36.7 percent) did so. The numbers of 66-year-old women who were eligible for and who claimed benefits both remained fairly stable in the two following intervals. As with men, the average annual number of eligible 66-year-old women fell in the 2000–2004 interval. From 2005 through 2009, the average annual number of 66-year-old women who were eligible to claim retired-worker benefits rose to 157,000, an increase of 120,000 from the previous interval, and the average annual number of claims filed by 66-year-old women rose to 134,000. Thus, from 2005 through 2009, an annual average of 85.8 percent of eligible 66-year-old women claimed retired-worker benefits. The number of 66-year-old women eligible to claim retired-worker benefits rose further in 2010–2014, to an annual average of 337,000, and the average annual number of claims filed by women rose to 218,000. Thus, from 2010 through 2014, 64.6 percent of eligible 66-year-old women claimed retired-worker benefits.

The data on which Charts 3–5 are based categorize individuals by their age at the end of the year. This is equivalent to grouping individuals by year of birth. For example, everyone whose 62nd birthday occurs during 2016 was born in 1954, and everyone who was born in 1954 will be 62 years old on December 31, 2016. People who were born in 1943 comprise the first birth cohort with the FRA of 66, the age they attained in 2009. The annual claims data from which the 5-year annual averages in Charts 3–5 are calculated show that the proportion of 66-year-old individuals who claimed retired-worker benefits began to rise in 2004, 5 years before the 1943 birth cohort reached age 66. This is due to the phased increase of the FRA from 65 to 66 in 2-month increments affecting successive birth cohorts from 1938 through 1943, which meant that the claimant's month of birth affected the year in which he or she attained FRA (see Table 1). Among people who were born in 1938, for example, individuals with birthdays in November and December did not attain their FRA of 65 years and 2 months until 2004—the year in which they also attained age 66. Consequently, the percentage of individuals who were not already beneficiaries and who claimed retired-worker benefits at age 66 began rising several years before the members of the 1943 birth cohort attained their FRA of 66.

Disabled-Worker and Retired-Worker Beneficiaries as Percentages of the Population

Chart 6 illustrates trends over the period 1985–2014 in retired-worker beneficiaries as percentages of the fully insured populations aged 62–64, 65, and 66. Because a decline in claiming retired-worker benefits before reaching FRA might have been offset in part by increasing claiming rates for Social Security Disability Insurance (DI) benefits, Chart 6 also shows DI disabled-worker beneficiaries as percentages of the insured populations aged 62–64 and 65.[8] The numerator of the percentages in Chart 6 is the number of men and women, respectively, in each age group who received retired-worker benefits or DI benefits in a particular year. The denominator is the number of

Chart 5.
Annual average number of men and women aged 66 eligible for and claiming retired-worker benefits, various periods 1985–2014



SOURCES: SSA OCACT and Office of Retirement Policy.

NOTES: Data are for men and women aged 66 at year-end.

"Eligible" population is the number fully insured at the beginning of the given year minus the number who are already receiving retired-worker benefits (including those converted from disabled-worker benefits at FRA), widow(er) benefits, or spouse benefits.

"Claiming" population is the number of new awards in force, including those withheld or otherwise suspended.

Claiming rates are calculated using unrounded numbers.

beneficiaries plus the number of fully insured men and women in each age group who were not beneficiaries.[9] As in Charts 3–5, the pre-2000 trends illustrated in Chart 6 differ from those for the years after 2000.

From 1985 through 1994, the proportion of fully insured men aged 62–64 who received retired-worker benefits rose from 45 percent to 50 percent (Chart 6), after which it began to decline. By 2000, 46 percent of men aged 62–64 were receiving retired-worker benefits. After 2000, that proportion fell more sharply, to 30 percent by 2014. Had the Great Recession not briefly interrupted the decline in 2009–2011, the proportion of men aged 62–64 who received retired-worker benefits might have fallen even further by 2014. From 1985 through 2006, the proportion of men aged 62–64 who received DI benefits fluctuated only within a narrow range of 12 percent to 14 percent. By 2014, that proportion had risen to 16 percent.

The increase in the proportion of men aged 62–64 who received DI benefits and the decline in the proportion who received retired-worker benefits after 2000 coincided with the increase in the FRA from 65 to 66 for workers reaching age 65 in 2003 and later years. The increase in the proportion of men aged 62–64 who received DI benefits was smaller than the decline in the proportion who received retired-worker benefits. In 1999, 14 percent of men aged 62–64 received DI benefits and 46 percent received retired-worker benefits. By 2014, the proportion of men aged 62–64 who received DI benefits had risen by 2 percentage points, to 16 percent. Over the same period, the proportion of men aged 62–64 who received retired-worker benefits fell by 16 percentage points, to 30 percent.

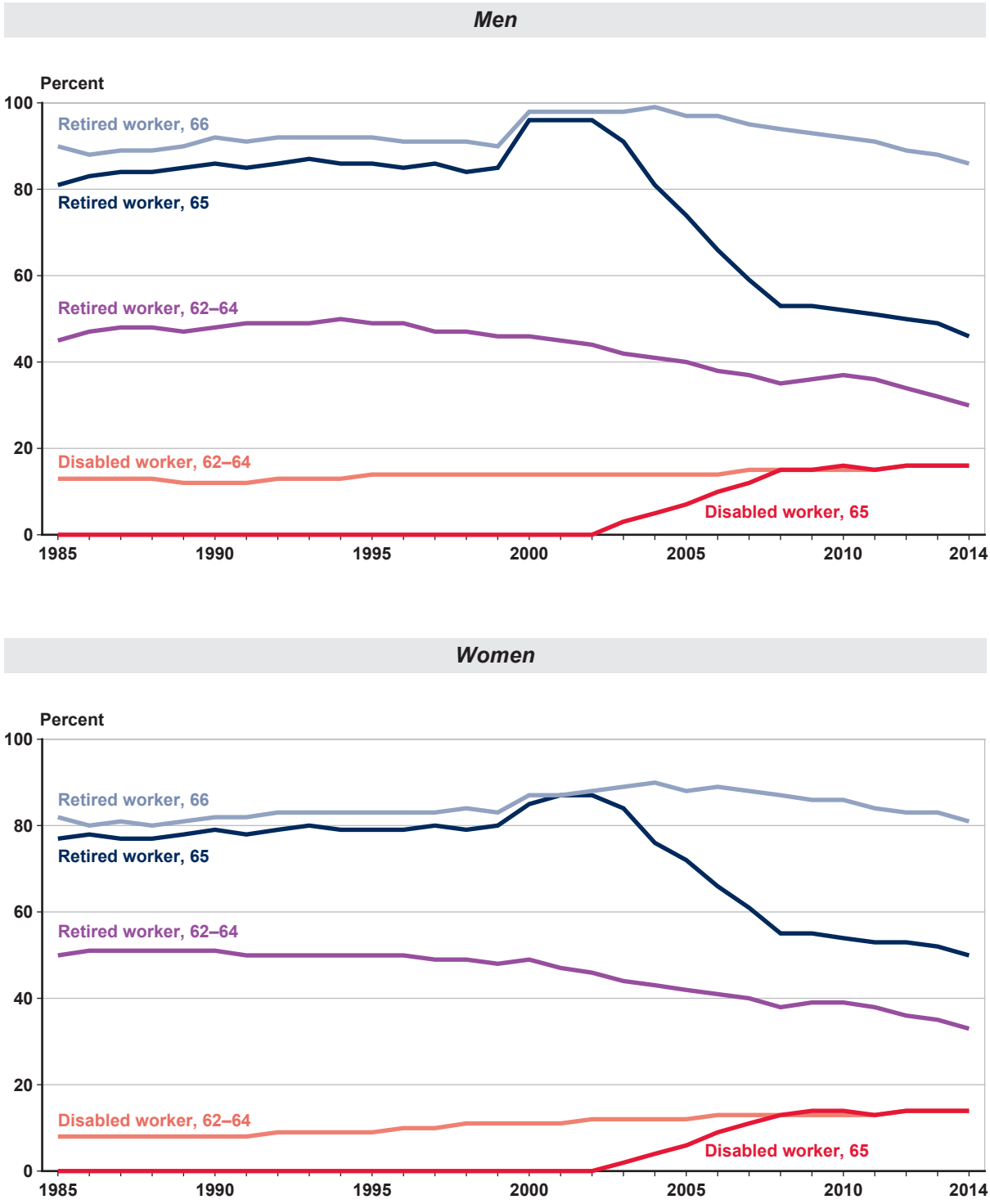
Because DI benefits automatically convert to retired-worker benefits when the beneficiary reaches FRA, no one received DI benefits at age 65 before 2003. As the FRA was raised incrementally to 66 for persons born after 1937, some DI beneficiaries continued to receive disabled-worker benefits at age 65. As a result, between 2002 and 2009, the proportion of 65-year-old men who received DI benefits increased from 0 percent to 15 percent. The rate of increase then slowed. By 2014, 16 percent of fully insured 65-year-old men received DI benefits.

From 1985 through 1999, the proportion of 65-year-old men who received retired-worker benefits increased from 81 percent to 85 percent. The proportion rose sharply to 96 percent in 2000, partly in response to the repeal of the RET in that year for beneficiaries who had reached FRA. After 2002, the proportion of 65-year-old men receiving retired-worker benefits began to fall as the older FRAs for people born after 1937 affected greater shares of each successive birth cohort with each passing year. By 2014, the proportion of 65-year-old men who received retired-worker benefits had fallen to 46 percent. The increase in the proportion of 65-year-old men who received DI benefits did not fully offset the decline in the proportion who received retired-worker benefits after 2000. From 2002 through 2014, the proportion of 65-year-old men receiving DI benefits rose from 0 percent to 16 percent. Over the same period, the proportion of 65-year-old men who received retired-worker benefits fell by 50 percentage points, from 96 percent to 46 percent.

Year to year, an average of 91 percent of 66-year-old men received retired-worker benefits from 1985 through 1999. In 2000, the proportion jumped to 98 percent, partly in response to the repeal of the RET for beneficiaries who had reached FRA. From 2001 through 2004, the proportion of 66-year-old men who received retired-worker benefits remained stable. It began to decline thereafter, reaching 86 percent by 2014. Chart 5 showed that the annual average number of men still eligible to claim retired-worker benefits at age 66 rose by nearly 200,000 between the 2000–2004 and 2005–2009 intervals and by another 200,000 between the 2005–2009 and 2010–2014 intervals. Although majorities of those men claimed their benefits at age 66, enough of them delayed their claims until age 67 or later to cause the proportion of 66-year-old men who were receiving retired-worker benefits to decline.

Among women aged 62–66 (Chart 6), trends in the proportions who received DI benefits or retired-worker benefits were similar to the trends among men. The percentages of insured women who were receiving retired-worker benefits generally fell after 2000, and the declines exceeded the increases in the percentages who received DI benefits. From 1985 through 1999, a year-to-year average of 50 percent of fully insured women aged 62–64 received retired-worker benefits—in that period, the proportion never rose above 51 percent or fell below 48 percent. From 2000 through 2014, the proportion of women aged 62–64 who received retired-worker benefits fell from 49 percent to 33 percent. That decline occurred even as the proportion of women aged 62–64 who were fully insured for retirement benefits was rising.

Chart 6.
Disabled-worker and retired-worker beneficiaries at selected ages as percentages of the insured population at those ages: By sex, 1985–2014



SOURCES: SSA OCACT and Office of Retirement Policy.

NOTE: Age is as of year-end.

From 1985 through 1999, the proportion of fully insured women aged 62–64 who received DI benefits rose from 8 percent to 11 percent. From 2000 through 2014, that proportion rose by 3 additional percentage points, to 14 percent. The increase from 1985 through 2014 in the percentage of women aged 62–64 receiving DI benefits (8 percent to 14 percent) was proportionally greater than the increase from 13 percent to 16 percent among men, reflecting the growth in that period of the proportion of women insured for disability benefits (Pattison and Waldron 2013).

Another trend shared with men was that the increase in the proportion of women aged 62–64 who received DI benefits was smaller than the decrease in the proportion who received retired-worker benefits. In 1999, 11 percent of women aged 62–64 received DI benefits and 48 percent received retired-worker benefits. By 2014, the proportion who received DI benefits had risen by 3 percentage points (to 14 percent) and the proportion who were receiving retired-worker benefits fell by 15 percentage points (to 33 percent). As noted earlier, DI benefits are converted to retired-worker benefits when the beneficiary reaches FRA. Before 2002, all DI beneficiaries were reclassified as retired-worker beneficiaries at age 65. Because of the older FRAs affecting individuals who attained their FRA beginning in 2003, the proportion of 65-year-old women who received DI benefits increased from 0 percent in 2002 to 14 percent by 2014.

From 1985 through 1999, the proportion of 65-year-old women who received retired-worker benefits increased from 77 percent to 80 percent. The proportion rose to 85 percent in 2000, partly in response to the repeal in that year of the RET for beneficiaries who had reached FRA. After 2002, the proportion of 65-year-old women receiving retired-worker benefits began to fall as the FRA increased incrementally from 65 to 66 for people born after 1937. By 2014, the proportion of 65-year-old women who received retired-worker benefits had fallen to 50 percent. The increase of 14 percentage points in the proportion of 65-year-old women who received DI benefits from 2002 through 2014 did not offset the decline in the proportion who received retired-worker benefits (37 percentage points) over that same period.

Year to year, an average of 82 percent of fully insured 66-year-old women received retired-worker benefits from 1985 through 1999. From 1999 through 2004, the proportion rose from 83 percent to 90 percent, after which it began a gradual but sustained decline to 81 percent by 2014. The decline in the proportion of 66-year-old women who receive retired-worker benefits was similar in magnitude to the parallel decline among 66-year-old men. These declines may reflect both the trend toward later claiming of retirement benefits and the increase in labor force participation among Americans aged 65 or older.

Conclusion

This article highlights several important trends in labor force participation among older Americans and in the age at which people claim retirement benefits, including the following:

- Older Americans are working longer. From 1985 through 2015, the LFPR among individuals aged 65–69 rose from 24 percent to 37 percent for men and from 14 percent to 28 percent for women.
- Over the last 30 years, the proportion of individuals aged 62–66 who were fully insured for Social Security retirement benefits remained stable at about 92 percent for men. For women, however, the proportion rose sharply, from 66 percent to 86 percent.
- After 2000, the proportion of fully insured men and women who claimed retirement benefits at age 62 declined substantially. Among both men and women aged 62–64, the decline in the percentage who were receiving retired-worker benefits was greater than the increase in the percentage who were receiving DI benefits.

Appendix A: Early Eligibility Age and FRA

The Social Security Act of 1935 set the age of eligibility for retired-worker benefits at 65. Social Security–insured workers have been able to claim retired-worker benefits as early as age 62 since 1956 (for women) and 1961 (for men), but the benefit amount is permanently reduced for individuals who claim before reaching the FRA. Individuals who claim benefits before attaining FRA receive benefits over a longer period, on average, than do those who claim at FRA or later. The benefit reduction for those who claim before reaching FRA is designed to make the present value of lifetime benefits equal for the average beneficiary, regardless of the age at which he or she claims. The Social Security Amendments of 1983 (P.L. 98-21) set the FRA for people born after 1937 at incrementally increasing steps from 65 to 67 (see Table 1).

For individuals born before 1938, the FRA is 65. The 1983 amendments set the FRA for individuals born in 1938 at 65 and 2 months. For members of each

successive birth cohort from 1939 to 1943, the FRA increases by 2 months. The FRA for people born from 1943 through 1954 is 66. Further incremental FRA increases affect individuals born during 1955–1960, and the FRA is 67 for people born in 1960 or later. Relative to a benefit claimed at FRA, the amount of a retired-worker benefit claimed at age 62 is reduced by 20 percent for individuals whose FRA is 65, by 25 percent for those whose FRA is 66, and by 30 percent for those whose FRA is 67. Thus, workers in later birth cohorts have increasing financial incentive to delay their claims until after age 62.

Appendix B: The RET and DRCs

The Social Security RET reduces the benefits of retired-worker beneficiaries who are younger than FRA and have earnings that exceed certain thresholds. (Benefits withheld under the RET are eventually restored by means of an upward adjustment in the benefit amount beginning when the beneficiary attains FRA.) Until 2000, the earnings test applied to all beneficiaries younger than 70. The Senior Citizens' Freedom to Work Act (P.L. 106-182) eliminated the RET for people who had reached FRA, effective January 1, 2000. Workers who had attained their FRA as of that date but had deferred claiming Social Security benefits (because their earnings would have resulted in a benefit reduction) now had incentive to apply for benefits immediately. Thus, the repeal of the RET for workers who had reached FRA was followed by a temporary increase in benefit claims among persons aged 65–69 who were working and had deferred claiming retired-worker benefits.

Workers who delay claiming benefits until after they reach FRA earn DRCs that permanently increase their monthly Social Security retired-worker benefit amount. DRCs thereby provide a financial incentive for workers to remain employed and defer claiming. In 1977, Congress set the DRC at 3 percent per year. This meant that benefits were permanently increased by 3 percent for each full year that a worker delayed claiming beyond age 65. However, 3 percent was less than actuarially fair as a permanent benefit increase, and thus did not provide a strong financial incentive to delay claiming beyond the FRA. The 1983 Social Security Amendments mandated a gradual increase in DRCs beginning in 1990. For persons born in 1943 or later, the DRC is 8 percent per year, which is actuarially fair for the average worker. The LFPR among both men and women aged 65–69 has risen in recent years, and the proportion of men aged 65–69 who receive Social Security retired-worker benefits has fallen. These trends may result in part from the additional incentive to defer claiming benefits that was created by the increase in DRCs.

Notes

[1] Some people who report that they are neither employed nor looking for work may be employed in the "underground" or "shadow" economy.

[2] A number of recent studies have examined the demographic, social, and economic factors that have contributed to the increase in the LFPR among women aged 25–54 and the decline in the LFPR among men in that age group over the last several decades. See, for example, Juhn and Potter (2006), Aaronson and others (2014), Council of Economic Advisors (2014), and Social Security Advisory Board (2015).

[3] A worker must accumulate 40 quarters of Social Security–covered employment to be fully insured for retired-worker benefits. (Earnings exceeding a given threshold qualify the worker for one quarter of coverage; up to four quarters can be earned in a given year. The earnings threshold is adjusted annually.) Retired-worker beneficiaries include those entitled solely to a retired-worker benefit and those who are dually entitled to a retired-worker benefit and a spouse's or widow(er)'s benefit.

[4] For example, in 2014, retired-worker benefits were awarded to 1,432,653 men aged 62 or older. Of this number, 242,560 were conversions from disabled-worker benefits to retired-worker benefits at FRA. Of the 1,190,093 net new retired-worker benefit awards, 494,339 (41.5 percent) were awarded to men who were 62 years old at that time (SSA 2016, Table 6.A4).

[5] Data on claims by age in the *Annual Statistical Supplement* are based on age in the month of the claim. Charts 3–5 in this article follow the convention used by OCACT in preparing the annual *Trustees Reports* by using data based on age at the end of the calendar year.

[6] Disability Insurance benefits are automatically converted to retired-worker benefits when the beneficiary reaches his or her FRA. This does not change the amount of the benefit. It affects only the classification of benefit type.

[7] Until 2000, the earnings test applied to all beneficiaries younger than 70. In 2016, benefits for individuals younger than FRA are reduced by $1 for each $2 earned above $15,720. The withheld benefits are restored in the form of an increased benefit after the individual reaches FRA.

[8] Although DI benefits may be paid to dependents or survivors, this analysis is restricted to benefits paid to the disabled workers themselves.

[9] To be eligible for DI benefits, an individual must have earned one quarter of coverage for each calendar year after age 21 and have earned at least 20 quarters of coverage during the last 10 years. Fewer quarters of coverage are required for workers younger than 31.

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Poverty Status of Social Security Beneficiaries, by Type of Benefit

by Benjamin Bridges and Robert V. Gesumaria*

In this article, we examine the 2012 poverty status of Social Security adult type of benefit (TOB) groups using both the official poverty measure and the Supplemental Poverty Measure (SPM). For each TOB group, we compare the SPM estimate with the official poverty measure estimate. In addition, we estimate the effects of various features of the SPM on poverty rates, noting why SPM estimates differ from official estimates. For each poverty measure, we also compare poverty estimates across TOB groups. We find that for both poverty measures, retired-worker beneficiaries and aged spouse beneficiaries have lower poverty rates than aged widow(er) beneficiaries and disabled-worker beneficiaries have. Compared with the official measure, the SPM shows much higher poverty rates for each of the three groups of aged beneficiaries. For the disabled-worker group, switching from the official measure to the SPM does not appreciably affect the poverty rate.

Introduction

There are numerous types of benefits (TOBs) paid under the U.S. Social Security program. Each benefit type has its own set of eligibility rules and, generally, its own benefit structure. An individual's current total income has no direct bearing on his or her eligibility for any TOB or on the benefit amount he or she receives. (One type of current income, earnings, can affect the benefit amount.) However, the different eligibility rules and benefit structures among the various Social Security benefit types are likely to be associated with sizable differences in poverty rates among TOB groups.[1] Many proposals to modify Social Security benefits affect some types of beneficiaries and not others. For example, there have been proposals to increase the widow's benefit to 75 percent of the couple's retired-worker benefits and proposals to raise the divorced wife's benefit to 75 percent of the ex-husband's benefit while he is still alive (Government Accountability Office 2012).[2] Policymakers are interested in knowing the poverty rates of the affected TOB groups.

The Census Bureau has published official estimates of poverty for more than 40 years.[3] In 2011, the Bureau began the annual publication of alternative estimates of poverty based on a new measure, the Supplemental Poverty Measure (SPM), which was intended to address shortcomings in the official measure of poverty. The SPM produces a different overall estimate of the number of poor people in the United States and substantially alters the composition of the population in poverty—much more aged poverty, more nonaged adult poverty, and much less child poverty.

In this article, we examine the 2012 poverty status of eight Social Security adult beneficiary groups using both of these poverty measures.[4] For each TOB group, we compare the SPM estimates with the official poverty measure estimates. We estimate the effects of

Selected Abbreviations

BLS	Bureau of Labor Statistics
CE	Consumer Expenditure Survey
CPS	Current Population Survey
FCSU	food, clothing, shelter, and utilities
FRA	full retirement age
LIHEAP	Low-Income Home Energy Assistance Program

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Selected Abbreviations—*Continued*

MBR	Master Beneficiary Record
MOOP	medical out-of-pocket [expenses]
NSLP	National School Lunch Program
PHUS	Payment History Update System
PIA	primary insurance amount
SER	Summary Earnings Record
SNAP	Supplemental Nutrition Assistance Program
SPM	Supplemental Poverty Measure
SSA	Social Security Administration
SSI	Supplemental Security Income
TOB	type of benefit
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

various features of the SPM on poverty rates, noting why SPM estimates differ from official estimates.[5] For each poverty measure, we also compare poverty estimates across groups. The main data source for this article is the 2013 Current Population Survey (CPS), a Census Bureau household survey, supplemented with exactly matched administrative records on benefits from the Social Security Administration (SSA).

Two of the TOB groups examined in this article, retired workers and disabled workers, are primary beneficiaries.[6] A primary beneficiary receives a benefit based on his or her own earnings in Social Security–covered employment. The other six TOB groups examined are composed of secondary beneficiaries—that is, beneficiaries who receive benefits based on the earnings record of another Social Security number holder.[7] Spouses of living primary beneficiaries constitute two of the secondary-beneficiary groups (aged spouses and child-in-care spouses). Surviving spouses constitute three other secondary-beneficiary groups (aged widow(er)s, child-in-care widow(er)s, and disabled widow(er)s). Disabled adult children constitute the final group of secondary beneficiaries.

The official poverty measure determines a family's poverty status by comparing a set of thresholds for families of different sizes and compositions with their before-tax cash income.[8] That measure was developed in the early 1960s by SSA's Mollie Orshansky (1963, 1965a, 1965b). The poverty thresholds associated with the official measure are the minimum amounts of such income that families of particular sizes and compositions need to be considered not poor.[9] When they were developed, the official thresholds represented the cost of a minimum food diet multiplied by three (to allow for expenditures on other goods and services). The thresholds have been kept constant in purchasing power over time by increasing their money values to keep pace with increases in the general price level.

Critics of the official measure point out that the official income or resource measure fails to account for noncash government benefits, taxes, medical out-of-pocket (MOOP) expenses, and work expenses. Those critics also point out that the official thresholds are a very narrow measure of necessary expenditures—that is, food—and are based on very old data.[10] They argue that the official thresholds also fail to adjust for geographic differences in the cost of living and that the official measure's unit of analysis (the Census-defined family) is too narrow.[11]

In November 2011, the Census Bureau published its first report on the new SPM (Short 2011).[12] The SPM addresses numerous concerns of official-measure critics, and its intent is to provide an improved statistical picture of poverty. The SPM income or resource measure is cash income *plus* in-kind government benefits (such as food stamps and housing subsidies) and refundable tax credits *minus* certain nondiscretionary expenses (taxes, MOOP expenses, and work expenses). The SPM thresholds are based on a broad measure of necessary expenditures—food, clothing, shelter, and utilities (FCSU)—and are based on recent, annually updated expenditure data. The SPM thresholds are adjusted for geographic differences in the cost of living. The SPM uses a broader unit of analysis that treats cohabiters and their relatives in a more satisfactory way.[13]

This article consists of seven sections, including the introduction. In the second section, we present a detailed description of the eligibility rules and benefit structures of the various types of adult Social Security benefits. In the third section, we describe the various features of the SPM (unit, resource, and threshold measures) and contrast them with the corresponding features of the official measure. The fourth section discusses our primary data source. In the fifth and sixth sections, we present an empirical examination of the 2012 poverty status of adult beneficiary groups using both poverty measures. The final section provides a summary of our empirical findings.

Among the eight TOB groups we examine, the largest four are retired workers, disabled workers, aged spouses, and aged widow(er)s. We find that for both

poverty measures, retired workers and aged spouses have the lowest poverty rates among the four large TOB groups, well below the corresponding poverty rates for the total U.S. population. For example, the SPM poverty rates for retired workers, aged spouses, and the total population are 13 percent, 13 percent, and 16 percent, respectively. For both measures, aged widow(er)s have higher poverty rates (SPM rate of 20 percent), and disabled workers have even higher poverty rates (SPM rate of 23 percent).

For aged beneficiaries, the SPM shows much higher poverty rates than the official poverty measure does. We find that for the three aged TOB groups, switching from the official poverty measure to the SPM increases estimated poverty rates by 6–7 percentage points. For each of these TOB groups, the MOOP expense deduction is by far the most important SPM feature, increasing poverty rates by 6–8 percentage points. For the disabled-worker TOB group, switching from the official measure to the SPM does not affect the poverty rate. This is because the large poverty-increasing effects of MOOP expenses (7 percentage points) and the higher SPM threshold level are offset by the poverty-decreasing effects of housing subsidies, food assistance, geographic cost-of-living adjustments, and the unit definition.

Social Security Eligibility Rules and Benefit Structures

This article examines eight adult TOB groups.[14] Retired workers and disabled workers are primary beneficiaries; the other six groups are secondary beneficiaries. Some beneficiaries are dually entitled to both a primary benefit and a (higher) secondary benefit. In sorting persons into our TOB groups, we assign all dually entitled beneficiaries to the appropriate secondary beneficiary group. Four of the eight TOB groups are large; in 2012, they collectively represented 97 percent of the beneficiaries we examine: retired workers (28 million), disabled workers (9 million), aged spouses (5 million), and aged widow(er)s (7 million).[15] The other four TOB groups are small, each containing 100,000–800,000 beneficiaries. The small groups are child-in-care spouses, child-in-care widow(er)s, disabled widow(er)s, and disabled adult children. Minor child beneficiaries are not examined.[16]

The two groups of primary beneficiaries, retired workers and disabled workers, receive monthly benefit amounts based on the primary insurance amount (PIA) generated from their own work records. The PIA is a function of an average of past earnings (higher earnings produce a higher PIA). The other beneficiary groups examined in this article are secondary beneficiaries. A secondary beneficiary is a person who receives a benefit because of his or her relationship to a retired worker, a disabled worker, a deceased insured person, or, in some cases, an insured ex-spouse not yet receiving benefits.[17] The benefit amount paid to a secondary beneficiary depends on the PIA generated from the work record of the retired worker, the disabled worker, or the insured person. For many benefit types, the amount of the benefit received is permanently reduced if it is claimed before the full retirement age (FRA). For individuals born in 1937 or earlier, the FRA is 65. For those born from 1938 through 1943, the FRA for members of each birth cohort is 2 months older than that of the prior cohort, reaching 66 for those born in 1943. The FRA is 66 for all birth cohorts from 1943 through 1954.[18] Because members of later birth cohorts have older FRAs than those of earlier cohort members, the proportion of their PIA that is payable at the earliest age of eligibility declines relative to that of earlier cohort members.

To receive a retired-worker benefit, a person must be at least 62 years old. The benefit amount for a retired worker who first receives benefits at the FRA is equal to the PIA. The benefit is reduced if it is first received before the FRA, and it is augmented if it is first received after the FRA. To receive a disabled-worker benefit, a person does not have to be a certain age but does have to have a health problem severe enough to meet SSA's definition of disability. The benefit amount is equal to the disabled worker's PIA and is not adjusted for the age at which the benefit is first received. At the FRA, a disabled worker is automatically reclassified as a retired worker.

Two of the secondary beneficiary groups examined in this article consist of spouses of living persons. An individual who is aged 62 or older and is married to a retired or disabled worker is eligible to receive an aged spouse benefit. Someone who is aged 62 or older and is divorced from a retired worker, a disabled worker, or a living insured person aged 62 or older is also eligible to receive an aged spouse benefit, as long as the marriage to the worker or insured person lasted 10 years or more. (Later in this article, we present separate poverty estimates for nondivorced and divorced aged spouse beneficiaries.) A person of any age who is

married to a retired or disabled worker and who is caring for the worker's child is eligible to receive a child-in-care spouse benefit (the child must be younger than 16 or have a disability that began before age 22). The benefit amount for an aged spouse who first receives benefits at the FRA is equal to the PIA multiplied by 0.5 (thus, a worker generally receives an amount twice as large as his or her spouse or ex-spouse); the benefit amount is reduced if first received before the FRA. For a child-in-care spouse benefit, the amount is equal to the PIA multiplied by 0.5 and is not adjusted for the age at which the benefit is first received.

Three of the secondary beneficiary groups examined in this article consist of survivors of deceased insured persons. A widow(er) aged 60 or older is eligible for an aged widow(er) benefit. A divorced person who is aged 60 or older and whose ex-spouse is deceased is also eligible to receive an aged widow(er) benefit, as long as the marriage to the ex-spouse lasted 10 years or more. (Later in this article, we present separate poverty estimates for nondivorced and divorced aged widow(er) beneficiaries.) A widow(er) of any age who is caring for the deceased spouse's child is eligible for a child-in-care widow(er) benefit; divorced persons who survive their ex-spouses can qualify for child-in-care widow(er) benefits. A widow(er) aged 50–59 and disabled is eligible for a disabled widow(er) benefit; divorced persons who survive their ex-spouses can also qualify for disabled widow(er) benefits.

An aged widow(er) receives a benefit equal to his or her deceased spouse's PIA if it is first received at the FRA (the secondary benefit is reduced if first received prior to the FRA).[19] A disabled widow(er) receives a benefit equal to his or her deceased spouse's PIA multiplied by 0.715, and a child-in-care widow(er) receives a benefit equal to his or her deceased spouse's PIA multiplied by 0.75; there is no age-at-first-receipt adjustment for either TOB.

The final group of secondary beneficiaries examined in this article consists of those who receive disabled adult child benefits. These benefits are paid to the children of retired workers, disabled workers, or deceased insured persons. Disabled adult children are aged 18 or older and have a disability that began prior to age 22. The benefit amount is equal to the primary worker's PIA multiplied by 0.5 (if the worker is alive) or equal to the primary worker's PIA multiplied by 0.75 (if the insured person is deceased). The benefit amount is not adjusted for the age at which the benefit is first received.

Some secondary benefits require a person to be unmarried. Marriage generally prevents payment of an aged divorced spouse benefit, a widow(er) benefit based on having a child in care, or a disabled adult child benefit. A remarried person cannot collect an aged widow(er) benefit unless his or her current marriage occurred after age 60. For example, a woman who lost her first husband and who remarried before age 60 would not be eligible for an aged widow benefit on the first husband's record as long as she was married to her second husband. A married person cannot receive a disabled widow(er) benefit unless the current marriage occurred after age 50 and after the disablement.

When a person's primary benefit exceeds his or her secondary benefit, only the primary benefit is paid. This feature of the law makes comparisons of demographic groups with TOB groups inappropriate. Divorced aged spouse beneficiaries are an important example. Most aged women with a marital status of divorced do not receive divorced aged spouse benefits. This is partly because many divorced women have earnings histories that entitle them to higher primary benefits.

Additional factors may further affect the benefit amounts certain beneficiaries receive. For instance, Social Security's earnings tests reduce benefits if earnings exceed certain thresholds. Also, the law specifies a maximum amount that can be paid to a family based on the earnings record of one primary beneficiary.

As stated earlier, a dually entitled beneficiary is a person who is entitled to a primary benefit and a *higher* secondary benefit. The primary benefit is paid in full but the secondary benefit is paid only in the amount by which it exceeds the primary benefit. Although a dually entitled beneficiary receives a primary benefit, his or her total Social Security benefit is equal to the full secondary benefit. An individual may be eligible for two or more secondary benefits, but he or she generally only receives the highest secondary benefit. In that case, an individual is not considered dually entitled unless he or she also is entitled to a primary benefit. Later in this article, we present separate estimates for dually entitled and not dually entitled beneficiaries in the aged spouse and aged widow(er) TOB groups.

From a policy perspective, we believe it makes more sense to classify dually entitled persons into TOB groups as secondary beneficiaries. This is

because a change in Social Security law that, for example, increases primary benefits would have no effect on the total benefit amounts received by many dually entitled beneficiaries. An increase in secondary benefits, however, would affect the total benefit amounts of all these dually entitled beneficiaries.

Key Features of the Two Poverty Measures: Descriptions and Comparisons

Measurement of poverty within the population has three critical elements:

1. *Unit* measures. Which individuals in a household can reasonably be expected to share resources?
2. *Resource* measures. What should be counted as resources?
3. *Threshold* measures. What minimum resources are required to be considered nonpoor?

In this section, we consider each of those elements in turn.[20] For the SPM and official poverty estimates examined in this article, we use data from the public-use version of the 2013 Annual Social and Economic Supplement to the CPS (which reports income information for calendar year 2012), supplemented with exactly matched administrative records from SSA. For the remainder of this article, we refer specifically to the 2013 Annual Social and Economic Supplement when we mention the CPS. In the following three subsections, we describe the SPM and official-measure elements as they were implemented for the 2013 CPS. Box 1 summarizes the conceptual differences between the two poverty measures.

Unit Measures

The official measure uses the Census-defined family as its unit of analysis. This unit includes all persons residing together who are related by birth, marriage, or adoption; it treats all unrelated individuals aged 15 or older independently. Proponents of the SPM unit criticize the failure of the official unit to include all persons at an address who are likely to share resources. In particular, those proponents believe that the official-unit concept does not properly treat cohabiters and their relatives.

Box 1.
Poverty measure concepts: Official and Supplemental Poverty Measure (SPM)

Concept	Official poverty measure	SPM
Unit definition	Conventional definition: Families and unrelated individuals	Broadened definition: All related individuals who live at the same address, including any cohabiters and their relatives and foster children
Resource measure	Before-tax cash income	Cash income *plus* noncash transfers (such as food stamps and housing subsidies) and refundable tax credits *minus* income and payroll taxes, medical out-of-pocket expenses, and work expenses (includes childcare expenses)
Threshold level for base two-adult/two-child unit	Three times the cost of a minimum food diet (from the Department of Agriculture), updated by the U.S. Consumer Price Index	33rd percentile of expenditures on food, clothing, shelter, and utilities (from recent Bureau of Labor Statistics surveys) multiplied by 1.2
Threshold adjustments	Implicit equivalence scale that varies by family size, composition, and age of the family head	Explicit equivalence scale that varies by unit size and composition, but not by age of unit head; also, adjustments for differences in housing costs by (1) housing status (owner with a mortgage and so forth) and (2) geographic area

SOURCE: Adapted from Short (2013), http://www.census.gov/prod/2013pubs/p60-247.pdf.

Proponents of the SPM believe that the SPM unit better represents the unit that shares economic resources. The SPM unit includes all related persons at the same address, as well as any cohabiters and their relatives, and any coresident unrelated children who are cared for by the family (such as foster children).[21] Most persons whose SPM units differ from their official units are in SPM units that are larger than their official units. In larger units, there is more resource sharing that tends to reduce the number of people in poverty.

Resource Measures

The official resource measure is family before-tax money income.[22] Persons in families whose before-tax money income is less than the family's threshold are classified as poor. Proponents of the SPM believe that the official resource measure has the following major weaknesses:[23]

1. It does not reflect the effects of government benefit and tax programs that alter the resources available to families and, thus, their poverty status. Those programs are in-kind public benefits, refundable tax credits, and payroll and income taxes.[24]
2. It does not account for expenses that are necessary to hold a job and to earn income. Those expenses include transportation costs for getting to and from work and the costs of childcare for working families.[25]
3. It also does not incorporate a deduction for MOOP expenses.[26]

The SPM resource measure attempts to overcome the weaknesses of the official resource measure. The SPM resource measure is cash income *plus* refundable tax credits and any government in-kind benefits that families can use to meet their basic needs, which are represented in the thresholds, *minus* taxes and other nondiscretionary expenses for critical goods that are not included in the thresholds (such as MOOP and work expenses). The importance of these various additions to and subtractions from cash income varies greatly across age groups.

Threshold Measures

The official measure uses a set of thresholds for families of different sizes and compositions. The threshold values depend on unit size, number of children, and age of the unit head (younger than 65; 65 or older). At the time they were developed, the official thresholds represented the cost of a minimum food diet multiplied by three (to allow for expenditures on other goods and services).[27] The thresholds are updated each year using the U.S. Consumer Price Index for all items.

Proponents of the SPM believe that the official threshold measure has the following major weaknesses:

1. It is based on only one category of necessary expenditures; that is, food. The expenditure information used is more than 50 years old. The share of food in expenditures is much lower now than it was 50 years ago.[28] The threshold levels are fixed in real or inflation-adjusted dollars and do not reflect increases over time in real spending on basic needs.
2. It does not adjust for differences in shelter and utility expenditure needs resulting from differences in unit housing status. For example, homeowners with mortgages, on average, need to make sizable mortgage payments.[29]
3. It does not adjust for geographic differences in the cost of living, which are often large.[30]
4. It uses family size and composition adjustments that in some cases produce questionable results. For example, some single-parent families have higher thresholds than married-couple families of the same size, implying that children require more resources than adults in certain size families. Critics of the official threshold measure believe that the evidence used in setting thresholds for aged units and for one-person nonaged units is quite weak. In addition, the fact that the equivalence scales are implicit and not transparent is a substantial weakness.[31]

The SPM threshold measure attempts to overcome the disadvantages of the official threshold measure and has the following properties:

1. SPM thresholds represent the amount needed for a basic set of goods that consists of FCSU and an additional amount allowed for other basic needs (household supplies, personal care, and nonwork-related transportation). The FCSU needs reflect expenditures on this basic bundle of goods around the 33rd percentile of the expenditure distribution, as reported in the Bureau of Labor Statistics' (BLS) Consumer Expenditure Survey (CE).[32] The SPM thresholds for 2012 are based on 2008–2012 data from the CE. To include other basic needs in the threshold, the FCSU needs are multiplied by 1.2.[33] Over time, the thresholds are not fixed in real or inflation-adjusted dollars. Each year, the thresholds are updated using the most recent CE data.

2. SPM thresholds are adjusted for differences in shelter and utility expenditure needs resulting from differences in unit housing status.
3. The thresholds are adjusted for geographic differences in housing costs.
4. The threshold for units with two children (the base threshold) is derived from CE data as described in item 1 above. The thresholds for other unit types (differing in size and number of children) are then derived by applying an explicit equivalence scale to that base threshold.[34] Equivalence scales are measures of the relative cost of living for units of different sizes and compositions that are otherwise similar. For example, if a unit of two adults can live as well as a unit of two adults and two children while spending only three-fourths as much, then relative to the reference unit of two adults and two children, the equivalence scale value for a two-adult unit is three-fourths. For the purpose of poverty measurement, an equivalence scale is used to adjust the threshold value for the reference unit to provide corresponding thresholds for other unit types. We use a three-parameter equivalence scale, which is described later.

Data

The main data source for this article is the 2013 Annual Social and Economic Supplement to the CPS, supplemented with exactly matched Social Security administrative records.[35] For each person in the CPS, an attempt was made to find his or her administrative data (for more information about the matching procedures, see Appendix A). SSA and the Census Bureau jointly developed this restricted-access data file, which can be used only for research purposes by persons authorized by the Census Bureau. Among the many socioeconomic and demographic variables included in the CPS are official measure poverty variables, SPM poverty variables, and Social Security income. All of the poverty-related variables used in this analysis are from the CPS; we use existing CPS weights. The CPS does not include reliable information on types of Social Security benefits.

The administrative data are from two benefit files—the Master Beneficiary Record (MBR) and the Payment History Update System (PHUS)—and from one earnings file—the Summary Earnings Record (SER). In this article, we use PHUS and MBR files to determine benefit recipiency and type. Because the SER includes data for every person in the SSA record system, we use it to establish a person's match status. The presence of a SER record indicates a match between the person's CPS record and his or her SSA earnings and benefit records; this is a *match* person. Many match persons do not have MBR or PHUS records. Most were not eligible for benefits; some were eligible but had not applied for benefits. The absence of a SER record indicates failure to find a match between the CPS record and SSA's earnings and benefit records; this is a *nonmatch* person.

Matches were found for 87 percent of persons aged 18 or older; match rates ranged from a low of 83 percent for those aged 25–34 to a high of 91 percent for those aged 70–79.[36] For persons aged 18 or older who report Social Security income in the CPS, the match rate is 91 percent.

As stated earlier, this article presents estimates of poverty by type of Social Security adult beneficiary. Most of these beneficiaries are match persons, but some are nonmatch persons. In the following paragraphs, we briefly discuss how we identify match persons as Social Security beneficiaries and determine their TOB. Then, we discuss the corresponding process for nonmatch persons.

For *match* persons, we use PHUS and MBR files to determine whether a person received Social Security benefits during 2012; that is, is a 2012 Social Security beneficiary. For match beneficiaries, we derive benefit type, divorced beneficiary status, and dual entitlement status from the MBR files. For further details, see Appendix B. We use these derived variables to assign match Social Security beneficiaries to TOB groups.

For some match persons, there are discrepancies between the administrative record and the CPS benefit information. For example, Table 1 shows that 6.4 million (or 14 percent) of the 46.4 million match persons aged 18 or older with SSA records as beneficiaries do not report Social Security income to the CPS.[37] For disabled workers, the percentage not reporting Social Security income to the CPS is a much higher 33 percent; the corresponding figures for retired workers, aged spouses, and aged widow(er)s are 10 percent, 10 percent, and 5 percent, respectively (not shown in the article's tables). All 46.4 million of these Social Security beneficiaries are included in our poverty analysis by TOB. Under both poverty measures, the poverty rates for the 14 percent of match persons who have SSA records as beneficiaries but no CPS-reported Social Security income are substantially higher than they are for the 86 percent who do

report their Social Security income to the CPS. For example, Table 2 shows respective SPM poverty rates for those two groups of 33 percent and 13 percent. In addition, there are 3.0 million match persons aged 18 or older who are not Social Security beneficiaries but who report Social Security income to the CPS (Table 1).[38] These 3.0 million persons are not included in our poverty analysis by TOB. Under both poverty measures, the poverty rates for this group of 3.0 million are markedly higher than those for the match beneficiaries who also report Social Security income to the CPS (for example, SPM poverty rates of 20 percent versus 13 percent).

For *nonmatch* persons, we use the CPS to determine whether a person received Social Security benefits during 2012; that is, is a Social Security beneficiary. We designate all nonmatch persons with CPS-reported Social Security income as Social Security beneficiaries. We impute TOB to these nonmatch beneficiaries. For nonmatch beneficiaries with an imputed TOB of aged spouse or aged widow(er), we also impute divorced beneficiary status and dual entitlement status. For further details, see Appendix B. These imputed variables are used solely to assign nonmatch Social Security beneficiaries to groups. Nonmatch Social Security beneficiaries consist of the 4.4 million CPS-reported beneficiaries with an imputed TOB code (Table 1). We include them in our analysis of poverty by TOB.

The 4.4 million nonmatch beneficiaries account for 8.6 percent of the 50.8 million (46.4 million plus 4.4 million) beneficiaries included in our poverty analysis. For the four large TOB groups (retired workers, disabled workers, aged spouses, and aged

Table 1.
Number of persons aged 18 or older by beneficiary status, data source, and match status, 2012 (in millions)

		CPS-reported Social Security income	
Social Security administrative data	Total	Yes	No
Match persons	206.1	43.0	163.1
Administrative record indicates person is a beneficiary			
Yes	46.4	40.0	6.4
No	159.7	3.0	156.7
Nonmatch persons	30.8	4.4	26.4

SOURCE: Authors' calculations based on the public-use version of the 2013 CPS's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Highlighted values indicate the populations covered in the poverty analysis by type of benefit.

CPS = Current Population Survey.

Table 2.
SPM poverty rates of persons aged 18 or older, by beneficiary status, data source, and match status, 2012 (in percent)

		CPS-reported Social Security income	
Social Security adminstrative data	Total	Yes	No
Match persons	13.8	13.7	13.8
Administrative record indicates person is a beneficiary			
Yes	15.9	13.2	33.2
No	13.1	20.2	13.0
Nonmatch persons	25.9	18.9	27.0

SOURCE: Authors' calculations based on the public-use version of the 2013 CPS's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Highlighted values indicate the populations covered in the poverty analysis by type of benefit.

SPM = Supplemental Poverty Measure; CPS = Current Population Survey.

widow(er)s), the corresponding figures are 7.3 percent, 12.8 percent, 7.1 percent, and 8.6 percent, respectively (not shown).[39]

The population of nonmatch CPS-reported beneficiaries differs markedly from the population of match CPS-reported beneficiaries. CPS-reported beneficiaries numbering 43.0 million account for 20.8 percent of the total match population aged 18 or older of 206.1 million; that is, the CPS-reported benefit receipt rate is 20.8 percent within the match population. The CPS-reported benefit receipt rate for the nonmatch population is quite a bit lower at 14.3 percent. For persons aged 25–54, the CPS-reported benefit receipt rates are higher for the nonmatch population than for the match population, but for persons aged 65 or older, the CPS-reported benefit receipt rates are much lower for the nonmatch population than for the match population (not shown). For individuals aged 18 or older, poverty rates are markedly higher for nonmatch CPS-reported beneficiaries than for match CPS-reported beneficiaries (for example, SPM poverty rates of 18.9 percent and 13.7 percent). For individuals aged 25–61, poverty rates are lower for the nonmatch CPS-reported beneficiaries than for match CPS-reported beneficiaries, but for those aged 62 or older, poverty rates are much higher for the nonmatch CPS-reported beneficiaries than for the match CPS-reported beneficiaries (not shown).

In Appendix C, we compare our numbers of adult Social Security beneficiaries (match plus nonmatch) with corresponding estimates from a 1 percent sample of SSA administrative records (Tables C-1 and C-2). In general, the two sets of estimates are similar for TOB groups and subgroups. In Appendix D, we present additional comparisons for the four largest TOB groups. Table D-1 shows average benefits by TOB group and data source for persons reported as receiving benefits in both the CPS and the PHUS. Table D-2 gives numbers of beneficiaries by match status and CPS-reported Social Security benefit status. Table D-3 gives poverty rates for the same populations covered in Table D-2.

Official Poverty Measure and SPM Estimates: A Comparison

In this section, we begin our empirical examination of the eight TOB groups. For each TOB group, we compare the SPM estimates with the official poverty measure estimates. For each measure, we also compare poverty estimates across TOB groups. In the following section, we estimate the effects of various features of the SPM on poverty levels, noting why SPM estimates differ from the official estimates.

As stated above, the sample for our analysis of poverty by TOB includes both match beneficiaries (with and without benefits reported in the CPS) and nonmatch beneficiaries. TOB codes are used to assign beneficiaries to groups (for example, retired workers). Our poverty estimates for these groups depend solely on CPS variables such as income components and thresholds; we use the existing CPS weights. Thus, our poverty estimates for beneficiaries may be compared to those for other groups presented in recent papers published by the Census Bureau and SSA that examine official and SPM poverty estimates for 2012 (Short 2013; Bridges and Gesumaria 2015a).

We begin this section by looking at poverty for the eight TOB groups. Next, we examine deep poverty and the distribution of beneficiaries by welfare-ratio intervals. Then, we examine movements into and out of poverty. Finally, we look at poverty for various subgroups within the TOB groups.

Poverty by TOB Groups

Table 3 gives numbers and percentages of beneficiaries in poverty for the eight TOB groups.[40] For both poverty measures, retired workers and aged spouses have the lowest poverty rates of the eight TOB groups; all of the poverty rates for these two TOB groups are well below the corresponding poverty rate for the total U.S. population. For example, the SPM rates for retired workers and for the total population are 12.7 percent and 16.0 percent, respectively.[41] Aged widow(er)s have the next lowest poverty rates for both poverty measures (SPM rate of 19.7 percent) followed by disabled workers and child-in-care widow(er)s (both with SPM rates of about 23.5 percent). Three small TOB groups (child-in-care spouses, disabled widow(er)s, and disabled adult children) have the highest poverty rates (about 31–38 percent).

Compared with the official poverty measure, the SPM produces higher estimated poverty rates for aged beneficiaries (retired workers, aged spouses, and aged widow(er)s). For these TOB groups, the SPM rates are 5.6–6.6 percentage points higher than the official poverty rates. (As we show later, MOOP expenses—accounted for in the SPM but not in the official measure—are very important for these aged groups.) On the other hand, the SPM and official poverty rates are similar for disabled workers.

Table 3.
Number and percentage of Social Security beneficiaries in poverty under the two poverty measures, by TOB group, 2012 (numbers in thousands)

TOB group	Total number	Official poverty		SPM poverty		Percentage point difference[a] between SPM and official poverty rates
		Number	Percent	Number	Percent	
Primary beneficiaries						
Retired workers	28,413	2,018	7.1	3,608	12.7	5.6
Disabled workers	8,828	2,074	23.5	2,066	23.4	-0.1
Secondary beneficiaries						
Aged spouses	4,922	354	7.2	662	13.4	6.3
Child-in-care spouses	116	37	32.2	39	33.8	1.6
Aged widow(er)s	7,262	952	13.1	1,432	19.7	6.6
Child-in-care widow(er)s	206	48	23.5	48	23.5	0.0
Disabled widow(er)s	230	72	31.2	71	31.0	-0.1
Disabled adult children	771	276	35.8	290	37.6	1.9

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

TOB = type of benefit; SPM = Supplemental Poverty Measure.

a. Percentage point differences do not necessarily equal the difference between rounded poverty rate values.

We refer to the ratio of a given unit's resources to its poverty threshold as a welfare ratio. We use the average welfare ratio of a group to indicate the average economic status of the group. For each of the four large TOB groups (retired workers, disabled workers, aged spouses, and aged widow(er)s), the average SPM welfare ratios for the SPM poor (.48–.59; not shown) are lower than the average official-measure welfare ratios for the official poor (.64–.67; not shown).

Deep Poverty by TOB Groups

People in units with resources that amount to less than 50 percent of the unit threshold are said to be in deep SPM or deep official-measure poverty.[42] Table 4 gives numbers and percentages of people in deep poverty for the four large TOB groups. For both deep poverty measures, retired workers and aged spouses have the lowest deep poverty rates (SPM rates of 3.8 percent and 4.8 percent).[43] Aged widow(er)s have higher deep poverty rates for both measures (SPM rate of 5.6 percent). For both deep poverty measures, disabled workers have the highest deep poverty rates (SPM rate of 6.7 percent).

For the large TOB groups, the SPM and official deep poverty measures give rather different results. The SPM shows considerably more deep poverty for aged beneficiaries (retired workers, aged spouses, and aged widow(er)s) than the official measure does. For those groups, the SPM deep poverty rates are 1.8–2.8 percentage points higher than the official deep poverty rates—proportionally large differences from official-measure estimates that range from 2.0 percent to 3.1 percent. For disabled workers, the SPM deep poverty rate exceeds the official deep poverty rate by only 0.8 percentage points.

For each of the four large TOB groups, the average SPM welfare ratios for the SPM deep poor (−.12 to +.06; not shown)[44] are lower than the average official-measure welfare ratios for the official deep poor (.19 to .22; not shown).

Distributions of People by Welfare-Ratio Classes and TOB Groups

Table 5 shows the percentage distributions of people in the four large TOB groups by welfare-ratio interval. People residing in units with welfare ratios less than 1.0 are in poverty, and those in units with welfare ratios of less than 0.5 are in deep poverty. For both poverty measures, disabled workers and aged widow(er)s have the lowest shares of people with welfare ratios of 2.0 or more. Compared with the official poverty measure, the SPM shows a lower share of people with welfare ratios of 4.0 or more for all four large TOB groups.

Table 4.

Number and percentage of Social Security beneficiaries in deep poverty under the two poverty measures, by selected TOB group, 2012 (numbers in thousands)

TOB group	Total number	Official deep poverty		SPM deep poverty		Percentage point difference [a] between SPM and official deep poverty rates
		Number	Percent	Number	Percent	
Primary beneficiaries						
Retired workers	28,413	557	2.0	1,075	3.8	1.8
Disabled workers	8,828	525	5.9	596	6.7	0.8
Secondary beneficiaries						
Aged spouses	4,922	96	2.0	236	4.8	2.8
Aged widow(er)s	7,262	227	3.1	404	5.6	2.4

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: "Deep poverty" describes individuals residing in units with resources that amount to less than 50 percent of the poverty threshold.

Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

TOB = type of benefit; SPM = Supplemental Poverty Measure.

a. Percentage point differences do not necessarily equal the difference between rounded deep poverty rate values.

Table 5.

Percentage distribution of Social Security beneficiaries by welfare-ratio [a] interval and selected TOB group under the two poverty measures, 2012

TOB group	Welfare-ratio intervals						
	Less than 0.50	0.50–0.99 [b]	1.00–1.24 [b]	1.25–1.49 [b]	1.50–1.99 [b]	2.00–3.99 [b]	4.00 or more
	Official poverty						
Primary beneficiaries							
Retired workers	2.0	5.1	4.6	5.2	12.5	35.4	35.2
Disabled workers	5.9	17.6	10.5	8.3	13.2	28.3	16.2
Secondary beneficiaries							
Aged spouses	2.0	5.2	4.8	5.1	12.1	37.5	33.3
Aged widow(er)s	3.1	10.0	9.7	11.8	17.8	31.5	16.1
	SPM poverty						
Primary beneficiaries							
Retired workers	3.8	8.9	7.9	8.0	14.4	35.5	21.6
Disabled workers	6.7	16.7	13.9	10.9	16.9	25.7	9.2
Secondary beneficiaries							
Aged spouses	4.8	8.7	9.1	8.8	14.1	34.2	20.3
Aged widow(er)s	5.6	14.2	13.2	12.5	16.3	29.1	9.2

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

Row percentages sum to approximately 100.0.

TOB = type of benefit; SPM = Supplemental Poverty Measure.

a. The ratio of unit resources to the unit poverty threshold.

b. Less than the lower bound of the next interval.

"Movements" Into and Out of Poverty by TOB Groups

When the basis for poverty measurement changes, the composition of the population designated as poor also changes. We refer to redesignations in poverty status that are solely attributable to the switch to a different method for determining who is poor as *movements* into and out of poverty.[45]

Table 6 gives percentages of people exiting poverty, staying in poverty, and entering poverty for the four large TOB groups if the criteria change from the official poverty measure to the SPM. For each of the aged beneficiary groups (retired workers, aged spouses, and aged widow(er)s), switching to the SPM moves about 7–9 percent of people into poverty and only 1–2 percent out of poverty. For disabled workers, switching to the SPM moves about 7 percent of people into poverty and about 7 percent out of poverty.

Poverty of TOB Groups by Selected Characteristics

We now examine poverty rates for selected subgroups of the four large TOB groups. Tables 7–9 show population counts and poverty rates for a number of beneficiary subgroups.

Worker beneficiaries by sex and marital status. Men comprise 61 percent of retired workers and 53 percent of disabled workers, but only 3 percent of aged spouses and 3 percent of aged widow(er)s.[46] Table 7 shows poverty estimates for retired and disabled workers by sex and marital status.

For each sex, poverty rates for retired workers are markedly lower for married persons than for the various categories of nonmarried persons. The marital status information is from the CPS and indicates status at the time of the interview. For nonmarried retired workers, poverty rates are higher for women than for men, but for married retired workers, poverty rates of men and women are similar. For retired workers, the switch to the SPM increases poverty rates by 3–6 percentage points.

For each sex, poverty rates for disabled workers are markedly lower for the married than for the divorced and never married. For disabled workers, the switch to the SPM increases poverty rates for the married, but reduces poverty rates for the divorced, widowed, and never married.

Divorced and nondivorced beneficiaries. Divorced spouse beneficiaries account for 8 percent of aged spouse beneficiaries (Table 8).[47] For both poverty measures, poverty rates for divorced spouses are quite high and are higher than those for nondivorced aged spouses (SPM rates of 25.8 percent and 12.4 percent, respectively).

Divorced widowed beneficiaries account for about 10 percent of aged widowed beneficiaries. For both measures, poverty rates for divorced aged widow(er)s are similar to those of nondivorced aged

Table 6.
Percentage of Social Security beneficiaries defined as poor under the official measure and poverty-status effects of a shift to the SPM, by selected TOB group, 2012

TOB group	Official poor [a]	Exit poverty [b]	Stay in poverty [c]	Enter poverty [d]	SPM poor [e]
Primary beneficiaries					
Retired workers	7.1	1.0	6.1	6.6	12.7
Disabled workers	23.5	6.6	16.9	6.5	23.4
Secondary beneficiaries					
Aged spouses	7.2	1.4	5.8	7.6	13.4
Aged widow(er)s	13.1	2.0	11.1	8.6	19.7

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

SPM = Supplemental Poverty Measure; TOB = type of benefit.

a. "Exit poverty" column plus "Stay in poverty" column.

b. Official poor, but SPM nonpoor.

c. Official poor and SPM poor.

d. Official nonpoor, but SPM poor.

e. "Stay in poverty" column plus "Enter poverty" column.

widow(er)s (SPM rates of 20.6 percent for the divorced and 19.6 percent for the nondivorced).

Dually entitled and not dually entitled beneficiaries. Table 8 also shows that 2.9 million of 4.9 million aged spouses (about 60 percent) are dually entitled. For both measures, poverty rates for dually entitled spouses are a bit lower than the poverty rates for those who are not dually entitled (SPM rates of 12.8 percent and 14.4 percent, respectively).

Dually entitled widow(er)s account for one half of aged widow(er)s. For both poverty measures, poverty rates for dually entitled aged widow(er)s are lower than the poverty rates for those who are not dually entitled (SPM poverty rates of 18.6 percent and 20.9 percent, respectively).

The following differences contribute to lower poverty rates for the dually entitled. On average, dually entitled aged spouses and aged widow(er)s receive somewhat higher Social Security benefits than do their counterparts who are not dually entitled. In addition, dually entitled aged spouses and aged widow(er)s have higher lifetime earnings than do their not dually entitled counterparts.

Table 7.
Number and percentage of Social Security retired worker and disabled worker beneficiaries in poverty under the two poverty measures, by sex and marital status, 2012 (numbers in thousands)

Marital status [a]	Total number	Official poverty		SPM poverty		Percentage point difference between SPM and official poverty rates
		Number	Percent	Number	Percent	
			Retired workers			
			Men			
Subtotal	17,444	1,037	5.9	2,041	11.7	5.8
Married	13,002	548	4.2	1,352	10.4	6.2
Divorced	1,654	185	11.2	236	14.3	3.1
Widowed	2,027	182	9.0	302	14.9	5.9
Never married	762	122	16.0	152	19.9	3.9
			Women			
Subtotal	10,968	981	8.9	1,567	14.3	5.4
Married	6,236	289	4.6	656	10.5	5.9
Divorced	1,906	274	14.4	329	17.2	2.8
Widowed	2,052	272	13.2	390	19.0	5.8
Never married	774	146	18.9	194	25.0	6.1
			Disabled workers			
			Men			
Subtotal	4,655	1,010	21.7	1,085	23.3	1.6
Married	2,478	358	14.5	504	20.3	5.8
Divorced	1,020	279	27.4	248	24.3	-3.1
Widowed	168	31	18.7	30	17.7	-1.0
Never married	990	341	34.5	304	30.7	-3.8
			Women			
Subtotal	4,172	1,064	25.5	981	23.5	-2.0
Married	2,082	275	13.2	349	16.7	3.5
Divorced	1,092	430	39.4	336	30.7	-8.7
Widowed	259	77	29.6	71	27.3	-2.3
Never married	739	282	38.1	226	30.6	-7.5

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Data do not include dually entitled beneficiaries.

Subtotals of numbers of beneficiaries do not necessarily equal the sums of the rounded numbers for the component groups.

SPM = Supplemental Poverty Measure.

a. Status at the time of Current Population Survey interview.

Retired worker beneficiaries by disability conversion status. Disabled-worker beneficiaries are automatically converted to retired-worker beneficiaries when they reach the FRA. In Table 9, we compare the poverty rates of these converted retired workers to the poverty rates of (1) nonconverted retired workers and (2) disabled workers.[48] We restrict our analysis to match beneficiaries.[49]

The poverty rates for converters are substantially higher than those for nonconverters are (SPM rates of 16.8 percent and 12.2 percent, respectively).[50] However, poverty rates for converters are much lower than the rates for disabled-worker beneficiaries are (SPM rates of 16.8 percent and 23.8 percent, respectively).[51] Switching to the SPM increases poverty rates for converters and nonconverters by 5–6 percentage points.

Table 8.
Number and percentage of Social Security aged spouse and aged widow(er) beneficiaries in poverty under the two poverty measures, by divorce and dual entitlement statuses, 2012 (numbers in thousands)

Divorce and dual entitlement status	Total number	Official poverty		SPM poverty		Percentage point difference between SPM and official poverty rates
		Number	Percent	Number	Percent	
			Aged spouses			
Not divorced	4,542	245	5.4	564	12.4	7.0
Divorced [a]	379	109	28.7	98	25.8	-2.9
Not dually entitled	1,998	154	7.7	288	14.4	6.7
Dually entitled	2,924	200	6.8	374	12.8	6.0
			Aged widow(er)s			
Not divorced	6,550	859	13.1	1,285	19.6	6.5
Divorced [a]	712	93	13.0	147	20.6	7.6
Not dually entitled	3,611	553	15.3	754	20.9	5.6
Dually entitled	3,651	399	10.9	678	18.6	7.7

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: SPM = Supplemental Poverty Measure.

a. Refers to individuals receiving benefits as divorced persons; they may report a marital status other than divorced in the Current Population Survey.

Table 9.
Number and percentage of Social Security primary beneficiaries in poverty under the two poverty measures, by TOB group and disability conversion status, 2012 (match persons only; numbers in thousands)

TOB group and conversion status	Total number	Official poverty		SPM poverty		Percentage point difference [a] between SPM and official poverty rates
		Number	Percent	Number	Percent	
Retired workers						
Converters	1,548	189	12.2	260	16.8	4.6
Nonconverters	24,797	1,649	6.6	3,015	12.2	5.5
Disabled workers	7,696	1,857	24.1	1,832	23.8	-0.3

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Data do not include dually entitled beneficiaries.

TOB = type of benefit; SPM = Supplemental Poverty Measure.

a. Percentage point differences do not necessarily equal the difference between rounded poverty rate values.

Effects of Various Features of the SPM on the Poverty of TOB Groups

The changes in measured poverty of the TOB groups can be attributed to specific features of the SPM. We now consider the effects of the SPM's resource, threshold, and unit measures for the four large TOB groups.

Effects of Elements of the Resource Measure

In the following three subsections, we (1) consider the effects of noncash transfers and refundable tax credits, (2) examine the effects of taxes and other nondiscretionary expenses, and (3) analyze the combined effect of all of these resource measure elements.

Noncash transfers and refundable tax credits. For each of the six noncash (in-kind) benefit or tax-credit programs, we compare SPM poverty estimates with those that result when the benefits of the program are subtracted from the resource measure but the SPM thresholds and SPM units are unchanged.[52] We view the change in poverty as the result of a specified change in the way poverty is measured.

Alternatively, we could interpret the change in poverty as the effect of a change in program policy for a given measure of poverty, namely, the effect on SPM poverty of introducing the program. Our estimate of the change in resources that results when the program is introduced does not attempt to account for changes in resource components that are due to the program's behavioral (work effort, saving, and so forth) and interprogram effects. (An interprogram effect exists when program rules specify that the benefit amount of one program affects the benefit amount or tax liability amount of another benefit or tax program.) Our estimate of the change in resources simply equals the amount of program benefits.[53]

Box 2 summarizes the derivation of the SPM resource concept. The SPM resource measure includes the following in-kind benefit programs: (1) housing subsidies, (2) the Low-Income Home Energy Assistance Program (LIHEAP), (3) the National School Lunch Program (NSLP), (4) the Supplemental Nutrition Assistance Program or SNAP (formerly known as the Food Stamp Program), and (5) the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).[54] The SPM resource measure also includes the following refundable tax credits: the earned income tax credit and the additional federal childcare tax credit.[55]

Five in-kind benefit programs and the refundable tax credit program are considered here. In Table 10, the top panel gives the percentage point decreases in the SPM poverty rate attributed to each program for each of the large TOB groups. For the aged TOB groups (retired workers, aged spouses, and aged widow(er)s), only two of the programs—SNAP and housing subsidies—have effects on SPM poverty in excess of 0.2 percentage points. SNAP benefits and housing subsidies respectively reduce measured poverty rates by 0.6–1.0 and 0.8–1.1 percentage points for aged beneficiaries. SNAP benefits and housing subsidies target low-income aged and nonaged persons. Refundable tax credits, the NSLP, and WIC are intended to help low-income nonaged persons. LIHEAP is not large enough to have much effect on the poverty rate of aged beneficiaries. For the aged TOB groups, the sum of the six individual effects is modest (1.8–2.4 percentage points).

For disabled workers, the effects of these programs are considerably larger. SNAP benefits and housing subsidies each reduce measured poverty by 2.9 percentage points. Refundable tax credits reduce the poverty rate by 0.9 percentage points. The sum of the six individual effects is a sizable 7.2 percentage points.

Box 2.
Deriving SPM unit resources

SPM resources = money income from all sources—

Plus:

- Housing subsidies
- Low-Income Home Energy Assistance Program (LIHEAP)
- National School Lunch Program (NSLP)
- Supplemental Nutrition Assistance Program (SNAP)
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)
- Refundable tax credits (such as earned income tax credits (EITC))

Minus:

- Federal individual income taxes
- State individual income taxes
- Payroll taxes
- Child support paid
- Medical out-of-pocket (MOOP) expenses
- Work expenses (includes childcare expenses)

SOURCE: Adapted from Short (2013), http://www.census.gov/prod/2013pubs/p60-247.pdf.

NOTE: SPM = Supplemental Poverty Measure.

Table 10.
Percentage point changes in the SPM poverty rate attributed to individual additions to and subtractions from SPM resources, by selected TOB group, 2012

SPM resource addition or subtraction	Primary beneficiaries		Secondary beneficiaries	
	Retired workers	Disabled workers	Aged spouses	Aged widow(er)s
	Poverty-reducing components			
Additions				
Refundable tax credits	-0.2	-0.9	-0.1	-0.1
Housing subsidies	-0.9	-2.9	-0.8	-1.1
LIHEAP	-0.1	-0.2	-0.2	-0.2
NSLP	0.0	-0.2	0.0	0.0
SNAP (formerly the Food Stamp Program)	-0.6	-2.9	-0.9	-1.0
WIC	0.0	-0.1	0.0	0.0
	Poverty-increasing components			
Subtractions				
Federal income tax	0.1	0.3	0.1	0.2
Payroll taxes	0.2	0.5	0.1	0.1
State income tax	0.1	0.1	0.1	0.2
Child support paid	0.0	0.3	0.0	0.0
MOOP expenses	5.9	6.9	7.3	8.4
Work expenses	0.5	1.1	0.2	0.3
Combined effect of all SPM additions and subtractions [a]	4.8	1.5	5.8	6.8

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

SPM = Supplemental Poverty Measure; TOB = type of benefit; LIHEAP = Low-Income Home Energy Assistance Program; NSLP = National School Lunch Program; SNAP = Supplemental Nutrition Assistance Program; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children; MOOP = medical out-of-pocket.

a. Because of interaction effects and the rounding of component values, the combined-effect values do not equal the sum of the individual changes.

Government cash transfers such as Social Security benefits and Supplemental Security Income (SSI) payments are included as resources by both the SPM and the official poverty measure.[56] In Appendix F, we examine the effects of including these cash transfers as resources on official and SPM poverty rates.

Taxes and other nondiscretionary expenses. For each expense element, we compare SPM poverty rates with the poverty rates that result when we use SPM resources *plus* the expense-element amount as our resource measure but continue to use the SPM thresholds and SPM units. We view the change in poverty as the result of a specified change in the way poverty is measured.

The following six expenses are deducted in deriving SPM unit resources: (1) federal individual income tax (after nonrefundable credits), (2) payroll taxes (Old-Age, Survivors, Disability, and Health Insurance tax payments by employees and the self-employed *plus* federal employee retirement payroll deductions), (3) state individual income tax,[57] (4) child support paid, (5) MOOP expenses, and (6) work expenses (including childcare expenses).[58]

The relative impact of various types of expenses on household resources tends to vary by age. For instance, payroll taxes and work expenses affect working families. Child support payments mostly come from nonaged persons. Low-income aged units typically have no or low income-tax liabilities.

MOOP expenses are very important for aged persons but are also important for those who are nonaged. MOOP expenses include health insurance premiums *plus* out-of-pocket expenses for one's own medical care (hospital visits, medical providers, dental services, prescription medicine, vision aids, and medical supplies) and over-the-counter health-related

products.[59] Subtracting MOOP expenses from income, as with taxes and work expenses, better identifies the amount of income that the unit has available to purchase the basic bundle of goods included in the threshold.

The bottom panel of Table 10 gives the percentage point increases in the SPM poverty rates attributable to each expense item for each of the four large TOB groups. MOOP expenses have the largest effect by far; subtracting MOOP expenses in calculating the resource measure increases the measured poverty rates by 5.9–8.4 percentage points. For disabled workers, the poverty-rate increase attributed to work expenses is 1.1 percentage points; the poverty-rate increases attributed to work expenses for aged TOB groups range from 0.2 to 0.5 percentage points.

For the large TOB groups, 94–98 percent of SPM-poor beneficiaries are members of SPM units with MOOP expenses. Average MOOP expenses for those units amount to about 30 percent of their unit's SPM poverty threshold for disabled workers and aged widow(er)s, 45 percent for retired workers, and 62 percent for aged spouses (not shown).

For the four large TOB groups, the sums of the six individual expense effects range from about 7 percentage points for retired workers to about 9 percentage points for disabled workers and aged widow(er)s.

All resource elements. Here we compare the SPM poverty rates with the poverty rates that result when we replace the SPM resource measure with the official resource measure but use the SPM thresholds and SPM units. We see in Table 10 that for aged beneficiaries, using the SPM resource measure increases the poverty rates by 4.8 percentage points or more. For disabled workers, the corresponding increase is modest (1.5 percentage points).

The combined effect of all the differences between the SPM resource measure and the official resource measure on poverty need not equal the sum of the effects of the 12 individual differences. This is because there are interaction effects. For example, deducting either MOOP expenses or work expenses from the resource measure may move a person into poverty; this increase in poverty would be reflected in *both* the MOOP expense effect and the work expense effect.[60] The net interaction effect equals the combined resource effect *minus* the sum of the 12 individual effects. For the four large TOB groups, the interaction effects are small (0.0 to −0.6 percentage points).

Effects of Elements of the Threshold Measure

We now examine the effects of various elements of the SPM threshold measure; that is, housing-status adjustments, geographic adjustments, threshold level, and equivalence scales. In addition, we consider the combined effect of the various elements of the SPM threshold measure. These effects on the SPM poverty rates for the four large TOB groups are given in Table 11 (in percentage points).

Housing-status adjustments. The SPM thresholds depend on a unit's housing status, which can be one of three types: owner with mortgage, owner without mortgage, and renter. The adjustments are based on CE data. All thresholds for units that have owners

Table 11.
Percentage point changes in the SPM poverty rate attributed to individual features of the SPM threshold, by selected TOB group, 2012

	Primary beneficiaries		Secondary beneficiaries	
Threshold feature	Retired workers	Disabled workers	Aged spouses	Aged widow(er)s
Housing-status adjustment	-2.0	-1.5	-3.0	-3.9
Geographic adjustment	0.2	-1.7	-0.3	-0.6
Threshold level	1.7	3.1	1.6	2.7
Equivalence scale	1.1	-0.6	1.8	-0.1
Combined effect of all SPM threshold features [a]	1.3	-0.6	1.1	-1.0

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

SPM = Supplemental Poverty Measure; TOB = type of benefit.

a. Because of interaction effects and the rounding of component values, the combined-effect values do not equal the sum of the individual changes.

without mortgages are 14 percent lower than they would be if the thresholds did not depend on housing status. Correspondingly, thresholds for units that have owners with mortgages and renters are respectively 3 percent and 1 percent higher than they would be if the thresholds did not depend on housing status.[61]

To estimate the effect of housing-status adjustments, we remove them from the SPM thresholds and compare the SPM poverty rates with the poverty rates that result when we use the modified thresholds. We find that the housing-status adjustment *decreases* the poverty rates of aged beneficiaries (retired workers, aged spouses, and aged widow(er)s) by 2.0–3.9 percentage points.[62] For each of these three TOB groups, about 60 percent of persons who would be defined as poor in the absence of this adjustment reside in units that have owners without mortgages; the adjustment markedly lowers their thresholds and moves many of them out of the poverty population. The adjustment decreases the poverty rates of aged beneficiaries in units that have owners without mortgages by 4.1–7.6 percentage points. For aged beneficiaries who are in units that have owners with mortgages and for those in units that have renters, there are small increases (usually less than 1 percentage point) in poverty rates (not shown).

The decrease in the poverty rate of disabled workers (1.5 percentage points) is smaller than the decreases for the three aged beneficiary groups. Only about 30 percent of disabled workers who are poor in the absence of the housing-status adjustment reside in units that have owners without mortgages.

Geographic adjustments. The SPM thresholds are adjusted to reflect geographic differences in housing costs. The adjustment factors depend on housing-status group and area rent levels. Rent data for more than 300 areas are from the American Community Survey.[63] Among beneficiaries in the four large TOB groups, the smallest and largest geographic-adjustment factors are 0.80 and 1.56, respectively; the factors average about 1.0 for all TOB groups (not shown).

We remove the geographic adjustments from the SPM thresholds and compare SPM poverty rates with the poverty rates that result when we use those modified thresholds.[64] The geographic adjustment decreases the poverty rate of disabled workers by 1.7 percentage points (Table 11). Among aged beneficiaries, the adjustment decreases the poverty rate of aged widow(er)s by 0.6 percentage points and has little effect on the poverty rates of retired workers and aged spouses. For each of the four large TOB groups, the adjustment increases poverty rates of beneficiaries in the Northeast and West (by 2–4 percentage points; not shown) and decreases poverty rates in the Midwest and South (by 1–4 percentage points; not shown). For all four large TOB groups, the adjustment decreases poverty rates substantially for beneficiaries living outside of metropolitan statistical areas.

Threshold level. With no housing-status adjustment and no geographic adjustment, the SPM threshold for the two-adult/two-child unit for 2012 would have been $24,959.[65] The two-adult/two-child unit official threshold for 2012 was $23,283. Thus, for this base unit, the official threshold is 93.28 percent of the SPM threshold.

To estimate the effect of the threshold-level difference, we remove that difference by multiplying each unit's SPM threshold by 0.9328. We then compare SPM poverty rates with the poverty rates that result when we use these modified thresholds. This change *increases* the poverty rates for retired workers, disabled workers, aged spouses, and aged widow(er)s by 1.7, 3.1, 1.6, and 2.7 percentage points, respectively.

Equivalence scales. There are important differences between the official poverty measure and SPM equivalence scales. Equivalence scales are measures of the relative expenditure needs for units of different sizes and compositions. Both scales depend on unit size and number of children, but the scales depend on those two factors in somewhat different ways, as we will show. The implicit official-measure scale also depends on the age of the unit head; one-person and two-person units with aged heads have lower scale values than corresponding units with nonaged heads.

The SPM three-parameter equivalence scale has the following properties:

- a child always costs less than an adult;
- the scale always exhibits economies of scale in consumption;
- the scale does not depend on the age of the unit head; and
- for one-person nonaged units, the SPM-scale value is rather different from the official-measure scale value.[66]

To estimate the total effect of using the SPM equivalence scale on the poverty rates of the TOB groups, we incorporate the official-measure equivalence scale into the SPM thresholds.[67] We find that using the SPM equivalence scale increases the poverty rates of retired workers and aged spouses by 1.1 and 1.8 percentage

points, respectively, decreases the rate for disabled workers by 0.6 percentage points, and has little effect on the rate for aged widow(er)s.

For units in which the SPM-scale value is greater than the official-scale value, using the SPM scale increases thresholds and thus increases poverty rates. Correspondingly, using the SPM scale decreases poverty rates for units for which the SPM-scale value is less than the official-scale value. Table 12 shows the ratios of SPM-scale value to official-scale value for the various unit types. The ratio of the SPM-scale value to the official-scale value exceeds 1.00 for two-person units with aged heads; for retired workers and aged spouses, these two-person units account for most of the poverty-rate increases. The ratio of scale values is less than 1.00 for one-person units with nonaged heads; for disabled workers, these one-person units account for most of the decrease in poverty.

All threshold elements. To get the combined effect of adjustments for housing and geographic area, threshold level, and equivalence scale on the poverty rates of the large TOB groups, we replace the SPM threshold with the official-measure threshold for each SPM unit. The official-measure thresholds depend on SPM unit size, number of children, and whether the unit head is aged (65 or older). We then compare the SPM poverty rate with the poverty rate that results when we use the modified thresholds but continue to use the SPM resource measure and SPM units.

We find that using the SPM thresholds increases the respective poverty rates of retired workers and aged spouses by 1.3 and 1.1 percentage points, and decreases the respective rates of disabled workers and aged widow(er)s by 0.6 and 1.0 percentage points (Table 11).[68]

Effects of Unit Definition

We now compare the official-measure poverty of TOB groups with the poverty that results when we use the SPM unit but use the official resource and thresholds concepts.[69] For aged beneficiaries (retired workers, aged spouses, and aged widow(er)s), Table 13 shows that replacing the official unit with the SPM unit produces very small decreases in poverty rates (0.1 to 0.3 percentage points). For disabled workers, the corresponding decrease is decidedly larger (1.7 percentage points).

The majority of disabled workers stay in the same unit; that is, their SPM unit is the same as their official-measure unit. However, about 8 percent end up in a new unit; that is, in a SPM unit that differs from their official unit.[70] Approximately 98 percent of these new-unit disabled workers end up in larger SPM units.[71] Replacing the official unit with the SPM unit moves about one-fourth of these new-unit disabled workers out of the poverty population; a small proportion moves into the poverty population. In larger units, there is more resource sharing and more economies of scale, which tend to reduce the number of people in poverty.

Table 12.
Ratio of the SPM equivalence-scale value to the official poverty measure equivalence-scale value, by unit size, age of the unit head, and number of children

	Number of children							
Unit size and age of head [a]	0	1	2	3	4	5	6	7
One person								
Younger than age 65	0.90	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Aged 65 or older	0.98	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Two people								
Unit head younger than age 65	0.99	1.03	. . .	. . .	. . .	. . .	. . .	. . .
Unit head aged 65 or older	1.10	1.03	. . .	. . .	. . .	. . .	. . .	. . .
Three people	1.30	1.11	1.05	. . .	. . .	. . .	. . .	. . .
Four people	1.20	1.08	1.00	0.95	. . .	. . .	. . .	. . .
Five people	1.17	1.07	1.01	0.95	0.92	. . .	. . .	. . .
Six people	1.15	1.08	1.03	0.98	0.93	0.91	. . .	. . .
Seven people	1.11	1.05	1.02	0.97	0.94	0.90	0.91	. . .
Eight people	1.09	1.04	1.01	0.97	0.94	0.91	0.88	0.86

SOURCE: Authors' calculations.

NOTES: SPM = Supplemental Poverty Measure; . . . = not applicable.

a. Ratios for units with three or more persons do not depend on the age of the unit head.

Table 13.
Percentage point changes in the SPM poverty rate attributed to features of the SPM, by selected TOB group, 2012

SPM element	Primary beneficiaries		Secondary beneficiaries	
	Retired workers	Disabled workers	Aged spouses	Aged widow(er)s
All resource features	4.8	1.5	5.8	6.8
All threshold features	1.3	-0.6	1.0	-1.0
Unit	-0.3	-1.7	-0.3	-0.1
Combined effect of all features [a]	5.6	-0.1	6.3	6.6

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

SPM = Supplemental Poverty Measure; TOB = type of benefit.

a. Because of interaction effects and the rounding of component values, the combined-effect values do not equal the sum of the individual changes.

Combined Effects of All Elements of the SPM

As shown earlier (Table 3), compared with the official poverty measure, the SPM shows much more poverty for aged beneficiaries. For the three aged TOB groups, the SPM poverty rates are 5.6–6.6 percentage points higher than the official rates. Our analysis shows that for aged beneficiaries, the SPM resource features account for most of these differences. The effect of MOOP expenses (5.9–8.4 percentage points) dominates the combined resource effect (Table 10).

For disabled workers, the SPM and official poverty rates are similar. This is because the large poverty rate–increasing effects of MOOP expenses (6.9 percentage points) and of the threshold level (3.1 percentage points) are offset by the combined poverty rate–decreasing effects of housing subsidies, SNAP benefits, housing-status adjustments, geographic cost-of-living adjustments, and the unit definition.

Summary of Empirical Findings

In this section, we first provide an overview of our comparisons of official poverty measure and SPM rate estimates. Then, we summarize our analysis of the effects of the various features of the SPM on the poverty rates of the four large TOB groups.

Comparison of Official Poverty Measure and SPM Estimates

For both poverty measures, retired workers and aged spouses have the lowest poverty rates among the four large TOB groups, well below the corresponding poverty rates for the total U.S. population. For example, the SPM rates for retired workers, aged spouses, and the total population are 12.7 percent, 13.4 percent, and 16.0 percent, respectively. Aged widow(er)s have the next lowest poverty rates for both measures (SPM rate of 19.7 percent). For both poverty measures, disabled workers have even higher poverty rates (SPM rate of 23.4 percent).

For the large TOB groups, the SPM and official poverty measures give quite different results. Compared with the official poverty measure, the SPM shows much more poverty for aged beneficiaries, with differences of 5.6–6.6 percentage points. On the other hand, the SPM and official poverty rates are quite similar for disabled workers.

The four small TOB groups all have high poverty rates for either measure. Child-in-care spouses, disabled widow(er)s, and disabled adult children have poverty rates even higher than those for disabled workers (SPM rates of 31–38 percent versus 23 percent).

For both poverty measures, rates for divorced aged spouses are quite high (SPM rate of 25.8 percent) and are much higher than those for nondivorced aged spouses (SPM rate of 12.4 percent). On the other hand, for both poverty measures, the rates for divorced aged widow(er)s (SPM rate of 20.6 percent) are similar to those of nondivorced aged widow(er)s (SPM rate of 19.6 percent).

Effects of SPM Features on the Poverty of Large TOB Groups

For the three aged TOB groups, switching from the official poverty measure to the SPM increases poverty

rates by 5.6–6.6 percentage points. For each of these three TOB groups, the MOOP expenses deduction is by far the most important SPM feature, increasing poverty rates by 5.9–8.4 percentage points. Two other significant features (housing-status adjustments and threshold level) are offsetting; threshold level effects increase poverty rates by 1.7–2.7 percentage points, but housing-status adjustments decrease poverty rates by 2.0–3.9 percentage points. Equivalence-scale effects increase poverty rates for retired workers and aged spouses.

For the disabled worker TOB group, switching from the official measure to the SPM does not affect the poverty rate. The large poverty rate–increasing effects of MOOP expenses (6.9 percentage points) and of the threshold level (3.1 percentage points) are offset by the combined poverty rate–decreasing effects of housing subsidies, SNAP benefits, housing-status adjustments, geographic adjustments, and the unit definition.

Appendix A: Matching Procedure

Matches were determined using the Census Bureau's Person Identification Validation System (PVS). See Wagner and Layne (2014) for a description of the PVS.

For each CPS person, the PVS compares selected CPS variables (such as name and date of birth) with the corresponding variables of persons in the Census Bureau's reference file to determine the CPS person's Social Security Number (SSN). For this match, the PVS uses information on name, date of birth, sex, address, household members, and SSN. For sample members, the CPS collects information on name, date of birth, sex, household members, and address, but not on SSN. For members of the U.S. population, the Census Bureau's reference file contains information from SSA's Numerical Identification System (Numident) file (supplemented by information from the Internal Revenue Service) on name, date of birth, sex, address, and SSN.

The matching process is not perfect. In addition to the failure to find matches, some of the matches are incorrect.

Appendix B: Determination of Beneficiary Status and TOB Code

Because all persons in the SSA administrative record system have SER records, the presence or absence of a SER record in our data file indicates a person's match status. The presence of a SER record indicates a match between the person's CPS record and his or her SSA earnings and benefit records; this is a *match* person. The absence of a SER record indicates failure to find a match between the CPS and SSA earnings and benefit records; this is a *nonmatch* person.

Match persons. The PHUS record gives the amount of Social Security benefits paid to a person during calendar year 2012, but does not contain any information on TOB, divorced beneficiary status, or dual entitlement status. The timing of PHUS income flows matches that of the CPS, which gives income amounts for calendar year 2012.

The MBR indicates whether a person was entitled to Social Security benefits for 1 or more months of calendar year 2012. Sometimes benefits for 2012 were not paid until a later year. For example, a person may not have been awarded disabled-worker benefits until 2013, but his or her entitlement is based on a disability that began in 2012. The MBR contains information on TOB, divorced beneficiary status, and dual entitlement status.

We use the PHUS record to determine whether a person is a Social Security beneficiary in 2012 and that person's MBR to determine his or her TOB, divorced beneficiary status, and dual entitlement status (as of December 2012 in the great majority of cases).

Nonmatch persons. We considered alternative procedures to address failures to match. One approach would be to eliminate the nonmatch persons from our analysis sample and to reweight the match persons to reach age-sex group controls for the noninstitutional U.S. population. Because we found that the population of nonmatch CPS-reported beneficiaries differs markedly from the population of match CPS-reported beneficiaries in terms of benefit receipt rates and poverty rates, we decided not to use the reweighting approach. Rather, our chosen approach keeps nonmatch persons in the analysis and uses the existing CPS weights for both match and nonmatch persons. These are the weights used in recent Census Bureau publications (Short 2013; DeNavas-Walt, Proctor, and Smith 2013) and in a recent article by Bridges and Gesumaria (2015a) that examine official and SPM poverty estimates for 2012. We designate all nonmatch persons with CPS-reported Social Security income as 2012 beneficiaries and impute their TOB.

Our imputation method follows. For match Social Security beneficiaries who also have CPS-reported Social Security income, we tabulate distributions of TOB codes for these persons by selected CPS variables that are correlated with TOB values. The CPS

variables used are age, marital status, sex, and reason for receiving Social Security income (namely, retired; disabled—adult or child; spouse; widowed; dependent child; surviving child; on behalf of dependent, surviving, or disabled child; and other—adult or child). The CPS has two variables (resnss1 and resnss2) that record reasons for receiving Social Security. All CPS-reported beneficiaries have a value for resnss1, but only 3 percent have a value for resnss2; thus, all of the imputations use resnss1. Although resnss1 is quite useful in our imputation procedure, among match Social Security beneficiaries we find that agreement between resnss1 codes and the TOB codes from the MBR is far from perfect. We tabulate the set of CPS correlates of TOB for each of the eight reasons for receiving Social Security income; thus, we have eight tables. Our tables for disabled and retired beneficiaries contain more age classes (10 and seven, respectively) than the other six tables do (one or two of each). The marital status categories are married (including separated), divorced, widowed, and never married. Sex is used in only three of the tables (those for retired, disabled, and other beneficiaries). For each combination of CPS variable values, our tables give percentage or probability distributions of persons with each TOB (adult or child). We then draw randomly from these percentage distributions to assign TOB to these nonmatch beneficiaries. This procedure also assigns divorced beneficiary status (divorced beneficiary or not divorced beneficiary) and dual entitlement status (dually entitled or not dually entitled) for aged spouses and aged widow(er)s.

Appendix C: Our Estimates Compared to Estimates from the 1 Percent Continuous Work History Sample

Table C-1 gives weighted numbers of beneficiaries by TOB. The first column shows our estimated numbers of (match plus nonmatch) beneficiaries. As described in the text of this article, these numbers are derived from the matched CPS-SSA administrative record data file; they are also shown in Table 3. The second column shows estimated numbers of beneficiaries derived from a large Social Security administrative record file, the 1 percent Continuous Work History Sample (CWHS).

In general, our CPS-SSA numbers are similar to the CWHS numbers. For adult beneficiaries (the eight TOB categories combined), the ratio of our beneficiary number to the CWHS number is 0.96. For seven of the eight TOB groups (including all four of the large groups), that ratio is in the 0.91–1.03 range.

Table C-1.
Number of Social Security beneficiaries: Estimates based on two alternative data sources, by TOB group, 2012 (numbers in thousands)

TOB group	Present study: CPS with SSA data from MBR, PHUS, and SER files	1 percent CWHS file	Present-study estimate divided by CWHS estimate
Total	50,748	53,072	0.96
Primary beneficiaries			
Retired workers	28,413	30,138	0.94
Disabled workers	8,828	8,813	1.00
Secondary beneficiaries			
Aged spouses	4,922	4,995	0.99
Child-in-care spouses	116	116	1.00
Aged widow(er)s	7,262	7,783	0.93
Child-in-care widow(er)s	206	160	1.29
Disabled widow(er)s	230	224	1.03
Disabled adult children	771	843	0.91

SOURCES: Authors' calculations based on the public-use version of the 2013 CPS's Annual Social and Economic Supplement, with data from matched Social Security administrative records; 1 percent CWHS.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

TOB = type of benefit; CPS = Current Population Survey; SSA = Social Security Administration; MBR = Master Beneficiary Record; PHUS = Payment History Update System; SER = Sumary Earnings Record; CWHS = Continuous Work History Sample.

Listed below are some conceptual differences between our beneficiary estimates and the CWHS estimates.

Geographic coverage—

- CPS-SSA: Only the 50 states and the District of Columbia.
- CWHS: The 50 states, the District of Columbia, outlying areas, U.S. citizens employed abroad by U.S. employers, persons employed on U.S. ocean-borne vessels, and unknown residence.

Institutionalized population—

- CPS-SSA: Not included.
- CWHS: Includes some institutionalized persons.[72]

Timing—

- CPS-SSA: Adults who receive benefits sometime during calendar year 2012.
- CWHS: Adults who are entitled to benefits for the month of December 2012.

In addition, the small TOB categories in the CPS are subject to considerable sampling error.

Table C-2 gives numbers of beneficiaries for subgroups of the four large TOB groups. Again, our beneficiary numbers are similar to the CWHS numbers. The ratios of our beneficiary estimates to the CWHS numbers range from 0.87 to 1.02.

Appendix D: Additional Comparisons

Table D-1 shows average benefit amounts reported in the CPS and the PHUS for persons in the four large TOB groups who have benefits reported in both of these sources. For aged spouses, the ratio of the amount reported in the CPS to the amount reported in the PHUS is 1.34. For the other three large TOB groups, the ratio ranges from 0.96 to 1.05.

For the four large TOB groups combined, Table D-2 shows that 12 percent of our (match plus nonmatch) Social Security beneficiaries do not show any Social Security income in the CPS. Although the Social

Table C-2.
Number of Social Security beneficiaries: Estimates based on two alternative data sources, by selected TOB group and selected beneficiary characteristics, 2012 (numbers in thousands)

TOB group and characteristic	Present study: CPS with SSA data from MBR, PHUS, and SER files	1 percent CWHS file	Present-study estimate divided by CWHS estimate
Primary beneficiaries			
Retired workers			
Men	17,444	18,523	0.94
Women	10,968	11,615	0.94
Disabled workers			
Men	4,655	4,670	1.00
Women	4,172	4,144	1.01
Secondary beneficiaries			
Aged spouses			
Not divorced	4,542	4,558	1.00
Divorced	379	437	0.87
Not dually entitled	1,998	2,124	0.94
Dually entitled	2,924	2,871	1.02
Aged widow(er)s			
Not divorced	6,550	6,989	0.94
Divorced	712	793	0.90
Not dually entitled	3,611	3,903	0.93
Dually entitled	3,651	3,880	0.94

SOURCES: Authors' calculations based on the public-use version of the 2013 CPS's Annual Social and Economic Supplement, with data from matched Social Security administrative records; 1 percent CWHS.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

TOB = type of benefit; CPS = Current Population Survey; SSA = Social Security Administration; MBR = Master Beneficiary Record; PHUS = Payment History Update System; SER = Summary Earnings Record; CWHS = Continuous Work History Sample.

Table D-1.
Social Security beneficiaries: Mean annual benefit amounts reported in CPS and PHUS for persons with benefits reported in both sources, by selected TOB group, 2012

TOB group	CPS ($)	PHUS ($)	CPS amount divided by PHUS amount
Primary beneficiaries			
Retired workers	14,876	15,035	0.99
Disabled workers	13,518	14,154	0.96
Secondary beneficiaries			
Aged spouses	9,434	7,023	1.34
Aged widow(er)s	14,440	13,739	1.05

SOURCE: Authors' calculations based on the public-use version of the 2013 CPS's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

CPS = Current Population Survey; PHUS = Payment History Update System; TOB = type of benefit.

Table D-2.
Number and percentage of Social Security beneficiaries, by match status, CPS-reported benefit data status, and selected TOB group, 2012

TOB group	All persons	Match persons		Nonmatch persons
		With CPS-reported benefits	Without CPS-reported benefits	
		Numbers (thousands)		
Total	49,424	39,350	5,900	4,174
Primary beneficiaries				
Retired workers	28,413	23,814	2,530	2,068
Disabled workers	8,828	5,155	2,541	1,132
Secondary beneficiaries				
Aged spouses	4,922	4,099	475	348
Aged widow(er)s	7,262	6,281	355	626
		Percentages		
Total	100.0	79.6	11.9	8.4
Primary beneficiaries				
Retired workers	100.0	83.8	8.9	7.3
Disabled workers	100.0	58.4	28.8	12.8
Secondary beneficiaries				
Aged spouses	100.0	83.3	9.6	7.1
Aged widow(er)s	100.0	86.5	4.9	8.6

SOURCE: Authors' calculations based on the public-use version of the 2013 CPS's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

Subtotals of numbers of beneficiaries do not necessarily equal the sums of the rounded numbers for the component groups.

Row percentages sum to approximately 100.0.

CPS = Current Population Survey; TOB = type of benefit.

Security income of many of these Social Security beneficiaries is not included in their reported family income, other Social Security beneficiaries may misreport their Social Security income as SSI payments or as Social Security income of another family member. The failure to include Social Security income in the family's CPS-reported income increases measured poverty. For disabled workers, the percentage of Social Security beneficiaries not showing Social Security income in the CPS is a high 29 percent; the corresponding figures for retired workers, aged spouses, and aged widow(er)s are 9 percent, 10 percent, and 5 percent, respectively.

For both poverty measures and all TOB groups, the poverty rates for our Social Security beneficiaries without Social Security income reported in the CPS are much higher than are those for our Social Security beneficiaries with CPS-reported Social Security income (Table D-3).

Appendix E: CPS Data for Components of the SPM Resource Measure

In this section, we provide information on the sources of the dollar values for the various in-kind benefits, taxes and refundable tax credits, and other nondiscretionary expense items given in the CPS/Annual Social and Economic Supplement data file. We begin by discussing in-kind benefits and taxes and refundable tax credits.

Housing subsidies. The CPS collects information on recipiency but not on amounts received. To estimate amounts of such assistance, the Department of Housing and Urban Development program rules are applied to CPS households.

Low-Income Home Energy Assistance Program (LIHEAP). The CPS collects information on amounts received.

National School Lunch Program (NSLP). The CPS collects information on recipiency but not on amounts received. To value benefits, the Census Bureau uses the amount of the cost per lunch from the Department of Agriculture's Food and Nutrition Service.

Supplemental Nutrition Assistance Program (SNAP). The CPS collects information on amounts received.

Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The CPS collects information on recipiency but not on amounts received. To value the benefits, the Census Bureau uses program information from the Department of Agriculture.

Table D-3.
Official and SPM poverty rates of Social Security beneficiaries, by match status, CPS-reported benefit status, and selected TOB group, 2012 (in percent)

TOB group	All persons	Match persons		Nonmatch persons
		With CPS-reported benefits	Without CPS-reported benefits	
		Official poverty		
Primary beneficiaries				
Retired workers	7.1	5.5	21.3	8.7
Disabled workers	23.5	19.4	33.8	19.2
Secondary beneficiaries				
Aged spouses	7.2	5.6	20.5	7.7
Aged widow(er)s	13.1	11.0	37.7	20.2
		SPM poverty		
Primary beneficiaries				
Retired workers	12.7	10.3	28.6	16.1
Disabled workers	23.4	18.8	34.0	20.7
Secondary beneficiaries				
Aged spouses	13.4	11.7	28.0	14.1
Aged widow(er)s	19.7	17.6	47.6	25.5

SOURCE: Authors' calculations based on the public-use version of the 2013 CPS's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Dually entitled beneficiaries are included in the appropriate secondary beneficiary group.

SPM = Supplemental Poverty Measure; CPS = Current Population Survey; TOB = type of benefit.

Taxes and refundable tax credits. The CPS does not collect information on taxes and refundable tax credits but relies on a tax calculator to simulate them. The calculator is a computer program that incorporates the main features of federal and state tax laws. These simulations also use a statistical match of the CPS to the Internal Revenue Service's Statistics of Income microdata file of tax returns.

We conclude by discussing other necessary expenses that are subtracted from resources.

Child support paid. The CPS collects information on amounts paid.

Medical out-of-pocket (MOOP) expenses. The CPS collects information on amounts paid for (1) health insurance premiums; (2) over-the-counter health-related products; and (3) medical care (hospital visits, medical providers, dental services, prescription medicine, vision aids, and medical supplies). Caswell and O'Hara (2010) conclude that CPS estimates of MOOP expenditures compare favorably to estimates from the Medical Expenditure Panel Survey (MEPS) and the Survey of Income and Program Participation (SIPP). The MEPS, in particular, devotes considerably more effort to collecting MOOP expenditures than does the CPS.

Work-related expenses (excludes childcare expenses). The CPS does not collect information on work-related expenses (travel to work, tools, uniforms, and so forth). Information on amounts of work expenses from the most recent SIPP is used to estimate those expenses for workers in the CPS.

Childcare expenses. The CPS collects information on amounts of such expenses (any type of childcare while parents are at work).

Appendix F: Effects on SPM and Official-Measure Poverty of Including Social Security Benefits and SSI in Resource Measures

We can view the change in poverty rates as the result of a specified change in the way that poverty is measured. Alternatively, we could view the change in poverty rates as the effect of a change in program policy for a given measure of poverty; namely, the effect on poverty of introducing the program. Our estimate of the change in resources that is the result of the introduction of the program does not attempt to take into account changes in resource components that are due to the program's behavioral effects (saving, work effort, and so forth).

Table F-1 shows that including the CPS-reported amounts of Social Security benefits in SPM resources produces very large decreases in SPM poverty rates for disabled workers (35.0 percentage points), retired workers (40.1 percentage points), aged spouses (45.7 percentage points), and aged widow(er)s (50.1 percentage points). Including the CPS-reported amounts of Social Security benefits in the official resource measure reduces the official poverty rates by smaller numbers of percentage points (29.7 percentage points for disabled workers, 34.5 percentage points for retired workers, 39.0 percentage points for aged spouses, and 48.1 percentage points for aged widow(er)s).

Table F-1.
Percentage point changes in the SPM and official poverty rates attributed to including Social Security benefits and SSI in resources, by selected TOB group, 2012

	Primary beneficiaries		Secondary beneficiaries	
Resource inclusion	Retired workers	Disabled workers	Aged spouses	Aged widow(er)s
		Official poverty		
Social Security benefits	-34.5	-29.7	-39.0	-48.1
SSI	-0.4	-4.6	-0.5	-0.9
		SPM poverty		
Social Security benefits	-40.1	-35.0	-45.7	-50.1
SSI	-0.7	-6.6	-0.9	-1.3

SOURCE: Authors' calculations based on the public-use version of the 2013 Current Population Survey's Annual Social and Economic Supplement, with data from matched Social Security administrative records.

NOTES: Dually entitled beneficiaries are categorized according to the appropriate secondary beneficiary group.

SPM = Supplemental Poverty Measure; SSI = Supplemental Security Income; TOB = type of benefit.

Including SSI payment amounts in SPM resources reduces SPM poverty rates by 6.6 percentage points for disabled workers and by 0.7–1.3 percentage points for the aged TOB groups. Including SSI payment amounts in the official resource measure reduces the official poverty rates by smaller numbers of percentage points (4.6 percentage points for disabled workers and 0.4–0.9 percentage points for the aged TOB groups).

Notes

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[1] Weaver (1997) examined the poverty status of most adult beneficiary groups for 1990 and 1993. Bailey and Hemmeter (2014) presented estimates of the official poverty status of disability beneficiaries for 2010.

[2] Also see Iams and Sandell (1998), Diamond and Orszag (2004), Weaver (2010), and Congressional Budget Office (2012).

[3] For a recent example, see DeNavas-Walt, Proctor, and Smith (2013).

[4] We examine almost all adult beneficiary groups.

[5] In previously published articles (Bridges and Gesumaria 2013, 2015b, 2015a), we examined the poverty of the aged (65 or older), the nonaged adult population (18–64), and children (under 18).

[6] These groups do not include dually entitled beneficiaries.

[7] These groups include dually entitled beneficiaries.

[8] There are two slightly different versions of the official poverty measure: (1) poverty thresholds, which are relatively detailed and are used primarily for statistical purposes; and (2) poverty guidelines, which are a simplified version of the thresholds and are used primarily for administrative purposes. In this article, we use the term "official poverty measure" to denote the poverty threshold measure. For a discussion of the two measures, see the Institute for Research on Poverty (2013).

[9] All members of a family unit are assigned the same poverty status; that is, poor or not poor.

[10] The share of food in expenditures has decreased markedly over time.

[11] An extensive discussion of such criticisms appears in Citro and Michael (1995).

[12] Subsequently, the Census Bureau released SPM reports in 2012, 2013, 2014, 2015, and 2016.

[13] For a discussion of the evolution of the SPM, see Bridges and Gesumaria (2015a).

[14] This section draws heavily on Weaver (1997). For more detail, see SSA (n.d.).

[15] As described in the following section, titled "Data," these numbers of beneficiaries are estimated from our main analysis file (the 2013 CPS/Annual Social and Economic Supplement), supplemented with exactly matched SSA administrative record data on benefits.

[16] In the CPS, Social Security income of persons younger than 15 is included in the income of family members aged 15 or older (mainly parents).

[17] A person achieves insured status by working enough in Social Security–covered employment. There are three types of insured status (fully insured, disability insured, and currently insured). No primary or secondary benefit can be paid unless the worker, on whose earnings record the benefit is based, has the appropriate insured status. Which status is appropriate depends on the TOB and is not discussed here. Persons will simply be referred to as insured, without being more specific.

[18] The FRA for members of each birth cohort from 1955 through 1960 is 2 months older than that of the prior cohort, reaching 67 for those born in 1960 or later.

[19] An aged widow(er) may have his or her benefit capped at an amount below the PIA if the deceased insured person received retired-worker benefits before the FRA. An aged widow(er) or a disabled widow(er) has his or her benefit increased if the deceased insured person earned credits for delaying retirement past the FRA.

[20] This section draws heavily on Short (2013).

[21] For a detailed discussion of the SPM and official unit measures, see Provencher (2011).

[22] Money income in the CPS consists of (1) earnings; (2) unemployment compensation; (3) workers' compensation; (4) Social Security benefits; (5) Supplemental Security Income payments; (6) public assistance (Temporary Assistance for Needy Families and general assistance); (7) veterans' payments; (8) survivor benefits; (9) disability benefits; (10) pension or retirement income; (11) interest; (12) dividends; (13) rents, royalties, and estates and trusts; (14) educational assistance; (15) alimony; (16) child support; (17) financial assistance from outside of the household; and (18) other income.

[23] For a critique of the resource-based SPM, see Meyer and Sullivan (2012). Those authors favor a consumption-based poverty measure. Wimer and Manfield (2015) suggest that the failure of the SPM resource measure to include an annuity value of assets causes a substantial overstatement of the poverty of the aged.

[24] Some of these are large. For example, fiscal year 2011 federal outlays for the Supplemental Nutrition Assistance Program (formerly known as the Food Stamp Program) amounted to about $80 billion or 2.1 percent of all federal outlays. Federal expenditures for refundable tax credits and for housing subsidies were about $80 billion and $40 billion (Falk 2012). All three of these programs are designed to assist the low-income population. Federal outlays for

Supplemental Security Income and Temporary Assistance for Needy Families were about $56 billion and $17 billion; both of these *cash* benefit programs are also designed to assist the low-income population.

[25] More than 80 percent of people are members of SPM units with work expenses. For those units, such expenses can be substantial; unit work expenses on average amount to 15 percent of SPM poverty thresholds.

[26] More than 95 percent of people are members of SPM units with MOOP expenses. For those units, MOOP expenses can be large; unit MOOP expenses on average amount to 21 percent of SPM poverty thresholds. In addition, there is great dispersion around this average; a minority of units have very high MOOP expenses relative to their poverty thresholds.

[27] For families of three or more persons, the multiplier is 3. However, for families of two persons, the multiplier is 3.7. Without using a food plan and a multiplier, the thresholds for unrelated individuals were set at 80 percent of the corresponding thresholds for two-person families with no children. See Fisher (1992).

[28] In 2012, food expenditures accounted for about 30 percent of the bundle of necessary expenditures that form the basis of the SPM thresholds.

[29] In determining SPM thresholds for 2012, the expenditure needs of units that have owners with mortgages are estimated to be 20 percent larger than those of units that have owners without mortgages.

[30] For 2012, the geographic-adjustment factors used in the SPM ranged from 0.80 for the lowest-cost area to 1.56 for the highest-cost area.

[31] See Citro and Michael (1995). Our following discussion of the properties of the SPM threshold includes some discussion of equivalence scales.

[32] To be more precise, "expenditures around the 33rd percentile" is the average of expenditures within the 30th–36th percentile portion of the expenditure distribution. For a discussion of the choice of the 33rd percentile, see Citro and Michael (1995) and the Interagency Technical Working Group on Developing a Supplemental Poverty Measure (2010).

[33] For a discussion of the choice of this multiplier, see Citro and Michael (1995) and the Interagency Technical Working Group on Developing a Supplemental Poverty Measure (2010).

[34] In this article, the terms "adults" and "children" are used in two slightly different ways.

In calculating equivalence-scale values and thresholds values, all persons younger than age 15 and dependent persons aged 15–17 are counted as children; all persons aged 18 or older and nondependent persons aged 15–17 are counted as adults.

In all other parts of the article, the term "children" signifies persons younger than age 18 and the term "adults" denotes persons aged 18 or older. The term "nonaged adults" denotes persons aged 18–64.

[35] The 2013 CPS/Annual Social and Economic Supplement is a household sample survey of the U.S. civilian noninstitutionalized population; it also includes military personnel who live in a household with at least one civilian adult. The number of interviewed households was about 75,000. Approximately 8,000 households were not interviewed because there were no available participants.

[36] These are weighted match rates.

[37] Many of these 14 percent fail to report their Social Security income to CPS interviewers. In addition, for some persons, their Social Security income may be reported by another member of their CPS family unit or may be reported incorrectly as Supplemental Security Income payments.

[38] Some of these persons may incorrectly report their Supplemental Security Income or another family member's Social Security income as their Social Security income.

[39] For the four small TOB groups (child-in-care spouses, child-in care widow(er)s, disabled widow(er)s, and disabled adult children), the corresponding figures range from 12 percent to 17 percent.

[40] For the large TOB groups, average sample weights range from 1,730–1,841. For the other four TOB groups, average sample weights range from 1,381–1,781.

[41] Short (2013) examines official and SPM poverty using the 2013 CPS. She presents sampling error measures for estimates of population counts, poverty counts, poverty rates, and so forth for various population subgroups. The Short sampling error measures for a population subgroup should provide approximations of these sampling error measures for a population subgroup of similar size in our study.

[42] For official-measure deep poverty, before-tax cash income is the resource measure.

[43] For the total population, the SPM deep poverty rate is 5.2 percent.

[44] Nondiscretionary expenses (mainly MOOP expenses) cause three of these average SPM welfare ratios to be negative.

[45] This terminology is somewhat different from that ordinarily used in the poverty literature, in which movements into and out of poverty are attributable to changes in a unit's financial resources.

[46] Men account for almost 60 percent of disabled adult children but less than 6 percent of the child-in-care spouses, child-in-care widow(er)s, and disabled widow(er)s.

[47] Divorced spouse beneficiaries are persons who receive aged spouse benefits as divorced spouses. Their CPS marital status is sometimes other than divorced.

[48] Our converted retired workers include only those who converted at the FRA. Some disabled workers convert prior to the FRA. About 7 percent of disabled workers who converted in 2010 were early converters (Stephens and Thomas 2011).

[49] For match beneficiaries, we used MBR information to determine conversion status. We had no satisfactory way to determine conversion status for nonmatch beneficiaries.

[50] Married beneficiaries constitute a smaller percentage of converters than of nonconverters, and married persons tend to have lower poverty rates than nonmarried persons.

[51] On average, converters receive somewhat higher Social Security benefits than disabled workers do. In addition, married beneficiaries constitute a larger percentage of converters than of disabled workers.

[52] For example, we compute the effect on the SPM poverty rate of adding Supplemental Nutrition Assistance Program (SNAP) benefits to the SPM resource measure for disabled workers in the following way:

1. We subtract the value of each SPM unit's SNAP benefits from its SPM resource measure.
2. For each unit, we then compare that modified resource measure to the unit's SPM threshold to determine the modified poverty status of its members.
3. We then calculate the percentage of disabled workers whose modified poverty status is poor; that is, we calculate the modified poverty rate. For this case, the modified poverty rate is 26.3 percent.
4. Finally, we compare the modified poverty rate with the SPM poverty rate. For disabled workers, the SPM poverty rate is 23.4 percent.

The inclusion of SNAP benefits in the resource measure reduces the poverty rate by 2.9 percentage points (23.4 minus 26.3).

[53] These program benefit amounts usually incorporate behavioral and interprogram effects.

[54] For housing subsidies, the NSLP, and WIC, the CPS collects information on recipiency but not on amounts received. In estimating the amounts of those benefits, the Census Bureau uses information from other government agencies. The sources of the dollar values for the various in-kind benefits, taxes, and other nondiscretionary expense items given on the CPS data file are discussed in Appendix E. For more details, see Short (2013) and references cited therein.

[55] The CPS does not collect information on taxes and refundable tax credits. The Census Bureau applies a tax-calculating computer program to the CPS to simulate taxes and tax credits. See Appendix E.

[56] Other government cash transfers included as resources by both the SPM and the official poverty measure are (1) unemployment insurance, (2) workers' compensation, and (3) Temporary Assistance for Needy Families and general assistance.

[57] These amounts represent state income taxes after credits. Some amounts are negative.

[58] The CPS does not collect information on work expenses. The Census Bureau uses information from another household survey to estimate work expenses. See Appendix E.

[59] Respondents reported their premium and nonpremium MOOP expenses in the 2013 CPS.

[60] The interaction effect is not the same as the interprogram effect discussed earlier.

[61] With no geographic adjustment, basic thresholds for two-adult/two-child units are $25,784 for owners with mortgages; $21,400 for owners without mortgages; and $25,105 for renters. With no geographic adjustment and no housing-status adjustment, the threshold for the two-adult/two-child unit would be 1.2 × $20,799, or $24,959: $25,784, $21,400, and $25,105 are 103 percent, 86 percent, and 101 percent of $24,959. See BLS (2013).

[62] Preliminary thresholds are multiplied by geographic-adjustment factors to obtain final thresholds. Those factors depend on housing-status group and on area rent. The inclusion of housing-status group in the calculation of geographic-adjustment factors can have small effects on the poverty rates for TOB groups. We include such effects as part of the effects of the geographic-adjustment factors and not as part of the effects of the housing-status adjustment.

[63] For a given housing-status group, the geographic adjustment factor is derived by multiplying an area's rent-index value by the group's share of housing expenditures (shelter plus utilities) in its threshold and adding that product to the group's nonhousing share. The rent index is the ratio of the area's rent to the national average rent.

This calculation of adjustment factors can also be stated in algebraic form:

$\text{Factor}_{ah} = \text{HousingShare}_h \times (\text{Rent}_a / \text{Rent}_n) + (1 - \text{HousingShare}_h)$, where a denotes geographic area, h denotes housing-status group, and n denotes national. See Renwick (2011).

Rent-index values range from about 0.61 to 2.10. For units that have owners with mortgages, owners without mortgages, and renters, the shares of expenses for housing in the thresholds are .504, .402, and .491, respectively (BLS 2013).

[64] Renwick (2011) made those comparisons for an earlier year.

[65] Derived from the BLS (2013).

[66] The three-parameter scale values are calculated as follows:

1. SPM unit with one or two adults and no children—unadjusted-scale value = $[\text{number of adults}]^{0.5}$

2. SPM unit with one adult and one or more children (mostly single-parent units)—
   unadjusted-scale value = [1 + 0.8 + 0.5(number of children – 1)]$^{0.7}$
3. All other SPM units—
   unadjusted-scale value = [number of adults + 0.5(number of children)]$^{0.7}$

In calculating equivalence-scale values, all persons aged 18 or older and nondependent persons aged 15–17 are counted as adults; all persons younger than age 15 and dependent persons aged 15–17 are counted as children.

In equation 2, the first child is treated as 80 percent of an adult; each additional child is treated as 50 percent of an adult. In equation 3, each child is treated as 50 percent of an adult. The numbers of adult equivalents are given by the expressions inside the brackets. For example, for a two-adult/two-child unit, equation 3 shows that the number of adult equivalents is three.

Economies of scale require that whenever an additional equivalent adult is added to an SPM unit, the unit's equivalence-scale value divided by the number of adult equivalents decreases. The exponents outside the brackets are the economy-of-scale factors. The smaller exponent (0.5) exhibits greater economies of scale than does the larger exponent (0.7).

The Census Bureau then adjusts all unadjusted-scale values proportionally so that the adjusted-scale value for the two-adult/two-child unit equals 1. The base threshold level for the two-adult/two-child unit is then multiplied by the adjusted-scale values in deriving threshold values for the other unit types.

[67] We incorporate the official-measure equivalence scale into the SPM thresholds as follows. For each poverty measure, the equivalence-scale value is set equal to 1.00 for a two-adult/two-child unit. For each unit type, we compute the ratio of the official measure–scale value to the SPM-scale value, where unit type is defined by unit size, number of children, and whether the unit head is aged 65 or older. We next multiply each unit's SPM threshold by the ratio of scale values to obtain modified thresholds.

[68] The net interaction effect equals the combined threshold effect *minus* the sum of the four individual threshold effects. For retired workers, disabled workers, aged spouses, and aged widow(er), the interaction effects are 0.3, 0.1, 0.9, and 0.9 percentage points, respectively.

[69] Note that here, we compare the official-measure poverty rate with the poverty rate that results when we change a specified feature of the official measure. In all of our previous estimates of poverty effects, we compare the SPM poverty rate with the poverty rate that results when we change a specified feature of the SPM. For the case of unit definition, the approach used here is considerably easier to implement than our usual approach.

[70] Only 1–3 percent of retired workers, aged spouses, and aged widow(er)s end up in new units.

[71] For the remaining disabled workers whose unit changes, their SPM unit and their official unit are of the same size but differ in membership.

[72] We used representative payee codes to identify some beneficiaries who reside in institutions. We excluded these beneficiaries from the CWHS numbers; they represent about 1 percent of all adult beneficiaries.

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