FAIRNESS AND TAX POLICY

Scheduled for a Public Hearing
Before the
SENATE COMMITTEE ON FINANCE
on March 3, 2015

Prepared by the Staff
of the
JOINT COMMITTEE ON TAXATION

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INTRODUCTION

The Senate Committee on Finance has scheduled a public hearing on March 3, 2015, titled "Fairness in Taxation." This document,[1] prepared by the staff of the Joint Committee on Taxation, describes concepts of tax equity and provides data related to the current and historical distribution of income and taxes.

[1] This document may be cited as follows: Joint Committee on Taxation, *Fairness and Tax Policy* (JCX-48-15), February 27, 2015. This document can also be found on the Joint Committee on Taxation website at www.jct.gov.

I. FAIRNESS IN TAXATION

In general

While most would agree that taxation should be fair, views as to what constitutes a fair tax vary. Economists and political philosophers since the days of Adam Smith have recognized two broad concepts of fair taxation.

One such principle is known as the benefit principle, under which taxes should be levied in proportion to the benefits received from the public sector. Under this principle, it is the government's job to view taxes as the prices that would prevail in an actual market for the government service. Thus, the tax for each individual should approximate the price that an individual would willingly pay for the government service if it were provided in a market. Under this concept of fairness, individuals are entitled to all of their earnings and there is no role for redistribution of those earnings. The Federal government currently imposes certain taxes that are intended to broadly reflect the benefit principle. Perhaps the most well known is the motor fuels excise tax, which funds highway construction. Since most gasoline is consumed in motor vehicles used on highways, the tax that one pays on gasoline rises or falls in proportion to one's use of the highways.[2] Social insurance taxes, such as those for social security, might also be viewed somewhat in this light, as one's future social security benefits are generally correlated with the amount of social security taxes paid in one's working life.

The second principle is known as the ability to pay principle. This principle focuses only on the tax side of the budget, and views taxation as imposing an aggregate cost that must be apportioned in a manner that taxes those with equal ability to pay equally, and imposes greater burdens on those with greater ability to pay.

Assessing ability to pay

The notion of ability to pay (*i.e.*, the taxpayer's capacity to bear taxes) is commonly applied to determine fairness, though there is no general agreement regarding the appropriate standard by which to assess a taxpayer's ability to pay. Annual income is the most common choice, though some have advocated that lifetime income, or consumption, might be better measures.

Annual income.–Many analysts have advocated a comprehensive measure of income as a measure of ability to pay.[3] Although income is commonly measured on an annual basis, it is recognized that there are significant shortcomings with using current-year income as an indicator of current-year ability to pay. First of all, an individual may be subject to wide swings in income from year to year. In this case, a snapshot of income in any one year could be a

[2] This tax is clearly not a perfect application of the benefit principle for a variety of reasons, including that gasoline use per road mile travelled will vary depending on the fuel efficiency of the motor vehicle.

[3] See, for example, Henry Simons, *Personal Income Taxation*, Chicago: University of Chicago Press, 1938; and Richard Goode, "The Superiority of the Income Tax," in Joseph Pechman (ed.), *What Should Be Taxed: Income or Consumption?* Washington, D.C.: Brookings Institution, 1980.

misleading indicator of ability to pay from a lifetime perspective. An individual's income generally varies more from year to year than does that individual's consumption expenditures, as individuals save money for a rainy day when their income is high and dissave to finance consumption purchases when their income is low. Second, over the course of one's lifetime, annual income will vary according to age, where income is low in one's early working years, peaking toward the end of one's working years, and declining in retirement. Low annual income may incorrectly indicate a low ability to pay, from a lifetime perspective, for those whose income is only temporarily low.

Lifetime income.–As a result of variability in annual income over one's lifetime, many economists have argued that lifetime income (or some average of income over several years) is a better indicator of ability to pay.[4]

Over an individual's lifetime, consumption is roughly equal to income;[5] but, as noted above, consumption is likely to be high relative to income in low-earning years and low relative to income in high-earning years. Therefore, if, under a consumption tax, tax liabilities are borne in proportion to consumption, a broad-based consumption tax would appear regressive if compared to an annual measure of income and would appear less regressive and perhaps even proportional when lifetime income is used as the measure of ability to pay.

It has been widely observed that annual consumption is much less variable than annual income, and that annual consumption is more likely to be a function of lifetime income than annual income.[6] Based on this observation, some have even advocated annual consumption itself as a measure of ability to pay since it is a good proxy for average lifetime income.[7] Others have advocated consumption itself not because it is a good proxy for income, but because it is a better measure than income of economic well-being.

If a tax system is considered fair when two individuals with the same wealth at the beginning of their lives and the same abilities to earn wage income are taxed equally, then consumption is a better tax base than income. This is the case because (if an individual neither receives nor leaves bequests) the present value of lifetime consumption equals the present value of his lifetime earnings, while the present value of lifetime income varies with the timing of savings. The present value of a consumption tax is then proportional to economic well-being but

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[4] If individuals do not have easy access to well-developed financial markets, the appropriateness of lifetime income as a measure of ability to pay should be qualified. For example, if an individual is credit-constrained, lifetime income may overestimate a low-income individual's ability to pay.

[5] Lifetime consumption may exceed lifetime income (in present value) when an individual receives large bequests or gifts (and these receipts are not considered income). Lifetime consumption may be less than lifetime income (in present value) when an individual makes bequests or gifts (and these payments are not considered consumption).

[6] See, for example, Milton Friedman, *A Theory of the Consumption Function*, Princeton, N.J.: Princeton University Press, 1957.

[7] See James M. Poterba, "Is the Gasoline Tax Regressive?" in (David Bradford (ed.), *Tax Policy and the Economy*, vol. 5, (Cambridge: The MIT Press), 1991.

the present value of an income tax varies for individuals with equal measures of economic well-being and, in fact, increases with the rate of savings.[8]

Horizontal and vertical equity

Within the confines of a tax system based on ability to pay, analysts generally apply two concepts when assessing the equity, or fairness, of a tax system: vertical equity and horizontal equity. The concept of horizontal equity asks whether taxpayers who otherwise are similarly situated bear the same tax burden. That is, do two taxpayers with the same ability to pay pay the same amount in tax?

However, it is sometimes difficult to determine when two individuals are similarly situated. For example, people disagree over whether two taxpayers are similarly situated if they have the same income but different medical, work-related, or dietary expenses, or whether they rent or own their home. These are disagreements about the tax base. Any noncomprehensive tax base, whether under an income-based or consumption-based tax, potentially imposes different tax liabilities on any two taxpayers who some might consider to be similarly situated. So too, a comprehensive tax base might impose different tax liabilities on any two taxpayers whom some might consider to be similarly situated, if, for example, one believes that medical expenses reduce the taxpayer's ability to pay.

The concept of vertical equity compares the tax burdens of taxpayers at different levels of income (that is, different ability to pay) or consumption (hereafter the discussion will be framed in reference to income as the basis of tax) and asks how the tax burdens of lower-income taxpayers compare to the tax burdens of higher-income taxpayers. If a tax system is horizontally equitable, there must be vertical differentiation in tax liabilities unless all taxpayers are viewed as similarly situated. There is, however, no agreed upon standard to determine what vertical differentiation in tax liabilities is most fair. Vertical equity is usually discussed in terms of the progressivity or regressivity of the tax system.[9]

Filing status: marriage neutrality versus equal taxation of married couples with equal incomes

The choice of the unit of taxation has important consequences related to equity. Any system of taxing married couples requires making a choice among three different concepts of tax equity. One concept is that the tax system should be marriage neutral; that is, the tax burden of a married couple should be exactly equal to the combined tax burden of two single persons where one has the same income as the husband and the other has the same income as the wife. A second concept of equity is that, because married couples frequently consume as a unit, couples

[8] The Treasury Department discusses the relative merits of a consumption and income tax base in its 1977 tax reform study. See, Department of the Treasury, *Blueprints for Basic Tax Reform*, January 17, 1977, pp. 38-41.

[9] Under the benefit principle of taxation, horizontal and vertical equity are not generally discussed. However, such a tax system would imply that those getting the same benefits from government services would pay the same tax, and those getting more services would by definition pay greater tax.

with the same income should pay the same amount of tax regardless of how the income is divided between them. (This second concept of equity could also apply to cohabitating couples or to other tax units that may consume jointly, such as the extended family or the household, defined as all people living together under one roof.) A third concept of equity is that the income tax should be progressive; that is, as income rises, the tax burden should rise as a percentage of income.

These three concepts of equity on treatment across single and married people are mutually inconsistent. A tax system can generally satisfy any two of them, but not all three. The current tax system is progressive: as a taxpayer's income rises, the tax burden increases as a percentage of income. It also taxes married couples with equal income equally: it specifies the married couple as the tax unit so that married couples with the same income pay the same tax. However, it is not marriage neutral.[10] A system of mandatory separate filing for married couples would sacrifice the principle of equal taxation of married couples with equal incomes for the principle of marriage neutrality unless it were to forgo progressivity.[11]

There is disagreement as to whether equal taxation of couples with equal incomes is a better principle than marriage neutrality.[12] Those who hold marriage neutrality to be more important tend to focus on marriage penalties that may arise under present law and argue that tax policy discourages marriage and inappropriately encourages unmarried individuals to cohabitate without getting married. Also, they argue that it is simply unfair to impose a marriage penalty even if the penalty does not actually deter anyone from marrying.

Those who favor the principle of equal taxation of married couples with equal incomes argue that as long as most couples pool their income and consume as a unit, two married couples with $60,000 of income are equally well off regardless of whether their income is divided

[10] Even if all the bracket breakpoints and the standard deduction amounts for unmarried taxpayers (and for married taxpayers filing separate returns) were half of those for married couples filing a joint return, the current tax system would not be marriage neutral. Many married couples would still have marriage bonuses. As described below, the joint return in such a system would allow married couples to pay twice the tax of a single taxpayer having one-half of the couple's taxable income. With progressive rates, this income splitting may result in reduced tax liabilities for some couples filing joint returns. For example, consider a married couple in which one spouse has $100,000 of income and the other has none. By filing a joint return, the couple pays the same tax as a pair of unmarried individuals each with $50,000 of income. With progressive taxation, the tax liability on $50,000 would be less than half of the tax liability on $100,000. Thus, the married couple has a marriage bonus: the joint return results in a smaller tax liability than the combined tax liability of the spouses if they were not married.

[11] It should be noted that there is an exception to this rule if refundable credits are permissible. A system with a single tax rate and a per taxpayer refundable credit would have marriage neutrality, equal taxation of couples with equal incomes, and progressivity. In such a system, the refundability of the tax credit combined with an equal marginal tax rate on all income would make irrelevant any splitting of income between the individuals. Refundability of the tax credit also would create progressivity in what would otherwise be a proportional tax. Such a system could not have standard deductions, as they would operate like a zero rate bracket, violating the single tax rate criterion.

[12] This discussion assumes that the dilemma cannot be resolved by moving to a proportional tax (*i.e.* a single rate on all income for all taxpayers) system. A proportional system would automatically produce marriage neutrality and equal taxation of couples with equal incomes, but is not a progressive system.

$50,000-$10,000 or $30,000-$30,000. Thus, it is argued, those two married couples should pay the same tax, as they do under present law. By contrast, a marriage-neutral system with progressive rates would involve a larger combined tax on the married couple with the unequal income division. The attractiveness of the principle of equal taxation of couples with equal incomes may depend on the extent to which married couples actually pool their incomes.[13]

An advocate of marriage neutrality could respond that the relevant comparison is not between a two-earner married couple where the spouses have equal incomes and a two-earner married couple with an unequal income division, but rather between a two-earner married couple and a one-earner married couple with the same total income. Here, the case for equal taxation of the two couples may be weaker, because the non-earner in the one-earner married couple benefits from more time that may be used for unpaid work inside the home, other activities or leisure. It could, of course, be argued in response that the "leisure" of the non-earner may in fact consist of necessary job hunting or child care, in which case the one-earner married couple may not have more ability to pay income tax than the two-earner married couple with the same income.[14]

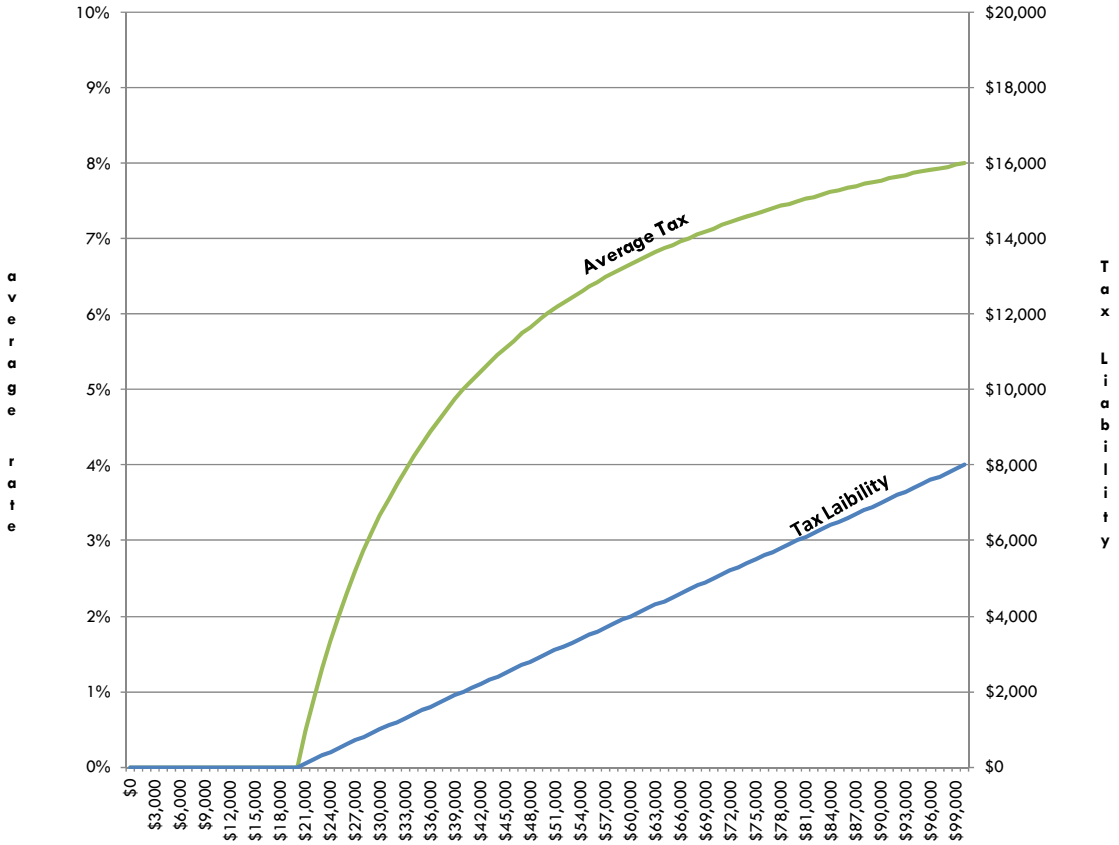
Tax Progressivity

A progressive tax is a tax wherein one's average tax rate rises as income rises (as in the current income tax system). A regressive tax, in contrast, is a tax where the average tax rate falls as income rises (the social security tax is an example, due to the cap on the wage base subject to tax). A proportional tax is a tax where the average tax rate remains constant as income rises (a flat rate income tax with no exemptions would be an example). A flat rate tax with an exemption would be a progressive tax, as Figure 1, below, illustrates:

[13] Some have called into question the justification for joint returns and the assumption of pooling of income among members of a household. See Marjorie E. Kornhauser, "Love, Money, and the IRS: Family, Income Sharing, and the Joint Income Tax Return," 45 *Hastings Law Journal* 63, 1993; Edward J. McCaffery, "Taxation and the Family: A Fresh Look at Behavioral Gender Biases in the Code," 40 *UCLA Law Review* 983, 1993; and Lawrence Zelenak, "Marriage and the Income Tax," 67 *Southern California Law Review* 399, 1994.

[14] However, if two couples have equal incomes and dependent children requiring care, many would think the two-earner couple paying for child care would have lower ability to pay tax than the single-earner couple, because the latter benefits from the unpaid labor of the stay-at-home spouse with regard to child care.

Figure 1.−Average Tax Rate Under A 10 Percent Flax Rate Tax With A $20,000 Exemption



Various features of the current Code contribute to making it a progressive tax. The most obvious is the progressive rate structure, wherein successive tranches of income bear a greater tax; *i.e.*, the marginal rate of tax rises with income. At the bottom of the income distribution, the standard deduction and the personal exemptions exempt a significant share of income from tax. Additionally, an important role is played by income-targeted credits, and refundable tax credits in particular, especially the earned income credit and the child credit. Phaseouts of tax benefits as income rises also contribute to progressivity. These phaseouts include, for example, the personal exemption phaseout ("PEP"), the overall limit on itemized deductions ("Pease" limitation), and phaseouts for most of the personal credits.

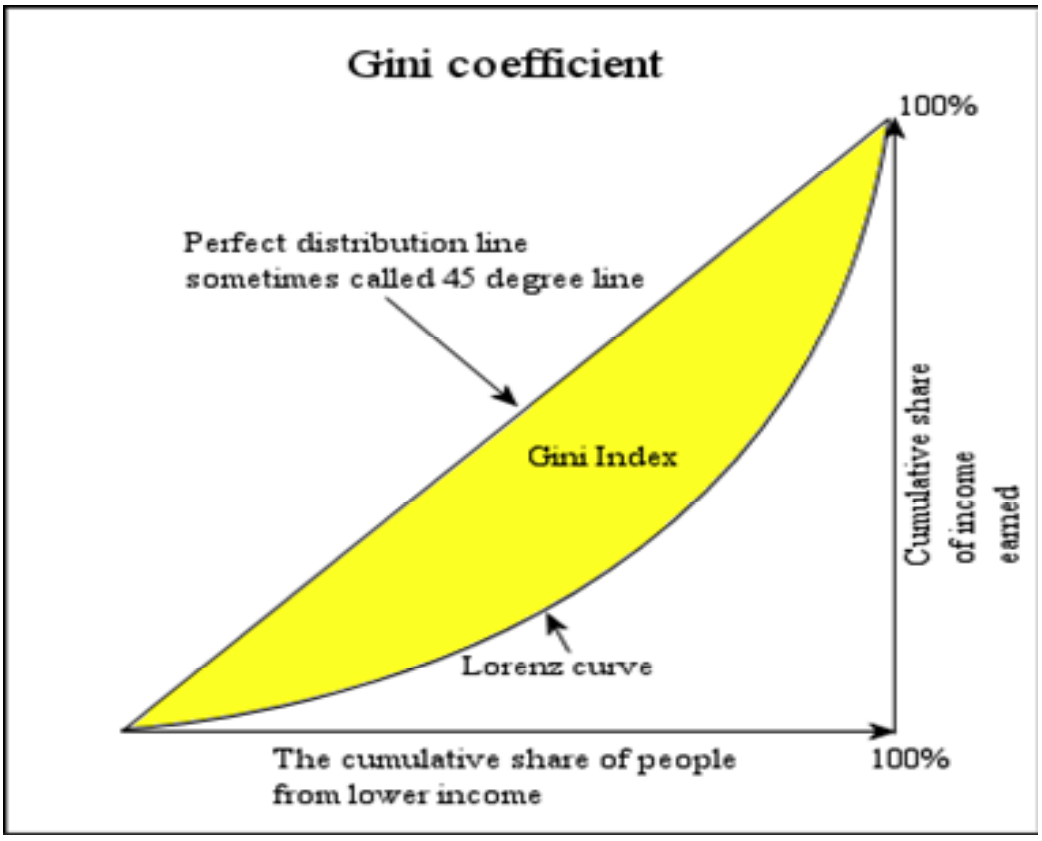
Other features of the Code reduce its degree of progressivity. An example from the income tax is the preferential tax rates or exclusions on forms of income concentrated nearer the top of the income distribution, such as tax-exempt interest and capital gain and dividend income. An example from the social security tax system is the cap on wages that applies for the 6.2 percent employer and employee tax on wage income for Old Age Survivors and Disability Insurance ("OASDI") and the comparable Self-Employment Contributions Act ("SECA"). For 2015, this cap is $118,500. The Federal excise taxes (*e.g.*, 18.3 cents per gallon gasoline tax) also reduce progressivity, to the extent consumption does not rise proportionately with income.

Tax progressivity should generally not be viewed in isolation**.** The progressivity of Federal spending and transfers affect the overall progressivity of Federal policy. For example, while social security taxes are regressive (average social security taxes decline as income rises), social security transfers are progressive, and the social security system in its entirety is generally considered to be progressive**.**

Measuring tax progressivity

Common measures of tax progressivity rely on the Gini index of income inequality and measures of tax concentration. The Gini index is a widely used measure of income inequality based on the relationship between the share of income held by the share of population, when the population is ranked in order of income. The Gini index varies from 0 to 1. An index of 0 is complete equality and occurs when the lowest 10 percent of the population controls 10 percent of the income, the lowest 20 percent controls 20 percent, and so on. An index of 1 indicates complete inequality, and would occur only when one individual receives all of the income. Figure 2, below, shows how the Gini index is determined.

Figure 2.−Gini Index



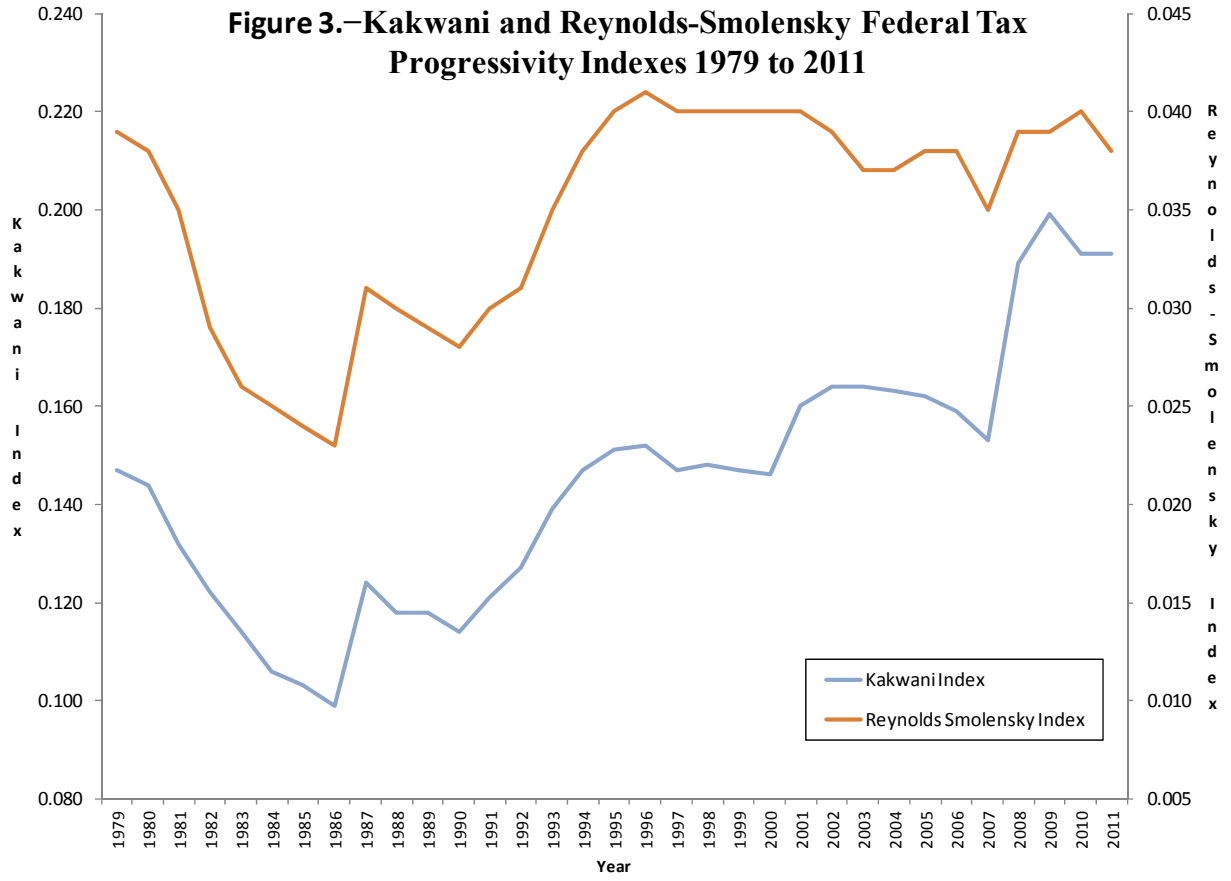
Note: The Lorenz curve shows the pre-tax distribution of income. The Gini index equals the yellow area expressed as a fraction of the entire triangle.

A tax concentration index is similar to the Gini index, measuring how shares of taxes paid relate to shares of population, with taxpayers ranked by pre-tax income. Similar to the Gini, an index of zero means the lowest income 10 percent of the population pays 10 percent of the taxes, the lowest 20 percent pays 20 percent of taxes, etc. An index of 1 would mean all taxes are paid by the single highest earner. Unlike the Gini index, the tax concentration index could be negative, if one paid a disproportionately higher share of taxes the lower one's income.

One tax progressivity index, known as the Kakwani index, is measured as the difference between the tax concentration index and the Gini index for income inequality. If taxes are proportional, the tax concentration index mirrors the Gini index and the Kakwani progressivity index is zero. The Kakwani index is positive under a progressive system, because the tax concentration index is greater than the Gini index--that is, taxes are more concentrated than income at the top of the income distribution; similarly, a regressive tax results in a negative Kakwani index value.

Another measure of tax progressivity, known as the Reynolds-Smolensky index, is the difference between the Gini index for before-tax income and the Gini index for after-tax income. Under this index, if the after-tax Gini is the same as the pre-tax Gini, then the tax system is proportional as it did not change the distribution of income, and the Reynolds-Smolensky index is 0. The Reynolds-Smolensky index is positive under a progressive system because the pre-tax Gini index is larger than the after-tax Gini, since the progressive taxes make income more equally distributed. The Reynolds-Smolensky index reflects the aggregate amount of taxes as well as their concentration.

Figure 3, below, shows the Kakwani index and the Reynolds-Smolensky index for 1979 to 2011. The two indices have shown similar trends since 1979. They would not necessarily move in similar directions if future tax reforms made different changes to aggregate levels of tax and/or to the concentration of taxes.



Source: Congressional Budget Office, "The Distribution of Household Income and Federal Taxes, 2011," November 2014.

II. BACKGROUND DATA RELATED TO THE DISTRIBUTION OF INCOME AND TAXES

Historical trends in the distribution of income and taxes

The following tables and figures show historical trends from 1980 to 2011 in the distribution of income and Federal taxes across households, as well as measures of average tax rates by income category.[15] By 2011, approximately 121 million households are represented in the data.

Table 1, below, shows the average real (*i.e.*, inflation-adjusted) pre-tax and after-tax household income for each income quintile[16] for selected years from 1980 to 2011 (the last year of available data). All income quintiles experienced real gains in income. The average real pre-tax income of the lowest quintile grew $7,500 dollars (from $17,100 to $24,600) from 1980 to 2011, while the highest income quintile grew by $111,800 (from $133,900 to $245,700) over the same period. On a percentage basis, the average real pre-tax income of the lowest income quintile grew 43.9 percent over the period, while the remaining quintiles grew by 30.9, 27.7, 37.9 and 83.5 percent respectively. Similar figures with respect to after-tax income were 52.5 for the lowest quintile, and 41.8, 39.8, 49.4 and 92.4 percent, respectively, for the other quintiles.

[15] The historical data comes from Congressional Budget Office, "The Distribution of Household Income and Federal Taxes, 2011," November 2014.

[16] The Congressional Budget Office methodology adjusts household income by household size (by dividing household income by the square root of the number of individuals per household) prior to ranking households by quintile. Thus there is no specific unadjusted household income range that defines the top and bottom of the quintile of households for all households, but rather separate ranges for each household size. For a household of three, the middle income quintile ranges from $62,700 to $89,900 (of unadjusted income) for 2011. Across all households, for 2011 the median household pre-tax income is $75,200 of unadjusted income.

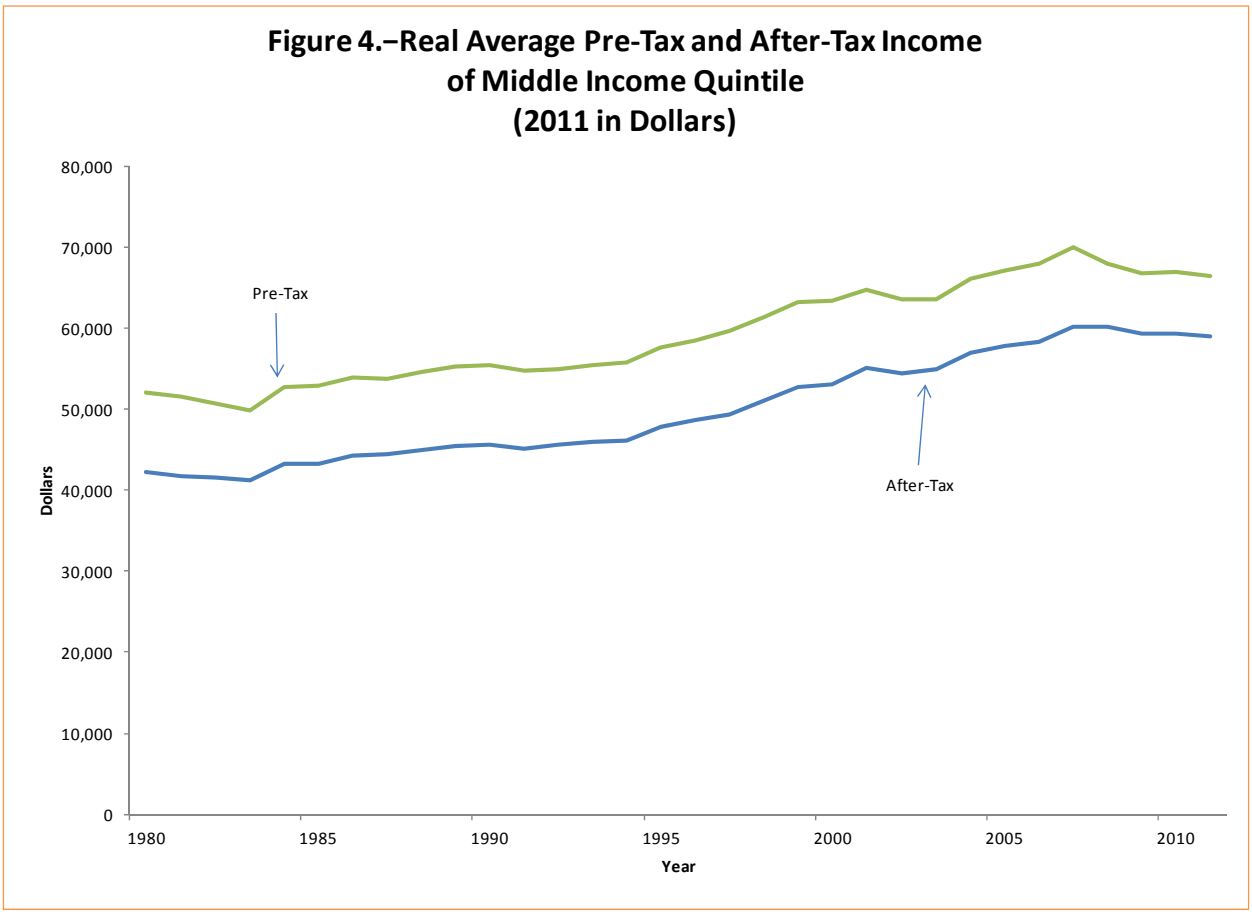
Table 1.−Average Pre-tax and After-tax Income and Income Shares, by Comprehensive Household Income Quintile, 1980-2011

Year	Lowest Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Highest Quintile
Average Real Pre-Tax Income (2011 Dollars)					
1980	17,100	34,600	52,000	70,700	133,900
1985	16,900	34,600	52,900	74,000	153,000
1990	18,900	36,500	55,500	78,200	169,500
1995	20,700	38,500	57,700	82,000	183,500
2000	21,700	42,400	63,400	93,700	245,600
2005	23,100	44,800	67,100	97,500	261,200
2011	24,600	45,300	66,400	97,500	245,700
Average Real After-Tax Income (2011 Dollars)					
1980	15,800	29,700	42,200	55,300	97,800
1985	15,300	29,600	43,300	58,900	116,500
1990	17,300	31,300	45,700	62,000	127,200
1995	19,300	33,600	47,800	65,100	133,000
2000	20,200	37,200	53,000	74,400	177,500
2005	21,900	40,400	57,800	80,400	194,900
2011	24,100	42,100	59,000	82,600	188,200
Share of Pre-Tax Income (Percent)					
1980	6.2	11.1	15.8	22.1	45.2
1985	5.3	10.2	15.2	21.8	48.1
1990	5.2	10.2	15.0	21.5	48.8
1995	5.3	10.2	15.0	21.1	49.3
2000	4.6	9.0	13.5	19.5	54.0
2005	4.7	9.1	13.6	19.6	53.6
2011	5.3	9.6	14.1	20.4	51.9
Share of After-Tax Income (Percent)					
1980	7.3	12.2	16.4	22.1	42.4
1985	6.1	11.0	15.7	21.8	46.2
1990	6.0	11.2	15.7	21.7	46.5
1995	6.3	11.4	15.9	21.5	45.9
2000	5.5	10.2	14.6	20.0	50.5
2005	5.5	10.3	14.7	20.2	50.1
2011	6.3	10.9	15.2	21.0	48.2

Source: Congressional Budget Office, "The Distribution of Household Income and Federal Taxes, 2011," November 2014.

See table notes in appendix.

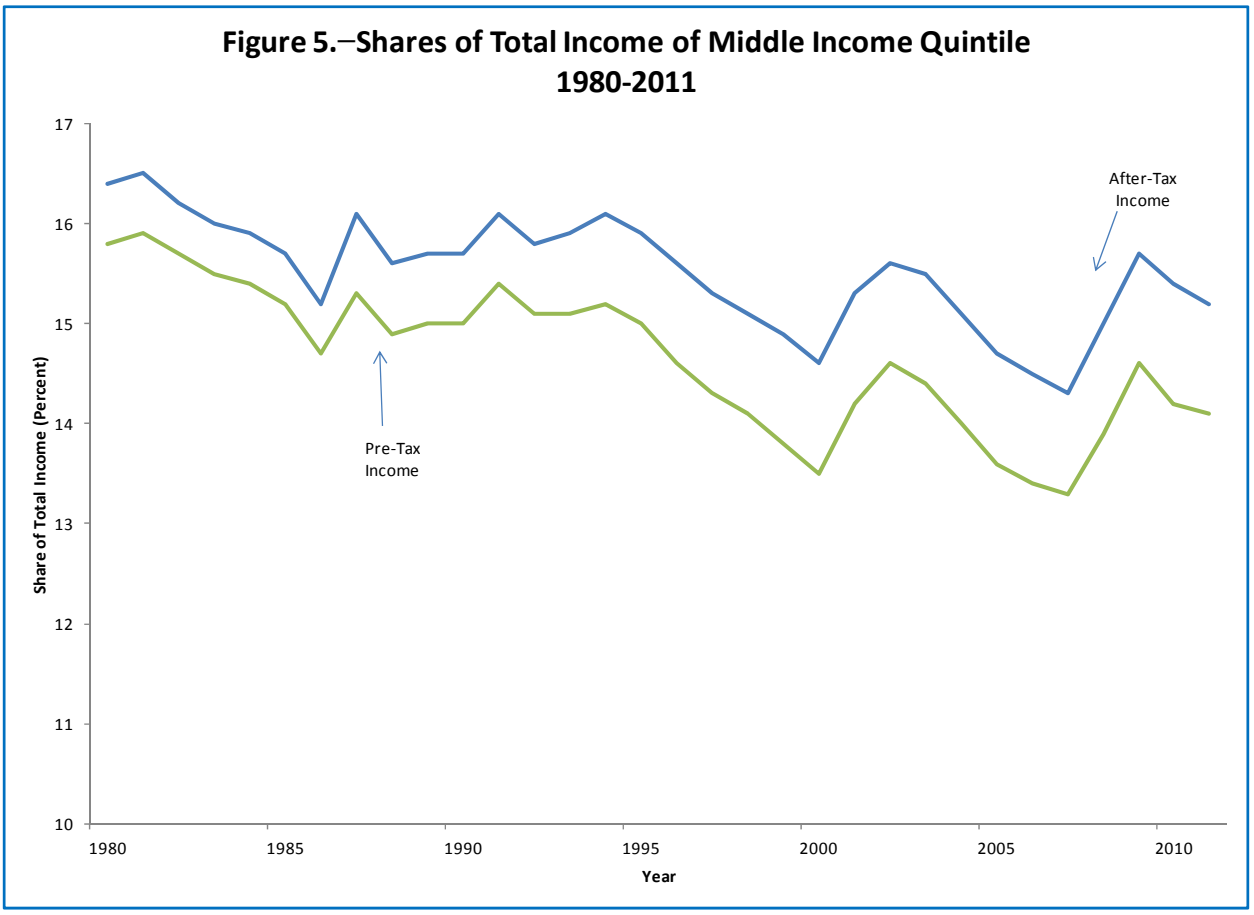
Figure 4, below, shows the real average pre-tax and after-tax income of the middle income quintile from 1980 to 2011.



Source: Congressional Budget Office, "The Distribution of Household Income and Federal Taxes, 2011," November 2014.

Table 1, above, also shows the share of pre-tax and after-tax income claimed by each income quintile. The share of aggregate income claimed by all income quintiles except the highest quintile fell from 1980 to 2011, on both a pre-tax and an after-tax basis. For example, the middle income quintile's share of aggregate pre-tax income fell from 15.8 percent in 1980 to 14.1 percent in 2011. Comparable figures on an after-tax basis were 16.4 percent and 15.2 percent, respectively. In contrast, the share of income claimed by the highest income quintile grew from 45.2 percent in 1980 to 51.9 percent in 2011 on a pre-tax basis, and from 42.4 percent to 48.2 percent on an after-tax basis.

Figure 5, below, shows the share of pre-tax and after-tax income claimed by the middle income quintile over the entire 1980 to 2011 period.



Source: Congressional Budget Office, "The Distribution of Household Income and Federal Taxes, 2011," November 2014.

Table 2, below, shows the percentage share of total Federal tax liabilities (individual income, social insurance, corporate income, and excise taxes), individual income tax liabilities, and social insurance tax liabilities by household income quintile from 1980 to 2011.[17] Over this period, the share of total Federal liabilities, individual income tax liabilities, and social insurance liabilities paid by all but the highest income quintile have fallen. For example, the share of total Federal tax liabilities paid by the middle income quintile fell from 13.5 percent of the total in 1980 to 8.9 percent of the total in 2011. The middle income quintile's share of individual income tax liabilities fell over this same period from 10.7 percent of all individual income tax liabilities to 4.0 percent, and social insurance liabilities fell from 19.4 percent of all social insurance liabilities to 15.1 percent. In contrast, the share of total Federal tax liabilities paid by the highest income quintile rose from 55.4 percent of the total in 1980 to 68.7 percent of the total

[17] See notes in the Appendix for an explanation of the measure of income used here and for assumptions on the household incidence of the different types of taxes.

in 2011, while over the same period their share of individual income tax liabilities rose from 64.7 percent of all individual income tax liabilities to 88.0 percent, and their social insurance liabilities rose from 37.0 percent of all social insurance liabilities to 45.5 percent.

Table 2.−Shares of Federal Tax Liabilities for All Households, by Comprehensive Household Income Quintile, 1980-2011

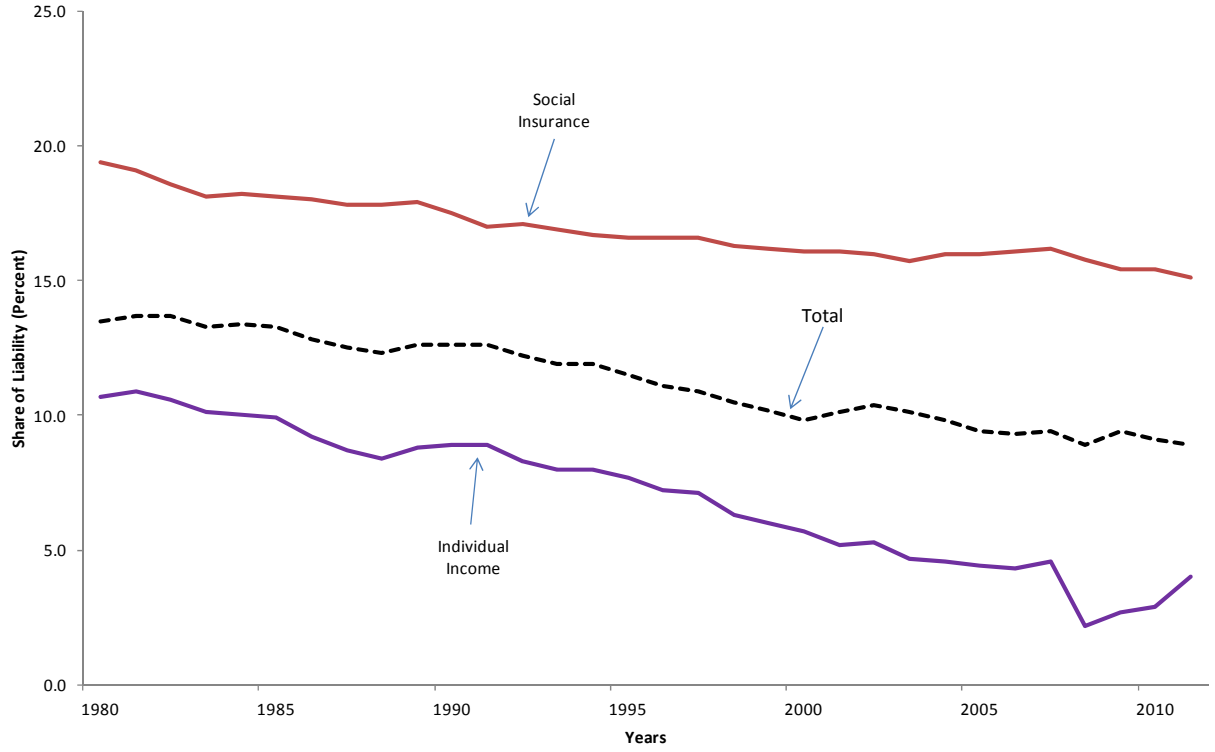
Share of Total Federal Tax Liabilities (Percent)					
Year	Lowest Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Highest Quintile
1980	2.1	7.1	13.5	21.8	55.4
1985	2.4	7.2	13.3	21.5	55.5
1990	2.0	6.8	12.6	21.0	57.5
1995	1.6	5.8	11.5	19.6	61.2
2000	1.4	4.9	9.8	17.7	66.0
2005	1.3	4.5	9.4	17.1	67.6
2011	0.6	3.8	8.9	17.6	68.7
Share of Individual Income Tax Liabilities (Percent)					
1980	0.1	4.1	10.7	20.3	64.7
1985	0.3	4.0	9.9	19.0	66.9
1990	-0.4	3.3	8.9	17.8	70.3
1995	-1.9	2.0	7.7	16.2	76.0
2000	-1.6	1.2	5.7	13.5	81.2
2005	-3.0	-0.5	4.4	12.9	86.2
2011	-4.7	-1.5	4.0	14.2	88.0
Share of Social Insurance Tax Liabilities (Percent)					
1980	4.4	12.0	19.4	27.3	37.0
1985	4.2	11.0	18.1	26.4	40.1
1990	4.3	10.8	17.5	26.6	40.6
1995	4.7	10.0	16.6	25.8	42.7
2000	4.7	9.9	16.1	25.7	43.4
2005	5.3	10.1	16.0	24.7	43.7
2011	5.6	9.7	15.1	23.9	45.5

Source: Congressional Budget Office, "The Distribution of Household Income and Federal Taxes, 2011," November 2014.

Note: See appendix for table footnotes. Negative shares indicate that on average the taxpayer is getting a refundable income tax credit.

Figure 6, below, shows the share of total Federal tax liabilities, individual income tax liabilities, and social insurance liabilities, attributable to the middle income quintile from 1980 to 2011.

Figure 6.–Share of Federal Tax Liabilities of Middle Income Quintile 1980-2011



Source: Congressional Budget Office, "The Distribution of Household Income and Federal Taxes, 2011," November 2014.

Table 3, below, shows the average total Federal tax rates by income quintile, as well as the average rates for the individual income tax and social insurance taxes. All income quintiles experienced a decline in the average total Federal tax rate, with the smallest decline occurring in the highest quintile. The decline in the average total tax rate was largely an effect of the decline in the average individual income tax rate. The average individual income tax rates declined over all income quintiles, falling by greater amounts the lower the income quintile. Average social insurance tax rates have generally risen for all income quintiles since 1980, with the sharpest growth occurring in the lowest income quintile. The drop in social insurance rates between 2005 and 2011 for all income groups reflects the temporary two percentage point reduction in the employee share of social insurance taxes that was in effect during 2011.

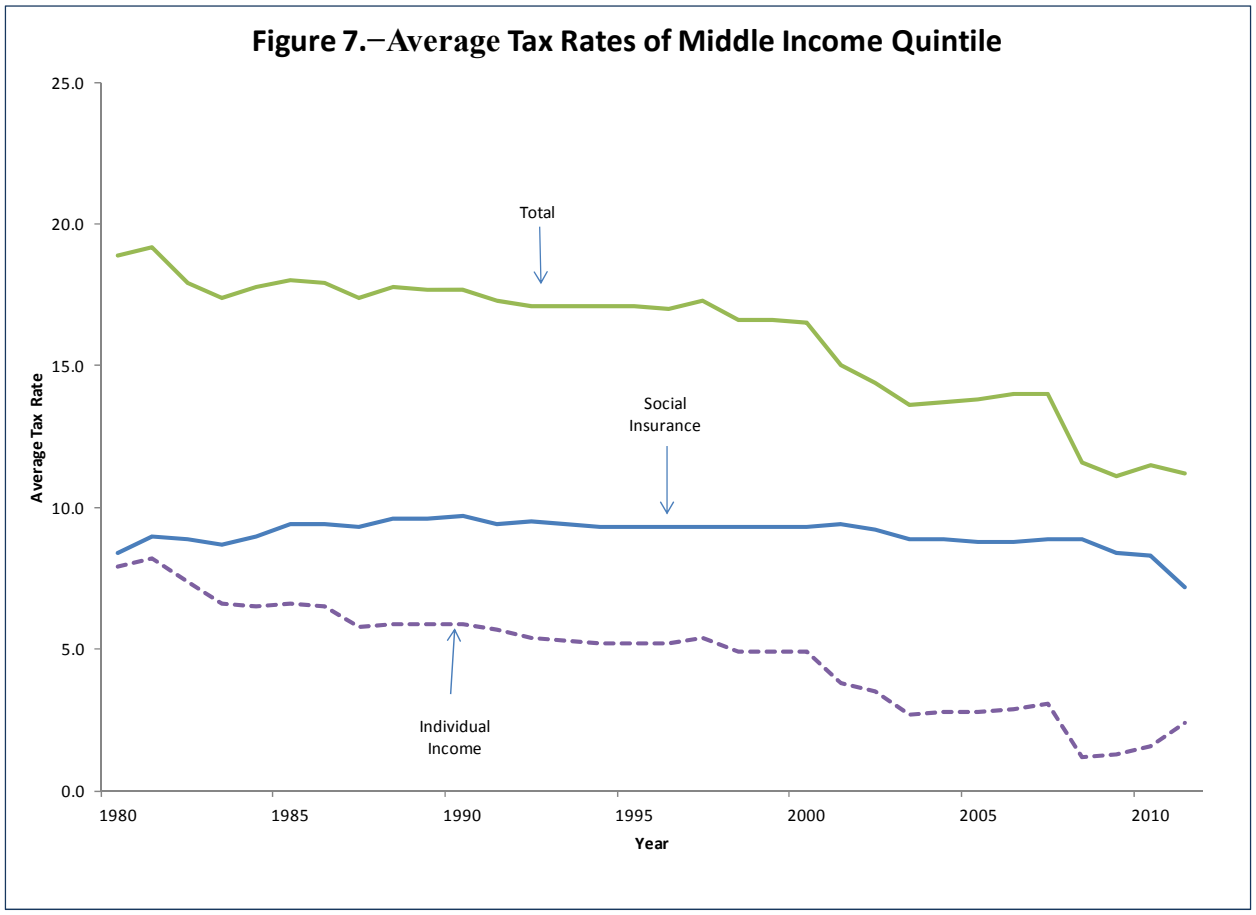
Table 3.−Federal Tax Rates for All Households, by Comprehensive Household Income Quintile, 1980-2011

Year	Lowest Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Highest Quintile
Average Total Federal Tax Rate					
1980	7.4	14.1	18.9	21.8	26.9
1985	9.2	14.5	18.0	20.4	23.8
1990	8.4	14.1	17.7	20.6	24.9
1995	6.7	12.7	17.1	20.6	27.5
2000	6.8	12.4	16.5	20.6	27.7
2005	5.4	9.9	13.8	17.6	25.4
2011	1.9	7.0	11.2	15.2	23.4
Average Individual Income Tax Rate					
1980	0.2	4.4	7.9	10.7	16.7
1985	0.6	3.9	6.6	8.8	14.1
1990	-0.7	3.3	5.9	8.3	14.5
1995	-3.6	2.0	5.2	7.8	15.6
2000	-4.0	1.5	4.9	8.1	17.6
2005	-5.7	-0.5	2.8	5.8	14.2
2011	-7.5	-1.3	2.4	5.8	14.2
Average Social Insurance Tax Rate					
1980	4.9	7.4	8.4	8.5	5.6
1985	6.2	8.4	9.4	9.5	6.6
1990	6.9	8.8	9.7	10.3	6.9
1995	7.5	8.3	9.3	10.2	7.2
2000	8.1	8.7	9.3	10.3	6.3
2005	8.4	8.2	8.8	9.4	6.1
2011	7.1	6.7	7.2	7.8	5.9

Source: Congressional Budget Office, "The Distribution of Household Income and Federal Taxes, 2011," November 2014.

Note: The average tax rate is the tax paid as a percentage of comprehensive household income. See appendix for definition of comprehensive household income.

Figure 7, below, shows the average tax rates for total taxes, and separately for individual income taxes and social insurance taxes, for the middle income quintile.



Source: Congressional Budget Office, "The Distribution of Household Income and Federal Taxes, 2011," November 2014.

Notes: The average tax rate is the tax paid as a percentage of comprehensive household income. See appendix for definition of comprehensive household income.

2015 projections of the distribution of income and taxes

The staff of the Joint Committee on Taxation estimates that, in 2015, the mean income[18] of all tax returns (excluding dependent filers and those with negative income, and including nonfilers) is projected to be $77,821. The mean taxable income of all returns is projected to be $42,268. The median income of all tax returns is projected to be $43,930; the median taxable income of all tax returns is projected to be $11,034.

The mean income in 2015 of married taxpayers filing jointly with two dependents is projected to be $168,196, with the median income being $113,408. The mean taxable income

[18] See notes to Table 4 for the definition of income used here.

for such taxpayers is $103,764, with the median being $55,307. For 2015, the top 10 percent (in terms of income) of all tax returns receive 45 percent of all income and pay 82 percent of all income taxes. The top five percent of all tax returns receive 34 percent of all income and pay 71 percent of all income taxes. The top one percent of all tax returns receives 19 percent of all income and pay 49 percent of all income taxes.

Table 4, below, shows the projected distribution of income and taxes by income category for 2015 tax returns. For example, tax returns with $30,000 to $40,000 of income constitute 9.8 percent of all returns, 4.4 percent of all income, 1.8 percent of total taxes, -0.8 percent of individual income taxes, and 4.6 percent of social insurance taxes. Similarly, tax returns with $100,000 to $200,000 of income constitute 15.2 percent of all returns, 26.7 percent of all income, 20.2 percent of total taxes, 23.6 percent of individual income taxes, and 33.7 percent of social insurance taxes.

Table 4 also shows average tax rates by income category for the individual income tax, social insurance taxes, and for total taxes (including the individual income tax, social insurance taxes and excise taxes, and the corporate income tax). Note that the average tax rate reported here is the tax collected by the relevant tax, divided by total income (not only income subject to the relevant tax). The average tax rate for social insurance taxes is similar across most tax returns, ranging between 7.3 and 10.2 percent for tax returns with income below $500,000, with substantially lower average rates for those with income above $500,000. In contrast, the average tax rate under the income tax varies widely, from a negative 11.0 percent to 27.4 percent, reflecting the existence of refundable tax credits and progressive statutory rates of tax.

Table 4.–Distribution of Income and Taxes, and Average Tax Rates in 2015

INCOME CATEGORY (1)	Number of Returns (2) (Thousands)	Share of Returns	Income (Millions of Dollars)	Share of Income	COMBINED INCOME, SOCIAL INSURANCE, BUSINESS, AND EXCISE TAXES UNDER PRESENT LAW (3)			INDIVIDUAL INCOME TAXES			SOCIAL INSURANCE TAXES		
					$ Billions	Percent Share	Average Tax Rate	$ Billions	Percent Share	Average Tax Rate	$ Billions	Percent Share	Average Tax Rate
Less than $10,000	20,020	11.7%	84,130	0.6%	9.0	0.3%	10.6%	-6.0	-0.4%	-7.1%	8.5	0.9%	10.2%
$10,000 to $20,000	21,168	12.4%	322,045	2.4%	1.4	0.1%	0.4%	-35.3	-2.6%	-11.0%	27.9	2.8%	8.7%
$20,000 to $30,000	21,544	12.6%	534,580	4.0%	22.0	0.8%	4.1%	-29.0	-2.2%	-5.4%	38.8	3.9%	7.3%
$30,000 to $40,000	16,729	9.8%	582,264	4.4%	49.6	1.8%	8.5%	-10.8	-0.8%	-1.9%	46.3	4.6%	7.9%
$40,000 to $50,000	14,252	8.3%	639,613	4.8%	75.2	2.7%	11.7%	4.6	0.3%	0.7%	54.0	5.4%	8.4%
$50,000 to $75,000	25,484	14.9%	1,567,247	11.8%	237.5	8.5%	15.2%	59.1	4.4%	3.8%	134.5	13.4%	8.6%
$75,000 to $100,000	16,547	9.7%	1,433,223	10.8%	253.1	9.1%	17.7%	86.0	6.4%	6.0%	124.7	12.5%	8.7%
$100,000 to $200,000	25,955	15.2%	3,545,434	26.7%	765.8	27.5%	21.6%	310.7	23.1%	8.8%	337.6	33.7%	9.5%
$200,000 to $500,000	7,491	4.4%	2,099,214	15.8%	562.6	20.2%	26.8%	318.2	23.6%	15.2%	165.5	16.5%	7.9%
$500,000 to $1,000,000	983	0.6%	661,209	5.0%	208.4	7.5%	31.5%	149.8	11.1%	22.6%	29.9	3.0%	4.5%
$1,000,000 and over	574	0.3%	1,818,897	13.7%	601.7	21.6%	33.1%	498.9	37.1%	27.4%	33.1	3.3%	1.8%
Total, All Taxpayers	170,748	100.0%	13,287,855	100.0%	2,786.2	100.0%	21.0%	1,346.3	100.0%	10.1%	1,001.0	100.0%	7.5%

(1) The income concept used to place tax returns into income categories is adjusted gross income (AGI) plus: [1] tax-exempt interest, [2] employer contributions for health plans and life insurance, [3] employer share of FICA tax, [4] worker's compensation, [5] nontaxable Social Security benefits, [6] insurance value of Medicare benefits, [7] alternative minimum tax preference items, [8] individual share of business taxes, and [9] excluded income of U.S. citizens living abroad. Categories are measured at 2015 levels.

(2) Includes nonfilers, excludes dependent filers and returns with negative income.

(3) Federal taxes are equal to individual income tax (including the outlay portion of the EIC), social insurance tax (attributed to employees), business taxes (attributed to capital owners and labor) and excise taxes (attributed to consumers).
Individuals who are dependents of other taxpayers and taxpayers with negative income are excluded from the analysis.
Does not include indirect effects.

Source: Staff of the Joint Committee on Taxation.

Table 5, below, shows, by income class, the number of tax returns paying income or social insurance taxes for which the social insurance taxes are greater than income taxes. Because of the progressive income tax structure and the generally flat structure of social insurance taxes[19], the lower is one's income the greater is the likelihood social insurance taxes will exceed income taxes. Thus, for example, in the $40,000 to $50,000 income class 75.7 percent of tax returns have social insurance taxes greater than income taxes, while in the $100,000 to $200,000 group 61.4 percent of returns have social insurance taxes greater than income taxes.

Table 5.–Tax Returns with Income or Social Insurance Taxes in 2015

INCOME CATEGORY (1)	Millions of Returns (2)	Individual Income Taxes	Social Insurance Taxes	Returns with Social Insurance Taxes Greater than Income Taxes	Returns with Social Insurance Taxes Less than Income Taxes	Fraction of Returns with Social Insurance Taxes Greater than Income Taxes
		$ Billions	$ Billions	Millions of Returns	Millions of Returns	
Less than $10,000	20.0	-6.0	8.5	12.0	(3)	60.2%
$10,000 to $20,000	21.2	-35.3	27.9	15.4	0.2	72.6%
$20,000 to $30,000	21.5	-29.0	38.8	13.9	0.3	64.4%
$30,000 to $40,000	16.7	-10.8	46.3	12.2	0.8	72.8%
$40,000 to $50,000	14.3	4.6	54.0	10.8	1.7	75.7%
$50,000 to $75,000	25.5	59.1	134.5	19.2	4.4	75.2%
$75,000 to $100,000	16.5	86.0	124.7	11.1	5.1	66.8%
$100,000 to $200,000	26.0	310.7	337.6	15.9	9.9	61.4%
$200,000 to $500,000	7.5	318.2	165.5	1.1	6.3	15.3%
$500,000 to $1,000,000	1.0	149.8	29.9	(3)	1.0	1.5%
$1,000,000 and over	0.6	498.9	33.1	(3)	0.6	0.7%
Total, All Taxpayers	170.7	1,346.3	1,001.0	111.6	30.2	65.4%

(1) The income concept used to place tax returns into income categories is adjusted gross income (AGI) plus: [1] tax-exempt interest, [2] employer contributions for health plans and life insurance, [3] employer share of FICA tax, [4] worker's compensation, [5] nontaxable Social Security benefits, [6] insurance value of Medicare benefits, [7] alternative minimum tax preference items, [8] individual share of business taxes, and [9] excluded income of U.S. citizens living abroad. Categories are measured at 2015 levels.

(2) Includes nonfilers, excludes dependent filers and returns with negative income.

(3) Less than 50,000.

Source: Staff of the Joint Committee on Taxation.

Table 6, below, shows the average marginal tax rates for labor income and for long-term capital gain income by income category. A taxpayer's marginal tax rate is the rate of tax that is owed on the last dollar of income of the taxpayer. Table 6 reports the average of the marginal tax rates of each taxpayer in the income category.

[19] Social insurance taxes (inclusive of the employer share) consist of a flat rate of 12.4 percent on covered employment income up to the 2015 wage base of $118,500, a flat rate of 2.9 percent on all covered employment income, and a flat rate of 0.9 percent on covered employment income in excess of $200,000 (250,000 in the case of married taxpayers filing a joint return and $125,000 in the case of a married taxpayer filing separately).

Table 6.–Marginal Tax Rates on Labor and Long-Term Capital Gains, by Income Category in 2015

INCOME CATEGORY (1)	Labor Income			Capital Gains Income
	Average Marginal Income Tax Rate (2)	Average Marginal Social Insurance Tax Rate (2)	Average Combined Marginal Income and Social Insurance Tax Rate	Average Marginal Tax Rate
Less than $10,000	-6.5%	14.2%	7.7%	0.1%
$10,000 to $20,000	-0.9%	14.2%	13.3%	9.3%
$20,000 to $30,000	10.1%	14.2%	24.3%	4.1%
$30,000 to $40,000	14.1%	14.2%	28.3%	1.6%
$40,000 to $50,000	15.4%	14.2%	29.6%	1.9%
$50,000 to $75,000	17.4%	14.2%	31.6%	4.4%
$75,000 to $100,000	17.2%	14.2%	31.4%	7.3%
$100,000 to $200,000	21.0%	13.2%	34.2%	11.0%
$200,000 to $500,000	28.8%	9.3%	38.1%	20.4%
$500,000 to $1,000,000	34.7%	7.2%	41.9%	23.7%
$1,000,000 and over	37.7%	6.9%	44.6%	24.1%
Total, All Taxpayers	14.6%	13.5%	28.2%	22.4%

(1) The income concept used to place tax returns into income categories is adjusted gross income (AGI) plus: [1] tax-exempt interest, [2] employer contributions for health plans and life insurance, [3] employer share of FICA tax, [4] worker's compensation, [5] nontaxable Social Security benefits, [6] insurance value of Medicare benefits, [7] alternative minimum tax preference items, [8] individual share of business taxes, and [9] excluded income of U.S. citizens living abroad. Categories are measured at 2015 levels.

(2) For individual income and social insurance taxes, the average marginal tax rate is equal to the change in taxes from an additional $100 of wages to each spouse with positive wages. For long-term capital gain, the average marginal tax rate equals the change in taxes from an additional 1% increase in long-term capital gains to each taxpayer with positive long-term capital gains.

Source: Staff of the Joint Commtitee on Taxation.

The marginal tax rates on labor income reflect the effects of the individual income tax and the social insurance taxes. The marginal tax rates on labor income generally rise with income, reflecting the progressive nature of the individual income tax. The social insurance tax is flat to regressive,[20] reflecting the fact that the single rate of tax for the Old Age and Survivors Disability Insurance portion of social insurance taxes does not apply to earnings above an annual cap ($118,500 in 2015).[21]

The marginal tax rates on long-term capital gains income are lower than those for labor income, reflecting both the lower statutory rates of tax applicable to long-term capital gains and the fact that social insurance taxes do not apply to capital gain income. Marginal tax rates on

[20] Note that this statement reflects only the tax side of social insurance, and not the linked benefits. Many analysts think it is important to consider the tax and benefits of social insurance together.

[21] As Table 6 shows, the marginal social insurance tax rate is 14.2 percent rather than the sum of the employer (7.65 percent) and employee share (7.65 percent), or 15.3 percent. The reason for this is that comprehensive income includes the employer share of social insurance tax liability. Hence the marginal social insurance rate is 0.153 divided by 1.0765, or 14.2 percent.

long-term capital gains still generally rise with the level of income, reflecting the statutory structure of the maximum rates of tax on long-term capital gain income, as well as the interaction of capital gain income with other provision of the income tax that phase out certain tax benefits as income increases.

APPENDIX

Notes to Tables 1, 2, and 3

Comprehensive household income equals pretax market income plus income from government transfers. Pre-tax market income is the sum of (1) labor income-- cash wages and salaries, including those allocated by employees to 401(k) plans; employer-paid health insurance premiums; the employer's share of social security, Medicare, and federal unemployment insurance payroll taxes; and the share of corporate income taxes borne by workers; (2) Business income—net income from businesses and farms operated solely by their owners, partnership income, and income from S corporations; (3) Capital gains—profits realized from the sale of assets; (4) Capital income (excluding capital gains)—taxable and tax-exempt interest, dividends paid by corporations, positive rental income, and the share of corporate income taxes borne by owners of capital, and (5) Other income—income received in retirement for past services and other sources of income.

Government transfers are cash payments from social security, unemployment insurance, Supplemental Security Income, Temporary Assistance for Needy Families (and its predecessor, Aid to Families with Dependent Children), veterans' programs, workers' compensation, and state and local government assistance programs. They also include the value of in-kind benefits, such as Supplemental Nutrition Assistance Program vouchers (formerly known as food stamps), school lunches and breakfasts, housing assistance, energy assistance, and benefits provided by Medicare, Medicaid, and the Children's Health Insurance Program. (The value of health insurance is measured on the basis of the Census Bureau's estimates of the average cost to the government of providing such insurance.)

Individual income taxes are distributed directly to households paying those taxes (that is, the economic incidence of the tax is assigned to the individual remitting the tax and is not assumed to be shifted to other parties). Social insurance, or payroll, taxes are distributed to households paying those taxes directly or paying them indirectly through their employers. Corporate income taxes are distributed to households according to their share of capital income. Federal excise taxes are distributed to households according to their consumption of the taxed good or service.

Income categories are defined by ranking all people by their comprehensive household income adjusted for household size—that is, divided by the square root of the household's size. (A household consists of the people who share a housing unit, regardless of their relationships.) Quintiles, or fifths, contain equal numbers of people. Households with negative income are excluded from the lowest income category but are included in totals.