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TAX FOUNDATION FIGURES DO NOT REPRESENT TYPICAL HOUSEHOLDS' TAX BURDENS

Figures May Mislead Policymakers, Journalists, and the Public

By Robert Greenstein and Aviva Aron-Dine

Each year, the Tax Foundation releases a report projecting "Tax Freedom Day," which it describes as the day when "Americans will finally have earned enough money to pay off their total tax bill for the year." Over the years, many pundits and policymakers have misinterpreted the Tax Foundation's report as reflecting the tax burdens that the broad swath of middle-income families must shoulder.

In fact, however, according to data from authoritative sources such as the nonpartisan Congressional Budget Office, middle-income Americans pay significantly less in taxes as a share of their income than the Tax Foundation's report implies. The flaws in the Tax Foundation's report include the following:

- In computing the nation's tax burden, the Tax Foundation simply divides what it says are total tax receipts by what it says is the total amount of income in the nation. It then presents the resulting figure in a manner that leads (and practically invites) journalists and policymakers to present it as the average American's tax burden — the number of days the average or typical American must work to pay his or her taxes. Such a use of the tax burden figure that the Tax Foundation generates is, however, highly misleading.

- Under the progressive U.S. tax system, high-income taxpayers pay significantly larger percentages of their income in federal income taxes than middle-income families do. Under the Tax Foundation methodology, the higher taxes that high-income taxpayers pay make the taxes that *average*, or *typical,* Americans pay look considerably higher than they actually are.

- The Tax Foundation reports that Americans paid an average of 18.6 percent of their income in federal taxes in 2004. But the Congressional Budget Office reports that taxpayers in the middle fifth of the income distribution actually paid an average of 13.9 percent of their income in taxes that year. (2004 is the latest year for which these CBO data are available.)

- *In every year the CBO data cover* — 1979-2004 — households in the middle of the income distribution have faced tax burdens considerably lower than those the Tax Foundation lists in its historical table.

The Tax Foundation approach suffers from the following problems.

Average Tax Figure Is Misleading

The Congressional Budget Office data show that, on average, households in each of the bottom *four* quintiles of the income scale paid *less* of their income in federal taxes in 2004 than the Tax Foundation's average figure of 18.6 percent. Only households in the top quintile paid a higher amount: 25.1 percent. The large discrepancy between the tax burdens that most Americans face and the tax burden the Tax Foundation ascribes to the "average American" is a consequence of the Tax Foundation's method of calculating average tax burdens. Under that method, the average figure is pulled up sharply by the larger amounts paid in taxes by a relatively small group of high-income households.

The following example shows how the Tax Foundation's methodology can exaggerate tax burdens. Suppose four families with incomes of $50,000 each pay $2,500 in income tax — 5 percent of their income — while one wealthy family with $400,000 in income pays $80,000 in income tax, or 20 percent of its income. If one averages these figures, one finds that 15 percent of the total income of these five families goes to pay federal income taxes. (Dividing the families' total tax payments of $90,000 by their total income of $600,000 — which is analogous to the approach the Tax Foundation uses — shows that 15 percent of their total income is paid in income taxes.)

TABLE 1
Percentage of Income Paid in Federal Taxes

	1996	1998	2000	2004
Congressional Budget Office (middle fifth of households)	17.3%	16.8%	16.6%	13.9%
Tax Foundation (average)	21.3%	22.4%	23.1%	18.6%

** CBO estimates are from "Historical Effective Federal Tax Rates: 1979 to 2004," December 2006.*

Under the Tax Foundation methodology, this 15 percent figure would imply that the average family in this group pays 15 percent of its income in income taxes and must work until 15 percent of the year has passed to pay its income tax bill. Yet the 15 percent figure is highly misleading as an indicator of the typical tax burden of families in this group. The four moderate-income families in the group pay 5 percent of their income in income tax, or one-third of the average 15 percent rate.

Thus, the Tax Foundation's conclusions about federal tax burdens *cannot be generalized and applied to typical Americans in the middle of the income spectrum*. This can be seen when the Tax Foundation's findings are compared with estimates issued by the Congressional Budget Office that look specifically at the tax burdens of middle-income families. (See Table 1.)

Tax Foundation's Methodology Also Misrepresents *Changes* in Tax Burdens Over Time

The Tax Foundation's methodology can also present a misleading picture of how tax burdens change over time. In its 2006 report, the Tax Foundation found that "Tax Freedom Day" would occur later in 2006 than in 2005 (i.e., that tax burdens were higher in 2006 than 2005), and that "Tax Freedom Day" occurred later in 2005 than in 2004.

As noted, under the Tax Foundation's methodology, the taxes that high-income taxpayers pay raise the overall tax burden figure well above the typical household's tax burden. Similarly, increases

in incomes among high-income taxpayers, and the resulting increase in their taxes, can lead the overall tax burden figure to rise even if most Americans are *not* paying more of their income in taxes. The methodology produces particularly misleading results in periods when income gains are concentrated at the top of the income spectrum, as has been the case during the current economic expansion.

Tax Foundation President Scott Hodge explained the Tax Foundation's 2006 finding that "Tax Freedom Day" had shifted later in the year by noting that, as a result of the economic growth since 2003, "growing incomes are pushing people into higher tax brackets."[1] This statement itself was misleading. The phenomenon of higher incomes pushing people into higher tax brackets — often referred to as "bracket creep" — is *not* something that has likely had a significant effect on most Americans. New data published by economists Thomas Piketty and Emmanuel Saez show that, between 2003 and 2005, 45 percent of the total real pre-tax income gains in the nation went to the households in the *top 1 percent* of the income scale, and nearly 70 percent of real income gains went to households in the top 10 percent. Less than a third of total income gains went to the bottom *nine tenths* of households. Consistent with this, from 2003 to 2005, the incomes of the top 1 percent of households grew by an average of 29 percent, after adjusting for inflation, and the incomes of the top 10 grew by an average of 15 percent. The incomes of the bottom 90 percent of households grew by an average of less than 4 percent, and much of that small gain may well have reflected gains among households in the top fifth of the income scale.

As a result of these trends, the share of the nation's pre-tax income that goes to the top 1 percent increased from 16.3 percent in 2003 to 19.3 percent in 2005, *the largest two-year increase since the 1920s* (in percentage point terms). Although no official data on household income trends are available past 2005, it appears extremely unlikely that this increase in income inequality reversed itself in 2006. Bureau of Labor Statistics data show, for example, that between 2005 and 2006, the median weekly earnings of those at the top of the income scale once again grew more quickly than the earnings of those in the middle or bottom of the income distribution.

Under the progressive structure of the federal income tax, those with higher incomes face higher tax rates. As more of the nation's income is concentrated in the hands of these high-income households, who pay income tax at a higher rate, total income tax revenues rise relative to total income. So while the tax payments of those with higher incomes may have increased, commensurate with their growing incomes, households with lower incomes that have not seen their incomes rise significantly during this recovery would not have experienced the increasing tax burdens that the Tax Foundation misleadingly portrays as having affected typical Americans.

The flaws in the Tax Foundation methods were particularly evident in the late 1990s and in 2000. During those years, the Tax Foundation showed that the tax burden was rising, while CBO showed that tax burdens for middle-income Americans were flat or declining (see Table 1 above). This divergence occurred because, during this period, those at the top of the income spectrum experienced very large income gains, resulting in higher income taxes, even as households in the middle of the income spectrum saw much more moderate income growth. The circumstances of households at the top influenced the Tax Foundation's average figure, pushing it higher, even though it was not representative of the circumstances of middle-income households. This

[1] Tax Foundation, "America Celebrates Tax Freedom Day," Press Release, April 12, 2006.

Greenspan Warns Against Seriously Flawed Approach Tax Foundation Uses

In a 2002 Congressional hearing, Federal Reserve Chairman Alan Greenspan warned that the type of approach the Tax Foundation uses — dividing total tax receipts by the Gross Domestic Product (or a similar measure), to determine the overall average tax rate (i.e., to determine the percentage of total income in the nation that is paid in taxes) — is simply not valid. Greenspan flatly stated: "you can't use tax receipts over nominal GDP as a tax rate." (The Tax Foundation uses a closely related Commerce Department income measure — NNP, or Net National Product.)

Chairman Greenspan explained one reason that such an approach is improper: although capital gains taxes are counted as part of federal tax receipts, the capital gains *income* on which such taxes are paid is *not* counted in GDP (or NNP).* Corporate retained earnings *are* counted in GDP, and, over the long run, total retained corporate earnings should equal total capital gains on corporate stock. But since capital gains are not equal to corporate retained earnings on a year-to-year basis, excluding capital gains from one's income measure can seriously distort year-to-year tax rate comparisons such as those the Tax Foundation presents. Because it includes retained earnings but excludes capital gains themselves, the Tax Foundation's measure does not report tax rates as a share of the income that households actually have available to them in a given year.

* Greenspan stated that the problem is "largely [that] a goodly part of the numerator are taxes not on the incomes that appear in the gross domestic product, but are capital gains type taxes." Testimony before the Senate Budget Committee, January 24, 2002.

phenomenon appears to be repeating itself today; income gains concentrated at the top of the income spectrum appear to be driving the changes in the Tax Foundation's estimates.

Tax Foundation's Average Figures Mislead Policymakers and the Press

To be sure, an average figure similar to the one calculated by the Tax Foundation can yield some useful information. Revenues measured as a share of the economy (i.e., as a share of GDP) is one of the best indicators for assessing the amount of the nation's overall resources that is devoted to the public sector (although it is not an appropriate measure of the nation's overall effective tax rate; see the box above).[2] The .fundamental problem occurs when the average tax burden figure that the Tax Foundation calculates is used to refer to the normal, average, or typical American, creating the mistaken impression that its figures represent the tax burdens of ordinary American families.

That the Tax Foundation reports create this misleading impression can be seen in the way that journalists present Tax Freedom Day. For instance, last year, the *Wall Street Journal* wrote "The Tax Foundation reports that the *average* American works 116 days of the year to pay their tax bill (emphasis added)."[3] Similarly, Senators Charles Grassley and Judd Gregg, drawing on the Tax Foundation's report, wrote in a recent op-ed "Americans must work *an average* of 77 days per year to

[2] The amount devoted to the public sector can, of course, be greater than the level of revenues collected if government runs deficits.

[3] Tara Siegel Bernard, "Taxing Thought: All Pay to April 26 Goes to Uncle Sam," *Wall Street Journal*, April 19, 2006.

The Tax Foundation's State-by-State Data Also Are Seriously Flawed

In past years, the Tax Foundation's reports have included a list of the dates described as representing "Tax Freedom Day" for each state. The serious flaws that mar the Tax Foundation's estimates of tax burdens nationally also plague its state-by-state estimates.*

- About two-thirds of the tax burdens in the Tax Foundation calculations are federal tax burdens. The amount of *federal* taxes paid by the residents of a state thus has a large impact on *that state's* "Tax Freedom Day." Since, as this analysis explains, the Tax Foundation methodology substantially overstates the federal tax burden of middle-class families, the Tax-Freedom-Day figures for each state also substantially exaggerate the tax burdens of middle-class families in that state.

- Because the federal income tax system is progressive, states with relatively wealthy residents end up under the Tax Foundation's methodology with a higher federal tax burden than other states. The fact that one state has higher-income residents than another state has nothing to do with the level of *state and local* taxes in the state. Yet by trumpeting state-level Tax Freedom Days that differ across the states, the Tax Foundation presentation is likely to lead to the misimpression that differences in burdens imposed by state and local taxes account for the differences across states in the Tax Foundation's "average tax burden," when that often is not the case.

- The Tax Foundation uses a procedure to allocate state corporate, severance, and tourism taxes based on the residence of the consumers who purchase products that businesses sell (adjusted for taxes that tourists pay). This is likely to lead to further misimpressions about the role of a state's tax policies on the tax burdens its residents are said to face. For example, when Alaska collects taxes from oil companies based on the amount of oil they produce in the state, the Tax Foundation does not count those taxes as part of Alaska's revenue. Rather, it adds those taxes to the tax burden in the states where oil is consumed. Maine residents, for example, consume a significant amount of fuel and so get allocated a large share of these Alaska taxes. Yet state legislators in Maine cannot have much impact on the level of taxes that Alaska or other oil-producing states levy on oil.

Further, the Tax Foundation highlights the tax burden for the current calendar year, making its own estimates of the taxes that will be collected during the year in the thousands of state and local jurisdictions around the country. Despite presenting these estimates as definitive, they are, in fact, speculative projections that have often proven to be significantly off-target when the actual data on state and local taxes are subsequently collected and published by the Census Bureau. For example, the Tax Foundation's 2002 report claimed that tax burdens had risen since 2000 in 38 states, that five states had lower tax burdens, and seven had no change. By 2005, the Tax Foundation had found it necessary to revise its 2002 estimates to show that only eight states (rather than 38) had higher tax burdens in 2002 than in 2000, while 39 had *lower* tax burdens and three had no change. And when the Census Bureau released its data for 2002, it found that only four states' tax burdens had risen, while tax burdens in 43 states had fallen (burdens were unchanged in three states). In its reports, the Tax Foundation does not adequately acknowledge the possibility that its data may be erroneous. Nor does the Tax Foundation give prominent attention to the revisions it makes in subsequent years when its previous estimates prove to have been faulty.

As a result, the Tax Foundation's proclamations of state Tax Freedom Days are highly misleading and do little to inform legitimate debates over levels of state and local taxes and the services those taxes support.

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* See Nicholas Johnson, Iris Lav, and Joseph Llobrera, "Tax Foundation Estimates of State and Local Tax Burdens Are Not Reliable," Center on Budget and Policy Priorities, April 10, 2006.

pay their federal taxes…"[4] Senators Grassley and Gregg were not discussing tax revenues as a share of the economy. They were discussing the tax burdens of typical American families. Yet, as described above, the Tax Freedom Day calculation is highly inappropriate for assessing individual tax burdens and substantially exaggerates the burden that the typical American faces.

As these examples show, the fundamental problem with "Tax Freedom Day" is the manner in which the Tax Foundation presents its estimates (using terms like "the average American's tax burden"). The Tax Foundation conflates the mathematical average it calculates with the colloquial use of the term average to refer to the normal or typical American, leading policymakers and journalists to conclude that its figures represent the tax burdens of ordinary American families.

Tax Foundation Figure Misuses Available Data

The Tax Foundation often defends its methodology by emphasizing that it uses official data from the Commerce Department's Bureau of Economic Analysis. The problems with the Tax Foundation approach are not with the underlying data themselves, however, but rather with how the Tax Foundation uses these data and then presents the results.

First, as Former Federal Reserve Chairman Alan Greenspan explained in a Congressional hearing in 2002, the approach the Tax Foundation uses fails to report tax burdens as a share of the income households actually have available to them in a given year (see box above).

The Tax Foundation also counts as taxes certain items that are *not* taxes. For instance, it includes Medicare premiums that older Americans elect to pay if they wish to receive coverage for physician's services and prescription drugs under Medicare. Those payments, however, are not taxes.

Tax Levels versus Expenditures on Food, Clothing, and Medical Care

Finally, the Tax Foundation claims that families must pay more in taxes than they pay for food, clothing, and medical care combined. This Tax Foundation claim, which apparently compares total tax payments in the nation to total food, clothing, and medical care expenditures, is likely to create further misimpressions.

Even if total tax payments exceed total expenditures for food, clothing and medical care, this says little or nothing about the relationship between taxes and spending for typical families. It is no doubt true that many upper-income families may pay more in taxes than they spend for these items. It also is true that low- and moderate-income families pay significantly less in taxes than they spend for such items; necessities consume most of their income.

The precise family income level at which taxes typically exceed expenditures for food, clothing and medical care is unclear. In discussing last year's Tax Freedom Day report, however, Scott Hodge, President of the Tax Foundation, incorrectly stated, "taxes are becoming the largest share of

[4] Charles Grassley and Judd Gregg, "Don't Mess with Success," *Wall Street Journal*. March 15, 2007.

any household budget in America (emphasis added)."[5] Such comments reinforce the mistaken impression that the Tax Foundation's estimates reflect ordinary American's tax burdens.

Conclusion

Given its methodology, the Tax Foundation's conclusions regarding the nation's tax burden are not an accurate reflection of the tax burden facing a typical American in the middle of the income spectrum. Authoritative institutions that study tax burdens, such as the Congressional Budget Office and the Urban Institute-Brookings Institution Tax Policy Center, show that the Tax Foundation's estimates are significantly higher than the tax burden that middle-income families face. Further, the Tax Foundation's recent estimates show a rising tax burden when what that likely reflects, in large part, is the robust income growth in recent years among very-high-income households and a continued trend toward growing income inequality. It is these higher-income households who likely are paying more in taxes, commensurate with their higher incomes, not the typical American worker.

[5] Chuck Grassley and Judd Gregg, "Don't Mess with Success," *Wall Street Journal*, March 15, 2007.

[6] CNBC News Transcripts, Kudlow & Company, April 12, 2005.