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CONGRESSIONAL BUDGET OFFICE STUDY SHOWS TAX CUTS HELPING ALL, INCLUDING THE MIDDLE CLASS

The Congressional Budget Office (CBO) has issued a study[1] examining how the 2001, 2002, and 2003 tax cuts[2] altered effective federal tax rates on households of various income levels. The study was undertaken at the request of the ranking Democrats on several Congressional committees (Senate Budget Committee, Senate Finance Committee, House Budget Committee, House Ways and Means Committee, and Joint Economic Committee).

CBO's main finding is that the three pieces of legislation provide tax relief to people at all income levels, including the middle class.

CBO's conclusions have been misrepresented in many media accounts. According to a number of news stories, CBO found evidence that the 2001, 2002, and 2003 tax acts have squeezed middle-class taxpayers. Actually, CBO's main finding is that the three pieces of legislation provide tax relief to people at all income levels, including the middle class.

The first part of this paper will describe the CBO study's main findings, and explore some noteworthy results the study uncovered that have received little attention in the press. The second part of this paper will examine fundamental problems with the type of distributional analysis CBO was asked to perform. Such analyses are not reliable and are poor guides when setting public policy.

I. CBO's Findings on the Impact of the Tax Cuts

CBO presents projected tax rates and tax shares for each twenty percent of households (quintiles) in the income distribution under old (2000) tax law through 2014. It also shows tax rates and tax shares for each quintile due to the 2001, 2002, and 2003 tax cuts as they are phased in and then phased out between 2001 and 2011, and any residual effects through 2014. It displays the differences between the two sets of tax rates and tax shares as the consequence of the tax reductions. (The CBO's description of the provisions of the three Acts is excellent, and the graphical depiction of their effective dates is highly intelligible and quite clever.)

The rich pay most of the income tax and face the highest tax rates.

The CBO study finds, as has much previous research, that federal income tax liabilities rise sharply with income. CBO estimates that, in 2004, the top 1% of the income distribution will pay almost one-third of federal income taxes and the top 10% will pay two-thirds. Meanwhile, the bottom 40% will have negative income taxes, that is, they will receive money from the government through the income tax system.[3]

Average income tax rates (income taxes as a percent of income) also are highly skewed. CBO estimates that, in 2004, the average income tax rate will rise from -5.7% for the bottom 20% of households (i.e, they get money from the government), to 3.5% for the middle 20% of households, to 14.2% for the top quintile, including 19.7% for the top 1%.[4] (CBO uses an expanded

definition of income that includes numerous items most people would not regard as income for tax purposes.[5] This expanded, and unfamiliar, definition of income has the effect of reducing apparent tax rates for people who pay taxes, and it also reduces the apparent size of rebates relative to income for the millions of people who receive money from the government through the tax system.[6])

The 2001, 2002, and 2003 tax cuts lowered income taxes and cut effective tax rates for all income levels.

The CBO study finds that income tax liabilities and average tax rates would be much higher at all income levels if not for the 2001, 2002, and 2003 tax cuts. According to CBO, those three tax Acts will reduce average income tax rates in 2004 by 1.4 percentage points for the lowest quintile (lowest-income 20%) of households, by 2.0 percentage points for the second quintile, by 1.7 percentage points for the middle quintile, by 1.8 percentage points for the fourth quintile, and by 3.0 percentage points for the top quintile of households, including a reduction of 4.8 percentage points for the highest-income 1%.[7] In terms of percentages of old-law income tax rates, CBO estimates the percentage reductions in 2004 will be 33% for the lowest quintile, 105% for the second quintile, 33% for the middle quintile, 21% for the fourth quintile, and 18% for the top quintile, including a 20% reduction for the top 1%.[8]

[T]he CBO study contradicts, rather than confirms, the notions that the tax cuts somehow forgot the middle class or that the tax cuts came at the expense of the middle class.

Looking at total federal taxes (which basically means adding payroll and excise taxes to income taxes), the CBO study again reaches the conclusion that the three bills will lower tax liabilities and average tax rates at all income levels. (Adding in Social Security taxes, which are slightly regressive due to the cap on the income subject to the retirement and disability portions of the tax, without noting that the corresponding retirement and disability benefits are heavily skewed toward the lower income, makes for a distorted comparison. But even without adjusting for the progressivity of benefits, the tax rate reductions are across the board.)

The timing of investment incentives make rate cuts at top appear higher in some years than others; 2004 numbers can be misleading.

CBO estimates that percentage reductions in average tax rates at higher incomes will be largest in 2004, and much less in later years.

The unusual reduction in the top quintile's tax rate in 2004 is due mainly to "bonus depreciation" and certain other provisions of the 2002 and 2003 tax Acts that were designed to encourage business investment following the attacks of 9/11/01.[9] Taking a portion of depreciation write-offs earlier in the life of investments made in 2002-2004 reduces tax liabilities in those years, but it leaves businesses with lower write-offs in later years, and raises upper income tax liabilities then, reducing the net tax reduction that group enjoys from the rest of the tax changes.

"Bonus depreciation" does not reduce total tax liability over time; the business owners benefit only from the timing shift, which more accurately reflects their expenditure on their investments. An earlier IRET study found that "bonus depreciation" was particularly effective in helping the U.S. economy recover from the last recession, which was due chiefly to an investment slump, and is a step in the direction of good long-term tax policy.[10]

Press reports distort results and miss key points.

Most press reports have downplayed the across-the board reductions in *effective income tax rates* mentioned above. Instead, they have concentrated on estimates of *dollar changes* in total federal taxes for various income groups and on estimates of changes in the *share* of total federal taxes paid by various income groups. The theme in many press reports is that the Bush tax cuts have somehow hurt or left out

the middle class. For example, stories from the *Washington Post*, the *New York Times*, and the *Associated Press* carried the following headlines: "Tax Burden Shifts To The Middle", "Report Finds Tax Cuts Heavily Favor The Wealthy", and "Study: Tax Burden Shifts To Middle Class".[11]

Comparing tax cuts in *dollars* at various income levels is highly misleading, because some of the income groups pay little or no tax, some pay a few hundred dollars, others pay a few thousand dollars, and still others pay many thousands or hundreds of thousands of dollars. An equal percentage reduction in tax rates across the board would obviously mean a larger dollar tax cut for those who were paying the most to begin with, but it would leave the distribution of the tax unchanged and would neither increase nor decrease the progressivity of the tax system. By contrast, an equal dollar reduction in taxes at all levels would mean a much larger rate cut for those who were paying less to start with, and relatively little rate relief at the top, and would shift the tax burden toward the upper income. Conversely, if taxes were increased by the same dollar amount for everyone, people with low incomes would be hit with much heavier relative tax increases than people with high incomes. For analytical clarity, tax changes for various income groups should be compared either relative to each group's income or as percentages of their previous tax payments.

With regard to income tax *shares*, CBO estimates that the 2001, 2002, and 2003 tax cuts will increase the share of income taxes paid in 2004 by people with the highest twenty percent of incomes while decreasing the shares of income taxes paid by people at all other income levels.[12] Over the period in which the tax relief is in force, the bottom three quintiles are projected to have the greatest reduction in income tax shares, while the fourth quintile will have a small reduction. The top quintile will pay a higher share. That does not support the newspaper headlines.

When CBO examines total federal taxes (including payroll and excise taxes), it sees a slightly different pattern, and that is what is cited in many press articles. Adding in the other taxes (which were not cut) makes all of the percentage reductions in the effective tax rates look smaller across the board, because the percentage reduction in total taxes is less than the percentage reduction in income taxes taken alone. The shift to total federal taxes also reduces the reported drop in tax shares for the lowest four household quintiles and reduces the reported upward shift in the tax burden on the upper quintile because the total tax burden is less progressive than the income tax, which falls mainly on the upper income. (Payroll and excise taxes are slightly regressive, and fall more heavily as a percent of income on the lower quintiles.)

These shifts in rates and shares are not uniform year to year. In the one year most cited by the press, CBO estimates that the three tax Acts will increase the share of total federal taxes paid *in 2004* by people in the middle quintile and the fourth quintile while decreasing the share of total federal taxes paid by people with higher and lower incomes.[13] The rise in the middle quintile's share of the total federal taxes is *only for 2004*; that quintile's share is often lower and never higher than before the tax cuts in every other year of the period. The corresponding drop in the share of the highest quintile is also *only for 2004*; it is either higher or unchanged in every other year of the period (as is the fourth quintile's share).

The 2004 anomaly is due to the peculiar timing of the temporary depreciation adjustments, which are claimed by people who own businesses or who have capital income to whom CBO attributes noncorporate business income, corporate income and corporate income taxes, and who are disproportionately in the top quintiles. Again, over the life of the tax cuts, the bottom three quintiles pay a lower share of the total tax, while the fourth and especially the top quintile pay a higher share.

One can only make the case that the middle income earners have been squeezed by ignoring the absolute reduction in federal income tax payments at all income levels, switching the analysis to "shares" of the total federal tax liability while omitting offsetting Social Security benefits, ignoring "shares" of federal income tax liability, looking only at 2004 as opposed to the full period of the tax reductions, and excluding the economic consequences of the tax relief. The exercise would make an appropriate

chapter in any sequel to Darrel Huff's amusing treatise on the presentation of numbers, "How to Lie With Statistics".[14]

The real message of the CBO report is that the lower and middle quintiles receive significant tax cuts, and their shares of federal taxes are small and remain small under the tax cuts. CBO estimates the middle quintile will pay only 5.4% of the federal income tax in 2004 while the top quintile will pay 82.1%. For total federal taxes in 2004, CBO estimates the middle quintile will pay 10.5% while the top quintile will pay 63.5%.[15] Moreover, in all other years in which any of the three tax cuts are in force, CBO estimates that they will reduce the middle quintile's share of the federal income tax and reduce or leave unchanged the middle quintile's share of total federal taxes.

With its finding that the 2001, 2002, and 2003 tax acts significantly lowered taxes for all income groups, including the middle class, the CBO study contradicts, rather than confirms, the notions that the tax cuts somehow forgot the middle class or that the tax cuts came at the expense of the middle class. The CBO study further indicates that tax liabilities, average tax rates, and tax shares rise steeply with income, with the result that the wealthy are taxed at the highest rates by far and bear disproportionate shares of the federal income tax and total federal taxes.

Tax rates will rise to new heights if the tax cuts expire.

CBO notes that almost all the provisions in the 2001, 2002, and 2003 tax-relief bills will expire on an irregular schedule over the period 2005 to 2010. Given that the three tax acts have significantly lowered taxes at all income levels, it follows that people across the income spectrum will face appreciably higher income taxes in coming years if Washington does not extend or make permanent the relief contained in the three tax acts.

The CBO report presents estimates that, compared to 2000 law, the three tax Acts will reduce the average federal income tax rate for all quintiles by 2.4 percentage points in 2004, from 11.5% to 9.0% (0.1% difference due to rounding). However, if Congress does not renew the cuts, the average federal income tax rate will climb by 3.4 percentage points from its 2004 rate (to 12.4%) by 2011, after the tax relief has expired. The rate will reach 12.9% by 2014.[16] A similar pattern holds for total federal taxes.[17]

In spite of tax indexing, graduated tax rates and real income gains are pushing more people onto the tax rolls and into tax brackets once reserved for the rich, abetted by the AMT.

CBO took pains to separate the effect of the tax cuts from ongoing changes in the tax distribution that would have occurred anyway over time, a necessary step if one is to make sense of the tax changes. People may think that, in the absence of changes to the tax code, the tax distribution stays fairly constant. It does not. CBO did not dwell on the issue, which was not the main topic of the study, but it correctly pointed out the problem.

The individual income tax structure (including the standard deduction, personal exemption, and the dollar amounts at which the tax brackets change) is adjusted annually for inflation (which offsets inflation-related "bracket creep"), but not for increases in real incomes (which creates "real bracket creep"). In addition, the alternative minimum tax (AMT) is not adjusted for inflation, and millions of middle income people are projected to become subject to it in the next decade.

CBO projects rising real income over the budget period. Incomes rise with technological advances that boost productivity and wages, with more and better capital, and with increased levels of education. Whenever rising incomes confront a graduated tax structure, the result is rising tax rates.

The 2001, 2002, and 2003 tax reductions more than offset the underlying real bracket creep in the first half of the decade. However, the CBO report states that the tax cuts will offset only about half of the effect of the real bracket creep by 2010, as they are phased out. After the tax cuts expire, tax rates in all quintiles will be substantially higher than in 2000, before the tax rates were cut. The "real bracket

creep" that remains even in the inflation-indexed tax system *means we need more tax relief, not less.*

Bracket creep is most pronounced in the lower quintiles.

The increase in tax rates due to real income growth is highest in percentage terms for the lower quintiles. That is, "bracket creep" is always greater, in percentage terms, at the bottom of the income distribution than at the top.

Between 2001 and 2014, the lowest quintile will experience a net tax increase of about 44% due to bracket creep; that is, its negative tax status will be eroded. The second quintile will have a 127% jump in its average income tax liabilities; the third, 44%; the fourth, 29%; and the top, 9%. The top 1% of households will see an increase of 1%.[18]

What accounts for the sharp percentage increase in low income tax rates? Because some amount of income is exempt from tax, there is a taxable threshold. As taxpayers begin to earn enough to be subject to the income tax, and as they lose the Earned Income Tax Credit, their tax liabilities move from negative (they receive a check from the government) to positive, and begin to rise sharply in percentage terms. Small increases in tax liabilities where little tax was initially owed means a large rise in percentage terms, and an increasing share of taxes paid. Also, there must be a top tax rate. Once one's income is subject to the top rate, additional earnings have no higher rate into which to spill.

Real bracket creep affects all quintiles. Over time, more and more taxpayers will find themselves in tax brackets once reserved for the upper income, or subject to the AMT. As more people reach the top brackets, or pay the AMT, the tax system becomes progressively less progressive!

The message is clear. An unindexed graduated tax rate structure, left alone for a long enough time, will raise the absolute and relative tax burdens on the lower and middle income quintiles as incomes rise across the board. Adjusting for inflation is a key offset to this effect, and is particularly important to lower and middle income earners, but it does not do the whole job. Consequently, it is important to make the recent tax rate cuts permanent, and not to allow the upper tax rates to jump back up, because more and more middle income households, families, and individuals will be encountering these rates "for the rich" over time. *It would be wise to expand tax indexing to cover real wage growth.*

II. Fundamental Problems with Distributional Analyses

Distributional analyses receive much attention in Washington. That is regrettable because they suffer from fundamental problems. They do not accurately describe who really bears the ultimate economic consequences of the various taxes. They exaggerate the ability of government officials to redistribute income through the tax system. They overstate income inequality. And they interfere with addressing other, arguably more important tax-policy issues.

Burden tables use static instead of dynamic analysis, and ignore growth effects and tax shifting.

The real burden of a tax (as opposed to just the calculation of who owes the money to the government) is what it does to peoples' after-tax incomes *after all the economic consequences are taken into account.* Taxes affect people's decisions about working, hiring, saving, and investing. These decisions affect the level of economic output and the gross (pre-tax) incomes of all the parties involved (the growth effect). Furthermore, the tax-impacted decisions of savers and investors affect the incomes of workers, and vice versa. Therefore, taxes on one factor of production may affect the pre-tax and after-tax earnings of other factors of production (the tax shifting effect). A forthcoming IRET report will examine tax shifting and its potentially large impact on ultimate tax burdens in detail.

<u>Distribution tables ignore growth effects.</u> The models most often used in distributional analyses usually make heroic simplifying assumptions that differ greatly from people's actual behavior. The models typically assume that taxes have no effect on important economic aggregates like total production, total income, and total private saving. In the models,

people work the same total hours, achieve the same productivity, obtain the same before-tax pay, and seek the same before-tax investment returns regardless of the tax system or changes in the tax system. By construction, therefore, a standard distributional analysis assumes that taxes and tax changes can never speed up or slow down economic activity.

In reality, of course, people care greatly about incentives. If a tax alters their after-tax returns for working more or less, saving more or less, or investing more or less, people are likely to respond by changing their behavior. By that route, taxes can have a major impact on the size of the economic pie. Because traditional distributional analysis insists that taxes can never have growth effects, it underestimates the burden on all income groups of tax changes that lower economic output and pre-tax incomes, and it overestimates the burden of tax reforms that are growth friendly.

The benefits of tax reductions and the pain of tax increases are distributed more widely than burden tables reveal.

A standard distribution analysis, therefore, provides no indication of whether, or by how much, a tax may have lowered economic output and pre-tax incomes, and therefore provides a misleading picture of tax burdens.

In reality, of course, people care greatly about after-tax incentives. For that reason, they often change their behavior when taxes alter their after-tax returns for working more or less, saving more or less, or investing more or less. These responses matter when trying to ascertain who ultimately bears a tax because as people change their behavior in response to a tax, they shift part of the tax to others.

Distribution tables ignore tax shifting. Not only do tax changes raise or lower incomes across the board, they may also affect the incomes of some groups more than others, and not in the manner that the initial imposition of the tax might suggest. Much evidence suggests that saving and investment are especially responsive to incentives. When tax rates on capital rise, people reduce their saving and investment until the after-tax return on capital returns to what it was before the tax increase. Conversely, when tax rates on capital fall, people increase their saving and investment, again until the after-tax return on capital returns to what it was before the tax change.

Further, because capital and labor complement each other in the production process, a tax-induced drop in saving and investment pushes down productivity (i.e., workers are less productive when they have less capital), which depresses wages, while a tax-induced increase in saving and investment pushes up productivity, which lifts wages. The end result is that much of a tax on capital, which standard distribution tables show as being borne mainly by people with above-average incomes, is instead shifted to labor and is borne by workers at all levels of income. (The CBO study warns of this possibility in a footnote, but, following traditional procedures, does not incorporate it into its model or results.[19])

Because the supply of labor is generally less responsive to changes in after-tax rewards than the supply of capital, taxes on labor are less subject to shifting than taxes on capital. Some shifting does occur, though. Many people in upper-income brackets are small business owners and professionals, and those people can often exercise considerable discretion in deciding how many hours to work, the forms in which they receive compensation, and the timing of when they receive compensation. As a result, a large increase in marginal tax rates on upper-income taxpayers will shift much less of the overall tax burden to them than would appear to be the case in a static analysis because many of the individuals affected will respond by working less and in other ways lowering their taxable incomes. Conversely, as was seen in the 1980s following the Reagan tax cuts and tax reforms, a large decrease in marginal tax rates on upper-income taxpayers, which would seem in a static analysis to reduce their share of taxes, may actually result in their paying a larger share of total taxes than before because they will work more and accept more of their compensation in taxable forms.

When government officials use the tax system to try to redistribute income, they are, in effect, attempting to supersede the market and alter the distribution of income by fiat. A standard (static) distributional analysis overstates government officials' ability to redistribute income in opposition to market forces and ignores the problems government officials cause when they try aggressively to do so.

Snapshots in time misrepresent peoples' real lifetime economic status and undercount those affected by tax changes.

Looking at the population and its income at a moment in time introduces two distortions into tax distribution analysis. It overstates the degree of income inequality by failing to adjust for age and changing circumstances, in effect putting many people into an "income quintile" that does not match their standard of living. It also misrepresents the distribution of many types of tax changes, including those that benefit people at different times of their lives, and those that are aimed at increasing growth by reducing discriminatory taxes on the income of capital.

Income mobility is ignored in burden tables. People in the United States often move across income categories. For example, a young adult who is still in school, or who is just entering the labor force without much on-the-job experience may show little income. A few years later, though, the same person will probably have a much higher income because of the education and on-the-job training he or she has acquired. The individual may face a lifetime income and standard of living squarely in the middle class, but be labelled as poor based on an income snapshot taken when a young adult, or as rich based on an income snapshot taken during a prime earning year.

People often show year-to-year income variations for other reasons, too. For instance, a spell of unemployment or the failure of a business may temporarily push a person into one of the lower income quintiles while the sale of a long-term investment may temporarily push a person into one of the higher income quintiles, without seriously altering their lifetime prospects.

Burden tables may leave readers with the erroneous impression that they are looking at the same people in each quintile year after year, people who remain very poor or very rich for most of their lives. The tables may give the false impression that everyone at the bottom of the income scale in a particular year is poor while everyone at the top of the income scale in that particular year is wealthy. Although one would never know it from standard distribution tables, one of the practical effects of taxes that rise steeply with income and supposedly redistribute income away from the "rich" is that they punish many middle income people who have temporarily high incomes.

The benefits of tax reductions and the pain of tax increases are distributed more widely than burden tables reveal. Tax provisions that would promote growth and raise productivity and wages often founder on misleading burden tables. Consider the 2001 and 2003 provisions that reduced tax rates on capital gains and dividends, and that reduced tax rates in all income brackets, including the top.

A young worker just out of school may have modest wage income but no income from savings. He may be a renter rather than a homeowner. Later in life, he may have higher income, and may have bought a home and accumulated pension rights and savings for retirement. At age twenty-two, he may not benefit from a cut in the top three tax rates, or a tax cut on capital gains or dividends, or from the deduction for mortgage interest or property taxes. Later in life, he would benefit from all such provisions. A snapshot of the incidence of such tax provisions or tax changes shows only the benefits for taxpayers who currently face such tax brackets, or have such assets, and ignores the future gains to younger taxpayers. Over time, a much larger proportion of the population would benefit from these provisions than the burden tables show.

The Treasury has recently constructed and "aged" a panel of taxpayers whose returns it has followed for several years, based on a sample of the taxpaying population.[20] The panel enables the Treasury to examine how a tax change would affect a typical taxpaying population over time, not just in a single

year. It found that, over time, the major provisions of the 2001 and 2003 tax cuts benefitted many more taxpayers than was indicated by a one year snapshot. In the panel study, some taxpayers who lacked dividend income or capital gains in some years of the period had dividends or capital gains in other years, and benefitted from the bills' reductions in the tax rates on dividends and capital gains. Some taxpayers who were in the lowest tax brackets in some years were in higher brackets in others, and benefitted from the reduction in marginal tax rates in the four highest brackets at some time during the period. The authors report that:

> "For example, in the first year 34.7 percent of taxpayers would benefit from the reduction of tax rates above 15 percent, whereas over ten years 60.7 percent would benefit in at least one year... In the first year, some tax return filers do not benefit from any of the major provisions of EGTRRA because they have no income tax liability under pre-EGTRRA law and do not qualify for the expanded refundability of the child credit. But over time, nearly all taxpayers, 94.4 percent, would benefit."[21]

Over time, then, the benefits of the bill are far more widely distributed than is indicated by the ordinary one year snapshot of the distribution of the tax reduction.

In addition, the reduced taxes on saving and investment in the recent tax cuts will encourage added capital formation, which will raise productivity and income for all current workers, so that they will receive economic benefits in the form of higher wages even if they were not yet taking advantage of the tax provisions directly. These dynamic benefits are not counted in the distribution tables either. These omissions make the distribution of the tax benefits appear to be far more unequal than they really are.

The 2001, 2002, and 2003 tax Acts are scheduled to expire by the end of 2010. These sunsets are due to ridiculous budget rules imposed by the Senate that make it hard to reform the tax system on a permanent basis. The sunsets mean that the lower income tax rates, the lower tax rates on dividends and capital gains, and the enhanced depreciation provisions may no longer exist when our hypothetical younger worker is ready to take advantage of them. But that is the fault of the sunsets, not of the provisions themselves. The provisions should be made permanent so everyone can have a chance to benefit from them, and from the improved economy they would make possible.

Tailoring tax bills to produce a good burden table outcome leads to bad tax policy and mind-numbing complexity.

When standard distribution analysis is used in the context of trying to redistribute income through the tax system, it often favors taxes that are complicated over those that are simple, and taxes that slow economic activity over those that do less economic damage. Provisions that discriminate against those with above-average incomes during the year are frequently added to tax legislation to "improve" distribution tables.

For example, the tax code contains many income-based phase-outs of credits, deductions, and exemptions. Distribution tables, coupled with the notion that more progressivity is always better, are often used to defend retaining current phase-outs and to argue for adding new ones. An earlier IRET study examined phase-outs and concluded that most of them are bad tax policy.[22] Phase-outs burden taxpayers with greatly increased tax complexity, produce large spikes in marginal tax rates that discourage additional work and saving within the phase-out ranges, and are stealth taxes which violate the principle that taxes should be as visible as possible. Distribution tables, however, disregard all such concerns.

Another example is the alternative minimum tax (AMT). It was imposed to make the annual snapshots of the distribution of the tax burden appear "fairer". The AMT is essentially a parallel income tax, with different rules than the regular income tax. Taxpayers must pay whichever is larger. The AMT increases tax complexity. Many of its rules are arbitrary and unfair, and the resulting definition of taxable income may bear little relationship to the real economic income of the taxpayer in the year in

question. The AMT hurts the economy as taxpayers make inefficient choices regarding their activities to avoid the AMT. The AMT should be repealed. That task is made difficult, however, because according to static distribution analysis, repeal would chiefly benefit the wealthy and upper middle class.

III. Conclusion

Contrary to a number of media accounts, a Congressional Budget Office study reached the conclusion that the 2001, 2002, and 2003 tax cuts substantially reduced federal taxes for the middle class. The CBO further concluded that the three tax reductions provided relief for people at lower and higher income levels, but that relief did not come at the expense of the middle class.

Although the three tax acts score well in terms of the standard distributional analysis that CBO was asked to perform, a deeper question is whether distributional analysis provides a sound basis for economic policy. The answer is that it often leads to poor policy choices.

With its each-year-in-isolation income snapshots, conventional distributional analysis does not furnish an accurate picture of the true distribution of income, and with its static macroeconomic assumption, it often fails to show the ultimate burdens of various taxes and tax changes.

Distributional analysis frequently degenerates into arguments about how the economic pie is sliced. This emphasis might be more appropriate if the size of the economic pie were fixed, so that a better deal for one group necessarily meant a worse deal for others. Even then, an analysis that primarily considered tax shares would be treacherous because it would neglect the overall size of the tax burden. For instance, suppose a group's share of taxes is cut slightly, but in the context of imposing large tax increases on all taxpayers. A pure distributional analysis might misleading suggest the group is better off because their share of taxes has dropped. When the people within the group must write tax checks to the government and see how much less they are allowed to keep on an after-tax basis, however, they will probably deduce that their tax burdens have become heavier.

Of course, the world is not a zero sum game. When tax policies can and do influence the size of the economy, it is sensible to seek out tax policies that would benefit everyone by expanding the size of the economy and to avoid tax policies that would cause widespread harm by retarding production and economic growth. Perversely, distributional analysis often favors tax policies that damage the economy. For that reason, good tax policy often faces an uphill battle against standard, static distributional analysis.

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Endnotes

1. Congressional Budget Office, "Effective Federal Tax Rates Under Current Law, 2001 to 2014," August 2004, accessed on the Internet at ftp://ftp.cbo.gov/57xx/doc5746/08-13-EffectiveFedTaxRates.pdf.

2. The Acts are the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA), the Job Creation and Worker Assistance Act of 2002, (JCWAA), and the Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA).

3. *Ibid.*, Table 2.

4. *Ibid.*, Table 2.

5. CBO's expanded definition of people's income includes government cash and in-kind payments (such as medicare, food stamps, and government pensions), many payments made by employers (such as the employer share of payroll taxes and employer-provided health benefits), and corporate retained earnings and corporate taxes.

6. For CBO's description of how it defines people's income, see *Ibid.*, pp. 2-3. For a warning about why this definition may cause confusion, see Scott A. Hodge, "Cautionary Notes For Comparing CBO's Household Date To Standard Tax Data," *Fiscal Facts*, Tax Foundation, August 13, 2004, accessed on the Internet at http://www.taxfoundation.org/ff/cbostudy1.html.

7. *Ibid.*, Table 4.

8. Calculated from *Ibid.*, Tables 3 and 4. The percentage reduction for the second quintile of households exceeds 100% because the Acts changed the previous low but positive average income tax rate to a small income tax rebate, on average.

9. Calculated from *Ibid.*, Tables 4 and B-1. Nearly 36% of the reduction in the total federal tax rate on the upper quintile in 2004 was due to bonus depreciation and changes to the net operating loss carryover provisions (1.4 percentage points of the 3.9 percentage points reduction in the tax rate). Having taken depreciation charges earlier than usual, however, the business owners have less to deduct in later years, resulting in higher tax rates of about 0.5 percentage points through 2007, and a few tenths in later years. Ultimately, the businesses receive the same total write-off, and same total tax liability, and benefit only from the change in the timing.

10. See Stephen J. Entin, "Renew Bonus Expensing To Keep Recovery Strong," *IRET Congressional Advisory*, No. 173, May 6, 2004, available on the Internet at ftp://ftp.iret.org/pub/ADVS-173.PDF.

11. Jonathan Weisman, "Tax Burden Shifts To The Middle," *Washington Post*, August 13, 2004, A4. Edmund L. Andrews, "Report Finds Tax Cuts Heavily Favor The Wealthy," *New York Times*, August 13, 2004, accessed on the Internet at http://www.nytimes.com/2004/08/13/politics/campaign/13tax.html. "Study: Tax Burden Shifts To Middle Class," *Associated Press*, August 13, 2004, accessed on the Internet at http://www.nytimes.com/2004/08/13/aponline/national/AP-Tax-Cuts-Study.html. A few media stories did accurately report CBO's findings. See, for example, "Tax Trickery," *Investor's Business Daily*, August 17, 2004.

12. *Ibid.*, Table 4.

13. *Ibid.*, Table 4.

14. Darrel Huff, *How to Lie With Statistics* (New York: W. W. Norton & Company, 1954).

15. *Ibid.*, Table 2.

16. *Ibid.*, Table 2.

17. For total federal taxes, CBO estimates that the three tax acts will reduce the average tax rate by 3.0 percentage points in 2004 (from 22.6% to 19.6%), but that in 2011, if Congress allows the tax relief to expire, the average tax rate will climb by 4.0 percentage points (to 23.6%). *Ibid.*, Table 2.

18. Computed from *Ibid.*, Table 3. Because this table is based on old (2000) law, it abstracts from any effects of the tax reductions and isolates the impact of "real bracket creep".

19. *Ibid.*, ftnt. 8, p. 3.

20. See Julie-Anne Cronin, Janet Holtzblatt, Gillian Hunter, Janet McCubbin, James R. Nunns, and John Cilke, "Treasury's New Panel Model for Tax Analysis," prepared for the 96th Annual Conference on Taxation "Forecasting Government Fiscal Situations" Session, National Tax Association, Chicago, IL, Nov. 25, 2003, forthcoming in the proceedings of the conference.

21. *Ibid.*, p. 8.

22. Michael Schuyler, "Phase-Outs Increase Tax Rates and Tax Complexity," *IRET Policy Bulletin*, No. 83, March 12, 2001, available on the Internet at ftp://ftp.iret.org/pub/BLTN-83.PDF.

Note: Nothing here is to be construed as necessarily reflecting the views of IRET or as an attempt to aid or hinder the passage of any bill before the Congress.