Reported Incomes and Marginal Tax Rates, 1960-2000: Evidence and Policy Implications

Emmanuel Saez, UC Berkeley and NBER[*]

August 23, 2003

Abstract

This paper use income tax return data from 1960 to 2000 to analyze the link between reported incomes and marginal tax rates. Only the top 1% incomes show evidence of behavioral responses to taxation. The data displays striking heterogeneity in the size of responses to tax changes overtime, with no response either short-term or long-term for the very large Kennedy top rate cuts in the early 1960s, and striking evidence of responses, at least in the short-term, to the tax changes since the 1980s. The 1980s tax cuts generated a surge in business income reported by high income individual taxpayers due to a shift away from the corporate sector, and the disappearance of business losses for tax avoidance. The Tax Reform Act of 1986 and the recent 1993 tax increase generated large short-term responses of wages and salaries reported by top income earners, most likely due to re-timing in compensation to take advantage of the tax changes. However, it is unlikely that the extraordinary trend upward of the shares of total wages accruing to top wage income earners, which started in the 1970s and accelerated in the 1980s and especially the late 1990s, can be explained by the evolution of marginal tax rates.

1   Introduction

Over the last 40 years, the U.S. federal income has undergone very large changes. Perhaps the most striking change has been the dramatic decrease in top marginal income tax rates. From the end of World War II to the early 1960s, the statutory top marginal income tax rate was 91%. This top rate was reduced to 70% by the Kennedy tax cuts in the mid 1960s. During the Reagan administrations of the 1980s, the top tax rate was further reduced to 50% in 1982 by the Economic and Recovery Tax Act (ERTA) of 1981, and down to 28% in 1988 by the Tax Reform Act (TRA) of 1986. The top tax rate was then increased to 31% in 1991, and further to 39.6% in 1993 by the Omnibus Budget Reconciliation Act (OBRA) of 1993. The top rate is currently 38.6% (year 2003) and is scheduled to decline to 35% by 2006. The number of tax brackets has also been drastically reduced over time from over 15 up to the early 1980s to 6 today. While only about half a thousand taxpayers were subject to the top marginal tax rate of 91% in the early 1960s, by 2000, more than half a million taxpayers are subject to the top rate.[1] Thus, the continuous and drastic progressivity of the federal income tax system up to the very richest taxpayers has been replaced by a much flatter tax structure where an upper middle class family can face the same marginal tax rate as the richest income earners in the United States.

In addition to those important redistributive effects, the dramatic reductions in top tax rates might have generated large behavioral responses: the net-of-tax value of an additional dollar of pre-tax income for the rich has experienced enormous variations over the period from less than 10 cents in the early 1960s to more than 70 cents by the late 1980s, and slightly above 60 cents by 2000. It is plausible to think that such variations might have had substantial effects on the economic activity of high income earners such as labor supply decisions, career choices, and savings decisions, as well as on the form of compensation (salary versus untaxed fringe benefits for example). Indeed, the intellectual weight behind the dramatic reduction in marginal tax rates in the 1980s was the logic of supply side economics arguing that lower tax rates could generate important increases in economic activity, and perhaps even tax revenues. As documented by Feenberg and Poterba (1993, 2000) and Piketty and Saez (2003), there has been an extraordinary increase in the share of total income accruing to upper groups in the income

---

[1]The statistics on the number of taxpayers in each tax bracket have been reported in the Internal Revenue Service (IRS) annual publication *Statistics of Income* regularly since 1961.

distribution over the last 25 years. For example, the income share of the top 1% taxpayers (excluding capital gains from the analysis), has surged from less than 8% in the early 1970s to almost 17% in 2000 (Piketty and Saez, 2003). Feenberg and Poterba (1993) pointed out that, the timing of the increase in top income shares, and most notably the surge in top income from 1986 to 1988 around TRA of 1986, appears to be closely related to the cuts in top tax rates. Slemrod and Bakija (2000) and Piketty and Saez (2003) note, however, that the surge in top incomes accelerated in the late 1990s, although top income tax rates increased substantially in 1993.

The goal of the present paper is to understand the effects of marginal income tax rates on reported incomes by analyzing the shares and composition of incomes accruing to various groups in the top tail of the income distribution, as well as the marginal income tax rates faced by those groups. Our analysis will focus on the 1960-2000 period because this period spans all the important tax changes since World War II,[2] and allows us to use the large and stratified electronic tax return micro-files built by the IRS since 1960 as well as the TAXSIM tax calculator created and maintained by the NBER to estimate marginal and average tax rates.[3]

There is a large literature trying to estimate the effects of taxes on labor supply, savings, and retirement decisions. Over the past decade, a new literature has emerged which has pointed out that these standard behavioral responses are only components of what drives reported incomes; other responses such as the form of compensation, unmeasured effort, and compliance also ultimately determine reported incomes, and these may be more elastic with respect to taxation. Feldstein (1999) shows that it is the overall elasticity of taxable income with respect to the net-of-tax rate (one minus the marginal tax rate) which is relevant for assessing the implications of tax changes for revenue raising and welfare. The influential studies of Lindsey (1987) and Feldstein (1995), using the 1980s tax cuts, estimated very large elasticities, in excess of one. This striking conclusion has generated a substantial body of work on this central elasticity parameter and generated a wide range of estimated elasticities, ranging from Feldstein and Lindsey's estimates at the high end to close to zero at the low end,[4] depending on the estimation methodology and

---

[2]There are few studies on behavioral responses to taxation in the United States in the pre-war era. Goolsbee (1999) provides a simple analysis of the most important episodes.

[3]See Feenberg and Coutts (1993) for a description of the TAXSIM calculator.

[4]See Gruber and Saez (2002) for a survey.

the tax reforms considered.

Our analysis shows that only taxpayers within the top 1% appear to be responsive to changes in tax rates over the 1960-2000 period. Even upper middle income class taxpayers (within the top decile but below the top 1%), which experienced substantial changes in marginal tax rates, show no evidence of responses to taxation, either in the short-run or the long-run. Attributing all the gains of the top 1% relative to the average to the changes in tax rates produces very large elasticities of income with respect to net-of-tax rates, between 0.9 and 1.4. However, allowing for a single secular and non-tax related time trend in the top income share reduces the elasticity drastically (between 0 and 0.5). Top income shares within the top 1% show striking evidence of large and immediate responses to the tax cuts of the 1980s, and the size of those responses is largest for the very top income groups. In contrast, top incomes display no evidence of short or long-term response to the extremely large changes in the net-of-tax rates following the Kennedy Tax cuts in the early 1960s. Our compositional data shows that part of the response to the 1980s tax cuts has been due to a sudden and permanent shift of corporate income toward the individual income sector using partnerships and subchapter S corporations legal entities taxed only at the individual level. However, most of the surge in top incomes since the 1970s has been due to a smooth and extraordinary increase in the wages and salary component. This wage income surge started slowly in the early 1970s and has accelerated over the period, and especially during the last decade, and does not seem to be closely related to the timing of the tax cuts. There is evidence of short-term responses of the wage income component around TRA 1986 and OBRA 1993 but it is basically impossible to tell apart a long term effect of tax cuts from a non-tax related secular widening of the disparity of earnings.

Our paper proceeds as follows. Section 2 describes the key identification issues in estimating behavioral elasticities of income with respect to marginal tax rates and shows how such elasticity estimates can be used for tax policy analysis. Section 3 presents our results on income shares and marginal tax rates, as well as the evolution of the composition of top incomes. Section 5 contrast the U.S. experience with evidence from other countries.

2   Conceptual Framework and Methodology

2.1   Estimating Elasticities

The economic model underlying the estimation of behavioral responses to income taxation is a simple extension of the static labor supply model. Individuals maximize a utility function $u(c, z)$ increasing in after tax income c (available for example for consumption) and decreasing in before tax income z (earning income is costly). The budget constraint takes the form $c = (1 - \tau)z + R$ where τ is the marginal tax rate and R is virtual income. Such maximization generates an individual "income supply" function $z(1 - \tau, R)$ which depends on the net-of-tax rate $1 - \tau$ and virtual income R.[5] Each individual has a particular income supply function reflecting his skills, taste for labor, etc. Income effects are in general explicitly or implicitly assumed away in most studies and the income function z is then independent of R. In the paper, we will also assume away income effects and assume that the income function depends only on the net-of-tax rate.[6] The key point is that, in contrast to the standard labor supply model, not only changes in hours of work can affect earnings z but also intensity of work on the job, career choices, form of compensation, etc. The analysis below will show that it is indeed the full response of "income supply" that is relevant for tax policy (a point made by Feldstein, 1999).

The literature on behavioral responses to taxation has attempted to use tax reforms to identify the elasticity of reported incomes with respect to the net-of-tax rate defined as $e = [(1 - \tau)/z]\partial z/\partial(1 - \tau)$ in the notation used above. In order to isolate the effects of the net-of-tax rate, one would want to compare observed reported incomes after the tax rate change to the incomes that would have been reported had the tax change not taken place. Obviously, the latter are not observed and must be estimated. The simplest method consists in using reported incomes before the reform and hence relate changes in reported incomes before and after the reform to changes in tax rates.

Lindsey (1987) and Feldstein (1995) applied this methodology to the ERTA 1981 and TRA

---

[5]This income supply function remains valid in the case of non-linear tax schedules, $c = (1 - \tau)z + R$ then represents the linearized budget constraint at the utility maximizing point.

[6]Labor supply studies in general estimate modest income effects (see Blundell and Pencavel, 1999 for a survey). Gruber and Saez (2002) try to estimate both income and substitution effects in the case of reported incomes, and find very small and insignificant income effects.

1986 tax changes and found that top income groups, which experienced the largest marginal tax cuts, also experienced the largest gains in reported incomes. As a result, Lindsey (1987) and Feldstein (1995) obtain very large elasticities, between 1 and 3, with preferred estimates around 1.5. There are several important issues with those estimates.

First, as pointed out by Slemrod (1996,1998) and Goolsbee (2000b), those elasticities will be upward biased if, for non-tax related reasons, top incomes were doing better than average incomes during that period. A large body of work has suggested that non-tax factors, such as skill biased technical progress, the development of international trade, or the decline of unions might have lead to a substantial increase in earnings disparity in the 1980s (see Katz and Autor, 1999 for a survey). To overcome this issue, it would be preferable to compare taxpayers with similar incomes rather than comparing the rich to the middle. In the case of income taxation, this is difficult for two reasons. First, for most reforms, taxpayers with similar incomes face very similar tax changes.[7] Second, although the discontinuity in marginal tax rates due to the progressive bracket structure creates sharp changes in marginal incentives for taxpayers with very similar incomes,[8] this cannot be satisfactorily exploited to estimate elasticities because it appears that taxpayers either control imperfectly their incomes or are not well aware of the details of the tax code and their precise location on the tax schedule.[9] Therefore, it is conceivable that only large or salient tax changes are likely to generate behavioral responses, raising some interesting and complicated issues about the estimation of behavioral responses and the design of tax policy (see Liebman and Zeckhauser (2003) for an analysis along those lines).

Second, comparing years just before and just after the reform might capture the short-term elasticity which can be quite different from the long-term elasticity which is the relevant parameter for tax policy. Slemrod (1995) discusses this point and Goolsbee (2000a) shows convincingly that executives exercised massively stock-options in 1992 in order to avoid the

---

[7]In contrast, redistributive programs such as the Earned Income Tax Credit which is targeted to taxpayers with children, allows to use taxpayers with no children but similar income as a plausibly better control group to identify the effects of the program (see e.g., Eissa and Liebman, 1996).

[8]Saez (2003) tries to exploit this feature and the 'bracket creep' from 1979 to 1981 to identify behavioral responses.

[9]Saez (2002) documents in detail the fact that we do not observe bunching, as predicted by theory, at the kink points of the tax schedule.

higher tax rate starting in 1993, creating a large short-term elasticity of reported income around OBRA 1993 but that the longer term elasticity was much smaller and possibly equal to zero.[10] Looking at times series spanning a number of years before and after the reform, as in Poterba and Feenberg (1993), can be helpful to make progress on those two issues.

Third, Lindsey and Feldstein studies assume implicitly that elasticities are the same for all income groups, and as we will see, the data strongly suggests that the very high incomes are much more responsive to taxation than the middle or upper middle income class. More precisely, instead of adopting the simple difference method just described, they compare changes in the incomes of the very rich (experiencing the largest tax rate changes), to changes in incomes of the middle and upper middle class (experiencing more modest tax changes). This difference-in-differences of (log) incomes is then divided by the corresponding difference-in-differences of (log) net-of-tax rates to obtain an elasticity estimate of the form:

$$\hat{e} = \frac{\Delta \log(z^H) - \Delta \log(z^M)}{\Delta \log(1 - \tau^H) - \Delta \log(1 - \tau^M)}$$

where z^H, z^M and τ^H, τ^M denote the incomes and marginal tax rates of the high (H) and middle (M) income groups respectively; and Δ denotes the changes from before to after the tax change. Suppose that the middle class has a zero elasticity so that $\Delta \log(z^M) = 0$ and that the high incomes have an elasticity of e so that $\Delta \log(z^H) = e \Delta \log(1 - \tau^H)$ and that the middle class experiences an increase in net-of-tax rates half as large as the high incomes so that $\Delta \log(1 - \tau^M) = 0.5 \cdot \Delta \log(1 - \tau^H)$. Then, the estimated $\hat{e} = 2 \cdot e$, creating a dramatic upward bias in the estimate. This simple example shows that it is not appropriate to rely on comparisons of middle incomes and upper incomes when there is a strong suspicion that the behavioral elasticities for the two groups are quite different.

Fourth, the increases in top incomes following the 1980s tax changes might have been due in part to income shifting rather than creation of new income. As we show below, the critical distinction for policy and welfare analysis, is whether the increase in reported incomes comes at

---

[10]Feldstein and Feenberg (1998) noted a decrease in top reported incomes from 1992 to 1993 and interpreted this finding as evidence of large behavioral elasticities. As compensation of executives continued to soar throughout the late 1990s, negative long-run elasticity estimates would be obtained by repeating Goolsbee's analysis and comparing incomes in 1992 to those of the late 1990s.

the expense of untaxed activities (such as leisure, fringe benefits, perquisites) or taxed activities (such as profits in the corporate sector, future capital gains, deferred compensation such as pensions). Slemrod (1996) points out that part of the surge in top incomes following TRA 1986 was due to a dramatic increase in S-corporation income, suggesting that many business owners switched the legal form of their corporations from subchapter C (facing the corporate income tax on their profits) toward subchapter S (which do not face the corporate tax and whose profits are taxed directly at the individual level) as the top individual income tax rate became lower than the corporate income tax rate by 1988.[11] Caroll and Joulfaian (1997) explore this issue in more detail using a panel of corporations from 1985 to 1990, and confirm Slemrod (1996) earlier findings. Gordon and Slemrod (2000) propose a systematic study of income shifting by analyzing simultaneously tax changes and reported incomes at the corporate and personal level. In this paper, we analyze in detail the composition of reported individual incomes in order to cast light on the source of the changes in reported incomes following tax reforms.

The early studies by Lindsey (1987) and Feenberg and Poterba (1993) used the large and stratified annual cross-sectional tax return data to document the evolution of top reported incomes. Following Feldstein (1995) influential analysis of the TRA 1986, a number of studies have used panel data to estimate elasticities. The justification put forward for using panel data instead of repeated cross-sections is that it might alleviate the issue of non-tax related changes in income inequality, as the same individuals are followed from before to after the reform. However, there is no reason why non-tax related increases in inequality should be due mostly from lower income individuals becoming rich rather than the rich becoming richer. Furthermore, a tax cut

---

[11]A C-corporation faces the corporate tax on its profits. Profits are then taxed again at the individual level if paid-out as dividends. If profits are retained in the corporation, they may generate capital gains that are taxed at the individual level but in general more favorably than dividends, when they are realized. Profits from S-corporations (or partnerships and sole proprietorships) are taxed directly and uniquely at the individual level. Distributions from S-corporations to individual owners generate no additional tax. Thus, a S-corporation is fiscally more advantageous than the C-corporation the lower the individual tax rate, the higher the corporate tax rate, and the higher the capital gains tax rate (see Scholes and Wolfson, 1992, Chapter 4, for extensive details and examples). A business can switch to and from the C and S status but S-corporations cannot have more than a limited number of stock-holders (75 currently), issue more than one class of stock, or be a subsidiary of other corporations.

might induce middle incomes to try harder to become rich, and this behavioral response will be missed by a Feldstein type panel data analysis. The use of panel data has two additional important drawbacks. First, the publicly available panel of tax returns is not stratified and hence does not allow nearly as precise a study of the evolution of top incomes as the large stratified cross-sections.[12] Second, comparing groups ranked according to pre-reform incomes generates a mean reversion problem: if there is mobility in incomes from year to year, then it can cause high income taxpayers in one year to appear low income in the next, aside from any true behavioral response. Eliminating this mobility bias requires to control for pre-reform income in the estimation but this will weaken and possibly destroy identification as the size of net-of-tax rates changes is closely correlated with income.[13]

Many authors, including Lindsey (1987) himself, have argued that comparing income groups using repeated cross-sections is a valid strategy only if taxpayers stay in the same groups from year to year. However, following a tax rate cut such as ERTA 1981 or TRA 1986, one would like to know how the distribution of reported income has changed relative to a scenario where the tax change does not take place. Whether or not there is mobility in incomes from year to year is independent of this question, as long as the income distribution is stationary (absent the tax change). In contrast, mobility in incomes is precisely what complicates the panel data analysis. Thus, a better statement seems to be that the absence of income mobility makes the panel analysis equivalent (but not better) than the repeated cross-sectional analysis, while the presence of substantial income mobility makes the panel analysis worse.[14]

Measuring the tax induced change in the income distribution is exactly what is needed to derive the tax revenue consequences of the tax change. Because we do not observe the counterfactual income distribution when no tax change takes place, we have to rely on income distributions from previous years, and there is no systematic bias in the repeated cross-section

---

[12]Auten and Carroll (1999) have used a larger panel available only at the Treasury to compare years 1985 and 1989. It is, however, difficult to create longer panels to analyze longer term time series.

[13]This point is discussed in Gruber and Saez (2002) who overcome this problem by using many years instead of just two in the analysis. The implicit assumption they need to make, however, is that mobility remains stable from year to year.

[14]Panel data have key advantages to study some questions more subtle than the overall response of reported incomes. For example, if one wants to study how a tax change affects income mobility (for example, do more middle incomes becomes successful entrepreneurs following a tax rate cut?), panel data is clearly necessary.

analysis as long as the income distribution remains stationary, absent the tax change. The direct focus on the income distribution series overtime allows a much more concrete and simple grasp on the evolution of incomes for different groups than panel analysis, as it is straightforward to divide the population into various percentiles for each year, and analyze simultaneously the evolution of the incomes and the marginal tax rates of these groups. By relating the changes in incomes to the changes in net-of-tax rates, we can obtain elasticity estimates. Starting with Lindsey (1987), several authors have pointed out that, when comparing incomes and marginal tax rates before and after a tax change, it is not appropriate to use actual marginal tax rates after the reform because those are "endogenous" in the sense that they are affected by the behavioral changes in income (as the progressive tax schedule generates a positive correlation between incomes and marginal tax rates). This point is incorrect because comparing incomes before and after the reform amounts to using time as an instrument, which takes care of the mechanical and cross-sectional correlation between incomes and the marginal tax rates.[15]

Finally, Slemrod (1998) and Slemrod and Kopczuk (2002) make the important point that the elasticity of reported incomes with respect to tax rates might not be a fixed parameter and depends on the legal details and the enforcement of the tax system: for example, if it is easy for corporations to switch from subchapter C to subchapter S to avoid taxes, the individual tax base might be much more elastic than in a setting where subchapter S corporations do not exist. Kopczuk (2003) proposes an empirical analysis of this issue for the United States from 1979 to 1990 and shows that taxable income elasticities are negatively related to the base of incomes subject to taxes suggesting that introducing additional deductions increases the responsiveness of taxable incomes. Goolsbee (1999) studies the key tax changes in the United States since the 1920s and finds enormous heterogeneity in the observed responses from episode to episode. The present analysis of the period 1960-2000 also displays significant heterogeneity in responses over time.

---

[15]Replacing the actual marginal tax rate after the reform by the predicted marginal tax rate based on pre-reform income, as done in Lindsey (1987) or Feldstein (1995), in principle leads to a reduced form estimate that is not the behavioral parameter of interest. The bias, however, is likely to be small. Auten and Carroll (1999) corrected for this minor issue and Gruber and Saez (2002) explain the problem in more detail.

2.2 Using Elasticities for Tax Policy

Most of our empirical analysis will show that evidence of behavioral responses to changes in marginal tax rates is concentrated in the top of the income distribution, with little evidence of any response for the middle class.[16] Therefore, it is useful to analyze the effects of increasing the marginal tax rate on the upper end of the income distribution. Let us therefore assume that incomes in the top bracket, above a given threshold $\bar{z}$, face a constant marginal tax rate τ.[17] We denote by N the number of taxpayers in the top bracket.

We assume that incomes reported in the top bracket depend on the net-of-tax rate $1 - \tau$, and we denote by $z(1 - \tau)$ the *average* income reported by taxpayers in the top bracket. As discussed above, we assume away income effects in the analysis and thus the net-of-tax rate is the only relevant parameter. The elasticity (compensated or uncompensated as there are no income effects) of income in the top bracket with respect to the net-of-tax rate is therefore defined as $e = [(1 - \tau)/z]\partial z/\partial(1 - \tau)$. Suppose that the government increases the top tax rate τ by a small amount $d\tau$ (with no change in the tax schedule for incomes below $\bar{z}$). This small tax reform has two effects on tax revenue. First, there is a mechanical increase in tax revenue due to the fact that taxpayers face a higher tax rate on their incomes above $\bar{z}$. Hence, the total mechanical effect is

$$dM = N[z - \bar{z}]d\tau.$$

This mechanical effect is the projected increase in tax revenue, absent any behavioral response. This corresponds to the tax revenue simulations actually performed by government agencies, which assume away behavioral responses.

Second, the small increase in the tax rate triggers a behavioral response which reduces the average reported income in the top bracket by $dz = -e \cdot z \cdot d\tau/(1 - \tau)$ on average and hence produces a loss in tax revenue equal to

---

[16]The low end of the income distribution is out of the scope of the present paper because many low income families and individuals do not file income tax returns. The large literature on responses to welfare and income transfer programs targeted toward low incomes has, however, displayed evidence of significant labor supply responses (see e.g., Meyer and Rosenbaum, 2001 for a recent analysis).

[17]In the case of year 2003 tax law, for example, taxable incomes above $\bar{z} = \$311,950$, are taxed at the top marginal tax rate of $\tau = 38.6\%$.

$$dB = -N \cdot e \cdot z \cdot \frac{\tau}{1 - \tau} d\tau.$$

Summing the mechanical and the behavioral effect, we obtain the total change in tax revenue due to the small reform:

$$dR = dM + dB = Nd\tau(z - \bar{z}) \cdot \left[1 - e \cdot \frac{z}{z - \bar{z}} \cdot \frac{\tau}{1 - \tau} \right].$$

Let us denote by a the ratio $z/(z - \bar{z})$. Note that $a \geq 1$ and that $a = 1$ when $\bar{z} = 0$, that is, when there is a single flat tax rate applying to all incomes. If the top tail of the distribution is Pareto distributed,[18] then a is independent of $\bar{z}$ and exactly equal to the Pareto parameter. As the tails of actual income distributions are very well approximated by Pareto distributions, it turns out that the coefficient a is extremely stable for $\bar{z}$ above \$200,000. Saez (2001) provides such an empirical analysis for 1992 and 1993 incomes using tax return data. The parameter a measures the thinness of the top tail of the income the distribution: the thicker the tail of the distribution, the larger is z relative to $\bar{z}$, and hence the smaller a. Feenberg and Poterba (1993) provide estimates of the Pareto parameter a from 1951 to 1990 for the United States using income tax returns and show that a has decreased from about 2.5 in the early 1970s to around 1.5 in the late 1980s.[19]

We can rewrite the effect of the small reform on tax revenue dR simply as:

$$dR = dM \left[1 - \frac{\tau}{1 - \tau} \cdot e \cdot a \right]. \tag{1}$$

Formula (1) is of central importance. It shows that the fraction of tax revenue lost through behavioral responses – the second term in the square bracket expression – is a simple function increasing in the tax rate τ, the elasticity e, and the Pareto parameter a. This expression is also equal to the marginal deadweight burden created by the increase in the tax rate. More precisely, because of the envelope theorem, the behavioral response creates no additional welfare

---

[18]A Pareto distribution has a density function of the form $f(z) = C/z^{1+\alpha}$ where C and α are constant parameters. α is called the Pareto parameter.

[19]Piketty and Saez (2003) provide estimates of thresholds $\bar{z}$ and average incomes z corresponding to various fractiles within the top decile of the U.S. income distribution from 1913 to 2000, allowing a straightforward estimation of the parameter a for any year and income threshold.

loss as the individual is maximizing utility, and thus the utility loss (in dollar terms) created by the tax increase is exactly equal to the mechanical effect dM. However, tax revenue collected is only $dR = dM + dB$ with $dB < 0$. Thus $-dB$ represents indeed the extra amount lost in utility over and above the tax revenue collected dR. The marginal excess burden expressed in terms of extra taxes collected is simply

$$-\frac{dB}{dR} = \frac{e \cdot a \cdot \tau}{1 - \tau - e \cdot a \cdot \tau}. \tag{2}$$

Those formulas are valid for any tax rate τ and income distribution, even if individuals have heterogeneous utility functions and behavioral elasticities.[20] as long as income effects are assumed away. Thus, this formula should be preferred to the Harberger triangle approximations which require small tax rates to be valid. The parameters τ and a are straightforward to obtain, the elasticity parameter e is thus the central non-trivial parameter necessary to make use of formulas (1) and (2). For example, in 2000, for the top .5% income cut-off (corresponding approximately to the top 39.6% federal income tax bracket in that year), Piketty and Saez (2003) estimate that $a = 1.6$. For an elasticity estimate $e = 0.5$, corresponding to the mid to upper range of the estimates from the literature, the fraction of tax revenue lost through behavioral responses (dB/dM), should the top tax rate be slightly increased, would be 52.5%, more than half of the mechanical projected increase in tax revenue. In terms of marginal excess burden, increasing tax revenue by \$1 requires to create a utility loss of $1/(1 - .525) = \$2.11$ for taxpayers, and hence a marginal excess burden of \$1.11 or 111% of the extra \$1 tax collected.

Following the supply-side debates of the early 1980s, much attention has been focused on the tax rate maximizing tax revenue, the so-called "Laffer rate". The Laffer rate τ^* maximizes tax revenue, hence the bracketed expression in equation (1) is exactly zero when $\tau = \tau^*$. Rearranging the equation, we obtain the following simple formula for the Laffer tax rate τ^* for the top bracket:

$$\tau^* = \frac{1}{1 + a \cdot e}. \tag{3}$$

A top tax rate above the Laffer rate is a very inefficient situation because decreasing the tax rate would both increase government revenue and the utility of high income taxpayers.[21] At the

---

[20]The elasticity e is the average (income weighted) of individual elasticities.

[21]In the case where the government has strong redistributive tastes and does not value the marginal consumption

Laffer rate, the excess burden becomes infinite as raising more tax revenue becomes impossible. Using our previous example with $e = 0.5$ and $a = 1.6$, the Laffer rate τ^* would be 55.6%, not much higher than the combined maximum federal, state, medicare, and sales tax rate. Note that when $\bar{z} = 0$, and the tax system has a single tax rate, the Laffer rate becomes the well-known expression $\tau^* = 1/(1 + e)$. As $a \geq 1$, the flat rate maximizing tax revenue is always larger than the Laffer rate for high incomes only. This is because increasing the top tax rate collects extra taxes only on the portion of incomes above the bracket threshold $\bar{z}$ but produces a behavioral response as large as an across the board increase in marginal tax rates.

The analysis has assumed so far that the reduction in incomes due to the tax rate increase has no other effect on tax revenue. This is a reasonable assumption if the reduction in incomes is due to reduced labor supply (and hence an increase in untaxed leisure time), or due to a shift from cash compensation toward untaxed fringe benefits or perquisites (more generous health insurance, better offices, company cars, etc.). However, in many instances, the reduction in incomes is due in part to a shift away from individual income toward other forms of income such as corporate income, or deferred compensation, that will be taxable to the individual when paid out (see Slemrod, 1998). For example and we will come back to this later on in detail, Slemrod (1996) and Gordon and Slemrod (2000) show convincingly that part of the surge in top incomes after the Tax Reform Act of 1986, is due to a shift of income from the corporate sector toward the individual sector.

Let us therefore assume that the incomes that disappear from the individual income tax base following the tax rate increase $d\tau$ are shifted to other bases taxed at rate t on average. For example, if two thirds of the reduction in individual reported incomes is due to increased leisure and one third is due to a shift toward the corporate sector, t would be one third of the corporate tax rate, as leisure is untaxed. In that case, it is straightforward to show that formula (1) becomes:

---

of high income individuals relative to the average individual, the optimal income tax rate for high incomes is exactly equal to the Laffer rate (3). In the general case where the government values the marginal consumption of high incomes at $0 \leq g < 1$, the optimal tax rate for the rich is such that the bracketed expression in (1) is equal to g. See Saez 2001) for a more detailed exposition following the classical optimal income tax theory of Mirrlees (1971).

$$dR = dM \left[1 - \frac{\tau - t}{1 - \tau} \cdot e \cdot a \right]. \tag{4}$$

The same envelope theorem logic applies for welfare analysis and the marginal deadweight burden formula is also modified accordingly by replacing $e \cdot a \cdot \tau$ by $e \cdot a \cdot (\tau - t)$ in both numerator and denominator of (2). The Laffer Rate (3) becomes:

$$\tau^* = \frac{1 + t \cdot a \cdot e}{1 + a \cdot e}. \tag{5}$$

If we assume again that $a = 1.6$ and $e = .5$, but that incomes disappearing from the individual base are taxed at $t = 20\%$ on average, the fraction of revenue lost due to behavioral responses drops from 52.5% to 26%, and the marginal excess burden (expressed as a percentage of extra taxes raised) decreases from 111% to 35%, if the initial top tax rate is $\tau = 39.6\%$. The Laffer rate increases from 55.6% to 64.5%. This simple theoretical analysis shows therefore, that, in addition to estimating the elasticity e, it is critical to analyze the source or destination of changes in individual incomes.

2.3   Data and Methodology

We estimate the level and shares of total income accruing to various upper income groups using the large cross-sectional individual tax return data annually released by the IRS since 1960.[22] The data are a stratified sample of tax returns, allowing an extremely precise analysis of top incomes. The top income shares are estimated based on Piketty and Saez (2003) analysis.[23] The unit of analysis is the tax unit defined as a married couple living together (with dependents) or a single adult (with dependents), as in the current tax law. Since 1960, the average number of individuals per tax unit has decreased from 2.6 to 2.1 but the average number of adults (aged 20 and above) per tax unit declined much more modestly from 1.62 to 1.51 (see Table A). This decline, however, has been of similar magnitude for top and average income families.

---

[22]There is no micro data for years 1961, 1963, and 1965.

[23]The main (and very minor) difference is that government transfers such as Social Security benefits and Unemployment Compensation have been excluded from the income definition to obtain better consistency in the income definition over years.

Each upper income group is defined relative to the total number of potential tax units in the entire U.S. population, estimated from population and family census data as the sum of married men, divorced and widowed men and women, and of single adults (aged 20 and above).[24] The income definition we use is consistent over time and includes all income items excluding realized capital gains[25] reported on tax returns and before all deductions such as adjustments to gross income, exemptions, itemized and standard deductions. We exclude government transfers such as Social Security (SS) benefits and Unemployment Insurance (UI) benefits. Thus, our income measure is defined as Adjusted Gross Income (AGI) less realized capital gains included in AGI, less taxable SS and UI benefits, plus all the adjustments to gross income.

As in Piketty and Saez (2003), we consider various groups within the top decile of the income distribution. In order to get a more concrete sense of those upper income groups, Table 1 displays the thresholds, the average income level in each group, along with the number of tax units in each group, all for 2000. The median income, as well as the average income for the bottom 90% of tax units is quite low, around $25,000. The groups in the top decile below the top 1% (the top 10-5% denoted the bottom half of the top decile, and the top 5-1%, the next 4 percentiles) have average incomes of $100,000 and $160,000 respectively, which corresponds, perhaps surprisingly given how far up the income distribution those groups are, to the popular view of the middle and upper middle income class. In 2000, an annual family income of at least $280,000 is required to be part of the top 1%. Hence, the top 1% corresponds perhaps to the popular view of the rich. About 140,000 tax units or 0.1% of all tax units report incomes larger than one million dollars (the very rich). Finally, the top .01%, the smallest top group we consider, is formed by the top 13,400 tax units, reporting on average $13 million of annual income in 2000, these are the super-rich Americans.

We estimate shares of income by dividing the income amounts accruing to each group by total personal income, where we have assumed that non-filing units earn 20% of the average

---

[24]From 1960 to 2000, between 90 and 95% of tax units actually filed an income tax return, as many non-taxable families file in order to get tax refunds.

[25]Realized capital gains form a very volatile component of income and face in general a different tax treatment than other forms of income. There is a large literature focusing on the response of capital gains realizations to tax changes. See Auerbach (1988) for a survey.

income.[26] We then estimate the composition of income for each group and we consider seven components: salaries and wages (including exercised stock-options, bonuses, and private pensions), S-corporation income, sole proprietorship (Schedule C income) and farm income, partnership income, dividends, interest income, and other income (including smaller item such as rents, royalties, estate income, and other miscellaneous items).

Marginal tax rates are estimated using the TAXSIM tax calculator. For each individual record, we compute a weighted marginal tax rate based on wage income and other income as various provisions in the tax code generate differences in the tax treatment of wage income and other forms of income. For each income group, we then estimate an average marginal tax rate weighted by income.[27] It is important to note that our marginal tax rate computations ignore state income taxes because the data does not provide state information for high income earners.

We use the same methodology to compute top wage shares using wages and salaries reported on tax returns. Wages and salaries include exercised stock-options and bonuses. In this case, groups are defined relative to the total number of tax units with positive wage income estimated as the number of part-time and full workers from National Income Accounts less the number of married women who are employees. The sum of total wages in the economy used to compute shares is obtained from National Income Accounts (total compensation of employees). The marginal tax rates for upper wage income groups are of course those relevant for wages and salaries and are also weighted by wage income (see Table A).

We propose a very simple time series regression methodology to obtain various elasticity estimates, and illustrate some of the identification difficulties. Because of heterogeneity in elasticities across income groups, all our regressions are run for a single income group. The simplest specification consists in regressing log real incomes on log net-of-tax rates (and a constant) for a given group. Of course, as real incomes grow overtime, we can add a time trend in the regression to control for an exogenous (i.e., non-tax related) real income growth rate. Those estimates are unbiased estimates of behavioral elasticities, if absent any tax change, real incomes in that specific group do not change (first specification) or grow at a constant rate (second specification). These assumptions may not be met. As many years of data are included, these estimates cap-

---

[26]As only between 5 and 10% of tax units do not file returns, our results are not sensitive to this assumption.

[27]As we saw above, for tax policy analysis, it is necessary to weight marginal tax rates by income.

ture mostly the long-term behavioral elasticities. As it is important to distinguish short-term responses, we also run regressions in first differences which relate the year to year changes in marginal tax rates to changes in income and thus capture the short-term response to taxation. As we will see, the pattern of average incomes for the full population does no appear to be related to the evolution of average marginal tax rates, therefore, in order to control for average income growth, we run most of the regressions in terms of log income shares instead of log average incomes. Those regressions control automatically for overall income growth. Adding a time trend in that case amounts to assuming that incomes for the particular group considered diverge exponentially from the average income in the economy.

3 Income Shares and Marginal Tax Rates

3.1 Trends in Average Incomes

We depict on Figure 1, the average federal marginal individual income tax rate, weighted by income, the average federal tax rate (weighted by income as well), and the average income (per tax unit) reported in real terms for the full population from 1960 to 2000. Incomes are expressed in 2000 dollars using the standard CPI-U deflator. Figure 1 shows that real incomes increased quickly from 1960 to 1973 and then hardly increased until the early 1990s. From 1993 to 2000, real incomes have increased quickly but are only 13% higher than in 1973. Real growth depends critically on the CPI deflator. Improvements in the CPI estimation have been made over the years and some of them have been incorporated retrospectively in the so-called CPI-U-RS deflator (see Stewart and Reed, 1999). Using the CPI-U-RS instead of the CPI-U would display about 29% real income growth instead of 13% from 1973 to 2000 (see Table A).

Average tax rates fluctuate between 12 and 15% with peaks during the end of the Vietnam war, the inflationary episode of the late 1970s and early 1980s, and the late 1990s. Average marginal tax rates display larger movements with a steady increase from 21-22% to 30% from the mid 1960s to the early 1980s (with a temporary surge during the Vietnam war surtaxes in 1968-70). In the 1980s, the average marginal tax rate decreased to 23%, and increased slightly to 26% during the 1990s. Figure 1 displays no clear relation between the level of real incomes and the level of marginal tax rates. As displayed in Table 2, a simple OLS regression of log average

18

incomes on the log of the net-of-tax rate controlling for a time trend to account for exogenous economic growth, displays a coefficient of -.01 (.35).[28] A regression in differences, capturing the short-term responses to taxation, also displays a very small and insignificant elasticity .21 (.35). Therefore, the aggregate data displays no evidence of significant behavioral responses of reported incomes to changes in the average marginal tax rate.

Figure 2 shows a striking contrast between the bottom 99% tax units (Panel A) and the top 1% (Panel B). The average real income of the bottom 99% increased steadily from 1960 to 1973 and then stagnated: real incomes in 2000 are hardly higher than in 1973.[29] The decline in marginal tax rates faced by the bottom 99% from almost 30% in 1981 to around 23% in 2000 does not seem to have noticeably improved the growth of real incomes. Indeed as shown in Table 2, regressing the log average incomes on the log net-of-tax rate for the bottom 99% displays negative (although insignificant) coefficients whether or not a time trend is included. The regression in differences produces an estimate extremely close to zero.

In stark contrast, the average real income of the top 1% has increased by 160% since the early 1970s (or by 200% if one uses the CPI-U-RS), and the average marginal tax rate has also declined substantially, from around 50% before 1981 to less than 30% by 1988. It is striking to note that the top 1% incomes start increasing precisely in 1981 when marginal tax rates start going down. The jump in top incomes from 1986 to 1988 corresponds exactly to the sharp drop in marginal tax rates from 45% to 29% after the Tax Reform Act of 1986. These points, first noted by Poterba and Feenberg (1993), suggest that the rich are indeed quite responsive to taxation. The other striking feature of the figure is the extraordinary increase in top incomes from 1994-2000 in spite of the increase in tax rates from about 32% to almost 40% in 1993. Thus, although the marginal tax rates faced by the rich in 2000 are hardly lower than in the mid-1980s (39% instead of 44-45%), top incomes are more than twice larger.

Figure 2 illustrates very well the difficulty of obtaining convincing estimates of the elasticity

---

[28]Table 2 shows that with no time trend control, the coefficient is actually negative, although insignificant: -.37 (.44).

[29]If one uses the CPI-U-RS deflator, the bottom 99% real incomes would have grown by about 13%. In any case, it is clear that real growth of incomes has been very slow in last quarter of the 20th century relative to the 1950-1973 period. It is also important to note that this slow growth is not due to a decrease in the number of adults per tax units (see Table A).

of reported income with respect to the net-of-tax rate. It seems clear that the sharp, and unprecedented, increase in incomes from 1986 to 1988 can be attributed to the large decrease in marginal tax rates that happened exactly during those years. The central question, however, is whether this short-term response persists overtime. In particular, how should we interpret the continuing rise in top incomes in since 1994? If one thinks that this surge is evidence of diverging trends between high incomes and the rest of the population independent of tax policy, which started in the 1970s, then it is tempting to consider the response of TRA 1986 as a purely short-term spiked followed by lower growth from 1988 to 1993, before getting back to the normal upward trend by 1994. On the other hand, one could argue that the surge in top incomes since the mid-1990s might have been the long-term consequence of the decrease in tax rates in the 1980s and that such a surge would not have occurred, had high incomes tax rates remained high as in the 1960s and 1970s. We come back to this point later on.

Those issues are illustrated formally in the regression results of Table 2. When no time trend is included in the regression of log income on log net-of-tax rate, all the growth in top incomes is attributed to the decline in top rates, and the elasticity obtained is extremely large 1.83 (.2). In contrast, including a time trend produces a much smaller, although still sizeable, elasticity .71 (.19) because part of the rise in top incomes is attributed to a secular rise. A regression in differences also produces a significant short-term elasticity .71 (.18).

This analysis also shows that, comparing two single years by taking the ratio of the difference in log incomes to the difference in log net-of tax rates, as done in most studies, can produce any elasticity. Comparing 1981 to 1984, as in Lindsey (1987) would produce an elasticity of 0.77.[30] Comparing 1985 and 1988, as in Feldstein (1995) and Auten and Carroll (1999), would produce an extremely large 1.7 elasticity.[31] In contrast, comparing 1991 to 1994 (Goolsbee, 2000a) would produce a zero elasticity because top incomes are about constant while tax rates increase by almost 10 percentage points.[32] The elasticity would even become negative if one

---

[30]Lindsey obtains larger estimates because he compares the upper income to the middle income groups, creating an upward bias if, as is apparent in the data, elasticities are increasing with income (see discussion above).

[31]Auten and Carroll (1999) obtain a much smaller 0.6 elasticity because they compare 1985 to 1989 (instead of 1988 as Feldstein) of the mean reversion issue discussed above which is difficult to correct with only two years of data.

[32]In contrast, comparing 1992 to 1993 would produce a significant short-term elasticity of 0.63 as in Feldstein

compares 1991 to the late 1990s as both top incomes and the tax rate have increased. The large micro-data sets can be used to obtain those simple elasticity estimates directly from regressions at the individual level as done in many studies, with very small standard errors. The regression counterpart would be to pool the samples of top 1% earners for the pre and post reform years, and run a 2SLS regression of log incomes on log net-of-tax rate using as an instrument a post year dummy.[33] In order the cast further light on those issues and try to separate tax effects from other effects, we turn to a closer analysis of various upper income groups, with particular emphasis on the change in the composition of reported incomes.

3.2 Trends in Top Income Shares and Marginal Tax Rates

We have shown that average real incomes do not seem to respond to average marginal tax rates in the aggregate, and that responses seem to be concentrated in the upper 1% fraction of the income distribution. Therefore, from now on, we normalize top incomes by considering the shares of total income accruing to various upper groups (as in Feenberg and Poterba, 1993 and 2000, and Piketty and Saez, 2003). This has two advantages. First, the income share measures are independent of the CPI deflator used. Second, the top shares are automatically normalized for overall real and nominal growth in incomes.

Figure 3 displays the share of income accruing to the bottom groups of the top decile: top 10-5% (Panel A), and top 5-1% (Panel B), along with the average marginal tax rate faced by those two groups. The figure shows that those upper-middle class groups (see Table 1), have experienced very moderate gains since 1960 and the pattern of the gains does not appear to be correlated with the pattern of the marginal tax rates they face (rising up to 1981, then declining in the 1980s, and then stable in the 1990s). Panels A and B in Table 3 show that regressing the log of those top income shares on the log net-of-tax rates, with or without a time trend control, or in differences to capture short-term responses, produces elasticities very close to zero. Therefore, upper middle income families and individuals (up to the top 1% threshold

---

and Feenberg (1993).

[33]It is doubtful, however, that those small standard errors would be accurate, as random year effects are most likely to be present in the data making 2SLS standard errors far too low and hence worthless (in addition to creating the identification problems discussed above). See Bertrand, Duflo, and Mullainathan (2003) for a detailed discussion of those econometric issues.

around \$280,000 per year in 2000) do not appear to be sensitive to taxation.[34] It is striking, in particular, that those upper middle income class shares increase very little during the 1980s although they experience quite sizeable marginal tax rate cuts (about 9 percentage points for the top 10-5%, and over 13 points for the top 5-1%).[35]

Figure 4 displays the share of income and marginal tax rates for the bottom groups of the top percentile: top 1-.5% (Panel A), and top .5-.1% (Panel B). Interestingly, the top 1-.5% share does not decrease during the 1970s when the marginal tax rate increases from 40 to 50% and does not increase during ERTA 1981 when the marginal tax rate decreases back to 40%. In contrast, TRA 1986, which decreases the rate to around 32% (thus a smaller percentage change in the net-of-tax rate relative to the 1970s or ERTA 1981) does produce a sizeable increase in the income share, producing a noticeable break in the series. The increase in tax rates to about 38% following OBRA 1992 does not seem to have affected the upward trend following TRA 1986. Thus although marginal tax rates since 1993 are only a few percentage points below those of 1983-1986, the income share is 30% larger.[36] The top .5-.1% share displays even clearer evidence of responses to taxation: both shares and marginal tax rates are flat up the 1981. Following the decrease in tax rates of ERTA 1981 and especially TRA 1986, the income share increases significantly. Again, OBRA 1993 has not prevented the income share from continuing to increase in the 1990s. The regressions for those groups display very significant elasticities in all three specifications.

Figure 5 displays the share of income and marginal tax rates for the very top groups: top .1-.01% (Panel A), and the top .01% (Panel B). The responses to ERTA 1981, TRA 1986, and

---

[34]In principle, the secondary earner labor supply responses should be captured by those elasticities. Thus our results can be consistent with the large married women labor supply responses obtained by Eissa (1995) only if secondary earners income is a small fraction of total reported family incomes.

[35]A similar regression analysis for other income groups below the top decile generates small or even negative and always insignificant elasticities. The estimates, however, are not very precisely estimated as changes in net-of-tax rates are much smaller below the top decile.

[36]Those considerations show again that elasticity estimates would be extremely sensitive to the time period considered. The ERTA 1981 and OBRA 1993 episodes would produce zero elasticity estimates, and TRA 1986 would produce a sizeable 0.93 estimate (comparing 1986 and 1988). Comparing 2000 to 1984 and attributing all the large increase in the share to the modest decrease in marginal tax rate would produce an enormous elasticity estimate of 4.94.

the short-term response to OBRA 1993 followed by a surge in income shares since 1995, are even more pronounced than for the groups just below. However, the Kennedy tax cuts of the early 1960s provide striking new evidence. For the very top .01%, the very progressive tax structure of the early 1960s generated extremely high marginal tax rates (around 80%) which were reduced significantly by the Kennedy tax cuts in 1964-5 (to about 65%). This implies a 75% increase in the net-of-tax rate, a much larger increase than the ERTA 1981 and TRA 1986 tax rate reductions. In spite of this enormous marginal tax rate cut, the very top share remains flat in the 1960s, and well into the 1970s, displaying a complete absence of behavioral response in both the short and the long-run.[37] Note that, although the top nominal marginal tax rate was 91%, the average marginal tax rate of the top .01% is "only" slightly above 80%. This is due to various other provisions of the tax code such as the maximum average tax of 87% on income and charitable gifts by the very wealthy.[38]

Table 3 (Panels E and F) show that the regressions for the top .1-.01% display a significant elasticity is all three specifications. In contrast, adding a time trend makes the elasticity for the top .01% go to zero, showing that the top .01% share trends upward but that the pattern is not closely correlated with the decrease in tax rates once a time trend in included. This is due mostly to the Kennedy tax cut episode where the very top rate fails to increase in spite of large reduction in tax rates.

3.3 Composition

We have seen in the previous subsection that the income groups within the top decile display very heterogeneous responses. Groups below the top 1% never display evidence of tax responsiveness. Top groups display a sharp response to the 1980s tax cuts, and especially TRA 1986, but only a short-term response to the tax increase of 1993, and no response for the earlier tax cuts in the 1960s. In order to cast further light on these findings. We now turn to the analysis of the

---

[37]Lindsey (1990) claimed that the Kennedy tax cuts generated a surge in top incomes, but this erroneous result is due to his very casual and not rigorous examination of the tabulations published by the IRS. Goolsbee (1999) makes a more careful use of the same published data (although he does not exclude realized capital gains and does not measure marginal tax rates very accurately) and finds no response, as we do here.

[38]Considering smaller groups at the very top such as the top .001% never generates marginal tax rates higher than 80-82%.

composition of those incomes.[39]

Figure 6 displays the evolution of the top decile income share, and how those incomes are decomposed into the seven sources described in Section 2, from 1960 to 2000. Wage income forms the majority of the top 10% incomes, and its share has increased smoothly from two thirds to about three quarters since 1960. Interesting, the large 12 percentage point gain in the top 10% income share (from 32% to 44%) is due almost entirely to a smooth and secular increase in the wage component (from 22 points to 33.5 points), with the size of the other components remaining stable overall (around 10 points with a squeeze around 7 points in the late 1970s and early 1980s).

As is well known, wages are a decreasing fraction of income as income increases.[40] The middle and upper middle class groups top 10-5% and top 5-1% below the top 1% derive a very large fraction of their incomes in the form of wage income (between 80 and 90%, see Table C1). In contrast, for the top 1%, as depicted on Figure 7, non-wage income is a significant fraction of income. The top 1% income share increases from 8.3% to almost 17% from 1960 to 2000. The striking feature, however, is that 7 out of the 8.7 point increase in the top 1% share is due to the wage income component. As a result, although wages represented only 40% of total income of the top 1% in the early 1960s, they now represent over 60% of top 1% incomes. The increase in the wage component appears to have started in the early 1970s and has been fairly regular with an acceleration in the last two decades (especially the 1990s). There are two spikes in the wage component series, one in 1988 (just after TRA 1986), and another in 1992 (just before the OBRA 1993 tax increase). However, the short-term nature of those two spikes suggests that they were the consequence of re-timing of wage income to take advantage of lower rates.[41]

Although the non-wage part stays stable as a whole, the components display interesting patterns. The most striking feature is the emergence of S-corporation income after TRA 1986. Be-

---

[39]The previous literature has mostly focused on taxable income elasticities. Feenberg and Poterba (1993,2000) analyze the composition of incomes for the top .5% from 1951 to 1990 and Slemrod (1996) analyze the composition of top incomes around TRA 1986.

[40]See Piketty and Saez (2003) for a comprehensive documentation of the composition of top U.S. incomes since 1913.

[41]Goolsbee (2000a) showed that executives exercised massively their stock-options in 1992 in order to take advantage of the low rate of 31% in 1992 before the increase to 39.6% in 1993. This retiming explains the large difference between the short-term and long term elasticity estimates using the OBRA 1993 reform.

fore the 1980s, S-corporation income was extremely small, as indeed, the standard C-corporation form was more advantageous for high income individual owners, as the top individual tax rate was much higher than the corporate tax rate and taxes on capital gains were relatively low. S-corporation income increases sharply from 1986 to 1988 and increases slowly afterwards. The sharp increase in S-corporation income just after TRA 1986 certainly reflects in large part a shift in the status of corporations from C to S status to take advantage of the lower individual rates.[42] In contrast, dividends (paid out by C-corporations and foreign corporations) and sole proprietorship income decrease regularly over the period. Partnership income is about the same in the 1960s as in the 1990s; partnership income was very small during the 1980s due to dramatic increase in partnership losses.[43] The dramatic increase of partnership losses from the mid to late 1970s up to 1986 (during recessions and recoveries alike) is probably first due to the increase in inflation which, because of deductibility of nominal interest payments, might have increased losses.[44] Then, taxpayers and tax accountants might have realized that partnerships offered an attractive possibility to avoid taxes. The repeal of the Investment Tax Credit and the passive losses limitations with the TRA 1986, as well as the reduction in top tax rates, has drastically reduced the value of those tax shelters and probably explains the very quick and sustained disappearance of most partnership losses just after TRA 1986.[45] Sole proprietorship income also displays a similar pattern, with a sharp reduction from the mid 1970s to the mid 1980s.[46] Although the wage income component starts to increase in the early 1970s, the combined effect of sharp reductions in partnership and sole proprietorship incomes from the mid-1970s to 1981 income explains why the top 1% income share stays almost flat up to 1981.

Figure 8 displays the income share and composition of the very top .01% group. It shows a dramatic shift in the composition of very top incomes away from dividends (which represented more than 60% of top incomes in the early 1960s) toward wage income (which represents about 60% of top incomes in 2000).[47] In the early 1960s, the top .01% incomes were facing extremely

---

[42]See Slemrod (1996), Carroll and Joulfaian (1997), and Gordon and Slemrod (2000) for a more precise analysis.

[43]Partnership profits have stayed about stable over the full period.

[44]Note that interest income is particularly high during that period as well.

[45]See Samwick (1996) for a more detailed analysis.

[46]Sole proprietorship income displays a secular trend downward from 1960 to 2000, most likely due to the secular decline in farming, and other traditional business activities organized in the form of sole proprietorships.

[47]This secular shift from rentiers to the working rich at the top of the U.S. income distribution is described in

high marginal tax rates of about 80% on average (while tax rates on long-term capital gains were around 25%). Thus, dividends were a very disadvantaged form of income for the rich suggesting that those top income earners were not concerned about taxes or, more realistically, had little control on the form of payment, and thus might have been in large part passive investors. The share of dividends falls regularly over the period while the share of wage income starts to increase in 1971. By 1979, the wage component overtakes the dividend component. Figure 8 shows clearly that ERTA 1981 produced a sudden burst of S-corporation income (which was negligible up to 1981). This is most likely due to a shift from C-corporations to S-corporations.[48] It is interesting to note that the increase in S-corporation income is concentrated mostly in the top .01% and does not happen at all for groups below the top .1%. This is fully consistent with the tax minimization explanation: ERTA 1981 decreased marginal tax rates significantly only for groups above the top .1% for whom the subchapter S status started to become attractive when the top individual rate was reduced to 50%.[49] Figure 8 shows that almost all the increase in top incomes from 1981 to 1984, first documented by Lindsey (1987), is also due to the surge in S-corporation income. The wage component increases as well but with no noticeable break in the upward trend around ERTA 1981.[50] The S-corporation component increases again sharply from 1986 to 1988, and then stay about stable afterwards. The wage component also presents a spike in 1988, as well as in 1993, but those spikes seem to be short-term responses in a generally upward trending curve. The tax cuts of the 1960s, although extremely large, did not generate any behavioral response, perhaps because top individual rates remained substantially higher than the corporate rate and thus did not induce top taxpayers to switch corporate income toward individual income.

Therefore, to sum up, the dramatic increase in top income shares is due primarily to a secular increase in the wage income component starting in the early 1970s, and the large tax changes of TRA 1986 and OBRA 1993 seem to have only generated short-term spikes in the overall upward and accelerating trend of the wage component.[51] The tax cuts of the 1980s

more detail in Piketty and Saez (2003).

[48]As discussed above, this phenomenon has been well documented in the case of TRA 1986.

[49]From 1980 to 1986, the corporate tax rate was 42%.

[50]Because of the maximum tax of 50% on labor income enacted in 1971-2, marginal tax rates for top wage incomes actually did not change much with ERTA, see below.

[51]Top income shares are flat before 1981 masking the increase in the wage component, because of a large

have generated a surge in business income taxed at the individual level. ERTA 1981 created a surge in S-corporation income for the very top groups of the income distribution. With TRA 1986, S-corporation income surged for all upper income groups. Partnership income also rose dramatically immediately after TRA 1986, mostly because of the disappearance of partnership losses. Those business income components have remained relatively stable after TRA 1986, suggesting that they were the consequence of a one-time shift from the corporate sector, and the one-time closing of the partnership loss tax shelters. The top tax rate increase of 1993 to 39.6% (with a corporate tax rate of 35%) was not large enough to induce business owners to switch back to the C-corporation status. As a result, OBRA 1993 did not produce any long term income shifting away from the individual sector and its only effects seems to have been a short-term re-timing of salary income. The surge in business income reported on individual returns in the 1980s cannot be interpreted as a "supply-side" success as most of those individual income gains came either at the expense of taxable corporate income, or could have been obtained from the closing of tax-shelters by imposing stricter rules on losses from passive businesses.[52] Therefore, success or failure of the tax cuts to generate additional economic activity must be deferred to a more precise analysis of the central wage income component, to which we now turn.

3.4 Top Wage Incomes

We have seen that most of the increase in top income shares since the 1970s is actually due to a sharp increase in the wage income component. The time pattern of marginal tax rates for wage income is not the same as the pattern for other forms of income because of the introduction of the maximum tax rate on earned income in 1971 which reduced the top rate for earned income from 70% (the top rate on other income) to 60% in 1971 and then 50% starting in 1972. This provision became irrelevant in 1982 when the top tax rate for any income source was reduced from 70% to 50%. Therefore, it is of particular interest to analyze separately the wage income

decline in partnership and sole proprietorship income due perhaps to high interest rates and the development of tax shelters in the 1970s. Partnership income (and to a lesser extent sole proprietorship income), increase back to their early 1970s level immediately after TRA 1986.

[52]It is doubtful that the decrease in tax rates, by reducing the incentives to avoid taxes, was necessary to eliminate abusive partnership losses (as argued for example in Samwick, 1996) because partnership losses were almost non-existent before the late 1970s, a time where tax rates were extremely high.

component.

As for average income, the evolution of average real wage income series (for the full population) does not appear to be correlated with the evolution of marginal tax rates. Figure 9 shows the pattern of real incomes and marginal tax rates for the bottom 99% wage earners (Panel A) and the top 1% wage earners (Panel B). The bottom 99% experienced no real growth in wage income since 1972, and the pattern of changes in real wages does not seem to be related to changes in marginal tax rates. In contrast, top 1% wage income earners experienced accelerating growth over the 1960 to 2000 period, with almost a tripling in real wage income since the early 1970s. Consistent with the pattern of the wage component for overall income, top wage incomes experienced spikes just after TRA 1986 and just before OBRA 1993, clear evidence of short-term responses (or re-timing) of labor income compensation. However, the long-run pattern seems to be an extraordinary and accelerating growth independent of the tax developments, as marginal tax rates on those wage income earners were about the same, around 40%, in the mid 1960s and in the most recent years. Indeed, the secular growth in top wages starts in the early 1970s, a time when marginal tax rates were actually increasing (due mostly to bracket creep). To understand better this unprecedented increase in top wage incomes, it is useful to consider smaller groups within the top 1% as we did for overall income.

Figure 10 and 11 display the wage income shares and marginal tax rates for groups within the top percentile. All groups display an accelerating upward trend starting in the early 1970s. For all groups, there is evidence of a short-term response to TRA 1986 (comparing 1986 and 1988), and OBRA 1993 (comparing 1992 and 1993). The implied short-term elasticities are increasing as we move up the income distribution. Elasticities from comparing 1988 to 1986 generate elasticities increasing from 0.65 for the top 1-.5% to 2.27 from the top .01%. However, those two tax reform episodes do not seem to have had permanent effect in the overall increasing trend upward. The large marginal tax reductions of the Kennedy tax reform generated larger changes in the net-of-tax rate of the very top wage earners (see Panel B of Figure 11). However, those changes had no discernable impact, at least in the short-run, on the very top wage shares. This evidence shows that the ability of top wage income earners to re-time their compensation to take advantage of tax changes has dramatically increased. As shown by Goolsbee (2000a), the development of stock-options is clearly the tool that allowed top executives to report salary

28

income in 1992 instead of 1993. The fact that top wage earners did not shift compensation around the 1960s and 1970s tax cuts suggest that they had much less control on the timing of their pay at that time.

Table 4 produces the same regressions as Table 3 but for wage incomes instead of overall income. The shares of the bottom groups of the top decile below the top 1% (top 10-5% and top 5-1%) display very low elasticities, while all groups within the top 1% display significant elasticities when no time trend is included, increasing sharply from 0.3 to 2.5 as we move up the wage income distribution. This is because all the increase in the top wage income shares is attributed to the secular decline in marginal tax rates since the 1960s. Including a time trend reduces dramatically the estimated elasticities which actually become small and insignificant or even negative within the top .1%. Short-term elasticities, estimated using a regression in differences, are also significant and between 0.3 and 0.7.

They key point to resolve is whether we should attribute the long-term increase in top wage shares entirely to the long-term decrease in marginal tax rates. Comparing 1960 and 2000, that seems to be an untenable view for groups below the top .1% because those groups faced comparable marginal tax rates in 1960 and in 2000. As a result, the sizeable increase in the top 1-.5% and top .5-.1% wage income shares cannot be due entirely to marginal tax rates.

The problem is more complicated for the very top groups (within the top .1%) because those groups experienced much larger gains but also experienced a non trivial decline in marginal tax rates. Undoubtedly, a reason for the huge increase in top wage income shares (the top .01% share increased more than ten-fold from .21% in 1970 to 2.45% in 2000) has been the development of stock-options. Stock-options also create lumpiness in wage compensation as they are exercised by executives only once every few years. As a result, the top .01% might be extremely large in recent years because, in any given year, top wage earners are executives who happen to exercise their stock-options in that particular year. The stock-option phenomenon, however, has clearly increased the average compensation of top executives as the top 1%, which certainly includes virtually all the top employees receiving large option grants, even when they do not exercise stock-options, more than doubles from 5.1% to 12.6% from 1970 to 2000.

Thus, the extraordinary increase in top wage incomes, a phenomenon certainly closely related to the explosion of the compensation of CEOs and other top executives, sports, movies, and

television stars, appears too large to have been solely the mechanical consequence of the tax reductions through supply-side effects. Furthermore, the surge in top wages is not related closely enough to the timing of the tax cuts to suggest a direct and simple causal link. Particularly surprising is the surge in top wages since 1994, in spite of the significant tax increase in 1993, which makes the reduction in marginal tax rates faced by top wage groups appear rather small.[53]

A more pertinent question to ask is perhaps whether this surge in top wages could have occurred, had the tax structure remained the same as in the early 1960s, and the working rich had to pay in taxes more than three quarters of their compensation. It is plausible to think that the drastic reduction in top marginal tax rates, which started in the 1960s, opened the possibility of the dramatic increase in top wages that started in the 1970s, and accelerated in the 1980s and the 1990s. It is of course impossible to provide a convincing answer to that important question by looking only at individual income tax statistics in the United States. A promising way to make progress would be look more closely into the top salaries surge phenomenon by analyzing executive compensation data. There is a large literature on executive compensation (see Murphy, 1999 for a survey). However, although there are many studies explaining disparity of CEO pay in cross-sectional data, no convincing explanation for the time series evidence seems to have been provided.[54] If the dramatic surge in top compensation is not fully explained by a comparable surge in the marginal productivity of top executives, then this is evidence of a market failure which would certainly change the welfare and tax policy analysis that we presented above. Alternatively, top executive pay may now be aligned to marginal product and was below market value before. We note, however, that the surge in the top 1% salaries since the early 1970s has been accompanied with a dismal growth for the bottom 99% salary earners, and thus does not seem to have had a positive impact on the vast majority of working families. An alternative way to make progress in our understanding is by looking at other countries experiences, a point

---

[53]Companies, however, might have started granting stock-options more aggressively after TRA 1986 because of the decrease in individual tax rates. Those options can be exercised (and thus appear on individual income tax returns) only a number of years later. Hall and Murphy (2003) show, however, that grants of stock-options, valued using the Black-Scholes formula, increased massively *after* the tax increase of 1993.

[54]It is quite telling to read in the recent survey of Hall and Murphy (2003), two prominent and conservative researchers in this field, that their best explanation for the surge in stock-option compensation was that "boards and managers falsely perceive stock options to be inexpensive because of accounting and cash-flow considerations".

to which we now turn for our conclusion.

4   Conclusion: International Comparisons

Unfortunately, no other country offers such a large body of empirical analysis on behavioral responses to individual income taxation than the United States. Recently, however, a number of studies have produced series of top income shares using tax return data. Although, those studies do not produce corresponding series of marginal tax rates, as we have done here, interesting findings emerge.

First, there is enormous heterogeneity in the behavior of top income shares in the recent decades across countries. Some countries, such as the United Kingdom (Atkinson, 2002) or Canada (Saez and Veall, 2003) have experienced notable increases in top income shares, although those increases have not been as pronounced as in the United States. In contrast, countries from continental Europe such as France (Piketty, 2001), the Netherlands (Atkinson and Salverda, 2003), or Switzerland (Dell, Piketty, and Saez, 2003) have experienced either declines or little changes in top income shares since the 1960.

Second, the United Kingdom experience seems to be the closest to the U.S. experience. Top income shares in the United Kingdom started increasing exactly in 1979 when the top rate declined from 98% to 75%, although this increase seems modest relative to size of net-of-tax increase at the top.[55] In 1988, the top rate was further decreased to 40% and has not changed since then. In contrast to the United States however, the increase in top share has been relatively smooth since 1979 with no break around the tax changes. Studying the composition, and estimating precisely the marginal tax rates faced by top U.K. incomes seems to be a priority to understand whether the recent increase in top incomes is due to the tax developments.[56]

Third, Canada has experienced a surge in top incomes significantly larger than the United Kingdom (although smaller than the United States), and as in the United States, this increase has been due to a dramatic increase in top salaries since the early 1980s. However, in contrast

---

[55]It might be the case, however, that for the top .1% incomes, the average decline in marginal tax rates has been much more modest.

[56]Dilnot and Kell (1988) try to analyze this issue but have only access to a single year of micro-tax returns and have to rely on aggregate numbers for their time series analysis.

to the United States, top incomes in Canada have not experienced, very large tax cuts since the 1960s.[57] Thus, the dramatic increase in top incomes in Canada cannot be attributed to fiscal developments in Canada. Saez and Veall (2003) argue that, the threat of emigration toward the United States, have forced Canadian companies to increase the pay of their top employees to retain them, thereby replicating in Canada the dramatic U.S. increase in top employees' pay.

Last, in contrast to the United States and the United Kingdom, France, Netherlands, and Switzerland have experienced relatively small changes in their top tax rates. Piketty (1999) shows that the small changes in the French top tax rates generated small short-term responses of top incomes but that those responses do not seem to persist overtime. Switzerland has lower top income tax rates than the United States (around 35% when adding federal, cantonal, and local income taxes), but has much lower top income shares than the United States (the top 1% share is around 8-9% in the 1990s, while it is between 13 and 17% in the United States).

In sum, high income tax rates do not seem to be able to account for the differences in top income shares across countries, although it is more debatable whether they can account for a substantial part of the time series pattern within countries. Therefore, it would be of most interest to make a systematic analysis of top incomes in countries which have experienced drastic cuts in top income tax rates in the recent decades, as in the United States and the United Kingdom. Those results could teach us whether a dramatic cut in top rates is necessarily associated with a rise in top incomes.

---

[57]The top income tax rate in Canada, including provincial taxes, is about 50% in 2000.

TO DO LIST:

1) Add 2000 composition incomes rigorously estimated either from SOI paper publication or micro-file if available before November 2003

2) Maybe add a short section on capital gains

3) Maybe expand the set of regression estimates to illustrate more clearly the issue with regression estimates of the elasticity. In particular, add additional polynomials in time

4) Expand conclusion by doing more work on international comparisons

References

Atkinson, A. B. (2002) "Top Incomes in the United Kingdom over the Twentieth Century.", mimeo Nuffied College, Oxford.

Atkinson, A. B., and W. Salverda (2003) "Top Incomes in the Netherlands and the United Kingdom over the Twentieth Century.", mimeo Nuffied College, Oxford.

Auerbach, A. (1988) "Capital Gains Taxation in the United States", *Brookings Papers on Economic Activity* 2, 595-631.

Auten, G., Carroll, R., (1999) "The Effect of Income Taxes on Household Behavior" Review of Economics and Statistics 81(4), 681-693.

Bertrand, M., Duflo, E., and S. Mullainathan (2002) "How Much Should We Trust Differences-in-Differences Estimates?", NBER Working Paper No. 8841, forthcoming *Quarterly Journal of Economics*.

Blundell, R., MaCurdy, T., 1999. Labor supply: A eeview of alternative approaches. In O. Ashenfelter, D. Card (Eds.), Handbook of Labor Economics, Amsterdam: North-Holland, Volume 3.

Carroll, R., and D. Joulfaian (1997). "Taxes and Corporate Choice of Organizational Form." Office of Tax Analysis Working Paper No. 73, U.S. Department of the Treasury.

Dell, F., T. Piketty, and E. Saez (2003) "The Evolution of Income and Wealth Concentration in Switzerland over the 20th Century", mimeo UC Berkeley.

Dilnot, A. and M. Kell (1988) "Top-Rate Tax Cuts and Incentives: Some Empirical Evidence", *Fiscal Studies* 9, 70-92.

Eissa, N., (1995) "Taxation and Labor Supply of Married Women: the Tax Reform Act of 1986 as a Natural Experiment" NBER Working Paper No. 5023.

Eissa, N. and J. Liebman (1996) "Labor Supply Response to the Earned Income Tax Credit.", *Quarterly Journal of Economics*, 111, 605-637.

Feenberg, D., Coutts, E., 1993. An introduction to the TAXSIM model. Journal of Policy Analysis and Management 12(1), 189-194.

Feenberg, D. and J. Poterba (1993). "Income Inequality and the Incomes of Very High Income Taxpayers: Evidence from Tax Returns", Tax Policy and the Economy ed. J. Poterba, (MIT

Press: Cambridge), 7, 145-177.

Feenberg, D. and J. Poterba (2000). "The Income and Tax Share of Very High Income House-holds, 1960-1995", American Economic Review, 90(2), 264-270.

Feldstein, M., (1995) "The effect of marginal tax rates on taxable income: A panel study of the 1986 Tax Reform Act." *Journal of Political Economy* 103(3), 551-572.

Feldstein, M. (1999) "Tax Avoidance and the Deadweight Loss of the Income Tax", Review of Economics and Statistics 81(4), 674-680.

Feldstein, M., and D. Feenberg (1996) "The Effect of Increased Tax Rates on Taxable Income and Economic Efficiency: A Preliminary Analysis of the 1993 Tax Rate Increases", In *Tax Policy and the Economy* ed. J. Poterba, (MIT Press: Cambridge), 10, 89-117.

Goolsbee, A., (1999) "Evidence on the high-income Laffer curve from six decades of tax reform." *Brookings Papers on Economic Activity* 2, 1-47.

Goolsbee, A., (2000a) "What happens when you tax the rich? Evidence from executive com-pensation." *Journal of Political Economy* 108(2), 352-378.

Goolsbee, A., (2000b) "It's not about the money: Why natural experiments don't work on the rich." In Slemrod J. (Ed.) *Does Atlas Shrug? The Economic Consequences of Taxing the Rich*, Cambridge University Press.

Gordon, R., Slemrod, J., 2000. Are 'real' responses to taxes simply income shifting between corporate and personal tax bases? In Slemrod J. (Ed.) Does Atlas Shrug? The Economic Consequences of Taxing the Rich, Cambridge University Press.

Gruber, J., Saez, E., (2002). "The Elasticity of Taxable Income: Evidence and Implications", *Journal of Public Economics* 84, 1-32.

Hall, B. and K. Murphy (2003) "The Trouble with Stock Options", NBER Working Paper No. 9784.

Katz, L. and D. Autor (1999), "Changes in the Wage Structure and Earnings Inequality", in *Handbook of Labor Economics*, eds. O. Ashenfelter and D. Card, Amsterdam: North-Holland, Volume 3A.

Kopczuk, W. (2003) "Tax Bases, Tax Rates and the Elasticity of Reported Income", mimeo Columbia University.

Liebman, J. and R. Zeckhauser (2003) "Schmeduling", Harvard University mimeo.

Lindsey, L. (1987) "Individual taxpayer response to tax cuts: 1982-1984, with implications for the revenue maximizing tax rate", *Journal of Public Economics* 33, 173-206.

Lindsey, L. (1990) *The Growth Experiment: How the New Tax Policy is Transforming the U.S. Economy* (New York: Basic Books, Inc.)

Meyer, B., Rosenbaum, D., 2001. Welfare, the Earned Income Tax Credit, and the Labor Supply of Single Mothers. Quarterly Journal of Economics 116.

Mirrlees, J.A., 1971. An exploration in the theory of optimal income taxation. Review of Economic studies 38, 175-208.

Murphy, K.J. (1999) "Executive Compensation", in *Handbook of Labor Economics*, eds. O. Ashenfelter and D. Card, Amsterdam: North-Holland, Volume 3B.

Piketty, T. (1999) "Les hauts revenus face aux modifications des taux marginaux supérieurs de limpôt sur le revenu en France, 1970-1996", *Economie et Prévision* 138-139, 25-60.

Piketty, T. (2001) "Income Inequality in France, 1901-1998", CEPR Discussion Paper No. 2876, forthcoming *Journal of Political Economy*.

Piketty, T. and Saez, E. (2003) "Income Inequality in the United States, 1913-1998", Quarterly Journal of Economics, 118, 1-39. Series updated to year 2000 at http://www.nber.org/papers/w8467

Saez, E., (2001) "Using Elasticities to Derive Optimal Income Tax Rates", *Review of Economic Studies* 68, 205-229.

Saez, E., (2002) "Do Taxpayers Bunch at Kink Points?" Mimeograph, University of California at Berkeley.

Saez, E., (2003) "The Effect of Marginal Tax Rates on Income: A Panel Study of 'Bracket Creep'.", *Journal of Public Economics* 87, 1231-1258.

Saez, E., and M. Veall (2003) "The Evolution of High Incomes in Canada, 1920-2000", NBER Working Paper No. 9607.

Samwick, A. (1996) "Tax Shelters and Passive Losses after the Tax Reform Act of 1986", in: *Empirical Foundations of Household Taxation*, eds. M. Feldstein and J. Poterba, University of Chicago.

Slemrod, J. (1995) "Income Creation or Income Shifting? Behavioral Responses to the Tax Reform Act of 1986." *American Economic Review*, 85(2), 175-180.

Slemrod, J., (1996) "High income families and the tax changes of the 1980s: the anatomy of

behavioral response." In: *Empirical Foundations of Household Taxation*, eds. M. Feldstein and J. Poterba, University of Chicago.

Slemrod, J., 1998. Methodological issues in measuring and interpreting taxable income elasticities. National Tax Journal 51(4), 773-788.

Slemrod, J. and J. Bakija, (2001) "Growing Inequality and Decreased Tax Progressivity " in K. Hassett (Ed.) *Inequality and Tax Policy*, Washington D.C: American Enterprise Institute Press.

Slemrod, J. and W. Kopczuk, (2002) "The Optimal Elasticity of Taxable Income", *Journal of Public Economics* 84(1), 91-112.

Stewart, K.J., and Stephen B. Reed, (1999) "CPI Research Series Using Current Methods, 1978-98" *Monthly Labor Review*, June.

U.S. Treasury Department, Internal Revenue Service, Annual since 1916 *Statistics of Income: Individual Income Tax Returns.* (Washington, D.C.).

TABLE 1.

Thresholds and Average Incomes in Top Income Groups in 2000

Percentile thresholds (1)	Income level (2)	Fractiles (3)	Number of tax units (4)	Average income (5)
		Full Population	133,589,000	$42,709
P50	$25,076	Bottom 90%	120,230,100	$26,616
P90	$87,334	Top 10-5%	6,679,450	$100,480
P95	$120,212	Top 5-1%	5,343,560	$162,366
P99	$277,983	Top 1-0.5%	667,945	$327,970
P99.5	$397,949	Top 0.5-0.1%	534,356	$611,848
P99.9	$1,134,849	Top 0.1-0.01%	120,230	$2,047,801
P99.99	$5,349,795	Top 0.01%	13,359	$13,055,242

Notes: Computations based on income tax return statistics (see Appendix Section A).

Income defined as annual gross income excluding capital gains and government transfers and before individual taxes.

Amounts are expressed in 2000 dollars.

TABLE 2.
Elasticities of income wrt net-of-tax rates in the Aggregate, Bottom 99%, and Top 1%

	Regression in Levels	Regression in Levels + Time trend	Regression in Differences dummies
	(1)	(2)	(3)
PANEL A. All tax units			
Elasticity	-0.37	-0.01	0.21
	(0.44)	(0.35)	(0.35)
Time Trend		0.48	
		(0.10)	
PANEL B. Bottom 99% tax units			
Elasticity	-0.64	-0.41	-0.04
	(0.37)	(0.37)	(0.38)
Time Trend		1.68	
		(0.24)	
PANEL C. Top 1% tax units			
Elasticity	1.83	0.71	0.71
	(0.20)	(0.19)	(0.18)
Time Trend		0.22	
		(0.10)	
Number of Observations	38	38	37

Notes: Estimates obtained by time-series regression of log(average real income) (using CPI-U deflator)
on a constant, log (1 - average marginal tax rate) from 1960 to 2000.
In column 1, simple OLS regression is run.
In column 2, a time trend is added. In column 3, the regression is run in first differences.

TABLE 3.
Elasticities of income shares wrt net-of-tax rates for various upper income groups

	Regression in Levels	Regression in Levels + Time trend	Regression in Differences dummies
	(1)	(2)	(3)
A. Top 10-5%			
Elasticity	-0.44	-0.23	-0.12
	(0.09)	(0.06)	(0.10)
Time Trend		0.22	
		(0.02)	
B. Top 5-1%			
Elasticity	0.14	0.23	0.04
	(0.16)	(0.03)	(0.06)
Time Trend		0.55	
		(0.02)	
C. Top 1-0.5%			
Elasticity	0.88	0.59	0.24
	(0.10)	(0.10)	(0.09)
Time Trend		0.70	
		(0.08)	
D. Top 0.5-0.1%			
Elasticity	1.17	0.75	0.50
	(0.12)	(0.14)	(0.11)
Time Trend		0.75	
		(0.18)	
E. Top 0.1-0.01%			
Elasticity	1.40	0.75	0.58
	(0.37)	(0.24)	(0.17)
Time Trend		1.52	
		(0.50)	
F. Top 0.01%			
Elasticity	1.40	0.05	0.41
	(0.16)	(0.30)	(0.19)
Time Trend		4.50	
		(0.90)	
Number of Observations	38	38	37

Notes: Estimates obtained by time-series regression of log(top income share)
on a constant, log (1 - average marginal tax rate) from 1960 to 2000.
In column 1, simple OLS regression is run.
In column 2, a time trend is added. In column 3, the regression is run in first differences.

TABLE 4.
Elasticities of wage income shares wrt net-of-tax rates for various upper income groups

	Regression in Levels	Regression in Levels + Time trend	Regression in Differences dummies
	(1)	(2)	(3)
A. Top 10-5%			
Elasticity	-0.43	-0.21	-0.05
	(0.09)	(0.04)	(0.06)
Time Trend		0.24	
		(0.02)	
B. Top 5-1%			
Elasticity	-0.17	0.07	0.07
	(0.20)	(0.02)	(0.06)
Time Trend		0.70	
		(0.01)	
C. Top 1-0.5%			
Elasticity	0.31	0.26	0.26
	(0.32)	(0.04)	(0.07)
Time Trend		1.32	
		(0.03)	
D. Top 0.5-0.1%			
Elasticity	1.50	0.46	0.50
	(0.28)	(0.07)	(0.10)
Time Trend		1.70	
		(0.05)	
E. Top 0.1-0.01%			
Elasticity	2.16	0.34	0.64
	(0.22)	(0.23)	(0.19)
Time Trend		2.87	
		(0.31)	
F. Top 0.01%			
Elasticity	2.48	-0.70	0.68
	(0.33)	(0.31)	(0.32)
Time Trend		7.33	
		(0.64)	
Number of Observations	38	38	37

Notes: Estimates obtained by time-series regression of log(top wage income share)
on a constant, log (1 - average marginal tax rate) from 1960 to 2000.
In column 1, simple OLS regression is run.
In column 2, a time trend is added. In column 3, the regression is run in first differences.

TABLE A. Reference Totals for Population, Income, and Inflation, 1960-2000

Elasticitie	Tax Units and Population					Total Income		Federal Individual Income Taxes		Wage earners and wage income			Inflation Indexes	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Tax Units ('000s)	Number of tax returns ('000s)	(2)/(1) (%)	Adult Pop. (aged 20+)	(4)/(1)	Total income (millions 2000 $ CPI_U)	Average income (2000 $, CPI-U)	Average Tax Rate (%)	Average Marginal Tax Rate (%)	Tax Units with Wages	Total Wages (millions 2000 $, CPI_U)	Average Wages (2000 $, CPI-U)	CPI-U (2000 base)	CPI-U-RS (2000 base)
1960	68,681	61,028	88.9	111,314	1.62	1,850,218	26,939	12.28	22.55	52,554	1,587,214	30,201	17.189	20.183
1961	69,997	61,499	87.9	112,450	1.61	1,907,985	27,258			51,946	1,615,622	31,102	17.361	20.385
1962	71,254	62,712	88.0	113,754	1.60	2,011,233	28,226	12.52	23.32	53,338	1,705,361	31,972	17.552	20.609
1963	72,464	63,943	88.2	115,096	1.59	2,099,285	28,970			53,893	1,772,347	32,886	17.762	20.856
1964	73,660	65,376	88.8	116,796	1.59	2,236,911	30,368	11.54	21.64	55,216	1,877,056	33,995	17.993	21.127
1965	74,772	67,596	90.4	118,275	1.58	2,361,753	31,586			57,239	1,987,572	34,724	18.299	21.486
1966	75,831	70,160	92.5	119,724	1.58	2,500,162	32,970	11.64	21.30	60,358	2,125,707	35,219	18.830	22.110
1967	76,856	71,652	93.2	121,143	1.58	2,600,178	33,832	12.04	21.62	61,571	2,213,824	35,955	19.376	22.751
1968	77,826	73,729	94.7	123,507	1.59	2,719,064	34,938	13.61	24.33	62,836	2,337,364	37,198	20.190	23.662
1969	78,793	75,834	96.2	125,543	1.59	2,794,675	35,469	14.52	25.53	64,371	2,435,448	37,834	21.280	24.693
1970	79,924	74,280	92.9	127,674	1.60	2,845,542	35,603	13.36	24.11	63,778	2,447,144	38,370	22.535	25.882
1971	81,849	74,576	91.1	130,774	1.60	2,905,636	35,500	12.54	23.06	63,194	2,484,179	39,311	23.527	27.031
1972	83,670	77,573	92.7	133,502	1.60	3,093,721	36,975	12.70	23.62	64,750	2,630,468	40,625	24.280	27.864
1973	85,442	80,693	94.4	136,006	1.59	3,225,502	37,751	13.37	24.77	67,614	2,748,251	40,646	25.785	29.608
1974	87,228	83,340	95.5	138,444	1.59	3,195,330	36,632	13.77	25.82	68,518	2,697,802	39,373	28.621	32.541
1975	89,127	82,229	92.3	141,055	1.58	3,093,548	34,709	12.80	25.40	66,671	2,609,012	39,132	31.226	35.236
1976	91,048	84,670	93.0	143,609	1.58	3,235,043	35,531	13.29	26.04	68,459	2,722,938	39,775	33.037	37.257
1977	93,076	86,635	93.1	146,305	1.57	3,339,935	35,884	13.66	27.71	70,898	2,825,066	39,847	35.185	39.635
1978	95,213	89,771	94.3	149,142	1.57	3,480,248	36,552	14.35	29.16	74,503	2,961,075	39,745	37.859	41.340
1979	97,457	92,694	95.1	152,105	1.56	3,503,689	35,951	14.15	29.19	77,038	2,979,812	38,680	42.137	45.224
1980	99,625	93,902	94.3	155,268	1.56	3,412,006	34,248	14.98	30.66	76,913	2,880,118	37,446	47.825	50.258
1981	101,432	95,396	94.0	158,033	1.56	3,419,549	33,713	15.44	31.68	77,439	2,876,292	37,143	52.751	54.974
1982	103,250	95,337	92.3	160,665	1.56	3,405,788	32,986	14.32	29.22	75,771	2,844,255	37,537	56.022	58.185
1983	105,067	96,321	91.7	163,135	1.55	3,466,971	32,998	13.27	27.36	76,260	2,913,254	38,202	57.814	60.602
1984	106,871	99,439	93.0	165,650	1.55	3,637,968	34,041	13.38	26.99	80,008	3,075,930	38,445	60.300	63.020
1985	108,736	101,660	93.5	168,205	1.55	3,760,935	34,588	13.40	27.27	81,936	3,193,778	38,979	62.471	65.161
1986	110,684	103,045	93.1	170,556	1.54	3,876,141	35,020	14.02	27.26	83,340	3,321,487	39,855	63.658	66.310
1987	112,640	106,996	95.0	172,552	1.53	4,046,941	35,928	13.13	24.47	85,618	3,442,337	40,206	65.950	68.569
1988	114,656	109,708	95.7	174,344	1.52	4,305,720	37,553	13.17	22.92	88,121	3,572,571	40,542	68.654	71.066
1989	116,759	112,136	96.0	176,060	1.51	4,350,842	37,263	13.12	23.06	90,145	3,609,277	40,039	71.949	74.158
1990	119,055	113,717	95.5	178,365	1.50	4,377,181	36,766	12.86	23.05	91,348	3,632,403	39,764	75.834	77.883
1991	120,453	114,730	95.2	180,978	1.50	4,286,889	35,590	12.60	23.11	89,813	3,574,052	39,794	79.019	80.737
1992	121,944	113,605	93.2	183,443	1.50	4,356,547	35,726	12.74	22.99	89,883	3,645,188	40,555	81.390	82.878
1993	123,378	114,602	92.9	185,685	1.51	4,320,595	35,019	13.05	23.94	91,279	3,687,902	40,402	83.832	85.018
1994	124,716	115,943	93.0	187,757	1.51	4,424,217	35,474	13.10	24.29	93,270	3,783,593	40,566	86.011	86.881
1995	126,023	118,218	93.8	189,911	1.51	4,581,375	36,353	13.52	24.58	95,388	3,891,745	40,799	88.419	89.061
1996	127,625	120,351	94.3	192,043	1.50	4,730,336	37,064	14.08	24.75	97,338	3,986,011	40,950	91.072	91.478
1997	129,301	122,422	94.7	194,426	1.50	4,974,958	38,476	14.13	25.33	100,161	4,170,993	41,643	93.167	93.460
1998	130,945	124,771	95.3	196,795	1.50	5,268,063	40,231	14.09	25.56	103,069	4,429,422	42,975	94.657	94.768
TAXSIM ca	132,267	127,075	96.1	199,255	1.51	5,522,779	41,755	14.62	25.84	105,233	4,626,416	43,963	96.740	96.750
d average	133,589	129,272	96.8	201,865	1.51	5,705,414	42,709			107,693	4,836,329	44,909	100.000	100.000

Notes: Population and tax units estimates based on census and current population surveys (Historical Statistics of the United States, and Statistical Abstract of the United States)

Tax units estimated as sum of married men, divorced and widowed men and women, and singles men and women aged 20+.

Consumer Price Index (CPI-U) is the official CPI index from Economic Report of the President. CPI-U-RS includes retrospectively improvements on CPI estimation method for 1967-1998 period.

Income defined as Adjusted Gross Income less realized capital gains, taxable SS and UI benefits and adding back all adjustments.

Average tax rate and marginal tax rates are weighted by income and estimated using TAXSIM calculator and the tax return micro-files and ignoring interactions with state income taxes.

The taxable part of realized capital gains is added back to income to estimate average tax rates. Marginal income tax rate is a weighted average of marginal tax rate on earnings and other income.

Table B1: Top Income Shares in the United States, 1960-2000

	Top 10% (1)	Top 5% (2)	Top 1% (3)	Top .5% (4)	Top .1% (5)	Top .01% (6)	Top 10-5% (7)	Top 5-1% (8)	Top 1-.5% (9)	Top .5-.1% (10)	Top .1-.01% (11)	Top .01% (12)
1960	31.70	20.81	8.28	5.53	2.13	0.59	10.89	12.53	2.75	3.40	1.54	0.59
1962	32.37	21.23	8.42	5.59	2.10	0.57	11.14	12.81	2.83	3.49	1.53	0.57
1964	32.18	21.04	8.25	5.46	2.05	0.56	11.14	12.78	2.80	3.41	1.49	0.56
1966	32.01	21.01	8.35	5.56	2.14	0.60	11.00	12.66	2.79	3.42	1.54	0.60
1967	32.12	21.12	8.42	5.61	2.15	0.59	11.00	12.70	2.80	3.47	1.56	0.59
1968	32.06	21.03	8.36	5.58	2.13	0.58	11.02	12.67	2.78	3.44	1.56	0.58
1969	31.86	20.72	8.03	5.30	1.99	0.54	11.14	12.70	2.73	3.31	1.45	0.54
1970	31.59	20.45	7.81	5.15	1.92	0.52	11.14	12.64	2.66	3.22	1.40	0.52
1971	31.82	20.54	7.79	5.11	1.90	0.51	11.28	12.76	2.68	3.21	1.39	0.51
1972	31.70	20.43	7.76	5.09	1.90	0.52	11.27	12.67	2.67	3.19	1.39	0.52
1973	31.93	20.64	7.75	5.06	1.87	0.49	11.29	12.89	2.69	3.19	1.38	0.49
1974	32.47	21.12	8.15	5.41	2.09	0.56	11.35	12.98	2.74	3.32	1.53	0.56
1975	32.74	21.14	8.04	5.32	2.02	0.55	11.61	13.09	2.73	3.29	1.47	0.55
1976	32.56	20.97	7.92	5.23	2.00	0.56	11.59	13.04	2.69	3.23	1.45	0.56
1977	32.60	20.99	7.96	5.27	2.03	0.56	11.60	13.04	2.69	3.24	1.47	0.56
1978	32.63	21.05	8.01	5.32	2.07	0.57	11.59	13.03	2.69	3.25	1.49	0.57
1979	32.53	21.01	8.09	5.40	2.15	0.61	11.52	12.91	2.69	3.26	1.54	0.61
1980	33.05	21.36	8.24	5.53	2.22	0.65	11.69	13.11	2.71	3.31	1.57	0.65
1981	32.96	21.16	8.03	5.38	2.17	0.64	11.80	13.13	2.65	3.21	1.54	0.64
1982	33.81	21.83	8.50	5.79	2.45	0.77	11.99	13.32	2.72	3.34	1.68	0.77
1983	34.37	22.25	8.71	5.99	2.60	0.86	12.12	13.55	2.72	3.39	1.74	0.86
1984	34.54	22.50	8.98	6.26	2.82	0.97	12.03	13.52	2.72	3.44	1.84	0.97
1985	34.86	22.81	9.20	6.44	2.94	0.96	12.05	13.61	2.76	3.50	1.98	0.96
1986	35.20	23.02	9.22	6.41	2.86	0.99	12.18	13.80	2.81	3.55	1.87	0.99
1987	36.68	24.70	10.87	7.83	3.74	1.30	11.98	13.83	3.04	4.09	2.44	1.30
1988	38.85	27.17	13.28	10.02	5.22	1.99	11.68	13.89	3.26	4.80	3.23	1.99
1989	38.70	26.89	12.74	9.45	4.76	1.75	11.82	14.15	3.29	4.69	3.02	1.75
1990	39.12	27.32	13.12	9.79	4.92	1.83	11.81	14.20	3.32	4.88	3.09	1.83
1991	39.00	26.98	12.48	9.12	4.44	1.61	12.02	14.50	3.36	4.68	2.83	1.61
1992	40.36	28.35	13.71	10.25	5.26	2.03	12.01	14.65	3.46	4.99	3.23	2.03
1993	39.99	27.85	13.03	9.58	4.75	1.75	12.14	14.82	3.45	4.83	3.01	1.75
1994	39.93	27.85	13.04	9.57	4.74	1.74	12.08	14.81	3.47	4.82	3.00	1.74
1995	40.54	28.46	13.53	9.99	4.98	1.82	12.08	14.93	3.54	5.00	3.17	1.82
1996	41.14	29.15	14.10	10.48	5.32	1.97	11.99	15.05	3.62	5.16	3.35	1.97
1997	41.70	29.83	14.77	11.12	5.80	2.19	11.87	15.07	3.65	5.31	3.61	2.19
1998	42.06	30.31	15.28	11.60	6.19	2.40	11.74	15.04	3.68	5.41	3.79	2.40
1999	42.59	30.91	15.85	12.14	6.63	2.63	11.68	15.06	3.71	5.51	4.00	2.63
2000	43.91	32.15	16.94	13.10	7.37	3.06	11.76	15.21	3.84	5.73	4.32	3.06

Notes: Computations by authors on tax return statistics. See Appendix Section B for details.

Table B2: Marginal Tax Rates for Top Income Groups in the United States, 1960-2000

	Top 10% (1)	Top 5% (2)	Top 1% (3)	Top .5% (4)	Top .1% (5)	Top .01% (6)	Top 10-5% (7)	Top 5-1% (8)	Top 1-.5% (9)	Top .5-.1% (10)	Top .1-.01% (11)	Top .01% (12)
1960	32.32	37.33	51.47	57.92	69.89	81.30	22.74	27.98	38.50	50.42	65.55	81.30
1962	33.17	38.02	51.89	58.05	69.07	79.31	23.92	28.91	39.73	51.41	65.27	79.31
1964	31.19	35.72	48.43	54.00	62.78	70.43	22.65	27.51	37.54	48.71	59.89	70.43
1966	30.58	34.91	47.13	52.00	59.90	65.22	22.32	26.85	37.42	47.06	57.84	65.22
1967	31.05	35.49	47.61	52.29	59.67	64.74	22.53	27.46	38.25	47.72	57.74	64.74
1968	34.55	39.38	52.37	57.03	64.31	67.44	25.32	30.82	43.03	52.51	63.15	67.44
1969	35.56	40.40	53.37	58.04	65.22	68.62	26.54	32.21	44.30	53.72	63.95	68.62
1970	34.29	39.05	51.53	55.76	61.87	64.28	25.57	31.34	43.33	52.12	60.98	64.28
1971	33.48	38.30	50.73	54.89	61.06	63.50	24.71	30.72	42.78	51.24	60.16	63.50
1972	34.55	39.42	51.19	54.48	59.36	61.40	25.72	32.22	44.94	51.57	58.60	61.40
1973	36.19	41.26	52.37	55.36	60.14	63.22	26.91	34.58	46.74	52.55	59.04	63.22
1974	37.56	42.73	53.79	56.56	61.20	63.68	27.95	35.78	48.32	53.64	60.30	63.68
1975	36.53	41.12	51.38	54.52	59.34	61.87	28.18	34.82	45.28	51.55	58.38	61.87
1976	38.32	43.02	53.10	56.04	60.77	64.36	29.82	36.89	47.39	53.10	59.40	64.36
1977	40.88	45.90	54.93	56.89	60.12	61.74	31.81	40.39	51.09	54.87	59.50	61.74
1978	42.65	47.43	55.45	57.37	60.62	62.75	33.96	42.50	51.67	55.30	59.80	62.75
1979	42.57	47.44	54.99	56.53	58.61	59.90	33.70	42.70	51.91	55.15	58.10	59.90
1980	44.14	48.46	54.84	56.18	57.79	58.79	36.25	44.46	52.10	55.11	57.37	58.79
1981	45.01	48.72	54.12	55.20	56.11	56.30	38.36	45.41	51.92	54.59	56.03	56.30
1982	40.60	43.72	47.44	47.45	46.49	44.90	34.92	41.34	47.44	48.15	47.22	44.90
1983	38.24	41.27	46.07	47.17	47.48	47.15	32.68	38.18	43.66	46.92	47.65	47.15
1984	37.33	40.22	44.65	45.72	45.88	46.56	31.92	37.28	42.18	45.59	45.53	46.56
1985	37.74	40.73	45.53	46.81	47.14	47.16	32.09	37.49	42.54	46.53	47.13	47.16
1986	37.58	40.52	45.34	46.51	47.31	46.72	32.03	37.30	42.66	45.87	47.62	46.72
1987	33.88	35.85	37.31	37.07	36.93	36.53	29.82	34.69	37.92	37.21	37.14	36.53
1988	29.03	29.46	28.59	27.53	27.33	27.07	28.05	30.29	31.83	27.76	27.49	27.07
1989	29.10	29.56	28.50	27.42	27.09	26.99	28.05	30.51	31.60	27.75	27.15	26.99
1990	29.20	29.74	28.91	27.90	27.65	27.57	27.96	30.50	31.90	28.15	27.70	27.57
1991	29.93	30.99	32.01	31.50	31.29	31.21	27.57	30.11	33.39	31.70	31.35	31.21
1992	29.87	30.88	31.83	31.34	31.25	31.15	27.47	30.00	33.29	31.42	31.32	31.15
1993	32.34	34.38	39.01	39.55	39.99	39.83	27.66	30.31	37.50	39.12	40.08	39.83
1994	32.57	34.61	39.27	39.68	39.95	39.80	27.86	30.51	38.14	39.41	40.04	39.80
1995	32.62	34.60	38.74	38.98	39.51	39.46	27.94	30.86	38.04	38.47	39.53	39.46
1996	32.39	34.17	37.74	37.90	38.42	38.38	28.05	30.83	37.26	37.37	38.44	38.38
1997	33.21	35.21	39.15	39.47	39.48	39.35	28.18	31.35	38.16	39.47	39.55	39.35
1998	33.63	35.54	39.05	39.36	39.43	39.37	28.69	31.98	38.07	39.29	39.47	39.37
1999	33.79	35.78	38.94	39.32	39.32	39.19	28.53	32.45	37.67	39.32	39.41	39.19
2000												

Notes: Marginal Tax Rates computed using micro-files of tax returns and the TAXSIM calculator. Marginal tax rates include only federal income taxes and ignore state income taxes. Marginal tax rates are weighted by income, and are a weighted average of marginal tax rates on earnings and other income (excluding capital gains). See Appendix Section B for details.

Table B3: Average Tax Rates for Top Income Groups in the United States, 1960-2000

	Top 10% (1)	Top 5% (2)	Top 1% (3)	Top .5% (4)	Top .1% (5)	Top .01% (6)	Top 10-5% (7)	Top 5-1% (8)	Top 1-.5% (9)	Top .5-.1% (10)	Top .1-.01% (11)	Top .01% (12)
1960	19.04	21.88	29.68	33.28	40.82	46.97	13.61	16.73	22.43	28.56	38.49	46.97
1962	18.91	21.62	29.01	32.38	38.83	42.90	13.74	16.76	22.34	28.49	37.32	42.90
1964	17.78	20.41	27.63	31.03	37.09	40.84	12.81	15.74	21.00	27.39	35.66	40.84
1966	17.77	20.42	27.92	31.26	37.52	41.47	12.71	15.48	21.26	27.36	35.99	41.47
1967	18.31	21.07	28.65	31.94	37.78	40.92	13.00	16.05	22.06	28.32	36.58	40.92
1968	20.30	23.27	31.42	34.83	40.61	42.30	14.65	17.89	24.59	31.25	39.99	42.30
1969	20.89	23.82	31.83	35.20	40.86	42.62	15.46	18.75	25.29	31.80	40.21	42.62
1970	19.34	22.04	29.60	32.85	38.40	40.86	14.38	17.38	23.31	29.54	37.50	40.86
1971	18.77	21.53	29.15	32.47	38.17	40.43	13.77	16.87	22.80	29.10	37.34	40.43
1972	19.21	22.03	29.64	32.71	38.14	40.75	14.10	17.37	23.79	29.48	37.17	40.75
1973	19.94	22.80	30.26	33.29	38.65	41.45	14.71	18.31	24.54	30.15	37.66	41.45
1974	20.49	23.40	31.34	34.57	40.45	43.97	15.09	18.41	24.97	30.86	39.18	43.97
1975	19.70	22.53	30.22	33.47	39.54	43.43	14.56	17.81	23.86	29.75	38.08	43.43
1976	20.27	23.18	30.93	34.12	39.74	43.41	15.01	18.47	24.74	30.63	38.33	43.41
1977	21.48	24.69	32.86	36.14	42.00	45.83	15.68	19.70	26.44	32.45	40.55	45.83
1978	22.12	25.25	33.07	36.23	41.72	45.41	16.44	20.45	26.83	32.74	40.30	45.41
1979	21.89	25.03	32.87	35.98	41.57	45.39	16.18	20.11	26.63	32.29	40.06	45.39
1980	22.73	25.81	33.21	36.13	41.00	44.19	17.11	21.15	27.26	32.86	39.69	44.19
1981	22.88	25.65	32.46	35.02	39.34	41.35	17.90	21.49	27.26	32.10	38.50	41.35
1982	21.03	23.84	30.62	33.21	37.35	39.21	15.92	19.51	25.11	30.18	36.50	39.21
1983	19.59	22.24	28.93	31.56	35.96	38.35	14.72	17.94	23.13	28.17	34.78	38.35
1984	19.62	22.28	28.89	31.42	35.81	37.75	14.65	17.89	23.06	27.83	34.78	37.75
1985	19.65	22.26	28.66	31.21	35.03	37.15	14.72	17.94	22.71	27.99	34.00	37.15
1986	20.56	23.40	30.30	32.81	37.05	38.51	15.20	18.80	24.57	29.39	36.27	38.51
1987	19.43	21.80	26.50	28.01	29.95	30.45	14.54	18.11	22.60	26.24	29.69	30.45
1988	18.90	20.75	23.88	24.51	25.04	25.32	14.60	17.74	21.97	23.93	24.87	25.32
1989	18.63	20.38	23.32	23.91	24.29	24.22	14.63	17.74	21.61	23.53	24.33	24.22
1990	18.24	19.94	22.94	23.62	24.00	23.80	14.29	17.18	20.94	23.23	24.12	23.80
1991	18.21	20.13	23.90	25.01	26.11	26.16	13.90	16.88	20.91	23.96	26.09	26.16
1992	18.59	20.62	24.60	25.69	26.82	27.18	13.80	16.90	21.37	24.50	26.60	27.18
1993	19.59	22.06	27.48	29.37	31.74	32.50	13.94	17.29	22.21	27.05	31.30	32.50
1994	19.93	22.42	27.79	29.59	31.79	32.15	14.21	17.69	22.85	27.42	31.58	32.15
1995	20.68	23.28	28.75	30.42	32.39	33.01	14.56	18.32	24.02	28.46	32.03	33.01
1996	21.46	24.07	29.33	30.79	32.36	32.67	15.11	19.14	25.10	29.17	32.18	32.67
1997	21.17	23.49	28.10	29.37	30.63	31.03	15.33	18.98	24.23	27.99	30.38	31.03
1998	21.21	23.50	27.76	28.88	30.09	30.55	15.31	19.17	24.24	27.49	29.81	30.55
1999	21.77	24.05	28.20	29.23	30.35	30.87	15.74	19.69	24.82	27.89	30.01	30.87
2000												

Notes: Average tax rates computed using micro-files and the TAXSIM calculator. Average tax rates include only federal income taxes and ignore state income taxes. Average tax rates are computed including the taxable portion of capital gains (50% from 1960 to 1978, 40% from 1979 to 1986, and 100% after 1987) and are weighted by income (including taxable capital gains). See Appendix Section B for details.

Table C1: Income Composition by Sources of Income and by Fractiles of Total Income (excluding capital gains), 1962-2000

Year	Top 10%							Top 5%							Top 1%							Top 0.5%						
	Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other	Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other	Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other	Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other
1960	70.1	0.9	5.1	10.6	7.2	2.4	3.7	60.4	1.3	6.9	13.5	10.1	2.9	4.9	41.5	2.3	10.7	16.6	18.6	3.5	6.7	37.8	2.5	11.1	14.9	23.0	3.6	7.2
1962	68.9	0.9	5.4	11.2	7.2	2.6	3.9	59.1	1.4	7.2	14.1	10.0	3.1	5.1	40.2	2.4	11.1	17.3	18.3	3.7	7.0	36.4	2.6	11.6	15.6	22.6	3.8	7.5
1964	70.1	0.9	4.9	10.9	7.1	3.0	3.1	60.7	1.3	6.8	14.0	9.9	3.5	3.9	41.4	2.4	11.1	17.4	18.1	4.1	5.5	36.8	2.7	12.1	15.9	22.5	4.2	5.8
1966	69.2	1.0	5.9	11.1	6.9	3.2	2.7	59.6	1.5	8.1	14.0	9.6	3.7	3.4	40.6	2.8	13.0	17.4	17.3	4.3	4.5	37.0	3.1	14.0	15.3	21.7	4.2	4.6
1967	70.5	1.0	5.9	10.7	6.7	3.3	1.9	61.4	1.5	8.2	13.6	9.2	3.9	2.4	42.3	2.7	13.7	17.0	16.6	4.5	3.2	37.7	3.2	15.0	15.7	20.5	4.5	3.5
1968	70.7	1.1	5.6	10.5	6.8	3.4	2.0	61.5	1.5	7.8	13.2	9.5	4.1	2.4	41.8	2.9	13.3	16.6	17.2	4.7	3.5	36.8	3.5	14.7	15.2	21.4	4.7	3.7
1969	72.1	1.1	5.1	10.2	6.1	3.5	1.9	63.4	1.5	7.1	13.0	8.5	4.1	2.3	43.9	3.0	12.2	16.7	15.8	5.2	3.3	39.6	3.5	13.0	15.2	19.6	5.5	3.7
1970	73.5	1.0	4.5	9.6	5.7	4.0	1.9	65.2	1.3	6.3	12.4	7.8	4.7	2.4	45.8	2.6	11.2	16.6	14.3	5.9	3.6	40.4	3.1	12.5	15.8	17.9	6.3	4.0
1971	74.7	1.0	3.9	9.3	5.1	4.1	1.8	66.5	1.5	5.6	12.0	7.2	4.8	2.4	47.8	2.8	10.5	16.4	13.2	5.8	3.6	42.4	3.4	11.8	15.7	16.5	6.1	4.0
1972	74.6	1.0	3.9	9.6	5.0	4.1	1.9	66.6	1.5	5.6	12.3	6.9	4.8	2.4	49.5	2.8	9.9	15.7	12.7	5.7	3.8	46.0	3.4	11.0	14.4	15.2	5.8	4.2
1973	73.1	1.0	3.7	10.6	5.0	4.4	2.3	65.1	1.5	5.2	13.3	6.9	5.1	2.9	49.4	2.7	9.1	16.1	12.4	6.1	4.2	45.6	3.2	10.0	15.0	15.4	6.3	4.6
1974	72.7	1.1	3.7	10.0	5.2	5.0	2.4	65.1	1.5	5.0	12.7	6.9	5.8	3.0	49.0	2.9	8.7	15.6	12.3	7.0	4.5	45.2	3.6	9.3	14.3	15.2	7.5	5.1
1975	75.2	0.9	3.4	8.7	4.8	4.7	2.3	67.9	1.3	4.8	11.2	6.6	5.3	3.1	52.4	2.4	7.9	14.1	11.9	6.5	4.8	49.1	3.0	8.7	12.9	14.6	6.6	5.3
1976	75.8	0.7	3.2	8.6	4.9	4.7	2.1	68.9	1.2	4.4	10.8	6.7	5.3	2.7	54.4	2.4	7.4	13.5	12.0	6.1	4.3	51.4	2.9	7.7	12.3	14.8	6.0	4.8
1977	76.6	0.7	3.2	8.1	4.9	4.6	1.9	69.9	1.1	4.5	10.2	6.6	5.2	2.5	55.9	2.0	7.8	12.6	11.9	5.8	3.8	53.1	2.4	8.2	11.4	14.5	5.8	4.5
1978	76.8	0.8	3.1	8.0	4.8	4.6	2.0	70.4	1.1	4.3	9.9	6.5	5.1	2.6	58.0	2.0	7.3	11.5	11.6	5.6	4.0	55.1	2.5	7.9	10.0	14.2	5.7	4.6
1979	77.3	0.7	2.6	7.4	4.8	5.3	1.9	71.0	1.0	3.6	9.2	6.5	6.1	2.5	58.9	1.8	6.5	10.3	11.6	7.0	3.9	56.3	2.1	7.0	8.8	14.2	7.2	4.4
1980	77.8	0.4	2.0	6.0	4.9	6.7	2.1	72.3	0.6	2.8	7.4	6.7	7.7	2.6	60.7	1.2	5.2	8.3	11.4	8.8	4.3	57.8	1.4	5.8	7.3	13.9	8.9	5.0
1981	78.3	0.2	1.0	5.0	5.1	8.6	2.0	73.3	0.3	1.3	5.9	6.7	9.8	2.6	62.5	0.6	2.5	6.7	11.4	11.7	4.6	59.6	0.9	2.6	6.1	13.4	12.0	5.3
1982	79.0	0.4	1.0	4.2	5.2	8.5	1.9	73.8	0.5	1.5	5.2	6.9	9.8	2.4	62.9	1.1	3.1	5.8	11.4	11.1	4.6	59.1	1.5	3.6	5.2	13.8	11.3	5.6
1983	80.8	0.8	1.0	4.6	4.4	7.0	1.5	76.3	1.1	1.3	5.6	5.8	7.8	2.1	65.3	2.6	2.8	6.4	9.9	9.1	3.9	61.8	3.5	3.3	5.7	11.6	9.4	4.9
1984	80.5	1.3	0.4	4.8	3.8	7.6	1.5	76.0	1.9	0.6	5.8	5.0	8.5	2.1	66.0	4.4	1.2	6.7	7.8	10.2	3.8	62.8	5.9	1.1	6.0	9.1	10.8	4.3
1985	80.3	1.3	0.7	5.1	3.9	7.3	1.5	75.6	2.0	1.1	6.1	5.0	8.2	2.0	63.7	4.3	2.2	7.0	8.2	10.3	4.3	59.0	5.8	2.7	6.7	9.6	10.8	5.4
1986	81.5	1.5	0.7	5.5	3.6	5.8	1.3	77.2	2.2	1.0	6.6	4.6	6.6	1.8	66.2	4.9	2.2	8.0	7.3	8.2	3.2	61.8	6.6	2.7	7.3	8.7	9.0	4.0
1987	79.1	2.5	2.0	5.9	3.4	5.7	1.5	74.0	3.6	2.7	7.0	4.2	6.6	1.9	62.6	7.4	5.0	7.7	5.9	8.3	3.2	59.8	9.7	5.2	6.4	6.4	9.0	3.6
1988	75.5	3.6	2.8	6.3	3.9	6.0	1.9	69.7	5.1	3.8	7.2	4.7	6.9	2.6	58.2	9.5	6.0	7.0	6.6	8.4	4.3	55.1	11.8	6.3	5.9	7.4	8.9	4.7
1989	74.4	3.8	3.0	6.2	3.8	7.0	1.9	68.3	5.2	4.1	7.2	4.6	8.1	2.7	55.5	9.8	6.7	7.2	6.5	10.0	4.4	51.5	12.4	7.0	6.2	7.2	11.0	4.8
1990	74.6	3.7	2.9	6.4	3.6	6.9	2.0	68.6	5.1	4.2	7.5	4.3	7.9	2.7	56.0	9.4	6.4	8.0	6.1	9.9	4.3	52.4	11.6	6.9	7.0	6.8	10.7	4.7
1991	76.1	3.4	3.1	6.2	3.2	6.1	1.9	70.0	4.8	4.2	7.4	3.9	7.1	2.6	57.4	9.0	6.9	7.9	5.5	9.1	4.2	53.4	11.4	7.6	6.8	6.0	10.2	4.7
1992	77.0	4.1	3.2	6.2	2.9	4.2	2.3	71.4	5.6	4.4	7.3	3.5	4.8	2.9	59.8	10.0	7.1	7.8	4.8	6.3	4.3	56.7	12.2	7.5	6.7	5.3	6.9	4.6
1993	77.8	4.0	3.3	6.3	2.8	3.5	2.3	72.4	5.6	4.5	7.4	3.4	4.0	2.9	60.1	10.2	7.6	7.7	4.6	5.4	4.4	56.9	12.6	8.2	6.5	5.1	6.0	4.8
1994	77.1	5.2	3.2	6.2	2.8	3.2	2.3	71.1	7.3	4.4	7.3	3.4	3.8	2.9	57.6	13.3	7.3	7.5	4.6	5.3	4.3	53.3	16.6	7.9	6.3	5.2	6.0	4.8
1995	76.8	5.3	3.1	5.9	3.1	3.7	2.2	70.8	7.2	4.3	6.9	3.7	4.4	2.8	58.3	13.0	6.9	6.9	5.0	5.8	4.1	54.5	15.9	7.4	5.7	5.5	6.4	4.5
1996	76.3	5.5	3.4	5.6	3.2	3.8	2.2	70.6	7.5	4.6	6.5	3.8	4.3	2.8	58.6	12.9	7.5	6.2	5.1	5.6	4.1	55.1	15.7	8.1	5.0	5.5	6.1	4.5
1997	76.0	5.7	3.5	5.3	3.4	3.6	2.4	70.4	7.7	4.7	6.1	4.0	4.2	2.9	59.3	13.1	7.5	5.6	5.1	5.3	4.2	55.8	15.8	8.1	4.5	5.4	5.8	4.7
1998	76.1	6.0	3.7	5.2	3.1	3.5	2.4	70.6	8.0	4.9	5.9	3.7	4.0	3.0	60.0	13.5	7.6	5.1	4.7	5.1	4.2	56.9	16.0	8.0	4.0	5.0	5.6	4.5
1999	76.1	6.0	4.0	5.0	3.2	3.2	2.5	70.9	8.0	5.2	5.5	3.7	3.7	3.0	61.0	13.0	7.9	4.7	4.7	4.7	4.0	58.3	15.2	8.4	3.7	4.9	5.1	4.4
2000	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Notes: Groups ranked by income (AGI + adjustments) excluding realized capital gains and SS and UI benefits.

Wages is defined as wages and salaries and pensions (and includes bonuses, stock-option exercises, etc.). S-corp. is profits from S-Corporations (entities not subject to corporate taxes and taxed only at the individual level)

Partn. is profits from Partnerships. Busin. is profits from sole proprietorship businesses (Schedule C income) and farm income. Divid. is dividends distributed. Interest is interest income.

Other include royalties, rents, income from estates, and other forms of income. The sums of all sources add up to 100%.

Capital Gains are excluded from income. All details in Appendix Section C.

	Top 0.1%								Top 0.01%								Top 10-5%								Top 5-1%					
	Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other		Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other		Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other		Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other
1960	32.0	2.6	9.9	7.5	37.5	3.4	7.0	1960	18.2	2.2	4.9	0.6	64.8	2.8	6.4	1960	88.5	0.1	1.7	5.2	1.6	1.5	1.4	1960	72.9	0.6	4.5	11.4	4.4	2.5	3.7
1962	30.7	2.8	10.7	8.1	36.5	3.7	7.5	1962	16.8	2.6	5.7	0.6	63.6	3.2	7.4	1962	87.4	0.1	1.8	5.6	1.9	1.6	1.5	1962	71.6	0.6	4.7	12.0	4.6	2.7	3.8
1964	29.2	2.8	10.6	9.5	37.3	4.3	6.2	1964	16.3	2.6	5.8	1.4	65.1	3.5	5.2	1964	87.8	0.1	1.5	5.2	1.9	2.0	1.5	1964	73.2	0.5	4.0	11.7	4.6	3.2	2.8
1966	29.3	3.6	13.7	9.3	35.1	4.3	4.8	1966	16.1	4.3	9.6	2.4	58.5	3.9	5.2	1966	87.5	0.1	1.8	5.4	1.7	2.2	1.4	1966	72.1	0.7	4.9	11.8	4.6	3.4	2.6
1967	30.3	4.2	14.9	9.1	32.7	4.8	4.1	1967	17.1	4.4	13.4	1.7	54.3	4.2	4.9	1967	87.9	0.2	1.6	5.0	2.1	2.2	1.0	1967	74.0	0.7	4.5	11.4	4.2	3.5	1.8
1968	28.7	4.4	14.2	8.2	35.6	5.0	3.8	1968	17.1	5.0	12.7	1.6	53.7	5.1	4.8	1968	88.2	0.2	1.3	5.3	1.7	2.3	1.1	1968	74.5	0.6	4.1	11.0	4.4	3.7	1.8
1969	31.3	4.5	12.9	9.1	31.5	6.3	4.5	1969	17.8	4.7	9.8	1.8	52.9	7.3	5.6	1969	88.2	0.2	1.4	5.1	1.6	2.4	1.1	1969	75.8	0.6	3.9	10.7	3.8	3.5	1.7
1970	31.5	4.5	11.9	10.2	29.6	7.3	5.1	1970	17.6	4.4	8.8	2.7	51.3	8.5	6.7	1970	88.7	0.2	1.1	4.5	1.8	2.7	0.9	1970	77.1	0.5	3.3	9.8	3.7	3.9	1.6
1971	33.5	4.5	12.5	10.4	27.4	6.8	4.9	1971	18.5	5.1	12.3	3.7	46.7	7.6	6.1	1971	89.7	0.1	0.9	4.4	1.4	2.8	0.8	1971	77.9	0.7	2.6	9.4	3.6	4.2	1.7
1972	37.2	4.9	11.8	10.1	25.0	6.1	4.9	1972	23.6	5.8	10.5	5.9	41.6	6.5	6.1	1972	89.1	0.2	0.8	4.5	1.6	2.8	1.0	1972	77.0	0.7	3.0	10.3	3.3	4.2	1.5
1973	36.7	5.0	9.7	11.3	24.6	7.0	5.8	1973	23.1	5.9	6.9	7.3	41.5	7.9	7.4	1973	87.7	0.1	0.9	5.5	1.7	3.0	1.3	1973	74.5	0.7	2.9	11.7	3.6	4.5	2.1
1974	35.8	5.6	9.3	10.6	23.9	8.1	6.8	1974	22.7	6.9	7.5	8.4	37.1	8.5	8.8	1974	86.7	0.3	1.2	4.9	2.0	3.6	1.2	1974	75.2	0.6	2.7	10.9	3.6	5.0	2.1
1975	40.2	4.9	9.1	9.3	22.9	6.9	6.7	1975	25.5	6.1	7.3	8.3	36.3	7.4	9.1	1975	88.5	0.2	0.8	4.3	1.6	3.6	1.1	1975	77.4	0.6	2.8	9.4	3.3	4.6	2.0
1976	43.4	4.3	7.9	9.0	22.8	6.2	6.3	1976	27.7	6.7	6.3	8.1	35.9	6.2	9.1	1976	88.4	0.0	1.0	4.6	1.6	3.6	1.0	1976	77.7	0.5	2.6	9.2	3.5	4.9	1.7
1977	45.5	3.6	8.3	8.6	22.5	5.9	5.7	1977	30.0	5.0	6.1	8.5	35.9	6.0	8.5	1977	88.7	0.1	0.8	4.4	1.6	3.5	0.9	1977	78.4	0.5	2.5	8.7	3.4	4.8	1.7
1978	46.3	3.6	7.9	7.9	22.3	6.0	6.1	1978	31.1	5.2	6.0	8.4	34.9	6.0	8.3	1978	88.3	0.1	0.9	4.6	1.6	3.5	1.0	1978	78.1	0.6	2.5	8.9	3.4	4.8	1.8
1979	47.5	3.2	7.7	6.9	21.7	7.7	5.4	1979	32.3	4.1	8.5	8.6	32.4	8.2	5.9	1979	88.9	0.1	0.7	4.1	1.7	3.7	0.9	1979	78.6	0.5	1.9	8.5	3.3	5.5	1.7
1980	49.6	1.8	5.8	6.2	20.4	9.5	6.6	1980	34.9	2.7	4.8	8.8	30.4	10.1	8.8	1980	88.0	0.1	0.6	3.5	1.8	4.9	1.1	1980	79.5	0.3	1.2	6.9	3.6	7.0	1.6
1981	51.4	1.4	3.0	5.2	19.3	12.9	6.9	1981	36.2	1.7	2.4	7.5	28.3	14.5	9.3	1981	87.2	0.0	0.4	3.2	2.1	6.4	0.7	1981	79.9	0.1	0.5	5.5	3.8	8.7	1.5
1982	48.3	2.7	4.1	4.8	19.8	12.6	7.7	1982	31.1	6.0	5.8	6.2	27.5	13.9	9.4	1982	88.3	0.1	0.1	2.4	2.2	6.1	0.8	1982	80.8	0.1	0.4	4.7	4.0	9.0	1.1
1983	51.2	6.7	3.6	4.7	16.4	10.1	7.3	1983	34.9	13.3	6.7	5.5	20.8	11.1	7.7	1983	89.0	0.0	0.3	2.7	1.9	5.6	0.5	1983	83.4	0.2	0.3	5.1	3.1	7.0	0.9
1984	53.6	11.3	-0.4	4.6	11.4	12.6	6.9	1984	33.7	22.2	5.5	4.7	14.8	11.9	7.3	1984	88.9	0.1	0.0	3.1	1.6	5.9	0.4	1984	82.7	0.3	0.3	5.2	3.1	7.5	1.0
1985	47.0	10.5	3.4	5.0	13.4	12.3	8.4	1985	35.8	22.0	5.0	5.0	13.2	12.3	6.7	1985	89.2	0.1	0.0	3.2	1.6	5.6	0.4	1985	83.7	0.4	0.4	5.4	2.9	6.7	0.4
1986	49.5	12.4	3.3	4.5	12.8	10.3	7.1	1986	40.6	23.8	4.1	3.3	13.0	10.4	4.8	1986	89.8	0.2	0.1	3.6	1.7	4.4	0.2	1986	84.5	0.4	0.3	5.6	2.9	5.5	0.9
1987	52.2	16.4	5.0	4.2	7.4	10.5	4.4	1987	36.1	26.4	7.6	3.1	9.4	12.8	4.7	1987	89.6	0.3	0.4	3.6	1.9	3.9	0.4	1987	83.0	0.6	1.0	6.5	2.8	5.2	1.0
1988	47.6	17.9	6.1	3.8	9.1	9.9	5.6	1988	38.0	23.2	6.3	2.8	12.4	11.2	6.2	1988	88.8	0.3	0.5	4.2	1.9	4.0	0.3	1988	80.7	0.8	1.6	7.4	2.9	5.5	1.0
1989	42.8	19.4	6.6	4.3	8.7	12.7	5.5	1989	31.0	28.0	6.4	3.1	11.2	14.0	6.3	1989	88.4	0.5	0.5	4.0	1.9	4.6	0.1	1989	79.8	1.1	1.7	7.1	2.9	6.3	1.1
1990	44.7	17.9	6.1	4.8	8.5	12.4	5.6	1990	34.0	25.0	5.6	3.8	11.6	14.0	6.2	1990	88.6	0.4	0.6	3.8	1.8	4.5	0.4	1990	80.2	1.1	1.6	7.1	2.7	6.1	1.2
1991	45.2	17.8	7.2	4.8	7.4	12.2	5.5	1991	33.1	25.9	8.0	3.4	9.1	14.7	5.8	1991	89.8	0.4	0.5	3.6	1.7	3.8	0.4	1991	80.9	1.1	1.9	7.0	2.6	5.3	1.2
1992	51.7	17.7	6.4	4.5	6.4	8.0	5.2	1992	45.3	23.0	6.5	3.5	7.2	9.0	5.5	1992	90.2	0.5	0.5	3.6	1.6	2.8	0.8	1992	82.4	1.5	1.9	6.9	2.2	3.5	1.7
1993	49.8	19.2	8.0	4.1	6.2	7.2	5.6	1993	40.3	25.8	8.9	3.1	7.1	8.4	6.4	1993	90.4	0.5	0.5	3.8	1.6	2.3	0.9	1993	83.1	1.5	1.8	7.1	2.2	2.7	1.6
1994	43.8	25.7	7.3	4.0	6.2	7.6	5.6	1994	32.4	35.4	6.7	2.8	7.1	9.5	6.0	1994	91.0	0.5	0.4	3.9	1.5	1.9	0.8	1994	82.9	1.9	1.8	7.0	2.3	2.5	1.6
1995	45.6	23.3	7.5	3.4	6.9	7.9	5.4	1995	35.7	31.1	7.8	2.3	8.4	9.3	5.5	1995	91.0	0.6	0.4	3.5	1.6	2.3	0.7	1995	82.2	2.0	1.9	6.8	2.5	3.0	1.6
1996	46.9	22.5	8.5	2.9	6.6	7.4	5.2	1996	39.2	28.5	8.7	1.9	7.8	8.6	5.3	1996	90.1	0.6	0.5	3.5	1.8	2.6	0.9	1996	81.8	2.4	1.9	6.7	2.5	3.0	1.6
1997	49.1	21.8	8.2	2.6	6.2	6.9	5.3	1997	44.6	25.6	8.2	2.0	6.5	7.7	5.5	1997	90.4	0.8	0.6	3.3	1.9	2.1	0.9	1997	81.2	2.4	1.9	6.6	3.0	3.2	1.7
1998	51.8	21.1	7.7	2.2	5.6	6.5	5.1	1998	50.3	23.5	6.9	1.3	6.0	7.1	5.0	1998	90.4	0.8	0.6	3.5	1.7	2.2	0.9	1998	81.4	2.5	2.2	6.7	2.6	2.9	1.7
1999	55.0	19.2	7.9	2.2	5.2	5.8	4.8	1999	56.0	19.2	7.4	1.5	5.5	5.9	4.6	1999	89.8	0.9	0.7	3.8	1.7	1.9	1.2	1999	81.3	2.7	2.4	6.3	2.8	2.7	2.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	100.0	2000	0.0	0.0	0.0	0.0	0.0	0.0	100.0	2000	0.0	0.0	0.0	0.0	0.0	0.0	100.0	2000	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Notes: Groups ranked by income (AGI + adjustments) excluding realized capital gains and SS and UI benefits.

Wages is defined as wages and salaries and pensions (and includes bonuses, stock-option exercises, etc.). S-corp. is profits from S-Corporations (entities not subject to corporate taxes and taxed only at the individual level)

Partn. is profits from Partnerships. Busin. is profits from sole proprietorship businesses (Schedule C income) and farm income. Divid. is dividends distributed. Interest is interest income.

Other include royalties, rents, income from estates, and other forms of income. The sums of all sources add up to 100%.

Capital Gains are excluded from income. All details in Appendix Section C.

Table C1 (continued): Income Composition by Sources of Income and by Fractiles of Total Income (excluding capital gains), 1962-2000

Top 1-0.5%

Year	Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other
1960	49.0	2.0	9.9	19.9	9.9	3.4	5.8
1962	47.6	2.1	10.3	20.7	9.7	3.6	6.0
1964	50.3	1.9	9.1	20.4	9.5	3.7	5.1
1966	47.8	2.3	11.0	21.5	8.5	4.5	4.4
1967	51.7	1.8	10.9	19.6	8.9	4.5	2.6
1968	51.8	1.8	10.6	19.5	8.7	4.6	3.0
1969	52.2	2.0	10.8	19.6	8.4	4.5	2.7
1970	56.3	1.6	8.7	18.0	7.4	5.2	2.8
1971	58.0	1.6	7.9	17.7	6.9	5.3	2.8
1972	56.2	1.6	7.6	18.1	7.9	5.3	3.3
1973	56.6	1.6	7.5	18.1	6.8	5.8	3.6
1974	56.7	1.6	7.5	18.3	6.5	6.0	3.4
1975	59.0	1.3	6.4	16.5	6.8	6.3	3.7
1976	60.1	1.3	6.6	15.8	6.6	6.1	3.5
1977	61.4	1.3	7.1	15.0	6.9	5.8	2.5
1978	63.6	1.1	6.0	14.4	6.4	5.5	3.0
1979	64.0	1.1	5.5	13.4	6.4	6.8	2.7
1980	66.5	0.8	4.1	10.3	6.8	8.7	2.9
1981	68.5	0.2	2.2	7.8	7.2	11.1	3.1
1982	70.9	0.5	2.0	7.2	6.4	10.7	2.4
1983	73.2	0.7	1.9	7.9	6.1	8.4	1.8
1984	73.4	0.9	1.4	8.3	4.9	8.6	2.6
1985	74.7	0.8	1.1	7.7	4.9	9.1	1.8
1986	76.3	1.1	1.1	9.8	4.0	6.4	1.3
1987	69.7	1.3	4.3	10.9	4.7	6.7	2.4
1988	67.7	2.5	5.3	10.3	4.3	6.8	3.1
1989	66.9	2.5	5.7	10.1	4.5	7.2	3.2
1990	66.5	2.8	5.2	11.0	4.3	7.3	2.9
1991	68.4	2.4	5.1	10.8	4.0	6.2	3.1
1992	68.8	3.5	5.7	11.0	3.4	4.5	3.2
1993	69.1	3.6	5.8	11.0	3.4	3.9	3.2
1994	69.6	4.4	5.5	10.9	3.2	3.4	3.1
1995	68.7	4.5	5.5	10.5	3.7	4.2	3.0
1996	68.8	4.9	5.7	9.8	4.0	3.9	2.9
1997	69.9	5.0	5.6	9.1	3.9	3.7	2.7
1998	69.4	5.3	6.2	8.8	3.6	3.5	3.1
1999	69.8	5.9	6.2	8.2	3.9	3.3	2.8
2000	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Top 0.5-0.1%

Year	Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other
1960	41.4	2.3	11.9	19.6	13.8	3.7	7.3
1962	39.9	2.4	12.2	20.0	14.2	3.8	7.5
1964	41.4	2.6	13.1	19.8	13.6	4.1	5.5
1966	41.8	2.8	14.3	19.1	13.4	4.1	4.5
1967	42.2	2.6	15.1	19.8	12.9	4.3	3.1
1968	41.8	2.9	15.0	19.5	12.6	4.5	3.6
1969	44.6	2.9	13.1	18.9	12.4	5.0	3.1
1970	47.7	2.8	12.9	19.2	10.9	5.6	3.4
1971	47.7	2.8	11.4	18.9	10.0	5.7	3.4
1972	51.2	2.5	10.6	17.0	9.4	5.6	3.7
1973	50.8	2.2	10.2	17.2	10.0	5.8	3.9
1974	51.1	2.3	9.3	16.6	9.7	7.1	4.0
1975	54.5	1.8	8.4	15.1	9.4	6.4	4.4
1976	56.4	2.1	7.6	14.4	9.9	5.9	3.8
1977	57.9	1.7	8.2	13.2	9.5	5.8	3.7
1978	60.7	1.8	8.0	11.4	9.1	5.5	3.6
1979	62.2	1.4	6.5	10.1	9.3	6.8	3.8
1980	63.3	1.0	5.7	8.1	9.6	8.4	3.9
1981	65.2	0.5	2.4	6.7	9.5	11.5	4.3
1982	67.0	0.6	3.2	5.5	9.3	10.3	4.1
1983	69.9	1.0	3.0	6.4	7.9	8.8	3.1
1984	70.3	1.4	2.3	7.1	7.2	9.4	2.3
1985	69.0	1.8	2.2	8.1	6.4	9.6	2.9
1986	71.6	1.9	2.2	9.5	5.4	7.9	1.5
1987	66.7	3.6	5.4	8.5	5.4	7.6	2.8
1988	63.3	5.1	6.4	8.2	5.6	7.7	3.7
1989	60.3	5.2	7.5	8.2	5.6	9.2	4.1
1990	60.2	5.3	7.7	9.2	5.0	9.0	3.8
1991	61.1	5.4	8.0	8.8	4.6	8.3	3.9
1992	62.0	6.4	8.7	9.1	4.1	5.7	4.0
1993	63.9	6.1	8.3	8.9	4.1	4.8	4.1
1994	62.6	7.6	8.6	8.6	4.2	4.4	4.1
1995	63.4	8.6	7.3	8.0	4.2	5.0	3.5
1996	63.6	8.7	7.7	7.2	4.3	4.8	3.7
1997	63.0	9.3	8.0	6.6	4.6	4.6	4.0
1998	62.8	10.2	8.3	6.1	4.3	4.5	3.9
1999	62.2	10.4	9.0	5.5	4.5	4.3	4.0
2000	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Top 0.1-0.01%

Year	Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other
1960	37.2	2.6	12.0	10.2	27.2	3.7	7.1
1962	35.8	2.8	12.7	10.9	26.4	3.9	7.6
1964	34.1	2.8	12.6	12.5	26.8	4.6	6.6
1966	34.4	3.4	15.3	12.0	26.0	4.4	4.6
1967	35.2	4.1	15.5	11.9	24.5	5.0	3.8
1968	33.0	4.2	14.8	10.7	28.9	5.0	3.5
1969	36.3	4.4	14.1	11.8	23.4	6.0	4.1
1970	36.6	4.5	13.0	12.9	21.5	6.9	4.6
1971	39.0	4.3	12.6	12.8	20.3	6.5	4.5
1972	42.2	4.6	12.3	11.7	18.9	6.0	4.4
1973	41.6	4.7	10.6	12.7	18.6	6.7	5.2
1974	40.5	5.1	9.9	11.4	19.1	7.9	6.1
1975	45.7	4.5	9.7	9.7	17.9	6.6	5.8
1976	49.5	3.4	8.5	9.4	17.8	6.2	5.3
1977	51.3	3.0	9.1	8.6	17.4	5.8	4.6
1978	52.1	3.0	8.6	7.7	17.4	6.0	5.3
1979	53.5	2.8	7.3	6.2	17.5	7.5	5.2
1980	55.6	1.5	6.2	5.3	16.3	9.3	5.7
1981	57.7	1.2	3.2	4.3	15.6	12.2	5.9
1982	56.1	1.2	3.3	4.1	16.3	12.0	7.0
1983	59.2	3.4	2.1	4.3	14.2	9.7	7.1
1984	64.1	5.6	-3.5	4.6	9.6	13.0	6.7
1985	52.4	4.9	2.6	5.0	13.5	12.3	9.2
1986	54.2	6.4	2.9	5.1	12.7	10.3	8.3
1987	60.8	11.1	3.6	4.7	6.4	9.3	4.2
1988	53.5	14.7	6.0	4.5	7.0	9.1	5.2
1989	49.6	14.5	6.6	5.0	7.3	12.0	5.0
1990	51.1	13.7	6.4	5.4	6.7	11.5	5.2
1991	52.1	13.2	6.7	5.6	6.5	10.8	5.3
1992	55.8	14.4	6.4	5.1	5.9	7.3	5.1
1993	55.3	15.3	7.6	4.7	5.6	6.5	5.1
1994	50.4	20.1	7.6	4.6	5.6	6.5	5.3
1995	51.3	18.8	7.4	4.1	6.1	7.0	5.3
1996	51.5	18.9	8.3	3.4	5.9	6.8	5.2
1997	51.9	19.5	8.2	2.9	6.0	6.4	5.2
1998	52.8	19.6	8.3	2.7	5.4	6.1	5.1
1999	54.3	19.2	8.3	2.6	5.1	5.8	4.9
2000	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Top 0.01%

Year	Wages	S-Corp.	Partn.	Sole P.	Divid.	Interest	Other
1960	18.2	2.2	4.9	0.6	64.8	2.8	6.4
1962	16.8	2.6	5.7	0.6	63.6	3.2	7.4
1964	16.3	2.6	5.8	1.4	65.1	3.5	5.2
1966	16.1	4.3	9.6	2.4	58.5	3.9	5.2
1967	17.1	4.4	13.4	1.7	54.3	4.2	4.9
1968	17.1	5.0	12.7	1.6	53.7	5.1	4.8
1969	17.8	4.7	9.8	1.8	52.9	7.3	5.6
1970	17.6	4.4	8.8	2.7	51.3	8.5	6.7
1971	18.5	5.1	12.3	3.7	46.7	7.6	6.1
1972	23.6	5.8	10.5	5.9	41.6	6.5	6.1
1973	23.1	5.9	6.9	7.3	41.5	7.9	7.4
1974	22.7	6.9	7.5	8.4	37.1	8.5	8.8
1975	25.5	6.1	7.3	8.3	36.3	7.4	9.1
1976	27.7	6.7	6.3	8.1	35.9	6.2	9.1
1977	30.0	5.0	6.1	8.5	35.9	6.0	8.5
1978	31.1	5.2	6.0	8.4	34.9	6.0	8.3
1979	32.3	4.1	8.5	8.6	32.4	8.2	5.9
1980	34.9	2.7	4.8	8.4	30.4	10.1	8.8
1981	36.2	1.7	2.4	7.5	28.3	14.5	9.3
1982	31.1	6.0	5.8	6.2	27.5	13.9	9.4
1983	34.9	13.3	6.7	5.5	20.8	11.1	7.7
1984	33.7	22.2	5.5	4.7	14.8	11.9	7.3
1985	35.8	22.0	5.0	5.0	13.2	12.3	6.7
1986	40.6	23.8	4.1	3.3	13.0	10.4	4.8
1987	36.1	26.4	7.6	3.1	9.4	12.8	4.7
1988	38.0	23.2	6.3	2.8	12.4	11.2	6.2
1989	31.0	28.0	6.4	3.1	11.2	14.0	6.3
1990	34.0	25.0	5.6	3.8	11.6	14.0	6.2
1991	33.1	25.9	8.0	3.4	9.1	14.7	5.8
1992	45.3	23.0	6.5	3.5	7.2	9.0	5.5
1993	40.3	25.8	8.9	3.1	7.1	8.4	6.4
1994	32.4	35.4	6.7	2.8	7.1	9.5	6.0
1995	35.7	31.1	7.8	2.3	8.4	9.3	5.5
1996	39.2	28.5	8.7	1.9	7.8	8.6	5.3
1997	44.6	25.6	8.2	2.0	6.5	7.7	5.5
1998	50.3	23.5	6.9	1.3	6.0	7.1	5.0
1999	56.0	19.2	7.4	1.5	5.5	5.9	4.6
2000	0.0	0.0	0.0	0.0	0.0	0.0	100.0

Notes: Groups ranked by income (AGI + adjustments) excluding realized capital gains and SS and UI benefits.

Wages is defined as wages and salaries and pensions (and includes bonuses, stock-option exercises, etc.). S-corp. is profits from S-Corporations (entities not subject to corporate taxes and taxed only at the individual level)

Partn. is profits from Partnerships. Busin. is profits from sole proprietorship businesses (Schedule C income) and farm income. Divid. is dividends distributed. Interest is interest income.

Other include royalties, rents, income from estates, and other forms of income. The sums of all sources add up to 100%.

Capital Gains are excluded from income. All details in Appendix Section C.

Table D1: Top Wage Income Shares in the United States, 1960-2000

	Top 10%	Top 5%	Top 1%	Top .5%	Top .1%	Top .01%	Top 10-5%	Top 5-1%	Top 1-.5%	Top .5-.1%	Top .1-.01%	Top .01%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1960	24.64	15.11	5.16	3.30	1.15	0.25	9.53	9.95	1.86	2.15	0.91	0.25
1962	24.62	15.02	5.05	3.21	1.08	0.21	9.60	9.97	1.85	2.13	0.87	0.21
1964	24.98	15.25	5.12	3.24	1.07	0.21	9.73	10.13	1.88	2.17	0.87	0.21
1966	25.35	15.47	5.16	3.27	1.10	0.22	9.88	10.31	1.89	2.16	0.88	0.22
1967	25.78	15.81	5.34	3.38	1.14	0.23	9.97	10.47	1.96	2.24	0.91	0.23
1968	25.60	15.66	5.24	3.32	1.12	0.23	9.94	10.42	1.92	2.20	0.89	0.23
1969	25.71	15.68	5.19	3.27	1.10	0.24	10.04	10.49	1.92	2.17	0.87	0.24
1970	25.67	15.64	5.13	3.21	1.06	0.21	10.03	10.51	1.92	2.15	0.85	0.21
1971	25.67	15.67	5.18	3.25	1.08	0.22	10.00	10.49	1.93	2.17	0.86	0.22
1972	25.82	15.80	5.32	3.39	1.14	0.24	10.02	10.48	1.94	2.24	0.90	0.24
1973	26.15	16.06	5.43	3.43	1.14	0.24	10.09	10.63	2.00	2.28	0.91	0.24
1974	26.63	16.48	5.66	3.63	1.26	0.27	10.15	10.82	2.03	2.37	0.99	0.27
1975	26.46	16.32	5.64	3.63	1.26	0.27	10.15	10.67	2.01	2.38	0.98	0.27
1976	26.66	16.49	5.74	3.70	1.30	0.29	10.16	10.76	2.04	2.40	1.02	0.29
1977	26.94	16.70	5.85	3.79	1.35	0.30	10.25	10.85	2.06	2.45	1.05	0.30
1978	27.43	17.07	6.05	3.93	1.40	0.31	10.36	11.02	2.13	2.53	1.09	0.31
1979	27.65	17.25	6.21	4.06	1.47	0.34	10.40	11.03	2.15	2.59	1.13	0.34
1980	28.06	17.60	6.43	4.23	1.57	0.38	10.46	11.17	2.20	2.66	1.19	0.38
1981	28.15	17.65	6.43	4.24	1.59	0.39	10.50	11.23	2.18	2.66	1.20	0.39
1982	28.56	18.02	6.68	4.42	1.67	0.41	10.54	11.34	2.25	2.75	1.26	0.41
1983	29.09	18.49	6.96	4.66	1.80	0.47	10.61	11.53	2.30	2.86	1.33	0.47
1984	29.61	18.95	7.27	4.96	1.99	0.52	10.66	11.68	2.32	2.97	1.47	0.52
1985	29.74	19.05	7.28	4.92	1.98	0.54	10.70	11.77	2.35	2.95	1.44	0.54
1986	29.94	19.19	7.33	4.96	2.02	0.58	10.75	11.87	2.36	2.95	1.44	0.58
1987	30.60	19.99	8.15	5.69	2.43	0.69	10.61	11.83	2.47	3.25	1.74	0.69
1988	31.97	21.37	9.38	6.79	3.16	1.09	10.60	11.99	2.59	3.63	2.07	1.09
1989	31.55	20.83	8.70	6.13	2.69	0.82	10.71	12.14	2.57	3.44	1.86	0.82
1990	31.81	21.14	9.00	6.41	2.87	0.91	10.67	12.14	2.59	3.54	1.96	0.91
1991	31.44	20.77	8.56	5.97	2.57	0.78	10.67	12.21	2.59	3.40	1.79	0.78
1992	32.46	21.85	9.63	6.97	3.33	1.22	10.61	12.22	2.66	3.64	2.12	1.22
1993	31.85	21.29	9.06	6.41	2.90	0.96	10.56	12.23	2.64	3.51	1.95	0.96
1994	31.54	20.95	8.72	6.07	2.63	0.83	10.59	12.22	2.65	3.44	1.80	0.83
1995	32.43	21.73	9.26	6.52	2.91	0.94	10.70	12.48	2.73	3.62	1.97	0.94
1996	33.16	22.47	9.80	6.97	3.21	1.11	10.69	12.66	2.83	3.77	2.10	1.11
1997	33.88	23.19	10.43	7.54	3.67	1.36	10.70	12.75	2.89	3.88	2.31	1.36
1998	34.34	23.73	10.98	8.08	4.12	1.65	10.61	12.76	2.89	3.96	2.48	1.65
1999	35.11	24.50	11.64	8.71	4.67	1.98	10.61	12.85	2.94	4.04	2.69	1.98
2000	36.03	25.42	12.61	9.64	5.44	2.45	10.62	12.84	2.99	4.24	3.03	2.45

Table D2: Marginal Tax Rates on Wages for Top Wage Income Groups in the United States, 1960-2000

	Top 10% (1)	Top 5% (2)	Top 1% (3)	Top .5% (4)	Top .1% (5)	Top .01% (6)	Top 10-5% (7)	Top 5-1% (8)	Top 1-.5% (9)	Top .5-.1% (10)	Top .1-.01% (11)	Top .01% (12)
1960	28.48	32.11	43.20	48.83	60.05	67.48	22.73	26.36	33.18	42.83	58.02	67.48
1962	29.44	33.06	44.39	50.08	61.05	71.97	23.78	27.31	34.53	44.53	58.41	71.97
1964	27.67	30.95	40.91	45.51	54.86	62.81	22.52	25.91	33.01	40.88	52.97	62.81
1966	26.96	30.06	39.99	45.02	53.91	60.45	22.10	25.09	31.28	40.49	52.26	60.45
1967	27.54	30.83	40.93	45.61	54.10	60.52	22.31	25.69	32.86	41.31	52.46	60.52
1968	30.68	34.27	45.35	50.15	58.22	63.79	25.01	28.70	37.08	46.02	56.79	63.79
1969	31.93	35.58	46.27	50.90	57.96	60.48	26.23	30.29	38.38	47.31	57.27	60.48
1970	30.96	34.57	45.36	49.72	56.25	60.53	25.32	29.32	38.07	46.51	55.20	60.53
1971	30.61	34.40	45.08	49.09	55.05	57.32	24.68	29.11	38.35	46.13	54.48	57.32
1972	31.48	35.24	45.08	48.05	50.27	50.52	25.56	30.24	39.89	46.92	50.21	50.52
1973	32.78	36.70	46.01	48.43	50.04	49.97	26.55	31.95	41.86	47.63	50.06	49.97
1974	34.10	38.19	47.05	49.22	49.94	49.66	27.45	33.55	43.17	48.84	50.02	49.66
1975	34.30	37.99	46.01	48.14	49.63	49.61	28.38	33.75	42.17	47.35	49.64	49.61
1976	36.04	39.76	47.27	48.94	49.30	48.10	30.01	35.76	44.24	48.74	49.64	48.10
1977	38.44	42.50	49.58	50.46	50.13	48.84	31.84	38.68	47.94	50.65	50.50	48.84
1978	40.06	43.93	49.95	50.37	50.19	49.02	33.67	40.63	49.18	50.47	50.52	49.02
1979	40.21	44.19	49.92	50.31	49.10	47.63	33.62	40.97	49.17	50.99	49.55	47.63
1980	41.90	45.38	49.57	49.69	48.28	47.06	36.05	42.97	49.34	50.53	48.67	47.06
1981	42.87	45.69	48.67	48.49	47.07	46.53	38.12	43.99	49.01	49.34	47.24	46.53
1982	39.14	41.61	44.64	44.70	44.12	43.13	34.93	39.83	44.52	45.05	44.44	43.13
1983	37.00	39.35	43.14	44.25	45.15	45.33	32.91	37.06	40.89	43.69	45.08	45.33
1984	35.94	38.24	41.91	42.95	42.83	44.71	31.84	35.96	39.69	43.03	42.16	44.71
1985	36.24	38.62	42.54	43.51	44.80	44.54	32.01	36.19	40.52	42.65	44.90	44.54
1986	36.47	38.95	43.20	44.10	44.71	44.37	32.05	36.32	41.30	43.69	44.84	44.37
1987	33.32	35.19	37.01	36.82	36.67	36.91	29.79	33.93	37.45	36.93	36.58	36.91
1988	28.79	29.28	28.91	27.73	27.10	26.61	27.81	29.56	32.00	28.29	27.36	26.61
1989	28.89	29.46	29.09	27.92	27.25	27.33	27.78	29.72	31.89	28.45	27.22	27.33
1990	28.97	29.61	29.42	28.32	27.73	27.76	27.71	29.75	32.15	28.79	27.71	27.76
1991	29.57	30.62	32.06	31.71	31.35	31.26	27.52	29.60	32.89	31.98	31.39	31.26
1992	29.64	30.66	31.88	31.51	31.35	31.24	27.55	29.69	32.85	31.65	31.42	31.24
1993	31.78	33.79	38.59	39.46	40.03	39.81	27.74	30.23	36.48	38.99	40.14	39.81
1994	31.83	33.84	38.83	39.60	40.10	40.09	27.85	30.28	37.07	39.22	40.11	40.09
1995	31.96	33.96	38.52	39.04	39.74	39.88	27.91	30.57	37.29	38.48	39.67	39.88
1996	31.75	33.57	37.68	37.98	38.80	39.01	27.92	30.39	36.92	37.28	38.69	39.01
1997	32.51	34.56	39.00	39.51	39.71	39.75	28.08	30.93	37.68	39.32	39.68	39.75
1998	32.95	34.91	39.02	39.43	39.64	39.60	28.56	31.37	37.90	39.21	39.66	39.60
1999	33.13	35.14	38.83	39.33	39.48	39.37	28.50	31.80	37.33	39.17	39.56	39.37
2000												

Notes: Marginal Tax Rates on wage income are computed using micro-files of tax returns and the TAXSIM calculator. Marginal tax rates include only federal income taxes and ignore state income taxes, as well as payroll taxes. Marginal tax rates are weighted by wage income.
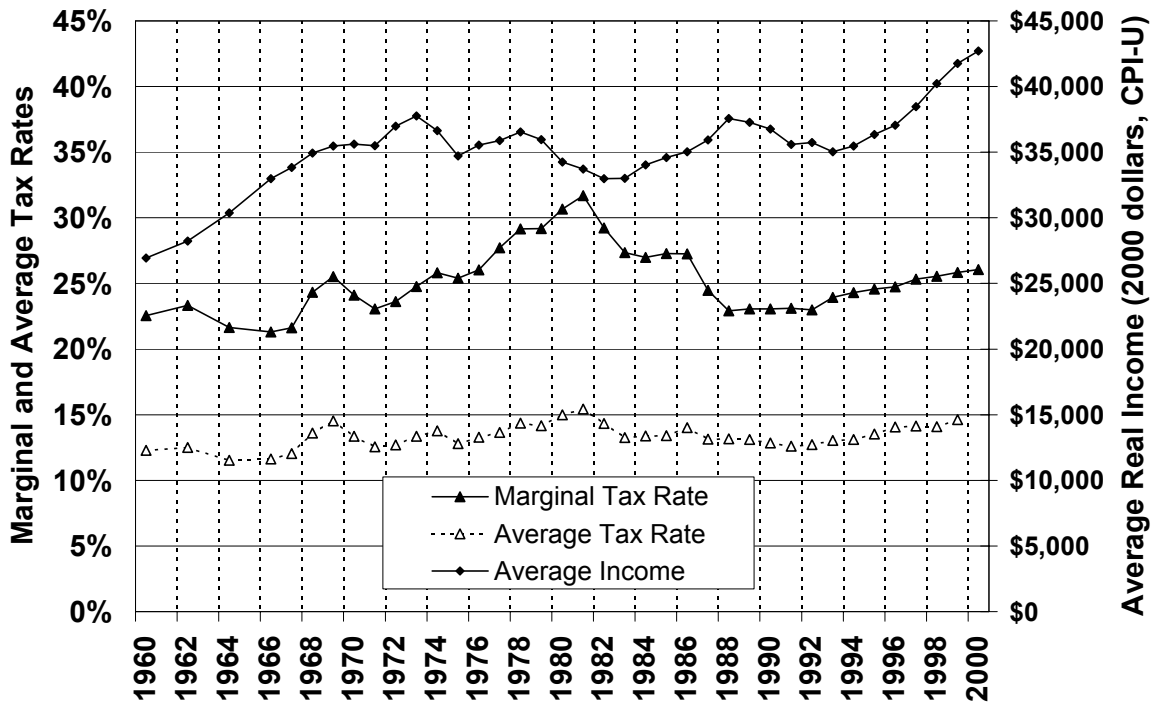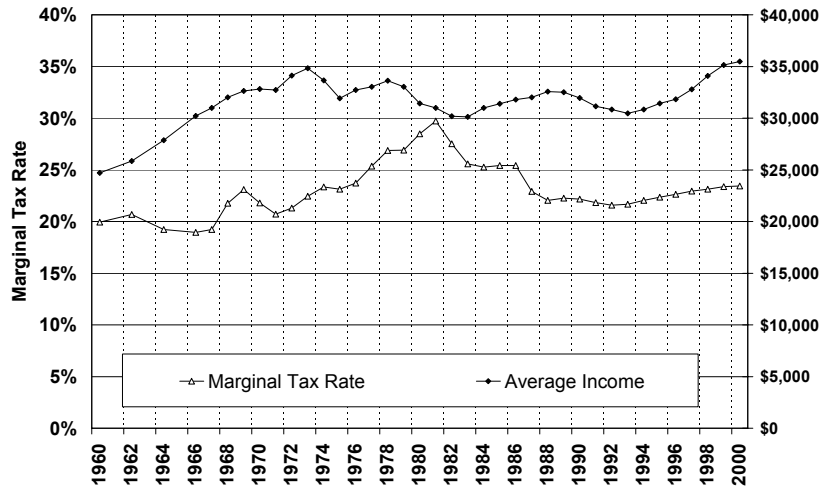See Appendix Section B for details.

FIGURE 1

Average Real Income, Marginal and Average Tax Rate, all tax units, 1960-2000

Source: Table A.

A. Bottom 99% tax units
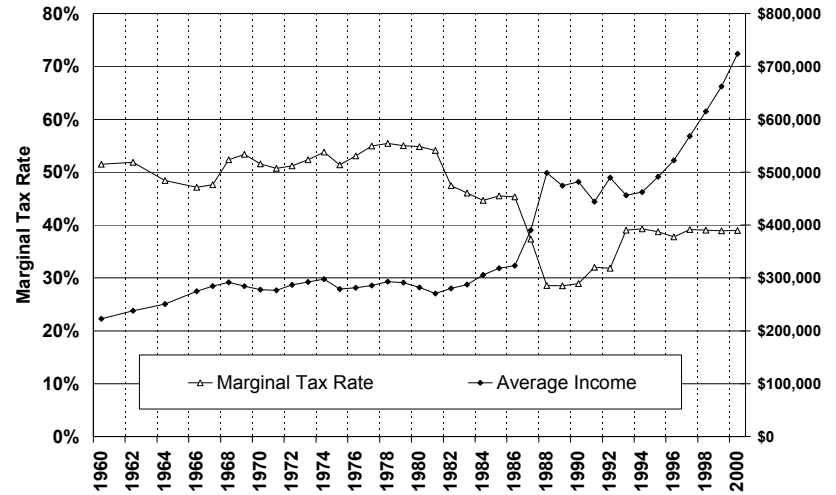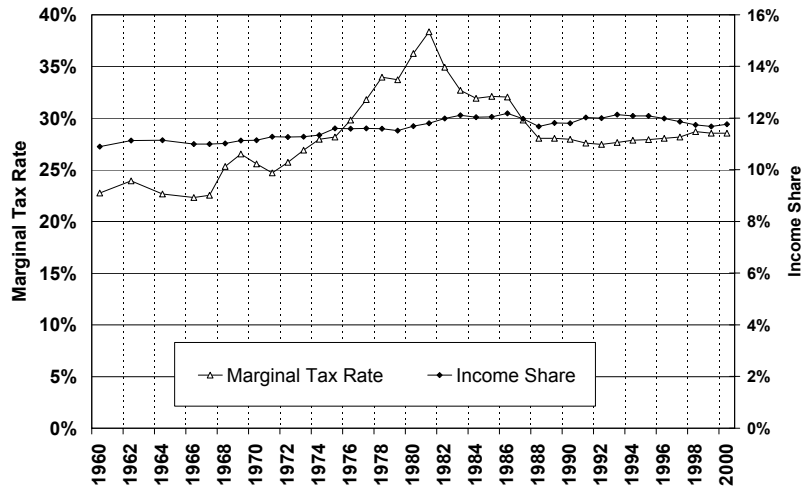

B. Top 1% tax units

FIGURE 2.
Marginal Tax Rates and Average Real Incomes for the Bottom 99% and the Top 1%

Source: Series obtained from Tables A and B1

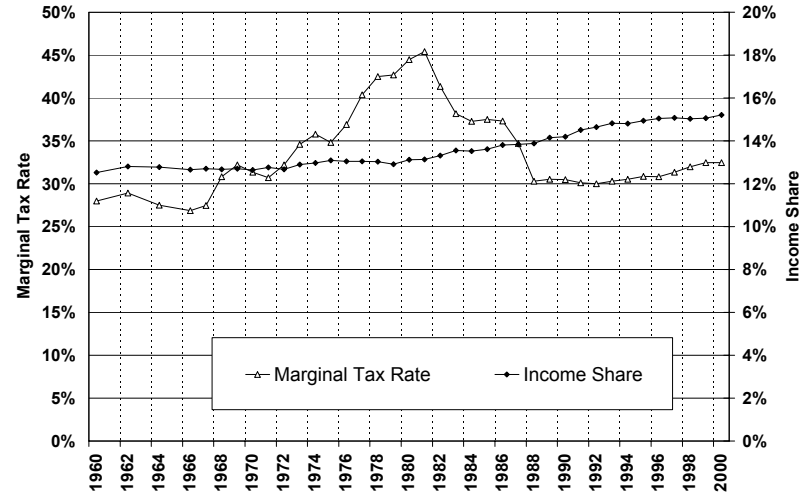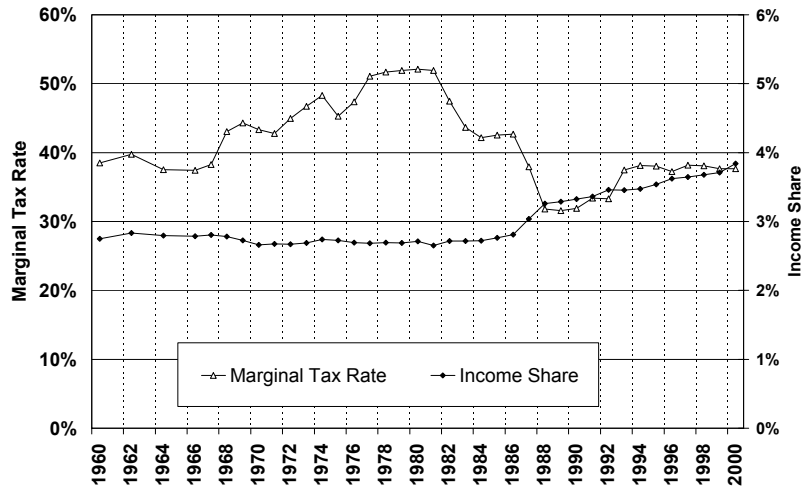**A. Top 10-5% tax units**

B. Top 5-1% tax units

FIGURE 3
Tax Rates and Income Shares for the Bottom of the Top Decile Groups
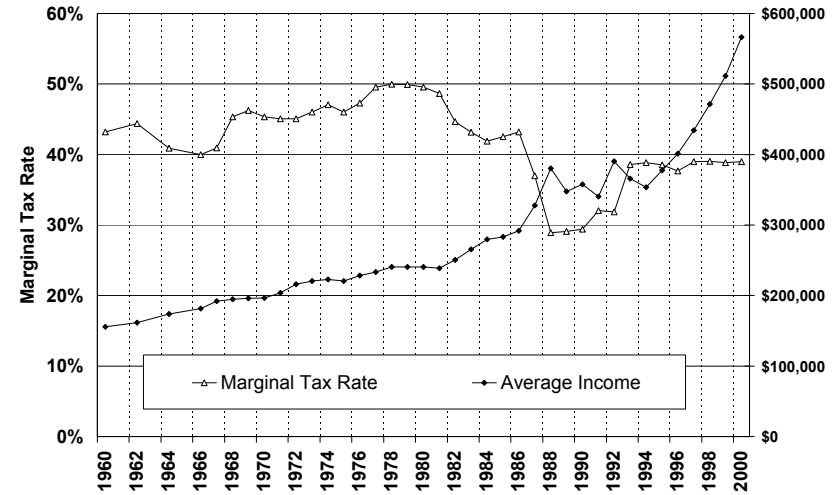
Source: Series obtained from Tables B1 and B2

A. Top 1-0.5% tax units

B. Top 0.5-0.1% tax units
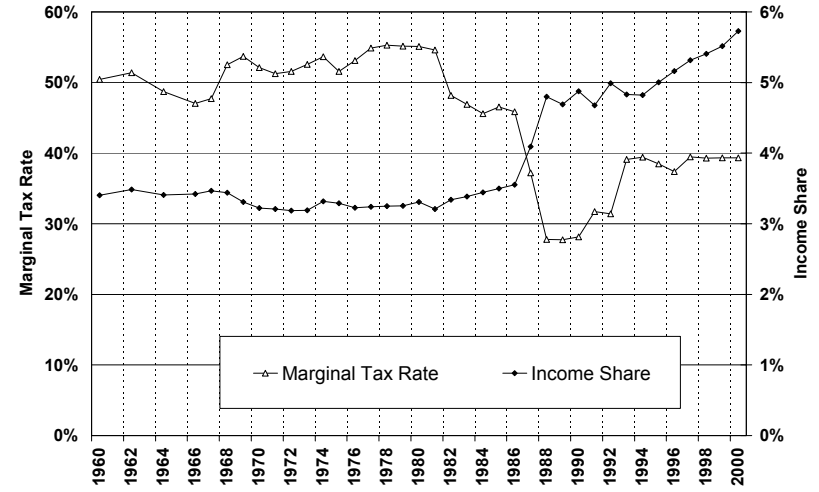
FIGURE 4
Tax Rates and Income Shares for the Bottom of the Top Percentile Groups

Source: Series obtained from Tables B1 and B2

A. Top 0.1-0.01% tax units
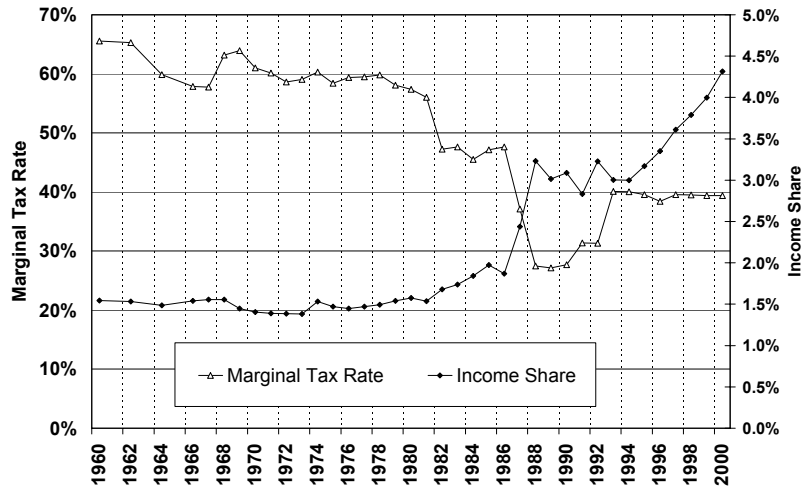
B. Top 0.01% tax units
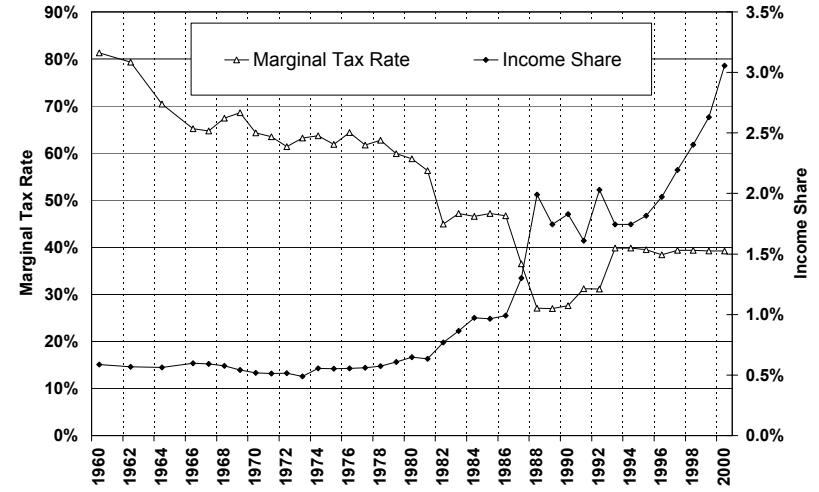
FIGURE 5
Tax Rates and Income Shares for the Very Top Groups

Source: Series obtained from Tables B1 and B2
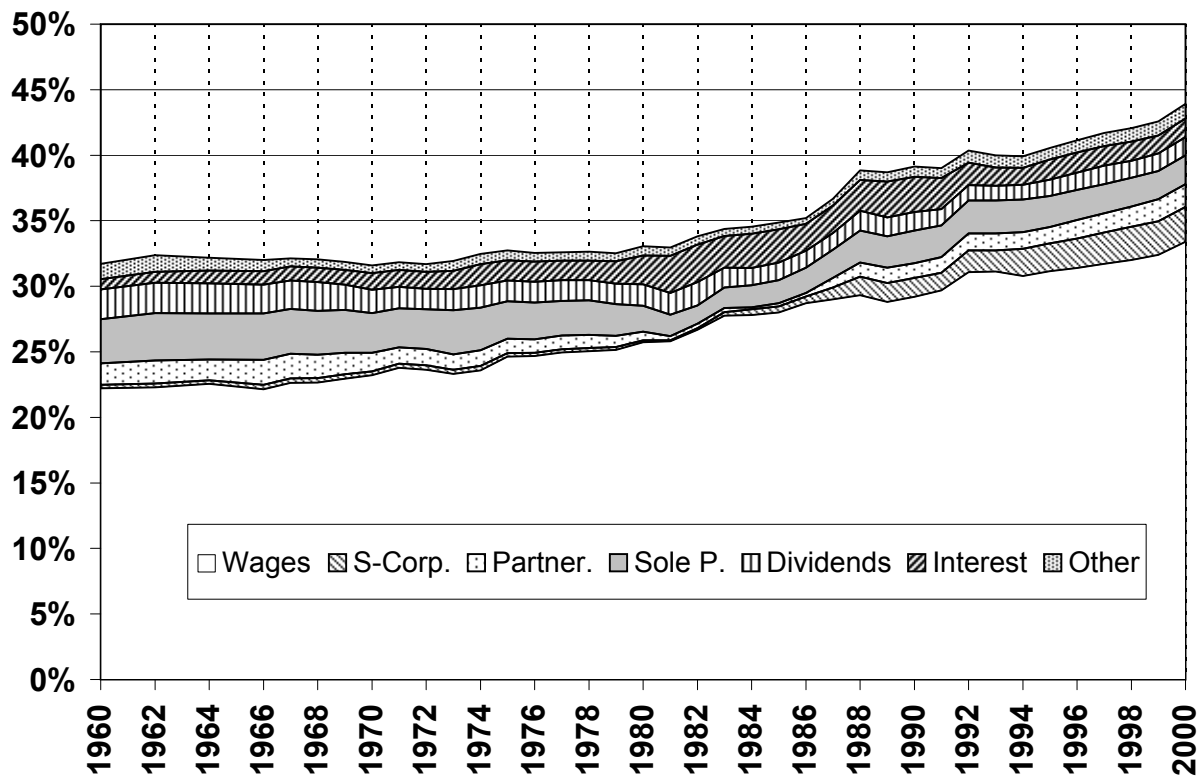
FIGURE 6.
The Top 10% Income Share and Composition, 1960-2000

Source: Tables B1 and C1
The figure displays the income share of the top 10% tax units, and how the top 10% incomes are divided into seven income components.
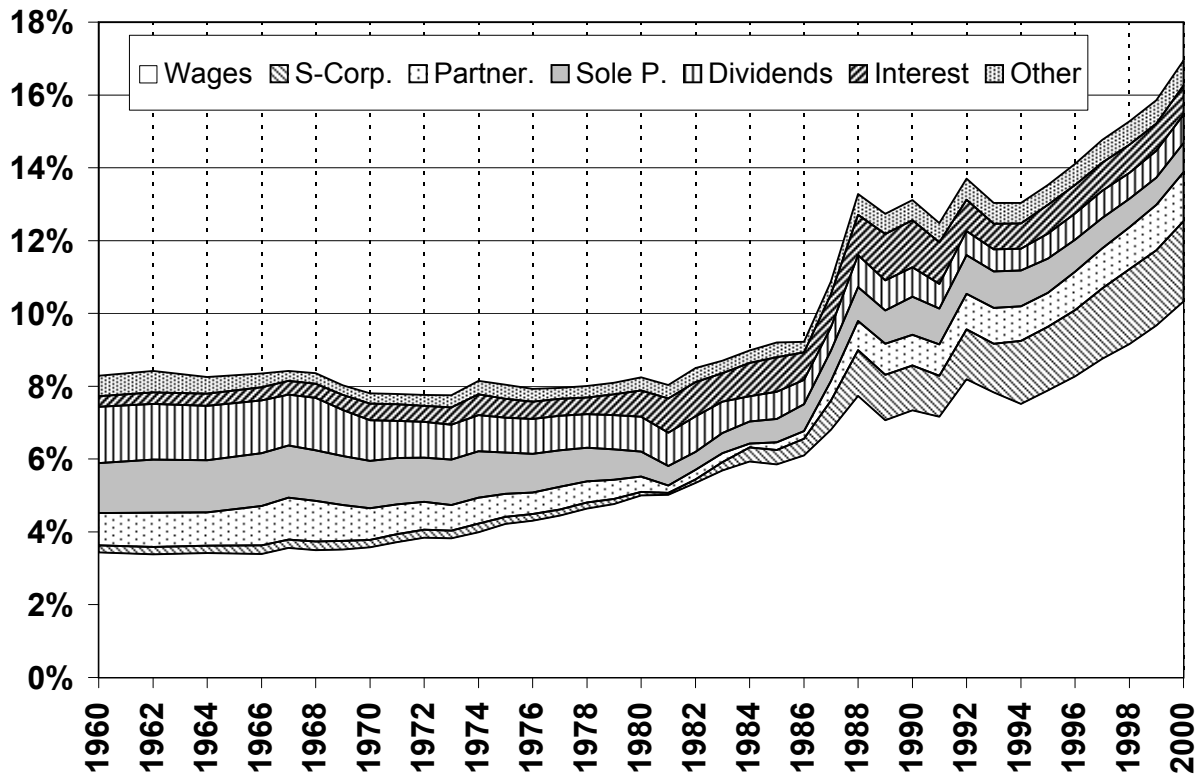
FIGURE 7.

The Top 1% Income Share and Composition, 1960-2000

Source: Tables B1 and C1

The figure displays the income share of the top 1% tax units, and how the top 1% incomes are divided into seven income components.
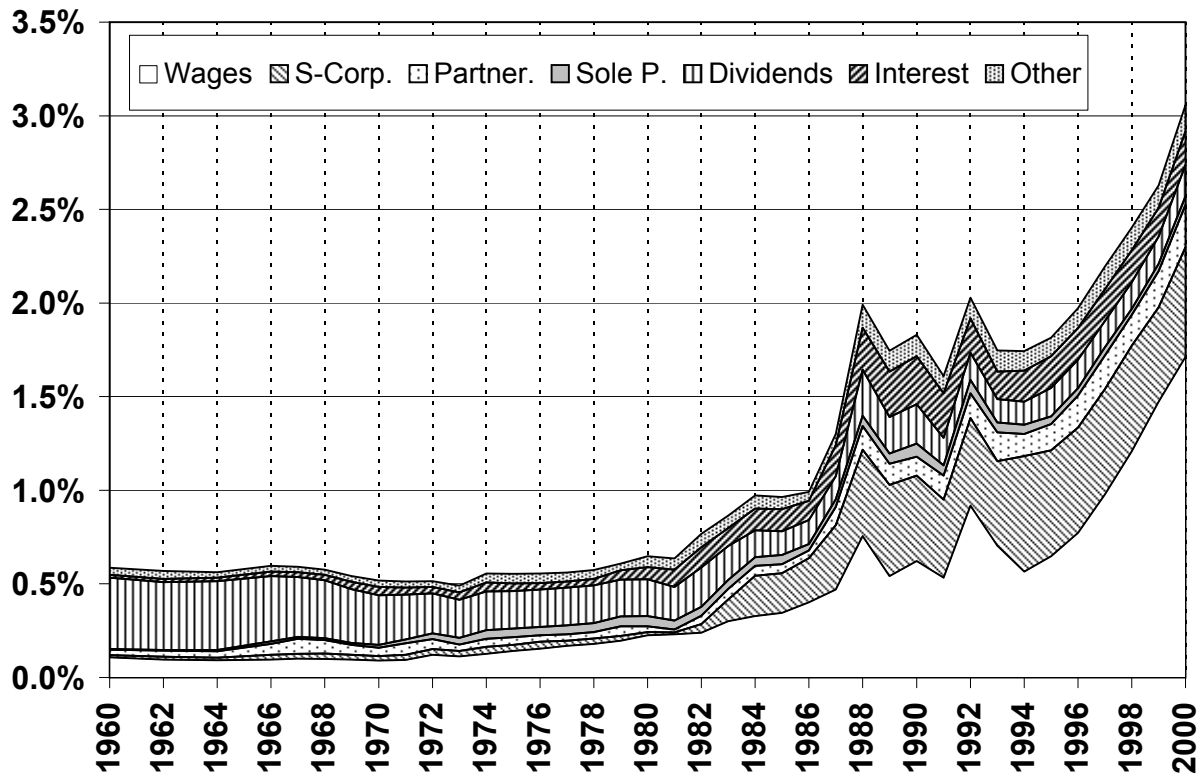
FIGURE 8.
The Top 0.01% Income Share and Composition, 1960-2000

Source: Tables B1 and C1
The figure displays the income share of the top .01% tax units, and how the top .01% incomes are divided into seven income components.
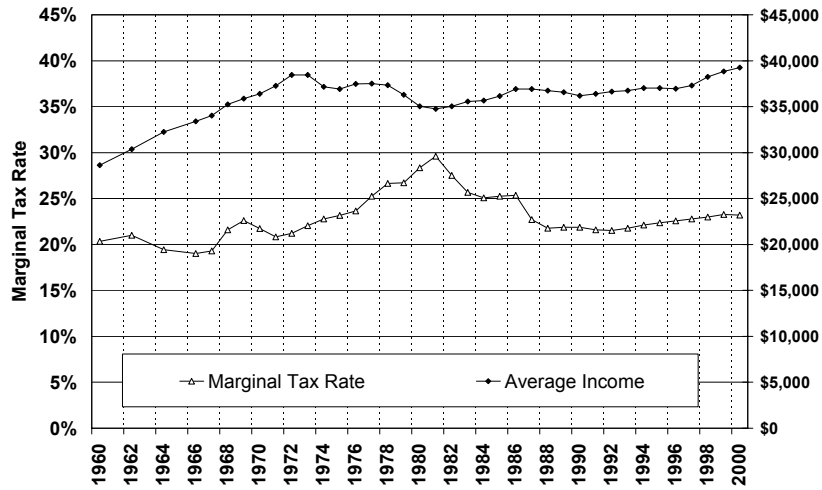
FIGURE 9.
Marginal Tax Rates and Average Real Wage Incomes for the Bottom 99% and the Top 1%

Source: Series obtained from Tables A and D1

A. Top 1-0.5% tax units with wage income
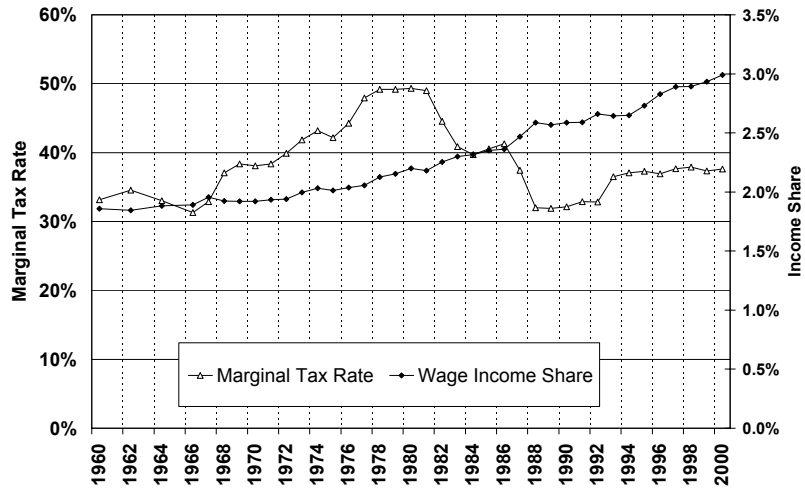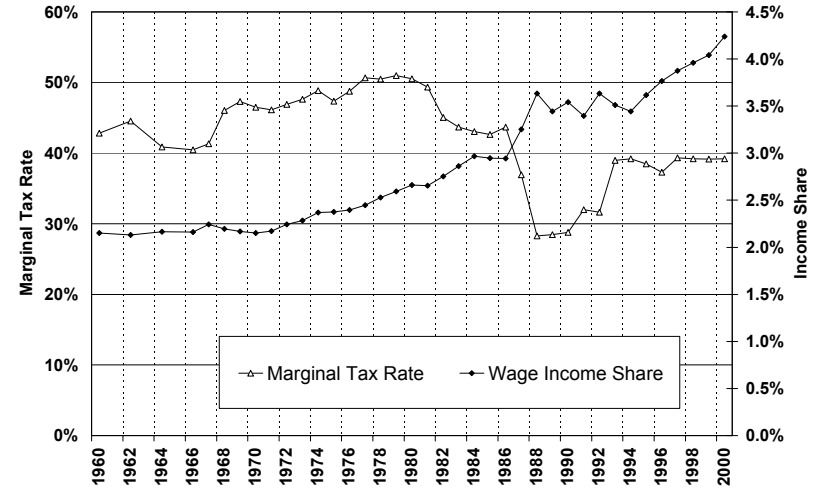

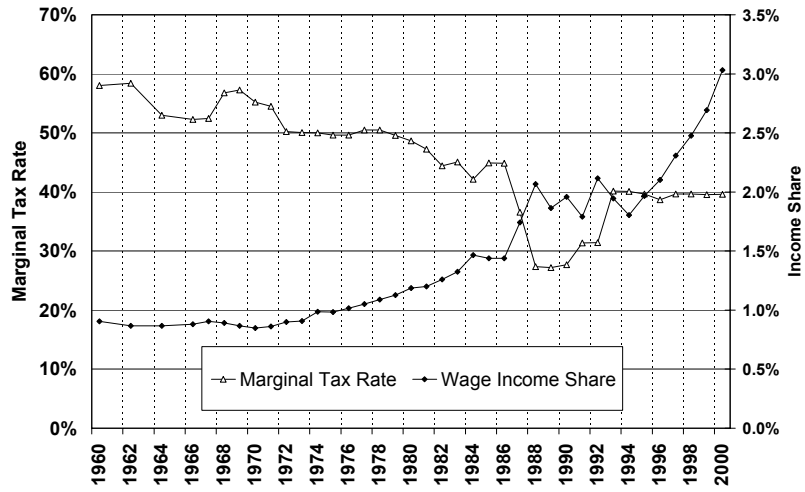**B. Top 0.5-0.1% tax units with wage income**

FIGURE 10.
Tax Rates and Wage Income Shares for the Bottom of the Top Percentile Groups

Source: Series obtained from Tables D1 and D2

A. Top 0.1-0.01% tax units with wage income

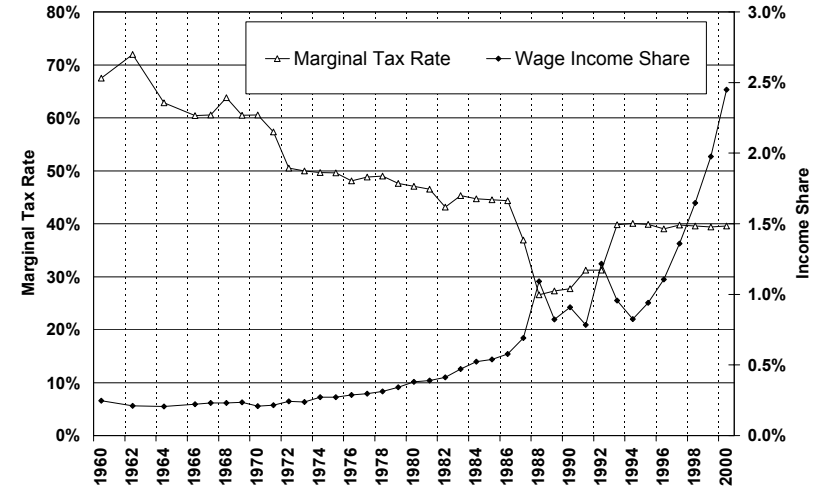**B. Top 0.01% tax units with wage income**

FIGURE 11.
Tax Rates and Wage Income Shares for the Very Top Groups

Source: Series obtained from Tables D1 and D2