The Increasing Progressivity of U.S. Taxes

And the Shrinking Tax Base

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In 2008, a study of tax policy in two dozen leading economies by the Organization of Economic Cooperation and Development (OECD: 104) found that, "Taxation is most progressively distributed in the United States, probably reflecting the greater role played there by refundable tax credits, such as the Earned Income Tax Credit and the Child Tax Credit . . . . Taxes tend to be least progressive in the Nordic countries, France and Switzerland."

Even aside from the uniquely generous U.S. tax credits, the OECD study found the ratio of taxes paid to income received among the top 10 percent was by far the highest in the U.S. at 1.35, compared with 1.1 for France, 1.07 for Germany, 1.01 for Japan and 1.0 for Sweden.

Table 1 provides a brief history of changes in individual tax rates in the U.S., using *average* tax rates by income from the Congressional Budget Office (CBO). The focus is on 1979, 1989, 1999 and 2007 for simplicity, but also because those years were cyclical peaks.

The first six columns show changes in *average* tax rates among fifths ("quintiles") of U.S. households. By 2007 the average tax rate fell to minus 6.8 percent for the poorest quintile. From 1979 to 2007, the average tax rate fell by 110% for the second quintile, by 56% at the middle, 39% for the fourth quintile, and by 15% for the top 1%.

The disproportionate reductions in average income tax rates for the bottom 80% of potential taxpayers (including negative tax rates for the bottom 40%), are the cumulative result of numerous changes in tax laws.

The 1981 tax cuts left the top tax rate at 50% for earned income but gradually reduced other tax rates 25% by 2004, and doubled the income threshold at which the top tax rate applied. The 1986 tax reform doubled personal exemptions and greatly increased the EITC and standard deduction (but left total deductions unchanged at 23% of AGI). The 2001 and 2003 tax cuts added a new 10% rate, further expanded the EITC and introduced a refundable $1000 tax child

tax credit. By 2009, federal income taxes were *negative*, on average, for 44.7% of Americans (including nonfilers), according to the Joint Committee on Taxation (2010: 54).

While *average* tax rates were reduced by 39-110% for the lowest four quintiles since 1979, the highest *marginal* tax rates on both ordinary income and capital gains were also cut in half. Yet revenue from the individual income tax was virtually unchanged − 8.7% of GDP in 1979 and 8.5% in 2007. Total revenues from all sources were identical at 18.5% in both years, and above the postwar average of 18%.

The reduction of average tax rates among the top 1 percent (to 19% in 1997 from 21.8% in 1979) does *not* imply that top taxpayers in 2007 paid less income tax than they would have if they had still been taxed at the 1979 rates of 70% on interest and dividends and 28% on capital gains. On the contrary, the evidence is unambiguous (Reynolds 1999 and Table 2) that raising the tax rate on capital gains reduces asset sales and therefore shrinks the amount of capital gains to be taxed. Investors contemplating taking profits on an appreciated stock in order to reinvest in a more promising new firm will make not make that trade if the transactions tax on realizations makes it unprofitable. Capital is thus made less mobile and capital allocation less efficient.

Raising the tax rate on interest and dividends likewise reduces that amount of taxable interest and dividend income. Raising the tax on high salaries reduces the incentive to be paid in cash, rather than in deferred compensation and perks. Raising the tax on individual income far above the tax on corporate income encourages professionals and small firms to shelter retained earnings in C-Corporations. For such reasons the punitive tax rates of 1979 resulted in fewer high incomes to tax, so that individual income tax revenues were, in fact, no higher in

1979 than they were after top tax rates had been cut in half, even though *average* tax rates have also fallen sharply on the bottom 80 percent.

Much Lower Tax Rates, Not Lower Revenues

The explanation of the apparent paradox of falling tax rates and unchanged revenues is that reductions in top *marginal* rates − including those on capital gains and dividends – increased *reported* top incomes so dramatically that the resulting additional revenue windfalls from the top one or two percent of taxpayers offset the relatively huge reduction in *average* tax rates for the bottom 80 percent.

The "elasticity of taxable income" (ETI) measures the percentage change in taxable income expected to result from a 1% change in the value of a marginal dollar of after-tax income (the "net of tax rate"). The response measured by the ETI results from changes in real activity (effort, investment and entrepreneurship) but also from changing incentives to avoid reporting income.

As Saez, Slemrod and Giertz observe, "a number of empirical studies have found that the behavioral response to changes in marginal tax rates is concentrated in the top of the income distribution." The reported amount of top income rises when marginal tax rates fall, and vice versa. It follows that what *appear* to be changes in the highest incomes may instead be behavioral responses to changes in various marginal tax rates on labor earnings, business income, dividends and capital gains in 1986-88, 1993, 1997 and 2003.

If the ETI for high-income individual is close to 1.0 or higher, that suggests a higher tax rate would induce high-income taxpayers to reduce reported incomes by such a large amount that the higher tax rate would yield little or no additional revenue. This is largely a matter of tax

avoidance but also work avoidance. Ohanian, Raffo and Rogerson find that "taxes can account for much of the variation in hours worked both over time and across countries."

At the Treasury Department's Office of Tax Analysis (OTA), Heim estimated that the elasticity of *taxable* income is 1.2 at incomes above $500,000. Other OTA economists, Auten and Joulfaian, also find "quite large responses for the highest income groups. . . . The implied long-run taxable income elasticity is about 1.0 for taxpayers in the $500,000 to $2,000,000 income classes." In a longer-run study focused on the top 1 percent in five Anglo-Saxon countries, Atkinson and Leigh estimate an ETI of 1.2 to 1.6.

Focusing on the *earned* income of corporate executives (excluding investment and business income), a Congressional Budget Office study by Eissa and Giertz found, "the estimated elasticity with respect to the current after-tax share rises . . . to 1.35 for executives with more than $650,000 in permanent income, and 1.71 for those with at least one million dollars (all statistically significant). . . . Tax responses appear much larger for all high-income taxpayers than for the subset of top executives."

A dozen earlier studies, including some by the OTA and CBO, typically found a high elasticity of the amount of capital gains that are realized to the top tax rate on capital gains (Reynolds 1999, Ch. 4). **Table 2** shows that a much larger volume of capital gains were *realized* in *taxable* accounts (rather than being *unrealized* or reinvested within tax-deferred or tax-exempt accounts) when the capital gains tax was 15-20% than when the capital gains tax was 28% or more. Realized capital gains only amounted to 2.5% of GDP from 1987 to 1996 when the capital gains tax was 28%, so they accounted for only 6.9% of individual tax revenues and 17.7% of the income reported by the top 1 percent. Realized gains doubled as a share of GDP

from 2003 to 2007, and accounted for 9% of individual tax revenue and 28.1% of the income reported by the top 1 percent.

Top Incomes Rose Because of Capital Gains and Dividends

Table 3 shows the top 1 percent's average real income broken down by specific sources, such as capital gains, dividends and salaries (including bonuses and nonqualified stock options). These estimates, from economist Thomas Piketty and Emmanuel Saez, are the same data President Obama referred to on April 13 when he said, "In the last decade . . . the top 1 percent saw their income rise by an average of more than a quarter of a million dollars each."

Table 3 shows that average real incomes of the top 1 percent over the past decade rose *and fell* almost entirely because of capital gains. The second column shows that average salaries, bonuses and stock options of the top 1 percent have *not* increased since 1999-2000. Total income of the top 1 percent was also lower in 2008 than in 1999-2000, because of the stock market collapse. CBO estimates of top incomes are totally dominated by the amount of capital gains which, in turn, means reductions in the capital gains tax tend to create illusory increases in (reported) top incomes.

The third column shows stronger gains in business income after 2003, which also happened the last time the individual income tax rate was as low as the corporate tax rate, from 1987 to 1992. This is consistent with greater incentives for new and existing firms and professionals to file under the individual income tax (rather than the corporate tax) as partnerships, limited liability companies or Subchapter S corporations.

Just as a high tax on capital gains before 1997 was easily avoided by not selling appreciated assets, a high tax on dividends before 2003 was easily avoided by shunning dividend-paying stocks (except in foundations or IRA and Keogh plans).

The fourth columns shows that the average amount of taxable *dividends* reported by the top 1 percent was essentially stagnant from 1993 to 2002 when the dividend tax was high, but *nearly tripled* by 2007 when the tax rate on qualified dividends was cut to 15 percent. The lower tax rate encouraged more firms to pay more dividends (Chetty and Saez), and also encouraged high-bracket investors to hold more dividend-paying stocks in taxable accounts (Kawano).

Just as the tax on dividends was easily avoided before 2003 by not investing in dividend-paying stocks, the tax on interest income was easily avoided by holding more tax-exempt municipal securities. Both of these 1993-2002 tax strategies held down *reported* pretax top incomes, just as avoiding the 28% capital gains tax did from 1987 to 1996. But that merely illustrates why pretax income reported on individual tax returns is an untrustworthy method of measuring actual incomes.

The fifth columns shows real taxable interest income of the top 1 percent falling sharply as top tax rates increased in 1991 and 1993, then remaining low through 2002. After the top tax rates were reduced in 2003, taxable interest income rose sharply even though interest rates remained low.

The increase in reported dividends, interest income and capital gains after 2003 largely reflects reduced incentives for easy tax avoidance strategies – hang onto appreciated stock unless you have offsetting losses; avoid dividends in taxable accounts; hold more tax-exempt bonds. What has been widely misinterpreted as an increase in top incomes (and wrongly attributed to

big salaries and bonuses) was largely a predictable response to reduced tax incentives to minimize reported income.

The downside of all this is that individual income tax revenue has become precariously dependent on periodic cyclical windfalls from the stock market. Those stock-related windfalls have been imprudently spent in reducing the lowest, least-damaging tax rate and taking more and more Americans off the tax rolls through refundable tax credits and enlarged exemptions.

One unrepeatable source of stock-related revenue windfalls in 1997-2000 (in addition to capital gains) was the proliferation of nonqualified stock options among 11 percent of households by 2001 (according to the Survey of Consumer Finances). Nothing remotely comparable is ever again likely to recur because (1) the NASDAQ stock prices will surely not quintuple in a few years as they did with the launch of the Internet, and because (2) the Financial Accounting Standards Board has squelched stock options for mid-level employees by requiring that firms record the estimated future value of stock options as an actual current expense.

Misconceptions about Tax Expenditures and Tax Reform

Recent discussions of tax reform and tax expenditures, including the 2010 Report of the National Commission on Fiscal Responsibility and Reform, mistakenly assume that static tax expenditure estimates predict that $402.9 billion of *added revenue* could be raised from 2010 to 2014 by taxing capital gains and dividends at the same rate as ordinary income. On the contrary − as those responsible for the tax expenditures estimates understand − such a policy would surely *reduce* federal tax revenue by greatly reducing the reported amount of capital gains and dividends. To see why, examine Tables 2 and 3.

As the Joint Committee on Taxation (2011: 12) explains, "unlike revenue estimates, tax expenditure calculations do not incorporate the effect of the behavioral changes that are anticipated to occur in response to the repeal of a tax provision." The static tax expenditure calculations pretend, against all evidence, that stockholders would realize just as many gains and report just as many dividends at a tax rate of 35-47% as they would at a tax rate of 15%. That is statistically simple, but economically absurd.

A related misunderstanding arises from a common belief that the 28 percent maximum tax rate enacted in the 1986 tax reform was "paid for" by reducing individual deductions. Feldstein writes that, "An important part of the Reagan [Kemp-Kasten] tax reform of 1986 was a reduction of tax expenditures from more than 9 percent of GDP to 6 percent of GDP." Among "tax expenditures that affected individual tax payers" he mentions loss of deductibility for state sales taxes and consumer credit interest. In reality, most of the dramatic reduction in the value of tax expenditures in 1988-90 was because the value of tax breaks is much lower with a top tax rate of 28 percent. *None* of the reduction in tax expenditures resulted from cutting individual tax deductions, because the reduction in itemized deductions was entirely offset by a larger standard deduction: Total deductions amounted to 23.3% of AGI from 1975 to 1984, and 23.1% of AGI from 1988 to 1993 (IRS). Repealing deductibility of credit card interest was designed to finance the family-friendly doubling of personal exemptions, not tax rate reduction (which brought in far more revenue than expected even as the higher capital gains tax brought in much less).

Another popular misconception is the belief that a tax schedule with low tax rates, such as the 10 percent bracket introduced in 2001, confers an exclusive benefit on low-income taxpayers. In reality, low-income people no longer pay federal income tax, but higher-income taxpayers have their *average* tax rates reduced because of the 10% rate, which saves them more

than $800 per couple. This is why flatter rate schedules produce more revenue. Eliminating the 10% bracket and reducing the top tax rate to 30% would be a *revenue-positive* reform, in static terms, regardless of tax deductions. By contrast, raising the tax rate on capital gains and dividends to 18.8 percent in 2013, as scheduled under current law, would have a far more ambiguous effect on revenues due to predictable behavioral responses.

To summarize, average individual income tax rates fell most dramatically for the bottom 80 percent of taxpayers from 1979 to 2007, with the bottom 40 percent now receiving more in refundable tax credits than is paid in taxes. The highest marginal tax rate fell from 70 percent to 15-35 percent on investment income and from nearly 40 percent on capital gains in 1976-77 to 15 percent after 2003. Revenues from the individual income tax nonetheless remained close to 8 percent of GDP whenever the economy was doing well, regardless of top tax rates, and overall revenues remained close to 18 percent of GDP.

The dramatic tax cut for the bottom 80 percent was made possible by greatly improved incentives to report and pay taxes on the *highest* incomes in recent years, particularly on realized capital gains, taxable interest and dividends. To put that process into reverse, by moving back toward the higher tax rates of the past, would clearly reduce the amount of capital gains, dividends and other income reported by the top 1 percent. Unfortunately, it would probably also reduce the share of taxes paid by the top 1 percent.

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Table 1
Average U.S. Individual Tax Rates by Income Groups,
Top Marginal Tax Rates,
And Revenues as a Share of GDP

	Avg. Tax Lowest Quintile	Avg. Tax Second Quintile	Avg. Tax Middle Quintile	Avg. Tax Fourth Quintile	Avg. Tax Highest Quintile	Avg. Tax Top 1%	Top Marginal Tax Rate (%)	Top Capital Gains Tax	Individual Tax Revenue % of GDP	Capital Gains as % of Individual Revenue	Total Tax Revenue % of GDP
1979	0	4.1	7.5	10.1	15.7	21.8	70	28	8.7	5.5	18.5
1989	-1.6	2.9	6	8.3	14.6	19.9	28	28	8.3	8.1	18.4
1999	-5.2	1.7	5	8	17.1	24	39.6	20	9.6	12.7	19.8
2007	-6.8	-0.4	3.3	6.2	14.4	19	35	15	8.5	12.3	18.5
Change 1979-2007	NA	-110%	-56%	-39%	-8%	-15%	-50%	-46%	-2%	+124%	0

Table 2
More Long-Term (LT) Capital Gains Were Realized and Taxed
When the Capital Gains Tax Was Reduced

	Top Tax Rate On LT Capital Gains	Realized LT Capital Gains % of GDP	Capital Gains % of Top 1 Percent Incomes	LT Capital Gains % of Individual Tax Revenue
1987-1996	28	2.5	17.7%	6.9%
1997-2002	20	4.6	26.0	9.0
2003-2007	15	5.0	28.1	9.0

Capital Gains share of top 1% incomes (including capital gains) from Thomas Piketty and Emmanuel Saez, Table A8.
Realized LT gains as a percent of GDP and revenues from the U.S. Treasury Department.

Table 3
Sources of Top 1 Percent Pretax Pretransfer Income
Average reported income in 2008 dollars

	Capital Gains	Salary	Business Income	**Dividends**	**Interest**	Rents	Total Income*
1988	166,707	354,978	125,845	45,114	59,361	8,904	760,909
1989	135,744	321,414	126,411	41,948	66,890	10,204	702,611
1990	98,810	335,473	129,206	39,399	64,314	11,588	678,790
1991	81,516	302,796	121,329	34,816	58,027	11,078	609,562
1992	86,838	363,016	139,077	31,823	**41,841**	13,554	676,149
1993	99,273	342,955	131,438	29,270	**34,240**	14,359	651,535
1994	99,389	332,937	150,976	29,857	34,364	15,210	662,733
1995	117,310	361,115	166,528	31,110	35,989	14,640	726,692
1996	178,695	388,561	175,731	33,845	37,099	15,621	829,552
1997	**240,072**	427,208	189,162	36,132	38,257	17,712	948,543
1998	**302,888**	469,996	204,614	36,154	40,000	18,461	1,072,113
1999	**350,250**	515,268	216,562	38,998	39,827	19,084	1,179,989
2000	**406,631**	551,873	216,369	43,799	44,675	19,272	1,282,619
2001	212,167	491,861	211,253	33,482	36,670	19,930	1,005,363
2002	150,016	446,953	200,107	30,673	33,595	19,719	881,063
2003	**181,709**	440,521	**202,698**	**38,052**	30,734	20,489	914,203
2004	**278,386**	474,515	**230,757**	**52,814**	**33,314**	21,126	1,090,912
2005	**371,465**	492,790	**277,869**	**59,351**	**46,761**	23,381	1,271,617
2006	**416,119**	505,874	**284,613**	**69,971**	**63,352**	22,693	1,362,622
2007	**469,981**	513,438	273,941	**83,072**	**74,172**	22,746	1,437,350
2008	248,243	504,402	256,276	**67,918**	50,712	26,262	1,153,813

Adapted by author from Piketty and Saez Tables A4, A6, A7& A8.

*Note: Piketty and Saez provide the breakdown by source as *percentages* of income, where income is defined to *exclude* capital gains. They also estimate average real income of the top 1% (with capital gains excluded), and this table multiplies their percentages by total income in order to display changes in real income by source. Piketty and Saez provide separate estimates of average real income which *includes* capital gains; another table shows the percentage of such income derived from capital gains (but not other sources). Capital gains in this table is total income in including capital gains multiplied by the percentage of that income attributable to capital gains. The last column adds up to a slightly (2 percent) *larger* total than Piketty and Saez series that include capital gain, presumably because the series that ranks the top 1 percent according to the more inclusive measure of income includes more investors and business owners and relatively fewer large salaries.