Current Event: Social Security and Medicare[1]

One of the most worrisome aspects of the long term U.S. fiscal situation is the obligations to entitlement programs such as Social Security and Medicare. These notes will first discuss how these programs affect the progressiveness of the U.S. tax schedule. They then discuss the official finances of Social Security and Medicare by assuming that general revenues cannot be used to pay their benefits. They conclude by examining the situation under an alternate scenario where payroll taxes are treated as fungible with general revenues.

Payroll Taxes

Social Security is a public pension program. Non retirees pay 6.2% of their income in social security taxes in exchange for retirement and disability benefits.[2]. Employers also pay a 6.2% tax to social security. Medicare is public health insurance for retirees. Workers pay 1.45% of their income in Medicare taxes which is also matched by the employer. As of 2013, Medicare taxes include an additional 0.9% by both parties on incomes above $125,000 (for single filers).

Recall from ECO 101 that it generally does not matter whether the employee or employer bears the burden of a tax. In computing total payroll taxes for 2012, economists use the following:

$$ptax = \frac{0.062 + 0.062 + 2 * 0.145}{1 + 0.062 + .0145} = 12.4\% \tag{1}$$

Note that both the numerator and denominators includes the employer's tax burden. This is because it should be counted both as taxes paid and as income.

As of 2013, workers stop social security, but not Medicare, when they reach $113,700 in income. Workers also do not pay income tax on the part of their income that is paid in payroll taxes. Although a small number of workers are exempt from these taxes, the vast majority of employees must pay them. Self employed workers must pay both the employee's and employer's share of payroll taxes.

Because payroll taxes are only paid by workers earning under $113,700, they affect the progressiveness of the tax code in a major way. The following Table demonstrates the official Federal income tax (not including payroll taxes) schedule for 2013. It assumes that the taxpayer is single, has no children, takes the standard deduction, earns all of their income in wages, and qualifies for no tax credits:

[1] These are undergraduate lecture notes. They do not represent academic work. Expect typos, sloppy formatting, and occasional (possibly stupefying) errors.

[2] A payroll tax holiday lowered this to 4.2% through 2012. It was allowed to expire at the start of 2013 as part of the "fiscal cliff."

Table 1: 2013 U.S. Federal Income Tax Schedule

Min ($)	Max ($)	Marginal tax rate
0	10,000	0
10,000	18,925	10%
18,925	46,250	15%
46,250	97,850	25%
97,850	193,250	28%
193,250	408,350	33%
408,350	∞	35%

Table 2: 2013 Marginal Tax Rates with Payroll Taxes

Min ($)	Max ($)	Marginal tax rate
0	10,000	14.2%
10,000	18,925	22.8%
18,925	46,250	27.1%
46,250	97,850	35.7%
97,850	113,700	38.2%
113,700	125,000	30.1%
125,000	193,250	31.3%
193,250	408,350	36.1%
408,350	∞	38.0%

This tax schedule is progressive, households with higher levels of income pay a marginal tax rate greater than or equal to those with less income. But Table 2 illustrates the effect of including payroll taxes as well.

By factoring in payroll taxes, the tax schedule becomes hump shaped. The highest marginal tax rate is for incomes just below the payroll tax cutoff. There are a few caveats:

1. It does not include other taxes such as state taxes, estate taxes, sales tax, etc.

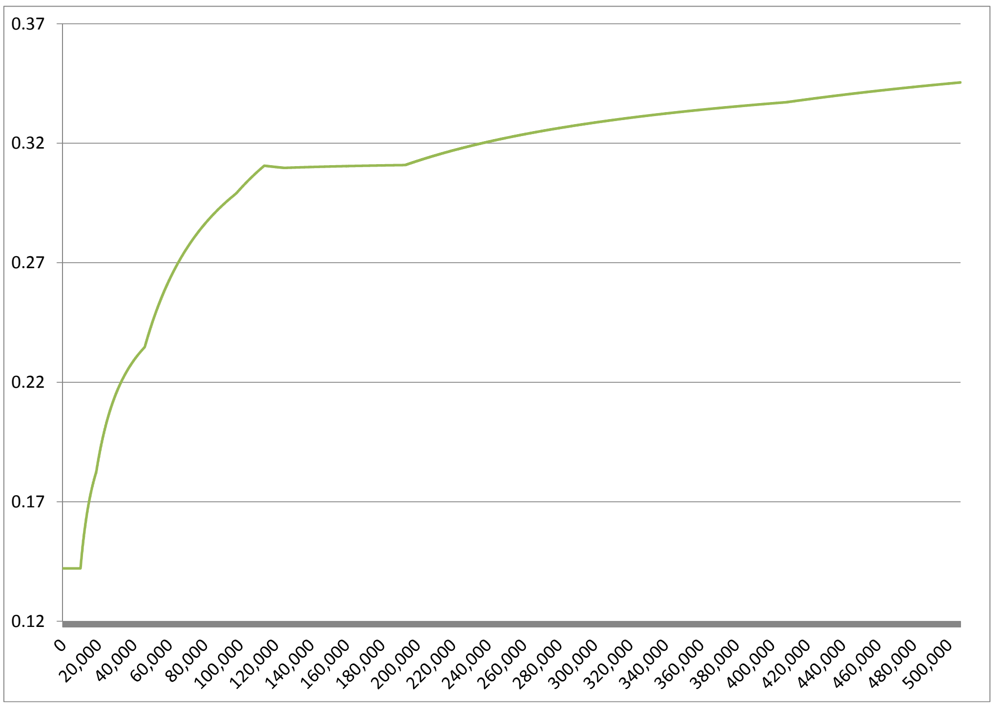
2. Many low income households qualify for tax credits that lower their tax burden and may make it negative.

3. Many middle and upper income households itemize their deductions and are thus able to pay a lower rate.

Income from capital gains and dividends are taxed at lower rates. Because many wealthy households obtain much of their income from these sources, they often pay a lower rate.

But continuing with the assumption that there are no deductions or credits, here is the average (as opposed to marginal) tax rates for households earning up to $500,000.

Figure 1: Average U.S. Labor Tax Rates By Income

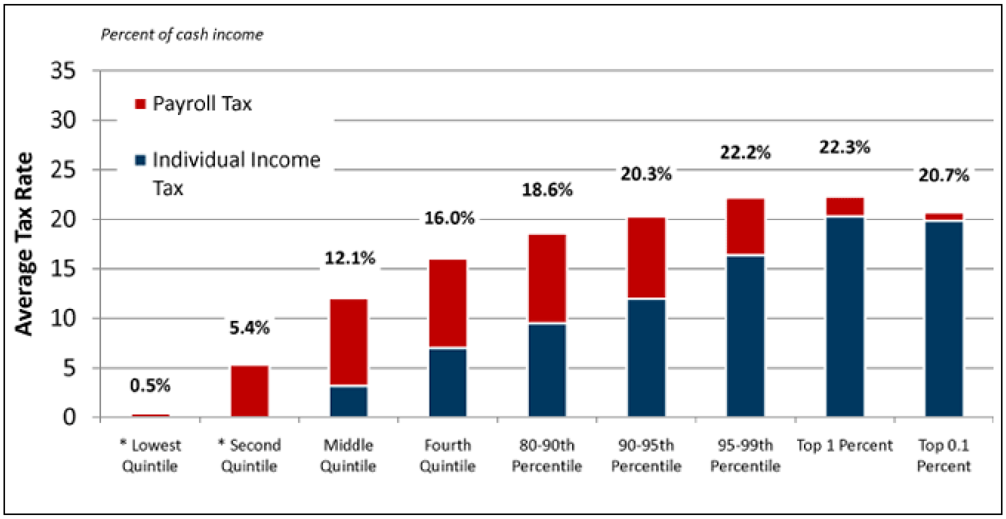


Note that between $113,700 (the payroll tax cap) and $125,000, the tax code is regressive. By considering only labor income, and assuming standard deductions with no credits, we avoid an apples to oranges comparison. Figure 2 takes a different approach, it factors in different types of income, credits and deductions. It yields the same hump shaped dynamic:[3]

The Official View of Social Security

[3]SOURCE: TPC, Table T120018 Effective Federal Tax Rates by Cash Income Percentile; 2011, February 2012. Compiled by PGPF.

Figure 2: Average U.S. Tax Rates By Income



When Social Security was created in 1935, and when Medicare followed in 1965, both programs shared two interesting features to help insulate them from future elimination:

1. All income groups must pay payroll taxes. And social security benefits are correlated with taxes paid. This is keep these programs from being welfare programs which are generally easier to attack politically.

2. Both programs are *off-budget*. This means that the taxes collected and the benefits are supposed to be counted separately. This is only sometimes done. Budget deficits, for example, rarely do this as the reported figure usually includes payroll taxes and the programs' spending. The total national debt, however, honors the off budget nature of these programs while the public figure does not.

Initially, both Social Security and Medicare ran budget surpluses. Both programs used these surpluses to purchase Treasury Bonds. These are known as the programs' trust funds. As of 12/31/2012, the Social Security trust fund contained \$2.7 trillion. Medicare's trust fund contained about \$290 billion. It is thus obvious that these programs are not responsible for the current U.S. national debt.

The basic problem with the long term fiscal outlook for these programs is that the population is aging and health care is becoming more expensive. Although social security spends more than it collects in taxes, its trust fund is expected to grow until 2020 due to accrued interest. At that point, the trust fund will begin to be drawn down and is expected to be exhausted by 2033. Under current law, benefits would then have to be cut by about 25%.

Medicare's finances are worse. It is already drawing on its trust fund (and has since 2008) which is expected to be exhausted in 2026. Under current law, benefits would then have to be cut by about 13%. That figure would then increase over time.

The key assumption here is that, when the trusts are exhausted, general revenues cannot be used to pay benefits. This is the current state of the law. The problem is that when the trusts expire, benefits will have to be cut or taxes will have to be raised. To delay the dates of insolvency, come combination of the following is needed:

1. Raise payroll taxes.

2. Reduce benefits.

3. Increase the retirement age (a special case of #2).

An Alternate View

An alternate view is to ignore the existence of the trust funds and treat all government spending and tax revenue as the same. This is increasingly the view of policymakers when discussing comprehensive solutions to the long term fiscal outlook (see the notes on government debt). The key assumption here is that if the trust funds are empty, general revenues may be diverted to pay benefits. Although this would require a change in the law, it has been done before. When temporarily reducing payroll taxes by 2%, for example, Congress used general revenue to make sure that social security's insolvency date would not change. It seems far more likely that Congress would do this in the future as opposed to allowing a major voting block to see a drastic and sudden decrease in benefits.

Under this view, Social Security and Medicare are just part of the broader problem of a long term unsustainable fiscal trajectory. Income tax revenue and payroll tax revenue are thus fungible. Because of their size, however, it is unlikely that serious fiscal reform can be done without touching these programs. How to do this is exceptionally controversial. The Simpson-Bowles proposal, for example, suggested the following:

1. Gradually increasing the retirement age to 69.

2. More means testing so that the wealthiest 50% of retirees would receive smaller benefits.

3. Raise the payroll tax cap to $190,000.

4. Reduced payments to health care providers who participate in Medicare.