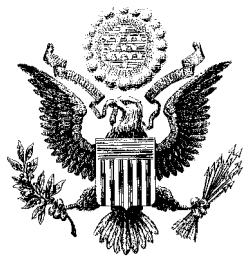
A COMPARISON OF TAX DISTRIBUTION TABLES: HOW MISSING OR INCOMPLETE INFORMATION DISTORTS PERSPECTIVES

A JOINT ECONOMIC COMMITTEE STUDY



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Abstract

Comparing tax distribution tables released by several different organizations, this study discusses how the design and presentation of data within tax distribution tables can be designed and presented in manners which fail to advance a balanced and accurate perspective of tax policy. Unless there is greater public recognition of both the art and the science of distributional analysis, tax policy will be unduly influenced by incomplete or misleading tax distribution tables. Although what is considered fair or equitable depends on philosophical and ethical judgments over which people can disagree, this study shows how the presentation of tax data within distribution tables often hides or omits much of the important information that is required in order to effectively evaluate the merits of any tax legislation.

The debate surrounding President George W. Bush's tax plan of 2001 provides a prime example of how the use of tax distribution tables can provide an incomplete picture. Numerous distribution tables were prepared by governmental organizations, advocacy groups and think tanks. These tables were routinely published in major newspapers around the country. However, without a proper understanding of what these distribution tables did and did not show, many important issues were misinterpreted or ignored altogether. These same issues are sure to rise again as tax policy proposals are debated during the 108th Congress and beyond.

By comparing distribution tables that provide alternative perspectives of President Bush's tax plan of 2001, this study examines how tax distribution tables often can provide misleading results about the impact of pending tax legislation. These tables rely excessively on comparisons of various income groups and are typically used to oppose broad income tax relief and foster class warfare notions in tax policy. However, tax distribution tables typically are defective in several ways that once recognized raise serious questions about their value to policymakers and the public.

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I. Introduction

> [T]he use of annual income in analyzing the distributional effects of the current tax system and proposed changes overstates the extent of inequality among taxpayers.
>
> *The Annual Report of the Council of Economic Advisers (2003)*[1]

Tax distribution tables have become the predominant tool for analyzing the distributive effects of tax burdens and benefits from proposed changes to tax law. However, the use of tax data for tax policy analysis is a time intensive and complicated process that can be more art than science. The different economic assumptions and presentations of data used by the various groups that release distribution tables have the inherent consequence of providing the public with numerous tables showing different results that are then used as political ammunition to influence debate. Further, the current practice or use of distribution tables typically provides a misleading sense of accuracy and an incomplete picture of the actual nature of a change in tax distribution as a result of a change in tax policy.

The debate surrounding President George W. Bush's tax plan of 2001 provides a prime example of how the use of tax distribution tables can provide an incomplete picture. Numerous distribution tables were prepared by the Joint Committee on Taxation of the U.S. Congress, the Office of Tax Analysis of the U.S. Department of the Treasury, advocacy groups and think tanks. These tables were routinely published in major newspapers around the country.[2] However, without a proper understanding of what these distribution tables did and did not show, many important issues were misinterpreted or ignored altogether. These same issues are sure to rise again as tax policy proposals are debated during the 108th Congress and beyond.

By comparing distribution tables that provide alternative perspectives of President Bush's tax plan of 2001, this study examines how tax distribution tables often can provide misleading results about the impact of pending tax legislation. These tables rely excessively on comparisons

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[1] Council of Economic Advisers, Executive Office of the President, *The Annual Report of the Council of Economic Advisers*, together with the *Economic Report of the President.* U.S. Government Printing Office. Washington, DC. February 2003, page 181.

[2] See for example: Jacob Schlesinger and John McKinnon, "Bush Plan Gives Rich Biggest Cut in Dollars But Not in Percentage," *The Wall Street Journal*, November 5, 2000; Steven Pearlstein and Paul Blustein, "On the Class Warpath," *The Washington Post*, February 7, 2001; Shailah Murray and David Rogers, "Democrats Attempt to Draw Rein As Republicans Study Wish Lists," *The Wall Street Journal*, February 8, 2001; Glenn Kessler, "Treasury's Tax Cut Data Can Cut 2 Ways," *The Washington Post*, March 9, 2001; David Cay Johnston, "Even for Wealthy, Tax Plan's Benefits Could Vary Widely," *The New York Times*, May 15, 2001; and Glenn Kessler, "Tax Cut Debate's Division Problem," *The Washington Post*, May 17, 2001.

of various income groups and are typically used to oppose broad income tax relief and foster class warfare notions in tax policy. However, tax distribution tables typically are defective in several ways that once recognized raise serious questions about their value to policymakers and the public.

This study is organized as follows. Section II provides detailed examples of actual distribution tables that analyzed George W. Bush's tax plan as it developed between 1999 and 2000 and discusses the problems associated with the presentation of data in the tables.[3] Section III briefly discusses how distribution tables ignore the importance of income mobility. Section IV provides a conclusion. The Appendix provides 10 useful guideline questions that users of distribution tables should ask when evaluating the presentation of distribution tables. A tax distribution table released by a national think tank is used as an example to illustrate how these 10 questions are informative.

II. Differences in Distribution Tables

The official sources of tax distribution data are the Office of Tax Analysis (OTA) of the Department of Treasury, the Congressional Joint Committee on Taxation (JCT), and to a lesser extent, the Congressional Budget Office (CBO).[4] All of these organizations apply different assumptions and methodologies to the analysis of tax legislation. In addition, various interest groups and think tanks release unofficial distribution tables to influence the policy process and the debate on particular aspects of tax legislation.

Distribution tables are constructed based on data sources that sample parts of the population to make inferences about the population at large, not data sources that count the entire population like a census. Furthermore, many economic and mathematical assumptions are relied upon in order to fashion distribution tables. The end results are tables that often purport to consist of absolute numbers but instead present a false sense of precision. Despite the appearance of precision conveyed by changes expressed down to one or even two decimal places, the reality is that significant problems usually are just below the surface.

It is well known to most taxpayers that tax liabilities often differ among families with the same income. Differences can occur due to family size, filing status, whether a taxpayer itemizes deductions or takes the standard deduction, whether a taxpayer pays a home mortgage and deducts the interest expense or rents, the nature of a family's income, number of children, and other factors. Additionally, some families are more aggressive reducing their tax liabilities than others. For example, tax liability can be reduced legally by contributing to a 401(k) plan, an

[3] The debate surrounding the 2001 tax plan, beginning with the 2000 presidential campaign of George W. Bush and advanced under his presidential administration, was chosen because it offers a unique opportunity to compare distribution tables released by a Democratic and Republican administration analyzing similar tax proposals.

[4] For a more detailed discussion of their respective rolls, see: Michael J. Graetz, "Distributional Tables, Tax Legislation, and the Illusion of Precision," in David F. Bradford, ed., *Distributional Analysis of Tax Policy*. Washington, DC: AEI Press, 1995, page 20.

individual retirement account or a medical savings account. However, this is not the image portrayed by distribution tables.

All distribution tables are not created equally.[5] Much information is necessary to effectively evaluate the distributional change of proposed tax legislation, such as what items are included in income, what types of taxes are being included/excluded, and over what time horizon the effects are being measured, among others. Producers of these tables use different methodologies, definitions and presentations to convey the results of their analyses. Additionally, the concept of "fairness" is as highly subjective a concept as "income." What might be fair to some is considered unfair to others. It is possible to bias the debate on a proposed change to tax policy by focusing an analysis and presentation of data in a manner that provides an incomplete or distorted perspective.

Previous Joint Economic Committee studies have demonstrated that a lack of complete and necessary information is prevalent with virtually all of the actual distribution tables released into the public domain. For a more detailed analysis on what constitutes a tax distribution table and how distribution analysis is conducted at various organizations, please see previous JEC studies on this issue.[6]

The following four distribution tables are real examples of distribution tables released into the public domain that analyzed various aspects of President George W. Bush's tax plan as it developed from 1999 through 2001.[7] Though the tables were not all prepared at the same time, the methodologies and presentations of data are consistent with those routinely used by the various groups and provide a useful illustration of how such groups use distribution tables in the tax policy process.

- Table 1 is a copy of a distribution table prepared by the Joint Committee on Taxation of the U.S. Congress (JCT);
- Table 2 was prepared by the Treasury Department's Office of Tax Analysis (OTA 2000) under former President Clinton;
- Table 3 was prepared by the Treasury Department's Office of Tax Analysis (OTA 2001) under President Bush; and
- Table 4 was prepared by Citizens for Tax Justice (CTJ), a labor-backed advocacy group.

[5] Readers interested in further understanding these important differences are encouraged to review the following references: Martin A. Sullivan, "How to Read Distribution Tables," *Tax Notes*, March 26, 2001; Jason J. Fichtner, "A Guide to Tax Policy Analysis: Problems With Distributional Tax Tables," Joint Economic Committee Study, January 2000; and David F. Bradford (Ed.), *Distributional Analysis of Tax Policy*, 1995.

[6] See, for example: Jason Fichtner, "A Guide to Tax Policy Analysis: Problems with Distributional Tax Tables," Joint Economic Committee, January 2000; "A Guide to Tax Policy Analysis: The Central Tendency of Federal Income Tax Liabilities in Distributional Analysis," May 2000; and "The Misleading Effects of Averages in Tax Distribution Analysis," September 2003.

[7] The debate surrounding the 2001 tax plan, beginning with the 2000 presidential campaign of George W. Bush and advanced under his presidential administration, was chosen because it offers a unique opportunity to compare distribution tables released by a Democratic and Republican administration analyzing similar tax proposals.

The point of this section is not to focus on the numbers and outcomes of the analyses per se, but on what information is and is not presented and how the presentation of the information can provide a distorted or misleading perspective. [8]

Joint Committee on Taxation:

Table 1. Distributional Effects of the Conference Agreement for H.R. 1836
Calendar Year 2006

Income Category (2)	Change in Federal Taxes (3)		Federal Taxes (3) Under Present Law		Federal Taxes (3) Under Proposal		Effective Tax Rate (4)	
							Present Law	Proposal
	Millions	Percent	Billions	Percent	Billions	Percent	Percent	Percent
Less than $10,000	-$76	-0.9%	$8	0.4%	$8	0.4%	10.4%	10.3%
10,000 to 20,000	-3,789	-13.6%	28	1.2%	24	1.1%	7.6%	6.6%
20,000 to 30,000	-7,853	-11.4%	69	3.1%	61	2.9%	13.7%	12.2%
30,000 to 40,000	-7,839	-7.9%	99	4.4%	91	4.4%	16.0%	14.7%
40,000 to 50,000	-7,570	-6.5%	116	5.2%	108	5.2%	17.2%	16.0%
50,000 to 75,000	-18,755	-6.0%	313	14.0%	294	14.0%	18.6%	17.5%
75,000 to 100,000	-17,212	-5.8%	297	13.3%	280	13.3%	21.3%	20.0%
100,000 to 200,000	-30,208	-5.1%	588	26.3%	558	26.6%	23.9%	22.7%
200,000 and over	-44,177	-6.1 %	719	32.1%	675	32.1%	28.3%	26.6%
Total, All Taxpayers	**-$137,476**	**-6.1%**	**$2,238**	**100.0%**	**$1,740**	**100.0%**	**21.7%**	**20.3%**

Source: Joint Committee on Taxation. JCX-52-01. May 26, 2001
Detail may not add due to rounding.
(1) Includes provisions affecting the child credit, individual marginal rates, a 10% bracket, limitation of itemized deductions, the personal exemption phaseout, the standard deduction, 15% bracket and EIC for married couples, deductible IRAs, and the AMT.
(2) The income concept used to place tax returns into income categories is adjusted gross income (AGI) plus: [1] tax-exempt interest, [2] employer contributions for health plans and life insurance, [3] employer share of FICA tax, [4] worker's compensation, [5] nontaxable social security benefits, [6] insurance value of Medicare benefits, [7] alternative minimum tax preference items, and [8] excluded income of U.S. citizens living abroad. Categories are measured at 2001 levels.
(3) Federal taxes are equal to individual income tax (including the outlay portion of the EIC), employment tax (attributed to employees), and excise taxes (attributed to consumers). Corporate income tax and estate and gift taxes are not included due to uncertainty concerning the incidence of the tax. Individuals who are dependents of other taxpayers and taxpayers with negative income are excluded from the analysis.
(4) The effective tax rate is equal to Federal taxes described in footnote (3) divided by: income described in footnote (2) plus additional income attributable to the proposal.

On the basis of presentation, the Joint Committee on Taxation table displays how much each income group would benefit in dollars, the amount of tax each group currently pays, the amount of tax each group would pay in 2006 under the proposed legislation, and the effective tax rate under current law and under the proposed changes.

The JCT uses a relatively easy to understand income concept called expanded income. Expanded income includes adjusted gross income (AGI), taken right from the federal income tax

[8] The Congressional Budget Office (CBO) did not prepare any tax distribution tables that were subsequently publicly released during this period. Hence, CBO is not represented below. Similarly, though now a prevalent issuer of tax distribution tables, the joint initiative between the Urban Institute and the Brookings Institution (Urban-Brookings Tax Policy Center) was not up and running during the time George W. Bush's tax plan was being developed and analyzed. Therefore, the Urban-Brookings Tax Policy Center (TPC) is also not represented below. However, tax distribution tables released by the CBO and the TPC also suffer from the problems and limitations identified throughout this study. A distribution table focusing on the 2003 tax plan released by the TPC is presented and analyzed in the Appendix.

return, plus government transfers and some employer-provided benefits. Additionally, the JCT uses as its unit of analysis a tax-filing unit. The tax-filing unit roughly corresponds to the filing status of federal income tax returns.

Most taxpayers think of income solely in terms of their wages. Some other taxpayers might think of income as what they report on their income tax returns. Of all the income concepts used by the various producers of distribution tables, the JCT's income concept would be the most familiar to the public, as it closely relates to income reported on a federal individual income tax return.

The data as presented in the JCT table indicate that the proposed changes are distributionally neutral. That is each income group would pay roughly the same percentage of the tax burden after the proposed tax change as before. However, attention must be drawn to footnote #3 in the table. Here the JCT discloses that it has excluded the effects of the estate and gift taxes, as well as the corporate tax, from their analysis due to uncertainty over the incidence, or who actually bears the burden of these taxes. Though not completely precise, excluding any tax from a distributional analysis for which the incidence is uncertain can actually be more accurate because including taxes where the incidence is uncertain requires subjective conjecture by an analyst that can end up distorting the results.

Missing from the JCT analysis is the number of units associated with each income class. Without this information, it is impossible to determine the number of taxpayers that would receive the benefits listed in the table. The JCT table does provide information pertaining to the percentage of federal taxes each income group is estimated to bear both before and after the proposed change in taxes. The inclusion of tax shares is an advancement in distributional analysis since a complete analysis of the costs and benefits of tax should not be made without an understanding of the current burden. This information illustrates that many tax relief proposals effectively keep the burden of taxation relatively the same, even if upper income groups might receive a greater nominal dollar benefit.

The JCT table does not include an average or median amount of tax benefit that taxpayers in corresponding income groups would expect to receive as a result of a change in tax policy. Regardless of the JCT's reasoning for excluding average tax benefits, many opponents of tax relief legislation favor highlighting the average tax cut that various income groups can expect to receive. This is because, due to the very nature of our progressive tax system, even a tax cut that is directly proportionate to the amount of current federal taxes paid will result in higher income groups (which pay a higher percentage of total federal taxes) receiving a higher nominal dollar amount of benefit. Focusing only on comparisons of average tax cuts can lead to "class warfare" assertions whereby opponents of tax relief legislation misleadingly claim that only the rich benefit from a tax cut.

Clinton Administration Office of Tax Analysis, Department of the Treasury:

Table 2. Major Provisions Passed by the House Ways and Means Committee [1]

(2000 Income Levels) Very Preliminary

Family Economic Income [2]	Number of Families (millions)	Average Tax Change ($)	Total Tax Change		Percent Change In:	
			Amount (millions) [3]	Percent Distribution (%)	Current Federal Taxes [4]	After-Tax Income [5] (%)
Lowest [6]	22.4	-13	-286	0.4%	-2.1%	0.13%
Second	23.0	-77	-1,762	2.7%	-2.5%	0.33%
Third	23.0	-192	-4,426	6.8%	-2.4%	0.55%
Fourth	23.0	-380	-8,748	13.4%	-2.4%	0.61%
Highest	23.0	-2,164	-49,877	76.6%	-4.2%	1.39%
Total [6]	**115.2**	**-566**	**-65,131**	**100.0%**	**-3.6%**	**0.98%**
Top 10%	11.5	-3,442	-39,586	60.9%	-4.5%	1.57%
Top 5%	5.8	-5,632	-32,490	49.9%	-4.9%	1.79%
Top 1%	1.2	-17,074	-19,840	30.5%	-5.5%	2.24%

Source: Department of the Treasury. Office of Tax Analysis. July 17, 2000.

(1) This table distributes the estimated change in tax burdens due to the following major provisions passed by the House Ways and Means Committee in H.R. 7, H.R. 8, H.R. 2990, H.R. 3832, H.R. 3916, H.R. 4810 and H.R. 4843.

(2) Family Economic Income (FEI) is a broad-based income concept. FEI is constructed by adding to AGI unreported and under-reported income; IRA and Keogh deductions; nontaxable transfer payments such as Social Security and AFDC; employer-provided fringe benefits; inside build-up on pensions; IRAs, Keoghs, and life insurance; tax-exempt interest; and imputed rent on owner-occupied housing. Capital gains are computed on an accrual basis, adjusted for inflation to the extent that reliable data allow. Inflationary losses of lenders are subtracted and gains of borrowers are added. There is also an adjustment for accelerated depreciation of noncorporate businesses. FEI is shown on a family rather than a tax-return basis. The economic incomes of all members of a family unit are added to arrive at the family's economic income used in the distributions.

(3) The change in Federal taxes is estimated at 2000 income levels assuming fully phased in law. Current and proposed taxes are estimated using FY2000 Budget assumptions. The tax benefit of the increase in retirement contribution limits is measured as the present value of tax savings on one year's contributions.

(4) The taxes included are individual and corporate income, payroll, excises, customs duties, and estate and gift taxes. The individual income tax is assumed to be borne by payers, the corporate income tax by capital generally, payroll taxes (employer and employee shares) by labor (wages and self-employment income), excises on purchases by individuals in proportion to relative consumption of the taxed good and proportionately by labor and capital and excises on purchases by businesses and customs duties proportionately to labor and capital, and the estate tax by decedents. Federal taxes are estimated at 2000 income levels but assuming 2009 law and, therefore, exclude provisions that expire prior to the end of the Budget period and are adjusted for the effects of unindexed parameters.

(5) After-tax income is Family Economic Income less current Federal taxes.

(6) Families with negative incomes are excluded from the lowest quintile but included in the total line.

NOTE: Quintiles begin at FEI of: Second $17,988; Third $34,844; Fourth $59,019; Highest $100,767; Top 10% $140,581; Top 5% $189,835; Top 1% $462,053.

Table 2 was prepared by the OTA under the Clinton Administration and during the presidential campaign of 2000. Unlike the table by the JCT, OTA prefers to categorize the units of analysis as families (not taxpayers like the JCT) and place them into quintiles, not dollar income levels. This has the effect of broadening the unit of analysis and lumping together as "families" many taxpayers that are traditionally not considered families, such as single taxpayers. The OTA use of families as an income concept groups together tax units with very different tax liabilities and different abilities to pay. Though this critique can also partly be said of the JCT analysis, the impact is much greater with the use of "families" as the unit of analysis. This use of "families" makes it difficult to judge both the horizontal and vertical equity of the proposed changes to tax policy on individual taxpayers.[9]

[9] Horizontal equity refers to a principle of judging the fairness of taxation, which holds that taxpayers who have the same income should pay the same amount in taxes. Vertical equity is another principle of judging fairness and holds that, in a progressive tax system, taxpayers with higher incomes should pay higher levels of taxes.

The main columns of interest in the 2000 OTA table are the "Average Tax Change" and the two columns under "Total Tax Change." The 2000 OTA analysis shows lower income groups receiving what looks like a pittance in income tax relief, while upper income groups receive what appears to be a disproportionate amount of tax relief. The perception that the income tax relief is skewed toward the rich is further emphasized in the last column relating to the percent change in after-tax income.

Again, the 2000 OTA analysis shows that lower income groups would receive substantially less of a change in their after-tax income than higher income levels. However, this is primarily due to the current progressive nature of the US income tax system whereby lower income groups pay little or no federal income taxes.[10] In fact, an estimated 50.6 million tax returns, or 35.6 percent of all tax returns, had zero or negative income tax liability in 2001.[11] Though an OTA paper released under the Clinton administration states that the only measure of a change in tax burden with "some theoretical basis is the percentage change in after-tax income,"[12] focusing solely on changes in after-tax income can be misleading because it implies that the amount of taxes currently paid is irrelevant to judging the equity of a proposed tax cut.

For example, Chart 1 shows that the entire bottom half (bottom 50 percent) of taxpayers that reported positive AGI paid 3.97 percent of all individual federal income taxes in 2001. This means that the top half of all taxpayers paid 96.03 percent of all individual federal income taxes. Moreover, the top 1 percent of taxpayers paid 33.89 percent, the top five percent paid 53.25 percent and the top 10 percent paid 64.89 percent (almost two-thirds of all federal individual income taxes of taxpayers).

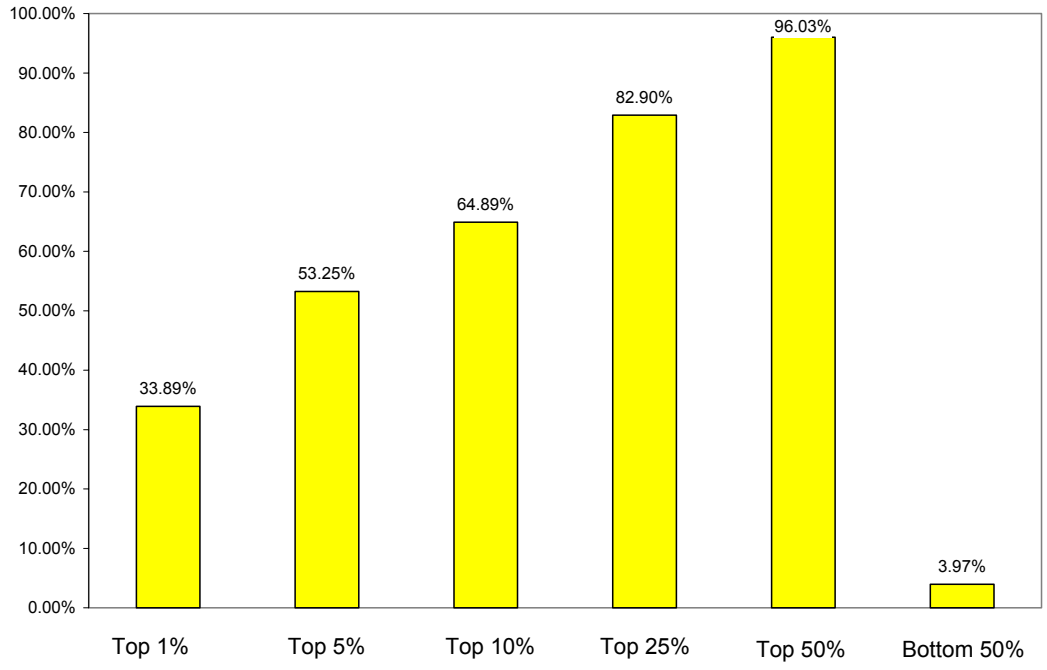
Unlike the JCT analysis, the distribution table by the 2000 OTA presents the proposed tax plan as *disproportionately* skewed to the wealthy, thereby reducing the progressivity in the current tax system. However, without information on how much in income tax each income group currently pays, it is impossible to completely assess the fairness or equity of the tax plan. The 2000 OTA estimate omits such necessary information.

It is important to note another key difference between the JCT analysis and the 2000 OTA analysis. The 2000 OTA uses a very broad measure of income, which is unfamiliar to most Americans and even to many legislators. The "Family Economic Income" (FEI) concept used by the 2000 OTA is a *theoretical* attempt to measure income based on a concept that economists refer to as the Haig-Simons income concept. The Haig-Simons income concept defines income as the "total value of rights exercised in the market, together with the accumulation of wealth in that period."[13] Unlike tangible dollar amounts that make up adjusted gross income, such as wages, dividends and capital gains, the FEI concept is measured by adding to AGI such items as

[10] Joint Committee on Taxation. JCX-65-01. August 2, 2001.
[11] *Ibid*.
[12] Julie-Anne Cronin. "U.S. Treasury Distributional Analysis Methodology." Office of Tax Analysis. Department of Treasury. OTA Paper 85. September 1999, page 34.
[13] Robert Murray Haig, "The Concept of Income: Economic and Legal Aspects," in R.M. Haig (Editor), *The Federal Income Tax*. New York: Columbia University Press, 1921; and Henry C. Simons, *Personal Income Taxation: The Definition of Income as a Problem of Fiscal Policy*. Chicago: University of Chicago Press, 1938.

in-kind income (e.g., cash transfers and food stamps), *imputed* income from durable goods consumption (e.g., imputed rental income from an owner-occupied home), and accrued (i.e., unrealized) capital gains.

Chart 1. Federal Individual Income Tax Burden in 2001
(Shares of Personal Income Tax Payments by Percentile Groups)



Source: Internal Revenue Service - Statistics of Income Division

The idea behind the Family Economic Income concept is to impute a cash measure including as income all forms of value that are not received in monetary form and are therefore not subject to taxation. In essence, the economic theory behind the imputation of income under the Haig-Simons income concept includes as "income" any flow of net value attributable to the consumption of all durable goods, such as houses, cars and washing machines. Under Haig-Simons, "the value of leisure and unpaid work (such as food grown for home use)" is also imputed as income to individuals and families.[14] Besides the imputed value of owner-occupied housing, the Haig-Simons income concept includes an imputation for personal interest income, "which includes the benefits of banking services provided free to customers in lieu of interest."[15] The Clinton OTA includes some types of imputed income in FEI (e.g., imputed rental income from owner-occupied housing) but not others (e.g., the value of leisure).

[14] Jane G. Gravelle. "Imputed Income." In Joseph J. Cordes, Robert D. Ebel, and Jane G. Gravelle (Editors). *The Encyclopedia of Taxation and Tax Policy*. The Urban Institute Press, 1995, page 168.
[15] *Ibid*.

Additionally, FEI *excludes* in-kind transfers such as Medicare and Medicaid, which often benefit middle and lower income groups, even though the payroll taxes to fund these benefits are *included* in the 2000 OTA analysis of tax burden. The OTA's justification for excluding Medicare and Medicaid is based both on "the difficulty of assigning a value of benefits to the recipient, and the difficulty of properly identifying recipients."[16] However, OTA faces similar problems with imputing values for unreported income, income from people who do not file tax returns and rental income from owner-occupied housing. But these items *are* included in the OTA family economic income concept. Many of the imputed additions to income that are included in the family economic income concept consist of non-monetary items that have never, and could not logistically, be included in the tax base. If these items cannot be included in the tax base, it is questionable why such a measure is used at all for purposes of analyzing tax policy.

Furthermore, in this table, the 2000 OTA aggregates the income of all tax filers in a household into a single-family unit. This means that the income of people cohabitating together, but unmarried, are added together to produce a "family" income measure. Also, single college students with low incomes but filing their own federal tax returns would be categorized as low-income "families." This runs contrary to the manner in which many people conceive of families, and hence could be misleading.

In short, using the OTA family economic income concept and methodology used in the 2000 analysis inflates the income amounts for those families primarily included in the middle and upper income brackets while lowering their average tax rate. The opposite effect holds for the lower income groups. Hence, virtually any broad-based income tax reduction proposal viewed under the 2000 OTA approach to tax distribution analysis would appear to overly favor the "wealthy" and understate the progressivity of any proportional change in tax policy.

[16] Julie-Anne Cronin. "U.S. Treasury Distributional Analysis Methodology." Office of Tax Analysis. Department of Treasury. OTA Paper 85. September 1999.

Bush Administration Office of Tax Analysis, Department of the Treasury:

Table 3. Major Individual Income Tax Provisions of the President's Tax Proposal [1]

(2000 Income Levels)

Cash Income Class [2]	Distribution of Proposed Changes in Individual Income Taxes (%)	Distribution of Total Individual Income Taxes [3]		Average Individual Income Taxes With Proposed Changes ($)	Percent Change in Individual Income Taxes (%)
		Current Law (%)	With Proposed Changes [4] (%)		
0 - 30	9.3	-1.0	-2.8	-457	-136.2
30 - 40	6.5	2.5	1.8	993	-38.3
40 - 50	7.8	4.1	3.4	2,210	-28.0
50 - 75	17.2	12.2	11.3	4,279	-20.8
75 - 100	13.6	12.2	12.0	7,848	-16.3
100 - 200	19.8	27.1	28.3	16,625	-10.7
200 & Over	25.4	42.9	45.9	103,931	-8.7
Total [5]	100.0	100.0	100.0	6,322	-14.6

Source: Department of the Treasury. Office of Tax Analysis. March 8, 2001.

(1) The major individual income tax provisions are: i) lower individual income tax rates; ii) increase the child credit to $1,000, raise the income level at which it phases out, and allow the child credit against the AMT; iii) allow a 10% deduction for the earnings of the lower earning spouse (up to $30,000) in two-earner families; iv) allow taxpayers who do not itemize to deduct charitable contributions up to the amount of the taxpayer's standard deduction; and v) provide a refundable tax credit for individually-purchased health insurance.

(2) Cash Income consists of wages and salaries, net income from a business or farm, taxable and tax-exempt interest, dividends, rental income, realized capital gains, cash transfers from the government, and retirement benefits. Employer contributions for payroll taxes and the federal corporate income tax are added to place cash on a pre-tax basis. Cash income is shown on a family rather than on a tax return basis. The cash incomes of all members of a family are added to arrive at a family's cash income used in the distributions.

(3) The refundable portions of the earned income tax credit (EITC) and the child credit are included in the individual income tax. Federal taxes are estimated at 2000 income levels but assuming fully phased in law and, therefore, exclude provisions that expire prior to the end of the Budget period and are adjusted for the effects of unindexed parameters.

(4) The change in Federal taxes is estimated at 2000 income levels assuming fully phased in law.

(5) Families with negative incomes are excluded from the lowest income class but included in the total line.

The table produced by the OTA in 2001 takes a markedly different approach from the table produced by the 2000 OTA. The FEI concept and quintiles have been replaced by a cash income concept and dollar income ranges similar to the JCT. Additionally, this table presents some different information than the previous two examples. For starters, the last column of the 2001 OTA table presents the "Percent Change in Individual Income Taxes." This column shows that the proposed tax cuts fall as a percentage of income as income rises. Therefore, in percentage terms, the lower income groups would benefit substantially relative to the higher income groups. As opposed to emphasizing the average tax benefit that would result to each income group, the 2001 OTA table shows the percentage reduction in taxes each group will pay after the tax change. As with the JCT tables, the inclusion of income tax shares is an advancement in distributional analysis.

Also, in the second to last column, the table provides the estimated average amount of individual income taxes that would be paid under the proposed tax plan. Presenting the data in this manner, as opposed to showing only the average tax cut, shows that a member of the lowest income group would actually receive a negative tax (mainly due to the refundable portions of the Earned Income Tax Credit and proposed changes to the Child Tax Credit), while a member of the highest income group would pay on average over $100,000.

Furthermore, like the JCT analysis and as explained earlier, the 2001 OTA analysis excludes the estate and gift taxes from its analysis due to the uncertainty of the incidence. Also, the 2001 OTA analysis excludes other federal taxes from the analysis, such as payroll taxes paid by employees, though it adds the portion of payroll taxes paid by employers to employee income to place cash on a pre-tax basis. Some economists believe that all forms of taxes (income, payroll, excise, etc.) should be included in any analysis of tax policy in order to get a total understanding of the burden of taxation, since many lower income earners pay more in payroll taxes than in income taxes. However, other economists have argued that payroll taxes *should be excluded* from income tax analysis because payroll taxes and excise are designed to pay for a direct present or future benefit to the payer not reflected in the analysis, whereas income taxes finance general expenditures.

Regardless, if payroll taxes are included in the income tax analysis then, at the very least, an estimate of the benefits associated with social insurance programs should be included in any distribution analysis, either as income or as a net against payroll taxes paid. As Michael J. Graetz writes,

> As tax-policy analysts know, when viewed in isolation the social security payroll tax is regressive, but when benefits are taken into account, the social security system is quite progressive. Nevertheless, estimates of the existing tax burden and of changes in tax burdens since 1977 (frequently used as a baseline by CBO) or since 1980 (which marks the beginning of the Reagan administration) routinely include payroll taxes without indicating the benefits that they finance.[17]

The table produced by the OTA in 2000 makes the tax plan appear to overly benefit the wealthy and give virtually nothing to the lower income groups. In contrast, the presentation of the data in the 2001 OTA table counters opponents of President Bush's tax plan who contend that it overly and unfairly benefits the wealthy. Even though the Bush administration continues to release OTA distribution tables, the administration has publicly questioned the limitations of distribution tables and noted that a one-year snapshot of the distributional effects of proposed tax legislation can be misleading.[18]

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[17] Michael J. Graetz. "Distributional Tables, Tax Legislation, and the Illusion of Precision." In David F. Bradford (Editor). *Distributional Analysis of Tax Policy.* AEI Press. Washington, DC. 1995, page 66.

[18] Council of Economic Advisers, Executive Office of the President, *The Annual Report of the Council of Economic Advisers*, together with the *Economic Report of the President.* U.S. Government Printing Office. Washington, DC. February 2003, Chapter 5.

Citizens for Tax Justice:

Table 4. Effects of the House GOP Tax Plan

Income Group	Income Range	Average Income	Tax Cut (billions)	Average Tax Cut	% of Total Tax Cut
Lowest 20%	Less than $13,300	$8,400	$-0.7	$-29	0.5%
Second 20%	$13,300 – 23,800	18,300	-3.6	-144	2.4%
Middle 20%	23,800 – 38,200	30,300	-8.9	-350	5.8%
Fourth 20%	38,200 – 62,800	49,100	-18.1	-712	11.8%
Next 15%	62,800 – 124,000	83,600	-28.8	-1,513	18.8%
Next 4%	124,000 – 301,000	173,000	-24.7	-4,866	16.1%
Top 1%	301,000 or more	837,000	-68.3	-54,027	44.6%
ALL		**$48,700**	**$-153.1**	**$-1,199**	**100.0%**
Addendum					
Bottom 60%	Less than $38,200	$19,000	$-13.3	$-174	8.7%
Top 10%	$89,000 or more	204,000	-105.8	-8,355	69.1%

Source: Citizens for Tax Justice. "House GOP Tax Plan: The Rich Get Richer." July 27, 1999

Notes: Figures show the annual effects of (1) a 10% cut in personal income tax rates; (2) a reduction in the income tax rates on realized capital gains, from 20% to 15% (for those in all but the bottom regular tax bracket) and from 10% to 7.5% (for those in the bottom regular tax bracket); (3) elimination of the estate tax; (4) repeal of the individual Alternative Minimum Tax; (5) a $200 interest and dividend exclusion ($400 for couples); (6) an increase in the standard deduction for couples to double the single amount; (7) increased contribution and benefit limits for pensions and 401(k)s; (8) deductions for health insurance for people without employer plans; and (9) various corporate tax breaks. Not included are about $3 billion a year in miscellaneous tax breaks, mostly for certain health and education expenses. All figures are at 1999 levels, showing full-year effects after phase-ins are completed.

The tables produced by many advocacy groups and think tanks exhibit many of the problems discussed above. The table above produced by the Citizens for Tax Justice (CTJ) easily lends itself in the direction of biasing any debate toward "class warfare" assertions focusing only on which groups would get how much, while completely ignoring the distribution of the current tax burden. From the data in Table 4, the CTJ table clearly shows that upper income groups would receive a hefty tax break while the lower income groups get virtually nothing. However, the tables produced by the CTJ, and routinely cited in major newspapers, routinely fail to discuss or disclose the current distribution of taxes under current law. The omission of data relating to the distribution of taxes under current and future law makes it impossible to judge the merits of any tax change and the progressivity of the tax system. For example, any tax change that actually results in a proportional 10 percent reduction in taxes for each income group would appear in a CTJ table as a windfall for the wealthy and a pittance for the poor, even though all groups would receive an equal 10 percent reduction in taxes.

Further, CTJ fails to disclose in this table the income concept used in its analysis and whether families or tax returns are the unit of analysis. Although the CTJ table is categorized by quintiles or percentage groupings, since the total number of taxpayers is not presented the number of taxpaying units per income class cannot be determined. There is also no disclosure on which existing taxes are included in the analysis (i.e., income, payroll, estate and gift, etc.) The lack of disclosure in this table should serve as a warning that the presentation of the data is designed more to support the CTJ's political viewpoints than to illuminate the nuances of the tax plan and add to the general debate.

III. Income Mobility

It is important at this point in the study to mention a weakness in all distribution tables: the failure to consider how tax changes alter the after-tax prices and costs of goods and services, thereby adjusting the relative mix of inputs used in production, the types of goods and services businesses offer, as well as the amount of labor and capital. Tax changes can alter the economy and can produce broad economic effects that are not reflected in tax distribution tables, including changes to economic growth. Therefore, attempts to ascertain the distributional impact of proposed tax legislation should at least consider the possible macroeconomic effects through some type of sensitivity analysis.

Further, distribution tables fail to account for income mobility, or the dynamic nature of society where people move in and out of income groups over the course of their lives. The significant degree of income mobility is evident in new data recently released by the Council of Economic Advisers (CEA) and provides further evidence that tax distribution tables are misleading. The CEA table is reproduced below as Table 5.[19]

Table 5. CEA Data on Income Mobility of Taxpayers

Taxpayers by EGTRRA Rate Bracket Using Panel Of Taxpayers from 1987 through 1996								
Year 1 tax bracket (percent)	Year 10 tax bracket (percent)							Returns in year 1 (thousands)
	0	10	15	25	28	33	35	
	Taxpayers by rate bracket (percent distribution)							
0	**33.8**	24.7	32.1	7.7	0.8	0.5	0.3	10,360
10	20.1	**29.3**	40.8	8.8	0.6	0.3	0.1	15,370
15	8.6	13.3	**53.4**	22.9	1.2	0.4	0.2	50,059
25	3.9	5.1	29.9	**51.4**	6.7	2.2	0.8	31,427
28	3.3	2.8	11.6	35.9	**24.0**	14.7	7.5	2,682
33	4.7	2.6	9.1	21.0	18.9	**23.9**	19.8	1,096
35	5.1	1.9	5.7	10.4	8.8	19.0	**49.1**	633

Note.—Tabulations from 1987-1996 panel of taxpayers. Tabulations include only non-dependent taxpayers present in all years of the panel data set. Each cell entry indicates the percent of taxpayers in a rate bracket in the last year of the panel (i.e., column entry) relative to the number of all taxpayers in that rate bracket in the first year of the panel (i.e., row sum).

[19] Council of Economic Advisers, Executive Office of the President, *The Annual Report of the Council of Economic Advisers*, together with the *Economic Report of the President.* U.S. Government Printing Office. Washington, DC. February 2003, page 199.

The tabulations indicate a substantial amount of mobility between income classes over a 10-year period. Taxpayers who remained subject to the same statutory tax rate in both the beginning year of the study (year 1) and the final year of analysis (year 10) are shown in bold along the diagonal. For example, between 1987 and through 1996, 66.2 percent of taxpayers exited the bottom tax bracket (33.8 percent remained; subtracted from 100 percent, this equals 66.2 percent that exited). Over the same period, 76.0 percent exited the 28 percent bracket, while 50.9 percent exited the top tax bracket.

According to the tabulations, 53 percent of taxpayers were in a different tax rate bracket at the end of the 10-year period than they began. These data show that over half of all taxpayers studied during the 10-year period eventually experienced changes in their lives that result in changes in their incomes and move them to a different income tax bracket. This movement can be either upwards or downwards. According to the CEA, "about 51 percent of the taxpayers in the top bracket in the first year were in a lower tax bracket after 10 years. Forty-seven percent of taxpayers in the top two brackets in year 1 had moved down to at least the 28 percent tax bracket by year 10."[20]

The nature of tax distribution tables to show only a "snapshot" of taxpayers at one specific point in time fails to account for the dynamic nature of income mobility in society. The result is tax distribution tables that mislead the public by cementing taxpayers into particular income groups and failing to appropriately indicate "that tax burdens in a given year may tell a very different story of the distribution of the tax burden than do measures of tax burdens over longer horizons."[21]

Finally, though a broader discussion on the use of the tax code for social policy is beyond the scope of this study, it is important to note that distribution tables also generally fail to account for the social welfare benefits received by various income groups. Though some producers of distribution tables will account for government transfers as income, one could argue that they are another form of redistribution of income that should be netted against tax liability. The Earned Income Tax Credit (EITC) is handled in the latter manner by the JCT. Instead of adding the refundable portion of the EITC to income, it is netted against tax liability. The refundable portion of the EITC is why many lower income taxpayers actually have a negative tax liability.[22] If other cash transfers were treated the same way, the distribution tables would show lower income households receiving a much larger negative tax liability and greater progressivity in the current tax system.

[20] *Ibid*.
[21] *Ibid*., at 201.
[22] Joint Committee on Taxation. JCX-65-01. August 2, 2001.

IV. Conclusion

This study has discussed how tax distribution tables are often presented in manners that fail to provide a balanced and accurate perspective of tax policy. Unless there is greater public recognition of both the art and the science of distributional analysis, tax policy will be unduly influenced by misleading tax distribution tables. Although what is considered fair depends on philosophical and ethical judgments over which people can disagree, the presentation of tax data within distribution tables often hides or omits much of the important information that is required in order to effectively evaluate the merits of any proposed tax legislation. Opponents of tax relief legislation often produce distribution tables designed only to show the information necessary to present their position in the best possible light.

In isolation, a tax distribution table is a poor and incomplete tool to test the merits and fairness of proposed changes to tax policy. A change in tax policy should not be judged solely on the grounds of whether or not it benefits one income group more than another. Tax distribution tables as typically used are defective in several ways that once recognized undermine their statistical validity and raise serious questions about their value to policymakers and the public.

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Appendix

Previous research by the Joint Economic Committee demonstrates that the following 10 questions can assist readers in discovering misleading aspects of any distribution table.[23] Using these 10 questions as a guide will unveil information that is not always revealed in tax distribution tables and better illuminate the merits of proposed tax legislation. A reader unable to answer all 10 questions should ask the issuing group to provide the missing information.

Agencies or groups that release tax distribution tables that either withhold or omit the answers to these questions, misuse the average as the sole measure of central tendency, or are based on statistically compromised data sources, should be questioned on the issues of motive, transparency, accuracy and reliability. Only with the answers to all of the following questions can readers make informed decisions about the distributional merits of tax proposals.

1. Is the median presented as a measure of central tendency, or at least provided in addition to the average?
2. What measure of income is used (e.g., Adjusted Gross Income (AGI) or Family Economic Income (FEI)?
3. What taxes are included in the analysis (e.g., income taxes, payroll taxes, estate taxes, etc.) and are the taxes used in the analysis both before and after the effects of a proposed tax change identical?
4. How many taxpayers reside within the displayed income categories?
5. What is the range of income and tax liability associated with each category?
6. What are the current and proposed (after full enactment of the proposed tax legislation) levels of taxation (percent of total taxes paid to the government) for each income category?
7. What are the current and proposed (after full enactment of the proposed tax legislation) effective tax rates for each income category?
8. What are the ranges and medians of the amount of tax change that each income group is estimated to receive after full enactment of the tax legislation?
9. Are the estimates presented free of imputations? If not, what imputations have been made to arrive at the estimates presented in the tax distribution tables?
10. Are the accuracy and reliability of the estimates presented in the tax distribution tables, and are data limitations disclosed?

No distribution table can be perfect or present every nuance associated with estimated changes in the distribution of taxes. However, it is possible to include enough information so that the results are not presented in a biased or misleading manner. Until distribution tables are either abandoned or reformed, the best defense against misleading tables are education and full disclosure of information.

[23] See, for example: Jason Fichtner, "A Guide to Tax Policy Analysis: Problems with Distributional Tax Tables," Joint Economic Committee, January 2000; "A Guide to Tax Policy Analysis: The Central Tendency of Federal Income Tax Liabilities in Distributional Analysis," May 2000; and "The Misleading Effects of Averages in Tax Distribution Analysis," September 2003.

A more transparent dissemination of data and an insightful understanding of the "tricks of the trade" will enable policymakers and the general public to better understand tax distribution tables, make informed decisions about the merits of proposed tax legislation and promote a better understanding of tax policy. Hopefully, the end result will be more informed public debates and better tax policy decisions.

Table 6 presents a table prepared by the Tax Policy Center (TPC), a joint project between the Urban Institute and the Brookings Institution. Using the 10 questions as a guide reveals that the presentation of data only presents information on 5 of the 10 criteria, including a partial answer to one question – question #8 (though providing an estimate for the amount of tax change, TPC relies on the use of the average, which is misleading, and fails to provide either a median or a range of estimated tax benefits for each income grouping).

Table 6. Tax Policy Center

22-May-03 **Preliminary Results Based on Conference Report (H. Rept. 108-126)** http://www.taxpolicycenter.org

Table 5.1
Conference Agreement on the Jobs and Growth Tax Relief Reconciliation Act of 2003:
Distribution of Income Tax Change by AGI Class, 2003[1]

AGI Class (thousands of 2002 dollars)[2]	Tax Units[3]			Percent Change in After-Tax Income[4]	Percent of Total Income Tax Change	Average Tax Change ($)	Average Income Tax Rate[5]	
	Number (thousands)	Percent of Total	Percent with Tax Cut				Current Law	Proposal
Less than 10	32,978	23.7	0.7	*	*	-1	-9.7	-9.7
10-20	23,022	16.6	45.2	0.3	1.2	-53	-3.9	-4.3
20-30	18,524	13.3	87.8	0.8	3.5	-189	3.5	2.8
30-40	13,431	9.7	92.6	1.0	4.4	-323	6.9	6.0
40-50	10,627	7.6	95.2	1.1	4.8	-451	8.6	7.6
50-75	18,039	13.0	98.9	1.2	12.8	-703	9.9	8.8
75-100	9,518	6.8	99.9	2.1	15.4	-1,611	12.4	10.5
100-200	9,196	6.6	99.8	2.2	23.2	-2,506	16.1	14.2
200-500	2,174	1.6	99.3	2.2	11.0	-5,015	23.2	21.5
500-1,000	359	0.3	98.5	3.5	6.3	-17,307	28.1	25.6
More than 1,000	184	0.1	98.7	4.4	17.3	-93,530	29.2	26.0
All	138,959	100.0	63.9	1.8	100.0	-715	13.3	11.8

Source: Urban-Brookings Tax Policy Center Microsimulation Model (version 0503-1).

* Less than 0.05 percent. ** Less than $1 in absolute value.

(1) Calendar year. Baseline is current law. Includes the following provisions: increase child tax credit to $1,000; expand size of the 10-percent bracket to $7,000 for singles and $14,000 for married couples; expand 15-percent bracket for married couples to twice that for singles; increase standard deduction for married couples to twice that for singles; reduce top four tax rates to 25, 28, 33, and 35 percent; increase AMT exemption by $9,000 for married couples and $4,500 for others; reduce the tax rate on qualifying dividends and long-term capital gains to 15 percent (the rate for individuals in the 10 and 15-percent tax brackets would be 5 percent; preferential rates would not apply to income that, under current law, is reported as dividends on tax returns but represents distributions of interest income from mutual funds; lower capital gains rate apply to qualifying assets sold on or after May 6, 2003).

(2) Tax units with negative AGI are excluded from the lowest income class but are included in the totals.

(3) Includes both filing and non-filing units. Tax units that are dependents of other taxpayers are excluded from the analysis.

(4) After-tax income is AGI less individual income tax net of refundable credits.

(5) Average income tax, net of refundable credits, as a percentage of average AGI.

Though falling well short of a perfect score, the ability to answer 5 of the 10 questions with the TPC table is an improvement over the distribution tables released by many advocacy groups. The table does list in the footnote the taxes that are included in the analysis (question #3 from the list above) and it does provide information describing the income range that is associated with each income group (question #5). Further, the TPC table discloses the income measure used in the analysis (question # 2). However, it is likely some data imputations (question #9) are included in the analysis since the TPC includes people who do not file income

tax returns, or "non-filing units," in its tax model by merging multiple datasets based on different sampling designs.[24] Also, the table fails to provide the necessary information that the remaining questions require.

For example, the table presents only the average as a measure of central tendency. As this study and previous JEC studies have demonstrated,[25] the use of the average in presenting income data has the effect of biasing the results and gives the appearance that certain income groups are "richer" or "poorer" than they actually are. The existence of potential bias is why professional analysts familiar with income data use the median, or at least present the median along with the average. Further, the TPC table fails to show the amount of tax currently paid by each income group and the amount each income group is estimated to pay after the enactment of the proposed legislation. Without knowing the percent of taxes each income group pays under current law and what each group would pay after, it is impossible to fully judge the fairness of the tax plan. Additionally, the table fails to provide any measure of error relating to precision, accuracy or reliability.

[24] For an overview of the Tax Policy Center's tax model, including a brief discussion on how "non-filers" are added to the model, visit http://www.taxpolicycenter.org/commentary/model.cfm

[25] See, for example: Jason Fichtner, "A Guide to Tax Policy Analysis: Problems with Distributional Tax Tables," Joint Economic Committee, January 2000; "A Guide to Tax Policy Analysis: The Central Tendency of Federal Income Tax Liabilities in Distributional Analysis," May 2000; and "The Misleading Effects of Averages in Tax Distribution Analysis," September 2003.

Bibliography

Bradford, David F. (Ed.) *Distributional Analysis of Tax Policy.* Washington, DC: The AEI Press, 1995

Citizens For Tax Justice. "House GOP Tax Plan: The Rich Get Richer." CTJ News, released July 27, 1999.

Cordes, Joseph J., Robert D. Ebel, and Jane G. Gravelle (Eds). *The Encyclopedia of Taxation and Tax Policy*. Washington, DC: The Urban Institute Press, 1999.

Council of Economic Advisers, Executive Office of the President of the United States, *The Annual Report of the Council of Economic Advisers*, together with the *Economic Report of the President*. Washington, DC: U.S. Government Printing Office, February 2003.

Cronin, Julie-Anne. "U.S. Treasury Distributional Analysis Methodology." U.S. Department of the Treasury. Office of Tax Analysis. OTA Paper 85. September 1999.

Fichtner, Jason J. "A Guide to Tax Policy Analysis: Problems with Distributional Tax Tables." Joint Economic Committee. United States Congress. January 2000.

———. "A Guide to Tax Policy Analysis: The Central Tendency of Federal Income Tax Liabilities in Distributional Analysis." Joint Economic Committee. United States Congress. May 2000.

_____. "The Misleading Effects of Averages in Tax Distribution Analysis." Joint Economic Committee. United States Congress. September 2003.

Graetz, Michael J. "Distributional Tables, Tax Legislation, and the Illusion of Precision." in Bradford, David F. (Ed.) *Distributional Analysis of Tax Policy.* Washington, DC: The AEI Press, 1995.

Haig, Robert Murray. "The Concept of Income – Economic and Legal Aspects." in Haig, Robert Murray (Ed.) *The Federal Income Tax.* New York, NY: Columbia University Press, 1921.

Johnston, David Cay. "Even for Wealthy, Tax Plan's Benefits Could Vary Widely." *The New York Times*. May 15, 2001.

Kessler, Glenn. "Tax Cut Debate's Division Problem." *The Washington Post*. May 17, 2001.

———. "Treasury's Tax Cut Data Can Cut 2 Ways." *The Washington Post*. March 9, 2001.

Murray, Shailah and David Rogers. "Democrats Attempt to Draw Rein As Republicans Study Wish List." *The Wall Street Journal*. February 8, 2001.

Pearlstein, Steven and Paul Blustein. "On the Class Warpath." *The Washington Post*. February 7, 2001.

Simons, Henry C. *Personal Income Taxation: The Definition of Income as a Problem of Fiscal Policy.* Chicago, IL: The University of Chicago Press, 1938.

Schlesinger, Jacob M. and John D. McKinnon. "Bush Plan Gives Rich Biggest Cut in Dollars But Not in Percentage." *The Wall Street Journal*. November 5, 2000.

Sullivan, Martin. "Zen and the Art of Reading Distribution Tables." *Tax Notes*. March 26, 2001.

Urban-Brookings Tax Policy Center. "Table 5.1 - Conference Agreement on the Jobs and Growth Tax Relief Reconciliation Act of 2003: Distribution of Income Tax Change by AGI Class, 2003." May 22, 2003. Available online at: http://www.taxpolicycenter.org/commentary/congress/table5_1.pdf

United States Congress, Joint Committee on Taxation. *Updated Distribution of Certain Federal Tax Liabilities by Income Class for Calendar Year 2001* (JCX-65-01). August 2, 2001.

———. *Distributional Effects of the Conference Agreement for H.R. 1836*, (JCX-52-01). May 26, 2001.

———. *Methodology and Issues in Measuring Changes in the Distribution of Tax Burdens* (JCS-7-93). June 14, 1993.

United States Department of the Treasury, Office of Tax Analysis. "Treasury Releases Distribution Table for the President's Tax Relief Plan." Treasury Press Release PO-79, March 8, 2001.

———. "Major Provisions Passed by the House Ways and Means Committee." Released in a letter to Congressman Bill Archer, July 17, 2000.