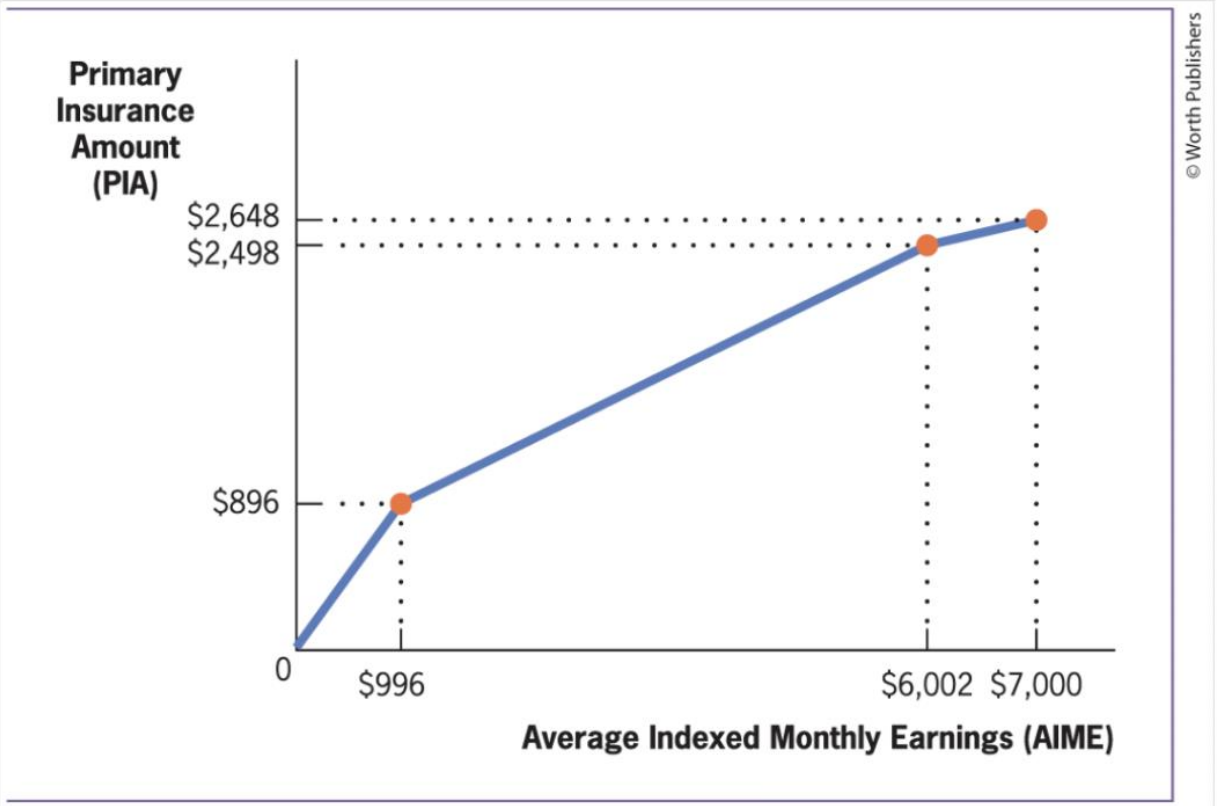

FIGURE 13-1 Social Security Benefits as a Function of Earnings • Social Security's Primary Insurance Amount (PIA) is a redistributive function of Average Indexed Monthly Earnings (AIME). Figures in bold show the benefits increment per dollar of AIME in that range of AIME. For example, if your AIME is between $996 and $6,002, you receive $0.32 in additional benefits for each additional dollar of AIME.

Data from: Social Security Administration (2021).

TABLE 13-1 Social Security in a Two-Period World

Period	Number of Young Workers	Earnings per Young Worker	Taxes Paid for Young Worker	Total Taxes Paid	Number of Old Retirees	Benefits to Old Retirees	Taxes Paid by Old Retirees	Rate of Return
1	100	$20,000	0	0	0	0	—	—
2	105	$21,000	$2,100	$220,500	100	$2,205	0	Infinite
3	110	$22,050	$2,205	$242,550	105	$2,310	$2,100	10%
4	115	$23,153	$2,315	$266,225	110	$2,420	$2,205	10%
5	121	$24,310	0	0	115	0	$2,315	−100%

In this two-period model, workers in period 1 pay no taxes when young but do receive benefits when old in period 2. In period 2, young workers pay $2,100 in taxes each, so each retiree receives $2,205 in benefits—an infinite rate of return. In periods 3 and 4, the retirees pay taxes when young, so they receive a 10% rate of return, which is determined by population and wage growth. In period 5, the last generation pays in when young but get nothing when old, so there is a rate of return of –100%.

TABLE 13-2 Redistribution Under Social Security for a Single Male

Earnings Level	Retirees Turn 65 in 1960	Retirees Turn 65 in 1995	Retirees Turn 65 in 2030
Low earner	78,000	$67,000	61,000
Average earner	$110,000	$61,000	$9,000
High earner	$118,000	$49,000	−$86,000

Data from: Kolasi and Steuerle (2020).

The Social Security Wealth of single males varies both across generations, with older generations getting more than recent generations, and within generations, with the rich first getting more, and more recently less, than the poor.

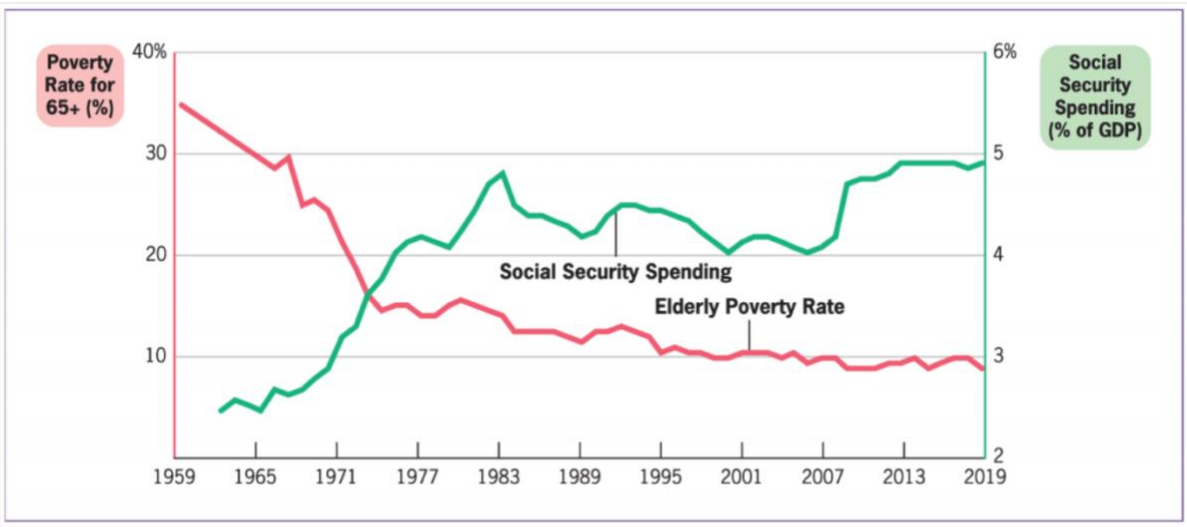

FIGURE 13-2 Elderly Poverty and Social Security, 1959–2019 • There is a striking negative correspondence over time between the poverty rates of adults over 65 (which have fallen) and the size of the Social Security program (which has risen).

Data from: U.S. Bureau of the Census (2021), Table 3, and Office of Management and Budget (2021), Tables 1.2 and 3.2.

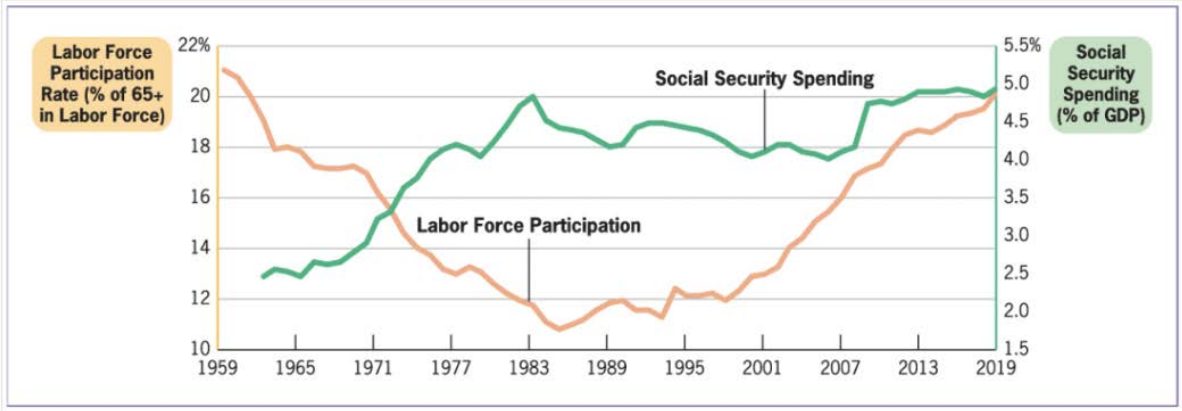

FIGURE 13-3 Elderly Work and Social Security, 1959–2019 • There is a striking negative correspondence over time between the labor force participation (LFP) rates of adults over 65 (which have fallen) and the size of the Social Security program (which has risen).

Data from: U.S. Bureau of Labor Statistics (2021).

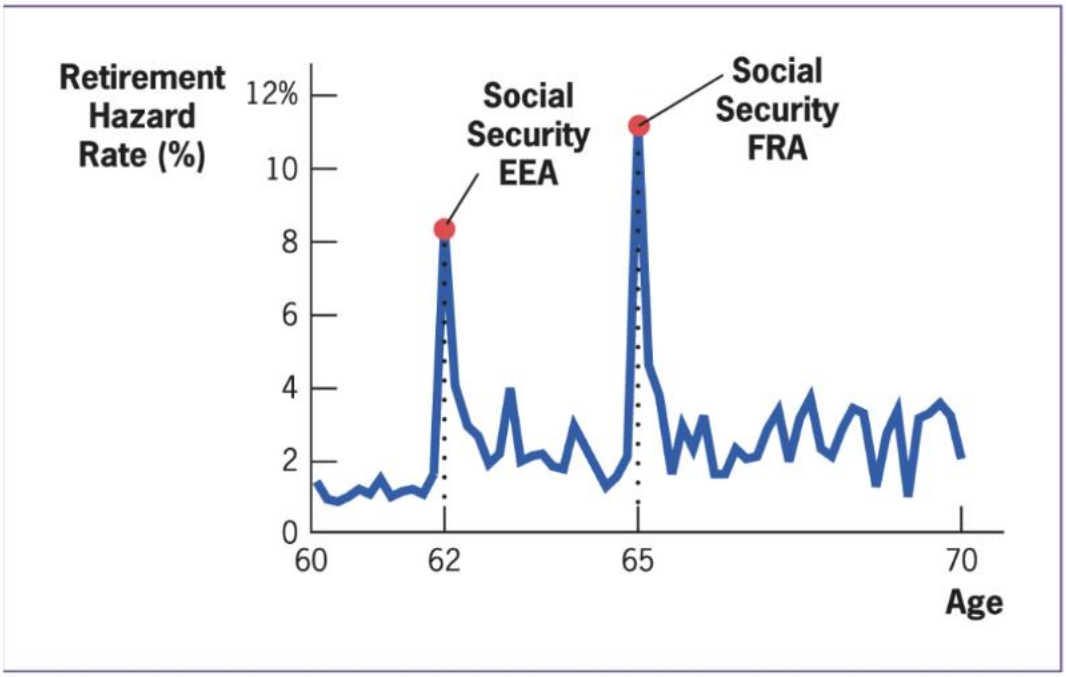

FIGURE 13-4 Hazard Rate of Retirement in the United States • The hazard rate, or exit rate at each age given that a person has worked to that age, has a distinct spike at age 62 (the Early Entitlement Age, EEA) and 65 (the previous Full Retirement Age, FRA), which are key ages for the Social Security system.

Data Source: Data kindly provided by Anil Kumar and Gary Englehardt.

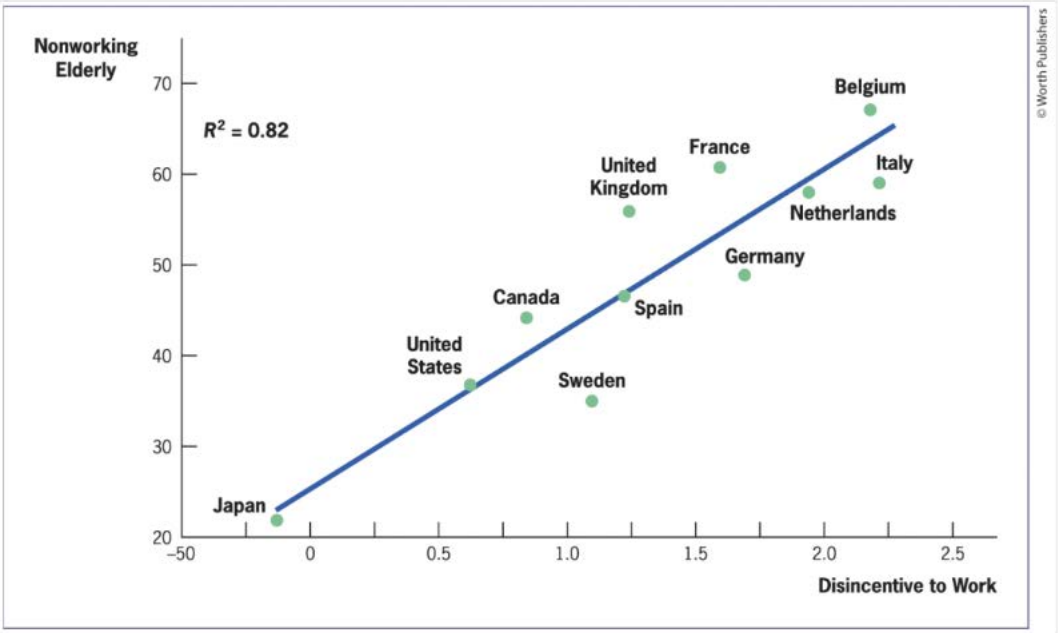

FIGURE 13-5 Implicit Taxes on Work and Nonwork • There is large variation across nations in the social security disincentives to work at older ages. The disincentive to work is measured here as the natural logarithm of the sum of implicit taxes on work at older ages. Those nations with greater disincentives to work tend to have much higher nonwork among older workers.

Data from: Gruber and Wise (1999), Figure 17.

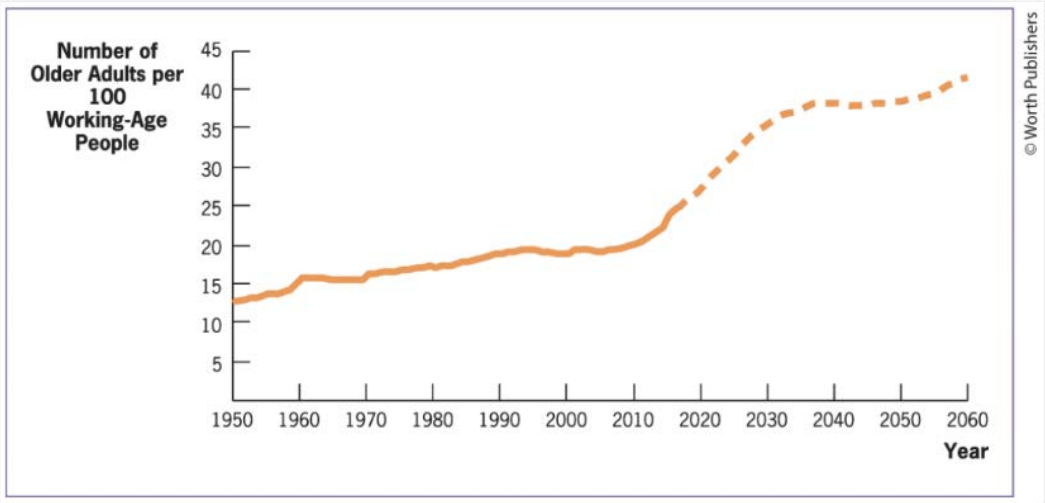

FIGURE 13-6 Ratio of Older Adults to Working-Age Population, 1950–2060 • The number of persons over age 65 per working-age person age 15 to 64 more than triples over the century, from 13 per 100 in 1950 to 42 per 100 in 2060.

Data from: U.S. Bureau of the Census (2017), Table 1.

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