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SORTING OUT SOCIAL SECURITY REPLACEMENT RATES

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Introduction

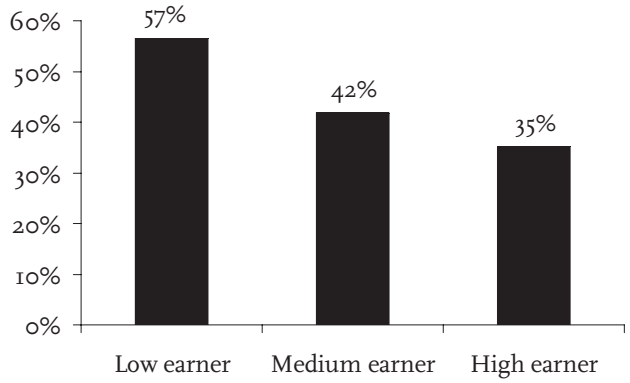
For anyone interested in retirement income policy, the most basic question is how much are people receiving today from Social Security, the backbone of the nation's retirement income system. The traditional measure of generosity is the replacement rate — namely, the ratio of benefits relative to pre-retirement earnings. The Social Security administration provides two sets of replacement rates. The first set is "policy model" estimates for hypothetical individuals. The second set is actual replacement rates for new beneficiaries. The two approaches happen to produce the same number for the median earner. However, this result is strictly a coincidence as the two methods involve different measures of pre-retirement earnings, different employment patterns, and different retirement ages. This *brief* explains these differences.[1]

Policy Model Estimates

The Social Security *Trustees Report* uses four illustrative cases to present projected benefit amounts and replacement rates under current law. Three of these cases correspond to hypothetical workers with career average earnings equal to a percentage of the "average wage index" for the year prior to retirement — 45 percent for the "low earner;" 100 percent for the "medium earner;" and 160 percent for the "high earner." A fourth worker represents someone who has earned the maximum taxable earnings throughout his career. Figure 1 summarizes the reported replacement rates for three of the four hypothetical individuals in 2004. The replacement rate for the medium earner is 42 percent.[2] Since Social Security has a progressive benefit formula, the replacement rate for the low earner is higher — 57 percent — and the rate for the high earner is lower — 35 percent.

FIGURE 1. POLICY MODEL SHOWS 42 PERCENT REPLACEMENT RATE FOR MEDIUM EARNER AT AGE 65

Benefits as a Percent of Earner Average Earnings for Hypothetical Workers



Source: U.S. Social Security Administration (2005).

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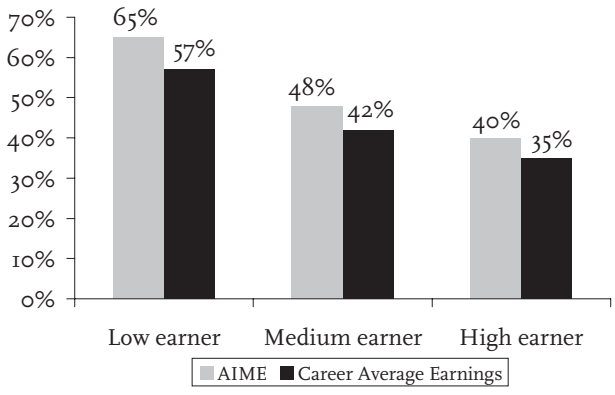
The measure of pre-retirement earnings used in the policy model is career average earnings,[3] which is set equal to the Average Wage Index in the year prior to retirement for the medium earner and some percent thereof for low and high earners. The Average Wage Index is a measure of the average wage in the economy. In 2004, the medium earner retiring at 65 received a benefit equal to $14,209. The Average Wage Index in 2003 was $34,065, so the worker received a replacement rate of 42 percent.

Different Measures of Pre-Retirement Earnings

Although the policy model approach uses career average earnings as the measure of pre-retirement earnings, Social Security benefits are actually based on the worker's Average Indexed Monthly Earnings (AIME). The AIME is determined in two steps. First, the worker's annual taxable earnings after age 22 (or 1950) are updated, or indexed, to reflect the general wage level at age 60. Earnings in years after 60 are not indexed but instead are counted at their actual value. Second, Social Security takes the highest 35 years of wage-indexed earnings between ages 22 and 62 and divides that total by the number of months in that period.

FIGURE 2. POLICY MODEL REPLACEMENT RATES WOULD BE HIGHER IF BASED ON AVERAGE INDEXED MONTHLY EARNINGS

Social Security Replacement Rates for Hypothetical Worker at 65 Based on AIME and Career Average Earnings



Sources: U.S. Social Security Administration (2005) and authors' calculations.

The Social Security Administration's *Performance and Accountability Report* presents replacement rates for new retirees as a percent of AIME, as do most academic studies.[4] If the policy model benefits were presented as a percent of AIME rather than the Average Wage Index in the year before retirement, replacement rates would be noticeably higher. The reason is that career average earnings, which reflect nominal wage growth through age 64, are higher than AIME, which makes no adjustment to earnings for ages 61-64. As a result, the replacement rate for the medium earner would be 48 percent of the AIME compared to 42 percent of the Average Wage Index (see Figure 2).

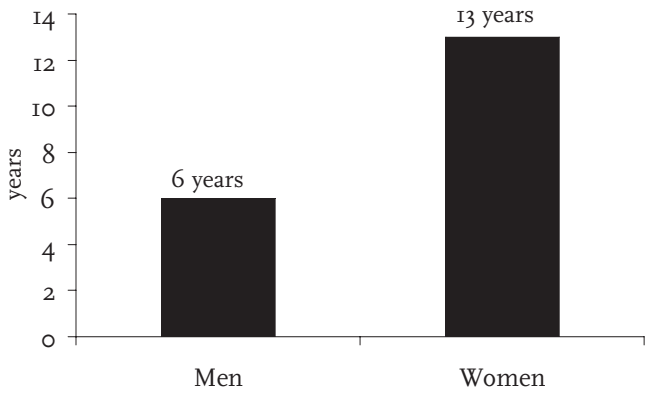
But that is not the end of the story. The policy model used to construct hypothetical Social Security replacement rates is clearly a simplification of real-world patterns, assuming that the medium worker enters the labor force at age 22 and remains constantly employed until age 65.[5]

Actual versus Hypothetical Earnings Patterns

Most workers, especially married women, do not have smooth continuous work histories. Instead, they have significant breaks in employment, either in unemployment or time spent out of the work force. According to the Social Security Administration, among new retired-worker beneficiaries, men averaged 6 years of zero earnings since age 22 and women 13 years (see Figure 3). For men, years with zero earnings should

FIGURE 3. BOTH MEN AND WOMEN HAVE SIGNIFICANT BREAKS IN EMPLOYMENT

Average Number of Years with Zero Earnings of New Retired-Worker Beneficiaries

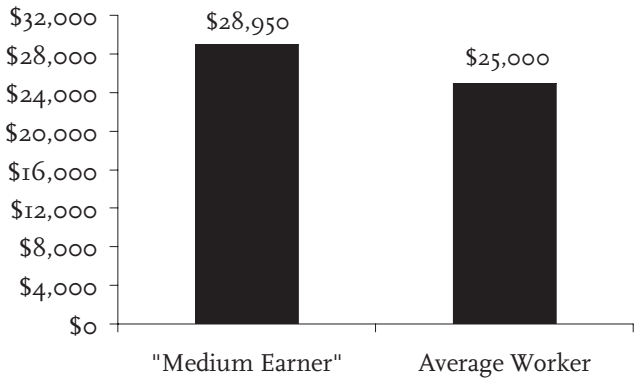


Source: U.S. Social Security Administration (2004a).

have a minimal impact on their earnings history relative to the hypothetical worker. That is, new retirees have a potential for 40 years of earnings between ages 22 and 62, from which the Social Security Administration selects the highest 35 years for the benefit calculation. On average, male workers will have 34 years of non-zero earnings. Women, on the other hand, average 13 years of zero earnings. So even their 35 highest will include an average of eight years of zeros.

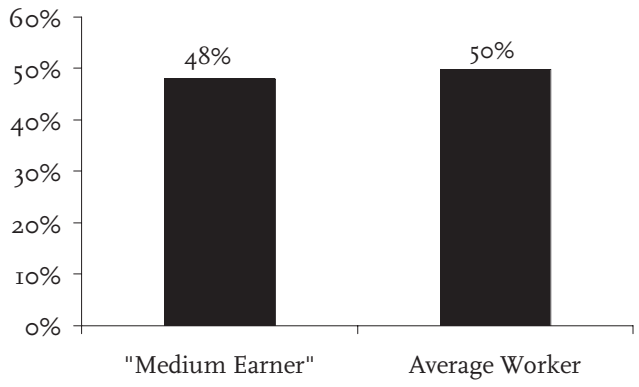
FIGURE 4. YEARS OF ZERO EARNINGS LOWER AIMES...

Average Indexed Monthly Earnings at Age 65



....AND RAISE EXPECTED REPLACEMENT RATES

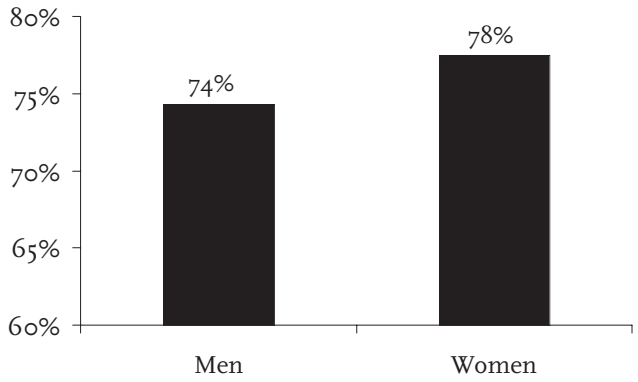
Social Security Benefits as a Percent of Average Indexed Monthly Earnings



Sources: Authors' calculations based on the *U.S. Social Security Administration* (2005) and (2004b).

FIGURE 5. MOST PEOPLE CLAIM SOCIAL SECURITY BENEFITS EARLY

Percent of Workers Receiving Initial Social Security Benefit Before 65



Source: Authors' calculations based on the *U.S. Social Security Administration* (2004b).

Once the zero years are taken into account, the average worker in 2003 had an AIME of $25,000 rather than $28,950 as predicted by the policy model assumption of steady earnings. Because Social Security has a progressive benefit formula, lower AIMEs produce higher replacement rates. According to the estimates of this analysis, the replacement rate should be two percentage points higher. That is, using AIME as the measure of pre-retirement earnings, the lower AIME should raise the expected replacement rate from 48 percent to 50 percent at age 65 (see Figure 4).

Actual versus Hypothetical Retirement Ages

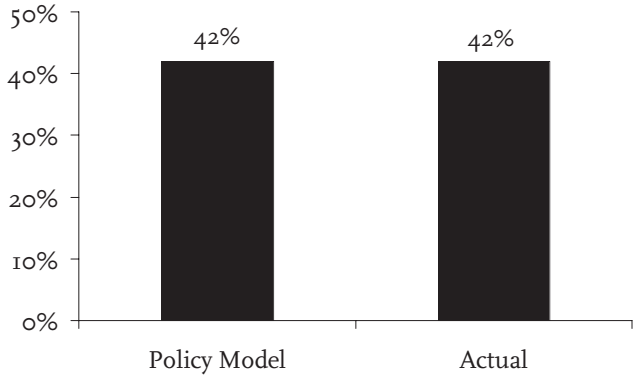
In another departure from the policy model, most workers do not wait to claim their benefits until age 65; they retire well before the Normal Retirement Age. In 2003, 74 percent of men and 78 percent of women workers claimed their initial benefit before age 65 (see Figure 5). Claiming early triggers an actuarial adjustment that reduces the benefit amounts and replacement rates.

The Net Effect

The Social Security Administration in its *Performance and Accountability Report* provides actual replacement rates for newly retired workers. The actual average replacement rate for the population of new beneficiaries has hovered around 42 percent in recent years — the same number produced by the policy model for the medium earner (see Figure 6). As noted, the fact that these two numbers are the same is mere coincidence. The policy model uses career average earnings; in fact, actual replacement rates are based on the AIME, which is a lower amount. The policy model assumes steady earnings; in fact, workers have interrupted careers. The policy model assumes that people retire at the Normal Retirement Age, historically 65; in fact, the vast majority of workers claim benefits before that age. That the two numbers turn out to be the same is enough to drive a policy wonk crazy!

FIGURE 6. DIFFERENT MEASURES OF REPLACEMENT RATES PRODUCE IDENTICAL RESULTS — BY COINCIDENCE!

Policy Model Benefits as a Percent of Career Average Earnings for the Medium Earner and Actual Social Security Benefits as a Percent of AIME for the Average New Retired-Worker Beneficiary



*Sources: U.S. Social Security Administration (*2005) and (2004a).

Endnotes

1 This brief is adapted from a longer paper by Alicia H. Munnell and Mauricio Soto entitled "What Replacement Rates Do Households Actually Experience in Retirement?" that is available at http://www.bc.edu/crr/papers/wp_2005-10.pdf.

2 For hypothetical medium scaled workers retiring at age 65, the replacement rate has remained around 42 percent during the last 20 years (Social Security Administration, 2005).

3 The career-average earnings are the average of the highest 35 years of taxable earnings after these earnings are indexed to the year prior to retirement. Because of the different indexation, this number will generally be greater than the AIME.

4 U.S. Social Security Administration (2004a).

5 The shape of the scaled earning profiles takes into account years of zero earnings. But then these profiles are calibrated to produce career-average earnings equal to the Average Wage Index of the year prior to retirement, making the years of zero earnings irrelevant for replacement rate calculations. See Clingman and Nichols (2004) for more details on how the scaled earner profiles are calculated.

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