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CRS Report for Congress

Distributional Effects of Tax Provisions in the Contract with America as Reported by the Ways and Means Committee

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April 3, 1995



Congressional Research Service - The Library of Congress



SUMMARY

The House Republican Contract tax proposals, with some modifications, have been reported by the Ways and Means Committee. Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports. The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid, while the OTA provides a more comprehensive measure that is more consistent with how economists would measure the bill's benefits to individuals in different income classes.

Certain aspects of the JCT's distribution tables seem to suggest that the tax benefit is greater for middle income individuals, since the largest percentage changes in tax liability occur in the middle incomes. Treasury's tables indicate that the benefits are concentrated at the higher income levels using a variety of absolute and percentage measures of change.

The OTA analysis has a number of methodological differences from the JCT analysis that are likely to improve their measures of the distribution of benefits of the tax cut, including a "fixed realizations" measure of the capital gains tax cut, attribution of corporate tax cuts (which eventually constitute a third or more of the revenue loss), and corrections to deal with timing problems. The JCT and the OTA also differ in how they measure and classify income. The tables provided also differ in the type of distributional measures presented, with the JCT tables presenting data in terms of percentage changes in tax liability (although they also have some data on new and old effective tax rates from which tax changes as a percent of income can easily be calculated). The OTA presents a variety of measures, including average taxes paid, distribution of the tax cut, and percentage changes in pre-tax income, after-tax income, and tax liability.

Despite the data differences, both distributions show rising average tax cuts across the income classes and a significant portion of the total tax cut accruing to higher income individuals. Use of the appropriate measure of relative effect on income inequality (the percentage change in disposable income) also indicates similar findings in both data sets - the tax benefits tend to make disposable incomes less equal. Tax reductions as a percentage of taxes paid which show the largest percentage changes in the middle income classes in the JCT (but not the OTA) data can be misleading as indicators of relative income distribution effects.

In the top income group (approximately one percent of the population), the average tax cut is close to \$5,000 in the JCT estimate (for the year 2000) and about \$20,000 in the OTA data. The most important tax provisions contributing to this discrepancy (given the methodological differences) are probably capital gains and neutral cost recovery. While some attention has been given to the child credit's role in the distribution of tax benefits, it is not very important for high income individuals, accounting for none of the top one percent of the population's tax cut, and about seven percent of the next four percent of the population in the OTA's data.

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DISTRIBUTIONAL EFFECTS OF TAX PROVISIONS IN THE CONTRACT WITH AMERICA

The House Republican Contract tax bill, with some modifications, has been reported by the Ways and Means Committee.¹ Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports.² The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid for each year from 1995-2000, while the OTA provides a more comprehensive measure more consistent with how economists would measure the bill's benefits to individuals in different income classes. There are also differences in how income is classified and how results are presented. In particular, some results of the JCT analyses seem to suggest that the benefits are more concentrated toward middle income taxpayers, while the OTA analysis suggests the benefits accrue more heavily to high income taxpayers.

The first section of this report summarizes the different distributional analyses provided by the JCT and the OTA. The next section explains the methodological differences between the two, and their consequences for distribution measures. The next section interprets the results of the distributional analysis in the light of this methodological analysis. It also identifies which of the tax provisions strongly influence the results. The final section sums up.

DIFFERENCES IN DISTRIBUTIONAL ANALYSIS

The House Republican Contract tax proposal, with some modifications, has been reported by the Ways and Means Committee. By and large, it retains the original provisions -- the child credit, a fifty percent capital gains exclusion, more generous depreciation benefits under the neutral cost recovery system (NCRS), tax-favored savings accounts, phase-out of the 85 percent maximum inclusion rate for social security, and a number of smaller provisions. It adds some minimum tax relief, however, and restricts the inflation indexing provisions for capital gains.

Both the JCT and the OTA have provided distributional analyses of the effects of the proposal, with substantial differences between their reports both in the underlying data and the method of presentation.

¹ The bill was originally reported as H.R. 1215, and is now a part of H.R. 1327.

² The JCT's estimates are contained in a series of distributional tables dated March 8 and March 9, 1995. The OTA's estimates are contained in a press release issued March 14, 1995.

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The JCT presents individual distribution tables for each year from 1995 to 2000, which measure their estimates of the changes in taxes paid by income class. The only distributional number presented directly in their study is the percentage change in taxes paid. Data presented include the aggregate tax change in each class and the percentage change, current and proposed federal tax distributions across the categories (in dollar aggregates and percentages) and effective tax rates before and after the tax. The OTA presents a distributional analysis that reflects fully phased in law; it also includes several distributional measures — average tax reductions, share of reductions by income class and income quintile, tax change as a percent of income, tax change as a percent of after-tax income, and tax change as a percent of taxes paid.

DIFFERENCES IN FUNDAMENTAL METHODOLOGIES

There are several methodological differences between the JCT's tables and the OTA's tables. These differences have the effect of making the relative benefits of the tax change for high income individuals smaller in the Joint Tax Committee's tables than in the Treasury's tables. In general, the Treasury Department's treatment is more consistent with how economists would analyze the distributional burden of a tax change. There are also differences in how the data are presented that can make a difference in the impression conveyed by these tables.

The following subsections discuss these methodological and presentational differences, which include treatment of behavioral responses, imputation of corporate tax, timing of tax benefits, differences in income classifiers, and differences in presentation.

BEHAVIORAL RESPONSES AND CAPITAL GAINS TAX CUTS

Any tax analysis involves some types of behavioral responses, if nothing more than making individual decisions (such as choosing whether or not to itemize deductions) that have virtually no real consequences other than to take full advantage of tax savings. There are also behavioral responses that involve a benefit or cost that is very real (such as choosing to work or save more, which involves changing patterns of consumption). Specifically, the important behavioral response of this latter type included in the revenue estimates for the Contract is the assumption that individuals will increase their realizations of capital gains as a result of the tax cut.

Both the JCT's and the OTA's revenue estimates of the proposal have included a variety of behavioral responses, but they differ in the treatment of the realizations response in their distributional tables.

The JCT has departed from previous practice (a change that was also made with some tables prepared in 1994) by simply reporting the distribution of taxes paid after taking into account expected changes in realizations.

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The OTA calculated taxes paid holding realizations constant (unchanged by the new tax provisions). The OTA approach is generally consistent with historical practices (as, for example, practiced during consideration of the Tax Reform Act of 1986). In some cases, OTA departed from this practice in the Bush Administration, by providing tables showing the distribution of taxes paid.

Note that these behavioral effects did not matter very much for the tax legislation in 1993 and no significant tax legislation was considered in 1994; thus, in a sense the issue of how to prepare distributional tables has not been a subject of direct policy significance since 1992 (when capital gains was last considered).

While this issue is not important when behavioral responses are small, they are important when they are large. The current revenue estimating practices of the Joint Committee on Taxation include a significant increase in realizations when capital gains tax cuts are introduced.

A table that reports taxes paid after behavioral responses are taken into account shows how the increased or decreased revenues will be spread across the income classes -- that is, which classes are actually expected to be paying more or less taxes and by how much.

Using the distribution of taxes paid as now reported by the Joint Tax Committee (after behavioral responses) may not yield a full or proper measure of the tax burden, and in particular that it can be misleading in the case of the capital gains tax where a large behavioral response is incorporated. This rationale is spelled out in the following quotation from a paper about the capital gains tax co-authored by Gravelle and Lindsey:³

"When considering the issue of tax equity, it is important to distinguish between the distribution of taxes paid and the distribution of the tax burden. For example, suppose a reduction in the capital gains tax rate led to substantially more capital gains realizations and actually increased the tax revenue paid by upper-income groups. While the distribution of taxes paid would have been shifted more into upper-income groups, it would be totally inappropriate to say that their tax burden had increased. After all, with a lower tax rate, these upper-income taxpayers are less burdened than they were before, even though they pay more taxes.

In this regard it is important to note that the distributional tables compiled by the Joint Committee on Taxation ignore the effect of taxpayer behavior when considering the distributional effect of a given tax change. This method is correct for considering the impact of the tax burden, but does not accurately reflect the distribution of taxes paid...

³ Jane G. Gravelle and Lawrence B. Lindsey, Capital Gains, Tax Notes, January 25, 1988, p. 399.

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...Distributional equity focuses on the total burden imposed by the tax, not on the revenue collected."

As suggested in this quote, the use of taxes paid in distributional tables could imply, under some circumstances, that cutting tax rates harms taxpayers and that increasing them benefits taxpayers.

While current behavioral responses used in revenue estimating are not large enough to actually result in increased revenues for the capital gains tax cut (except perhaps for some taxpayers in the initial year), especially given the size of the tax cut, the magnitude of tax reductions will be greatly reduced. They will also be disproportionately reduced for high income taxpayers. For example, considering just the exclusion, the realization response for taxpayers in the highest rate brackets will reduce revenue losses by 80 percent after the first year. For the 28 percent bracket, losses will be reduced by about 60 percent, and for the 15 percent bracket, by 30 percent. Thus, incorporating capital gains into the distributional tables after accounting for realizations responses, as is done in the Joint Committee's estimates, greatly diminishes the importance of the capital gains tax (which primarily benefits higher income individuals) in the distributional numbers.

In any case, the behavioral response that results in more tax payments is a voluntary action that could not be expected to make the individual worse off - rather he is willing to pay this tax for something that is of as great or greater value (presumably the benefits of converting an investment into some other form). Indeed, if anything, the benefit of the capital gains tax cut is larger than the static revenue effect.⁴

This sentiment that using taxes paid is not a good measure of the actual benefits or burdens of a tax change is echoed in certain publications of these official organizations as well. For example, in an earlier analysis of the methodology (hereafter called the "Red Book") of distributional tables, the Joint Tax Committee stated in discussing the distributional effects of a change in the tax rate: "For changes in the rate of a preexisting tax, the static revenue change generally is a superior approximation to the change in economic well being."⁵

The OTA produced tables of the distribution of taxes paid for the 1990 capital gains tax cut proposal and argued that it would raise revenues and that taxes

⁴ This observation means, of course, that the existing measure of tax burden is also too small; in fact, the burden is, in theory, the sum of actual taxes paid and the implicit cost of any behavioral distortions induced by the tax -- in the case of capital gains, the lock-in effect. Also, the static estimate of an increase in the tax burden would also be too small; but the static estimate would still be a better measure than the even smaller measure of taxes paid after avoidance behavior is initiated.

⁵ Joint Committee on Taxation. Methodology and Issues in Measuring Changes in the Distribution of Tax Burdens. Joint Committee Print, Washington, D.C.: U.S. Government Printing Office, June 14, 1993.

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paid was the appropriate measure of distribution. Notably, they also produced tables of static estimates, and were clearly aware of the inappropriate implications for these tables, noting: "...while high-income taxpayers would pay more in taxes, they would be better off because the lower capital gains tax rates will allow them to make investment decisions with less concern about the tax impact."⁶

This issue is not likely to arise in the economics literature where the fundamentals of how, in theory, to measure benefits are well established -- and the recognition that the benefit of cutting a tax is likely to be larger than the reduction in tax assuming no behavioral change is basic to tax analysis.⁷ When the policy making process is discussed, however, economists would, as in the case of Gravelle and Lindsey, reject the simple taxes-paid table as a measure of the distribution of tax burdens and benefits and, indeed, suggest that the "constant realizations" measure understates the benefits of a tax change. For example, Auten and Cordes state: "Additional taxes paid on induced realizations result from voluntary sales of assets, and taxpayers who choose to sell assets must be at least as well off as if they didn't change their behavior."⁸ Similarly, Davis states: "I have argued that a relatively simple "static" approach -- recalculation of tax liabilities -- produced satisfactory measurements for the distribution of benefits from a capital gains tax cut. If these measures were biased, they understated the size of the tax benefit."⁹

It is also important to note that the JCT's estimate of the realizations response, which, as will be shown below, so affects the distributional results, is not a response that is measured with any precision; indeed, recent research suggests that it may be too large.¹⁰

⁶ Statement of Kenneth W. Gideon, Assistant Secretary (Tax Policy), Department of the Treasury, Before the Committee on Finance, United States Senate, March 6, 1990.

⁷ Technically speaking, the burden of a tax is the sum of the taxes paid and the "excess burden" that results from the implicit cost of changing behavior.

⁸ Gerald A. Auten and Joseph J. Cordes, Policy Watch: Cutting the Capital Gains Tax, *Journal of Economic Perspectives*, Vol. 5, Winter 1991, p. 188.

⁹ Albert J. Davis, Measuring the Distributional Effects of Tax Changes for the Congress. *National Tax Journal*, Vol. 44, September 1991, p. 265.

¹⁰ The issue of the realizations response is by no means resolved, since the current literature contains a significant range of estimates. Moreover, the Joint Committee's estimate dates from 1990, and some research since that time has indicated that, at least after the first year or so, the realizations response is probably much lower. See Jane G. Gravelle, *The Economic Effects of Taxing Capital Income*, Chapter 6, Cambridge, Mass. MIT Press, 1994 for a review of the realizations literature.

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ATTRIBUTION OF CORPORATE TAXES

The JCT distribution tables do not include the corporate tax, even though it is clear that someone must pay the corporate tax. As discussed below, the corporate tax reductions -- primarily the depreciation changes -- are responsible for perhaps a third or so of the tax reduction.

What is a reasonable assumption here? Generally, in the short run, it is presumed that the tax falls on the owners of the firm, who are unable to alter their capital stock. In the long run, the traditional economics literature indicates that the tax is likely to fall on capital in general.¹¹

The JCT has indicated in its tables that it does not include the corporate tax because of the uncertainties about where the burden of the tax falls. In general, it was the JCT's practice for many years simply not to attribute the corporate tax. In the "Red Book," however, the JCT subsequently indicated a decision to distribute the tax to the owners of corporate equities, essentially reflecting a short run assumption. This decision has apparently been reversed.

The Treasury Department attributes the tax to capital in general, consistent with the economics literature and their longer term perspective on distributional analysis. (Actually, the attribution of the tax to corporate equity owners would make the distribution of the tax in distributional tables more progressive, and increase the fraction of the tax benefit that accrues to higher income individuals). The Treasury did not always attribute the corporate tax. For example, in the 1986 Tax Reform Act, corporate tax liabilities were not attributed; indeed, this was the subject of an analysis by Feldstein discussing how the distributional effects of the tax might be modified with attribution of the corporate tax. (Feldstein assigned the tax to all capital as does the Treasury in its current analysis.)¹² For the last several years, however, the Treasury has been attributing the tax

¹¹ The Harberger model of the tax (Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, *Journal of Political Economy*, vol. 70, June 1962, pp. 215-240) shows that the tax can in some cases fall more than 100 percent on capital (and benefit labor) and in other cases fall less than 100 percent on capital, but the general tendency is for the tax to fall on capital, under reasonable behavioral assumptions. This model was one of a closed economy. However, assuming that capital, although mobile, cannot be perfectly substituted around the world and that imports and domestic production are imperfect substitutions, this finding also tends to hold in an open economy. See Jane G. Gravelle, *Corporate Tax Incidence in an Open Economy*, 1993 Proceedings of the National Tax Association, Tax Institute of America, pp. 175-178.

¹² See Martin Feldstein, *Imputing Corporate Tax Liabilities to Individual Taxpayers*, *National Tax Journal*, March 1988, vol. 41, pp. 37-60. This issue was also explored by several other researchers. See Jane G. Gravelle, *Equity Effects of the Tax Reform Act of 1986*, *Journal of Economic Perspectives*, Vol. 6, Winter 1992, pp. 27-44 for a discussion of these analyses.

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to all capital and it is continuing that treatment in its distributional estimates of the Contract with America tax proposals.

The attribution of corporate taxes has a significant effect on the estimated revenue cost of the tax proposals and (given that the timing issue can be effectively dealt with) will have a large effect on distribution of the tax benefit when attributed to capital, since capital income is more concentrated in the higher income classes. The major provision is the Neutral Cost Recovery System (NCRS) which will eventually involve substantial amounts of revenue losses and is largely not included in the JCT's tables.

TIMING ISSUES

The provisions in the bill are estimated to bring about much larger revenue losses over time that reflect, primarily, the timing of tax benefits. Overall, the magnitude of cash flow benefits increases substantially over time, as can be seen in OTA's revenue estimates which cover an additional five years, from 2001-2005. (Overall, the estimates actually cover six years for the Joint Tax Committee, and 11 years for the Treasury, but the first year, FY 1995, has very small effects on the totals and actually make them larger).

According to the Treasury Department the cost from 1995-2000 is \$178.1 billion, while the cost from 1995-2005 is \$630.2 billion. Thus, the second-five-year cost of \$452.1 billion is much larger than the first five years. Assuming a nominal growth of 6 percent to project the normal growth that would be expected, the increase in the second five years, holding income constant, is about 90 percent; thus the costs almost double between the first and the second five years.

This growth is due only to certain provisions, as can be seen by examining the dominant revenue losers in each period. In the first five-year period, the \$500 child credit accounts for 62 percent of the cost, capital gains for 16 percent, the Alternative Minimum Tax Provision for 11 percent, the elimination of taxes on part of social security for 9 percent, and the marriage penalty relief for 5 percent. In the second five-year period, however, the largest revenue loser was the neutral cost recovery system, accounting for 31 percent. The child care credit has declined in share to 28 percent, the capital gains provision is about the same at 14 percent, the social security provision is about the same at 8 percent, and the IRA provision is responsible for 6 percent.

These changes occur for a variety of reasons. NCRS is designed so that it raises revenue in the first five years (through the slow-down in depreciation) but its true benefit is large and it grows rapidly until it becomes the single largest provision. Its growth far outstrips the growth in the overall size of the package. The child care credit, however, has not changed much in nominal terms, perhaps because any growth due to inflation is small and offset by demographic changes. Thus, it falls in share by over fifty percent. Capital gains revenue losses are growing rapidly because of indexation (and the interaction of this further tax cut with behavioral effects), and have grown about as fast as the overall cost. Social security is also growing naturally though demographics and benefit growth. Finally, IRAs

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become more important because of the accumulation of amounts in tax-favored accounts. The AMT has, however, diminished in relative size along with the marriage penalty relief.

These trends actually continue -- the real cost of the package will continue to grow due to certain provisions that tend to grow (NCRS, capital gains, and individual retirement accounts). In particular, neutral cost recovery, will likely continue to rise in real terms for many years.¹⁸

The treatment of timing issues is not always straightforward and it is hard to develop a consistent rule, although it is frequently the case that a cash flow measure will be misleading. The JCT has simply examined several years and used the cash flow approach, even though this causes the form of the tax benefit to strongly influence the projected revenue costs.

The Treasury Department has used an approach that is consistent, at least for these provisions, with their focus on the permanent distributional effects of tax changes. They have used fully phased-in provisions (e.g. full indexing) with long run behavior. For those provisions such as depreciation and IRAs where the same economic benefit can produce dramatically different cash flow patterns, they have calculated the present value of tax benefits associated with this year's investment or savings. Essentially, the depreciation benefits have been converted into an investment credit of equivalent value; similarly, the IRA benefits are measured as an initial credit. This is a pattern that will yield the same result for provisions with the same economic value. By contrast, the JCT's cash flow approach would yield very different effects if different forms of benefits were chosen (i.e. front-loaded rather than back-loaded IRAs, or direct expensing rather than the expensing equivalent via increased future depreciation deductions).

INCOME CLASSIFIERS

The JCT and the Treasury also differ in the measurement of income classes. The JCT uses tax return data and adds back to adjusted gross income to generate an expanded income class that includes nine separate classes. Adjusted gross income is increased by health care fringe benefits, tax-exempt interest, social security

¹⁸ See Jane G. Gravelle, Estimating Long-Run Revenue Effects of Tax Law Changes, *Eastern Economic Journal*, Vol. 19, No. 4, Fall 1993, pp. 481-494, for a general discussion of the revenue estimating issues arising with tax changes that have uneven patterns over time; this discussion includes a graphical presentation of the time path of back-loaded vs. front-loaded IRAs and prospective capital gains tax indexing. The revenue patterns of several tax provisions in the Contract are discussed in other CRS products. NCRS is discussed in David L. Brumbaugh and Jane G. Gravelle, *The Neutral Cost Recovery System and the House Republican Contract*, Congressional Research Service report 95-161 E; capital gains tax change in testimony of Jane G. Gravelle, on Capital Gains Tax Proposals, Before the Committee on Finance, February 15, 1995 and IRA proposals in Jane G. Gravelle, *Individual Retirement Accounts (IRAs) and Related Proposals*, Congressional Research Service Report 95-420, March 24, 1995.

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benefits not otherwise included in income, the insurance value of medicare, the employer's share of the FICA tax, certain tax preference items, and excluded income of individuals living abroad. Individuals with zero incomes are excluded.

The Treasury Department uses an expanded income concept that is more consistent with economists' income concepts, including not only most of the items included by the JCT but also additional returns to capital (such as imputed income on owner-occupied housing, the returns to pension and related plans, and adjustments for accrued, real capital gains). Income is measured on a family income basis so that individuals living in families who might file separate returns are combined, and is reported in two ways -- by the same income classes (with two combined) as the JCT data (which we term OTA -I), and by population shares (which we term OTA-II. It also includes individuals with zero or negative incomes.

In comparing the distributional tables it is important to distinguish between the differences due to different measures of income and those due to other methodological differences. Table 1 provides a comparison of these income classifiers by juxtaposing income shares with dollar levels of income. In this and all other comparisons, we use the JCT estimates for the year 2000 which move closer to

Table 1: Income Classes and Population Shares, JCT and OTA Distribution Tables

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-II refers to the distribution by quintiles. The total units in the OTA tables is 109.4 million (families); total units in the JCT tables are 136.2 million (returns).

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a permanent distribution than any of the other years. (Income categories are measured at 1995 levels for the JCT, but the distribution reflects year 2000 distributions of returns; all data are measured at 1996 income levels for the OTA data). Note also that some members of a high income family in the family classification of the OTA could appear as lower income tax returns in the JCT distribution.

As this table shows, although both report the same income levels, much more of the population is in the higher income levels for OTA - I than for JCT. Twice as large a share of the population units is in the OTA's \$200,000 class than in the JCT's \$200,000.

The table also shows that although the OTA- II table, which involves shares of the population, is actually more closely comparable to the JCT than either is to OTA - I, even though the nominal income levels are different. Again this is due to the expanded income concept which includes much more imputed, unrealized and transferred income than the JCT income concept.

PRESENTATION OF INFORMATION

The JCT and OTA tables also differ in how the information is presented. Both present overall tax reductions by income class, but this raw information has no frame of reference (i.e., one does not know whether the amounts in a category are large because the benefit is large or because there are a lot of people in the category). Rather, this information must be transformed in some way to provide information on distributional effects.

The JCT tables present only one type of direct distributional measure: the percentage change in tax liabilities. The OTA presents five different types of measures: the average tax reduction, the percentage distribution of the tax reduction, and the tax change as a percent of pre-tax income, after-tax income, and taxes paid.¹⁴

In discussing these measures it may be appropriate to distinguish between absolute measures and relative measures. For example, average tax reductions per unit provide information on the absolute size of a tax benefit across the income classes, which is a straightforward measure. Another way of examining this same effect is to compare the distribution of the tax benefit with the distribution of the population. If each proportion of the population is getting the same share of the benefit, then the benefits are equal. Both of these measures can inform us about how a tax cut is changing income without being misleading.

¹⁴ Most of the measures presented in the OTA tables can be derived from the JCT tables except for those that require a distribution of returns (e.g. average tax benefit per return). Data on the distribution of returns is, however, available from the JCT. Since, they also present effective tax rates before and after the changes, it would be a simple matter to see the change as a percent of pre-tax income).

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A different type of measure is a relative one that tries to examine how the tax benefit is changing the overall distribution of income in the country -- that is, is it making incomes more equal or less equal? In general, the best method for measuring this is to examine the percentage change in disposable (after-tax) income. If the percentage change is equal, then the tax change is not making incomes more equal or less equal. If the percentages are higher among higher income individuals the change is making incomes less equal.

What about the role of the other percentage measures -- of pre-tax income and of taxable income. The former will tend to produce slightly different percentages (and smaller ones) when taxes are already present and is not as precise in indicating the overall effects on income equality. The percentage of tax changes can, however, be misleading. If the percentages rise across the income levels (given an initial progressive system, the results indicate less equality. If they fall, however, the percentages can be very misleading. For example, suppose that a family pays only \$10 dollars in income tax. A ten dollar tax cut will, therefore, be a 100 percent tax reduction and will appear very large. For this reason, tables of percentage changes in taxes paid may indicate very little about the distributional benefits of a tax change.

COMPARISON OF DISTRIBUTIONAL EFFECTS

This section examines the distributional tables and calculates measures that can be used to examine the distributional of benefits of the tax cut and the causes of the different results in the two measures.

ABSOLUTE MEASURES

Table 2 presents data that show the average tax saving and the share of taxes saved (the data on income class and population from table 1 is reproduced as well). Recall that JCT is more comparable, based on income shares, with OTA II.

All three measures show rising dollar amounts across the income scale, but the amounts are larger and rise faster with the OTA numbers than with the JCT numbers. For example, in the top one percent of the population (approximately), the tax benefit is close to \$5,000 on average (\$4600 for the top 1.3 percent) in the JCT numbers but is four times as large -- \$20,000 -- in the OTA numbers. The top one percent gets somewhat less than 15 percent of the total tax saving in the JCT numbers, and 20 percent in the OTA numbers. Thus, based on absolute benefits, higher income individuals receive substantially more than do lower income individuals.

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Table 2: Average Tax Benefit and Distribution of Tax Benefit

JCT Average Tax \$ Saving	OTA - I Average Tax \$ Saving	OTA - II Average Tax \$ Saving	JCT Share of Tax Saving (Percent)	OTA - I Share of Tax Saving (Percent)	OTA - II Share of Tax Saving (Percent)
11	20	36	0.4	0.2	0.7
53	90	205	2.6	1.3	4.1
153	247	555	6.0	3.3	10.9
356	569	1021	20.5	11.6	20.2
651	997	1689	22.6	16.4	16.6
921	1572	2274	15.6	15.2	11.3
1378	2466	4122	17.2	23.4	16.2
4605	11266	20362	15.3	28.1	20.1

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

RELATIVE MEASURES

Two relative measures are presented in table 8: the percentage change in taxes paid, which is the only direct measure in the JCT tables, and the percentage change in after tax income, which measures whether the income distribution became more or less equal.

The percentage of tax changes in the JCT numbers are ones that might lead to the impression that the tax benefit is favoring the middle incomes, since the percentage changes are largest in \$30,000 to \$75,000 classes, and smaller at the lower incomes. (Actually, this group covers from the 33rd percentile to the 87th percentile). This pattern does not comport with the OTA measures, which show a generally rising (although declining slightly in some spots) percentage reduction in taxes.

The second measure shows that the tax changes are making the distribution of after tax income more uneven over time under any of the measures. In this case, the percentage changes are not much larger (e.g. 3.1 percent for JCT and 3.3 percent for OTA -II in the top bracket) in the OTA analysis, especially in the top bracket. There are two opposing forces -- the tax cut is larger, but so is economic income.

PROVISIONS THAT CONTRIBUTE TO LARGER TAX BENEFITS IN THE OTA ANALYSIS

While it is not possible to pinpoint exactly the provisions that contribute to the much larger benefits, particularly for higher income individuals, given the data supplied (which OTA only separates for the child credit and capital gains), it is clear that capital gains plays an important role and that the child credit does not. There has been some argument that the child credit should be dropped for families with incomes above \$100,000. This change would have little effect on the distributional results. The child credit is responsible for only 7 percent of the tax benefit in the next to the top bracket of OTA-II (roughly corresponding to the \$100,000 to \$200,000 expanded JCT class and somewhat above the \$100,000 adjusted gross income class). It is more important in the next lower class, (roughly corresponding to the \$75,000 to \$100,000 JCT class), where it accounts for 17 percent. (It has no effect on the top class).

Part of the cause of large tax benefits in the higher incomes is clearly the capital gains tax. The JCT's top bracket, accounting for 1.3 percent of the population distribution, has \$3804 in capital gains tax cuts, while OTA II has \$8037. (These amounts are 83 percent and 39 percent respectively of the total tax cut). Thus perhaps about a third of the differences can be attributed to capital gains. The remainder is probably due to the corporate tax cut attributions (especially neutral cost recovery) and the timing effects both for corporate tax attributions and for IRAs and noncorporate depreciation.

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Table 3. Percentage Changes in Taxes and in Disposable Income

JCT Percent Change: Taxes	OTA - I Percent Change: Taxes	OTA - II Percent Change: Taxes	JCT Percent Change: After-Tax Income	OTA - I Percent Change: After-Tax Income	OTA - II Percent Change: After-Tax Income
-2.3	-4.4	-5.5	0.3	0.4	0.5
-3.4	-6.8	-7.3	0.3	0.7	1.0
-3.9	-7.4	-8.3	0.7	1.1	1.7
-4.4	-8.3	-8.2	1.0	1.8	2.0
-4.4	-8.1	-8.6	1.1	2.0	2.3
-4.0	-8.7	-8.3	1.4	2.3	2.4
-3.7	-8.6	-9.3	2.0	2.4	2.6
-2.9	-9.9	-10.0	3.1	3.1	3.3

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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CONCLUSION

The OTA distributional tables in general indicate larger tax benefits from the Contract with America tax bill and a larger concentration of benefits in higher income classes. Among the highest income group, a significant part of that effect is due to the treatment of capital gains (reflecting both the fixed realizations assumption and the long run treatment). Probably the largest effect is from the attribution of corporate tax benefits (corrected for timing), but there are also effects from the differential treatment of the timing issues associated with IRAs and noncorporate depreciation. On the whole, the OTA methodology is more consistent with how economists would measure burden.

Both the JCT and the OTA data, however, show much larger average tax reductions in the higher income classes than in the lower ones, a significant fraction of the tax benefits accruing to very high income individuals, and a general move toward greater inequality in the distribution of disposable income.

CRS Report for Congress

Distributional Effects of Tax Provisions in the Contract with America as Reported by the Ways and Means Committee

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April 3, 1995



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SUMMARY

The House Republican Contract tax proposals, with some modifications, have been reported by the Ways and Means Committee. Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports. The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid, while the OTA provides a more comprehensive measure that is more consistent with how economists would measure the bill's benefits to individuals in different income classes.

Certain aspects of the JCT's distribution tables seem to suggest that the tax benefit is greater for middle income individuals, since the largest percentage changes in tax liability occur in the middle incomes. Treasury's tables indicate that the benefits are concentrated at the higher income levels using a variety of absolute and percentage measures of change.

The OTA analysis has a number of methodological differences from the JCT analysis that are likely to improve their measures of the distribution of benefits of the tax cut, including a "fixed realizations" measure of the capital gains tax cut, attribution of corporate tax cuts (which eventually constitute a third or more of the revenue loss), and corrections to deal with timing problems. The JCT and the OTA also differ in how they measure and classify income. The tables provided also differ in the type of distributional measures presented, with the JCT tables presenting data in terms of percentage changes in tax liability (although they also have some data on new and old effective tax rates from which tax changes as a percent of income can easily be calculated). The OTA presents a variety of measures, including average taxes paid, distribution of the tax cut, and percentage changes in pre-tax income, after-tax income, and tax liability.

Despite the data differences, both distributions show rising average tax cuts across the income classes and a significant portion of the total tax cut accruing to higher income individuals. Use of the appropriate measure of relative effect on income inequality (the percentage change in disposable income) also indicates similar findings in both data sets - the tax benefits tend to make disposable incomes less equal. Tax reductions as a percentage of taxes paid which show the largest percentage changes in the middle income classes in the JCT (but not the OTA) data can be misleading as indicators of relative income distribution effects.

In the top income group (approximately one percent of the population), the average tax cut is close to \$5,000 in the JCT estimate (for the year 2000) and about \$20,000 in the OTA data. The most important tax provisions contributing to this discrepancy (given the methodological differences) are probably capital gains and neutral cost recovery. While some attention has been given to the child credit's role in the distribution of tax benefits, it is not very important for high income individuals, accounting for none of the top one percent of the population's tax cut, and about seven percent of the next four percent of the population in the OTA's data.

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DISTRIBUTIONAL EFFECTS OF TAX PROVISIONS IN THE CONTRACT WITH AMERICA

The House Republican Contract tax bill, with some modifications, has been reported by the Ways and Means Committee.¹ Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports.² The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid for each year from 1995-2000, while the OTA provides a more comprehensive measure more consistent with how economists would measure the bill's benefits to individuals in different income classes. There are also differences in how income is classified and how results are presented. In particular, some results of the JCT analyses seem to suggest that the benefits are more concentrated toward middle income taxpayers, while the OTA analysis suggests the benefits accrue more heavily to high income taxpayers.

The first section of this report summarizes the different distributional analyses provided by the JCT and the OTA. The next section explains the methodological differences between the two, and their consequences for distribution measures. The next section interprets the results of the distributional analysis in the light of this methodological analysis. It also identifies which of the tax provisions strongly influence the results. The final section sums up.

DIFFERENCES IN DISTRIBUTIONAL ANALYSIS

The House Republican Contract tax proposal, with some modifications, has been reported by the Ways and Means Committee. By and large, it retains the original provisions -- the child credit, a fifty percent capital gains exclusion, more generous depreciation benefits under the neutral cost recovery system (NCRS), tax-favored savings accounts, phase-out of the 85 percent maximum inclusion rate for social security, and a number of smaller provisions. It adds some minimum tax relief, however, and restricts the inflation indexing provisions for capital gains.

Both the JCT and the OTA have provided distributional analyses of the effects of the proposal, with substantial differences between their reports both in the underlying data and the method of presentation.

¹ The bill was originally reported as H.R. 1215, and is now a part of H.R. 1327.

² The JCT's estimates are contained in a series of distributional tables dated March 8 and March 9, 1995. The OTA's estimates are contained in a press release issued March 14, 1995.

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The JCT presents individual distribution tables for each year from 1995 to 2000, which measure their estimates of the changes in taxes paid by income class. The only distributional number presented directly in their study is the percentage change in taxes paid. Data presented include the aggregate tax change in each class and the percentage change, current and proposed federal tax distributions across the categories (in dollar aggregates and percentages) and effective tax rates before and after the tax. The OTA presents a distributional analysis that reflects fully phased in law; it also includes several distributional measures -- average tax reductions, share of reductions by income class and income quintile, tax change as a percent of income, tax change as a percent of after-tax income, and tax change as a percent of taxes paid.

DIFFERENCES IN FUNDAMENTAL METHODOLOGIES

There are several methodological differences between the JCT's tables and the OTA's tables. These differences have the effect of making the relative benefits of the tax change for high income individuals smaller in the Joint Tax Committee's tables than in the Treasury's tables. In general, the Treasury Department's treatment is more consistent with how economists would analyze the distributional burden of a tax change. There are also differences in how the data are presented that can make a difference in the impression conveyed by these tables.

The following subsections discuss these methodological and presentational differences, which include treatment of behavioral responses, imputation of corporate tax, timing of tax benefits, differences in income classifiers, and differences in presentation.

BEHAVIORAL RESPONSES AND CAPITAL GAINS TAX CUTS

Any tax analysis involves some types of behavioral responses, if nothing more than making individual decisions (such as choosing whether or not to itemize deductions) that have virtually no real consequences other than to take full advantage of tax savings. There are also behavioral responses that involve a benefit or cost that is very real (such as choosing to work or save more, which involves changing patterns of consumption). Specifically, the important behavioral response of this latter type included in the revenue estimates for the Contract is the assumption that individuals will increase their realizations of capital gains as a result of the tax cut.

Both the JCT's and the OTA's revenue estimates of the proposal have included a variety of behavioral responses, but they differ in the treatment of the realizations response in their distributional tables.

The JCT has departed from previous practice (a change that was also made with some tables prepared in 1994) by simply reporting the distribution of taxes paid after taking into account expected changes in realizations.

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The OTA calculated taxes paid holding realizations constant (unchanged by the new tax provisions). The OTA approach is generally consistent with historical practices (as, for example, practiced during consideration of the Tax Reform Act of 1986). In some cases, OTA departed from this practice in the Bush Administration, by providing tables showing the distribution of taxes paid.

Note that these behavioral effects did not matter very much for the tax legislation in 1993 and no significant tax legislation was considered in 1994; thus, in a sense the issue of how to prepare distributional tables has not been a subject of direct policy significance since 1992 (when capital gains was last considered).

While this issue is not important when behavioral responses are small, they are important when they are large. The current revenue estimating practices of the Joint Committee on Taxation include a significant increase in realizations when capital gains tax cuts are introduced.

A table that reports taxes paid after behavioral responses are taken into account shows how the increased or decreased revenues will be spread across the income classes — that is, which classes are actually expected to be paying more or less taxes and by how much.

Using the distribution of taxes paid as now reported by the Joint Tax Committee (after behavioral responses) may not yield a full or proper measure of the tax burden, and in particular that it can be misleading in the case of the capital gains tax where a large behavioral response is incorporated. This rationale is spelled out in the following quotation from a paper about the capital gains tax co-authored by Gravelle and Lindsey:³

"When considering the issue of tax equity, it is important to distinguish between the distribution of taxes paid and the distribution of the tax burden. For example, suppose a reduction in the capital gains tax rate led to substantially more capital gains realizations and actually increased the tax revenue paid by upper-income groups. While the distribution of taxes paid would have been shifted more into upper-income groups, it would be totally inappropriate to say that their tax burden had increased. After all, with a lower tax rate, these upper-income taxpayers are less burdened than they were before, even though they pay more taxes.

In this regard it is important to note that the distributional tables compiled by the Joint Committee on Taxation ignore the effect of taxpayer behavior when considering the distributional effect of a given tax change. This method is correct for considering the impact of the tax burden, but does not accurately reflect the distribution of taxes paid...

³ Jane G. Gravelle and Lawrence B. Lindsey, Capital Gains, Tax Notes, January 25, 1988, p. 399.

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...Distributional equity focuses on the total burden imposed by the tax, not on the revenue collected."

As suggested in this quote, the use of taxes paid in distributional tables could imply, under some circumstances, that cutting tax rates harms taxpayers and that increasing them benefits taxpayers.

While current behavioral responses used in revenue estimating are not large enough to actually result in increased revenues for the capital gains tax cut (except perhaps for some taxpayers in the initial year), especially given the size of the tax cut, the magnitude of tax reductions will be greatly reduced. They will also be disproportionately reduced for high income taxpayers. For example, considering just the exclusion, the realization response for taxpayers in the highest rate brackets will reduce revenue losses by 80 percent after the first year. For the 28 percent bracket, losses will be reduced by about 60 percent, and for the 15 percent bracket, by 30 percent. Thus, incorporating capital gains into the distributional tables after accounting for realizations responses, as is done in the Joint Committee's estimates, greatly diminishes the importance of the capital gains tax (which primarily benefits higher income individuals) in the distributional numbers.

In any case, the behavioral response that results in more tax payments is a voluntary action that could not be expected to make the individual worse off - rather he is willing to pay this tax for something that is of as great or greater value (presumably the benefits of converting an investment into some other form). Indeed, if anything, the benefit of the capital gains tax cut is larger than the static revenue effect.⁴

This sentiment that using taxes paid is not a good measure of the actual benefits or burdens of a tax change is echoed in certain publications of these official organizations as well. For example, in an earlier analysis of the methodology (hereafter called the "Red Book") of distributional tables, the Joint Tax Committee stated in discussing the distributional effects of a change in the tax rate: "For changes in the rate of a preexisting tax, the static revenue change generally is a superior approximation to the change in economic well being."⁵

The OTA produced tables of the distribution of taxes paid for the 1990 capital gains tax cut proposal and argued that it would raise revenues and that taxes

⁴ This observation means, of course, that the existing measure of tax burden is also too small; in fact, the burden is, in theory, the sum of actual taxes paid and the implicit cost of any behavioral distortions induced by the tax -- in the case of capital gains, the lock-in effect. Also, the static estimate of an increase in the tax burden would also be too small; but the static estimate would still be a better measure than the even smaller measure of taxes paid after avoidance behavior is initiated.

⁵ Joint Committee on Taxation. Methodology and Issues in Measuring Changes in the Distribution of Tax Burdens. Joint Committee Print, Washington, D.C.: U.S. Government Printing Office, June 14, 1993.

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paid was the appropriate measure of distribution. Notably, they also produced tables of static estimates, and were clearly aware of the inappropriate implications for these tables, noting: "...while high-income taxpayers would pay more in taxes, they would be better off because the lower capital gains tax rates will allow them to make investment decisions with less concern about the tax impact."⁶

This issue is not likely to arise in the economics literature where the fundamentals of how, in theory, to measure benefits are well established -- and the recognition that the benefit of cutting a tax is likely to be larger than the reduction in tax assuming no behavioral change is basic to tax analysis.⁷ When the policy making process is discussed, however, economists would, as in the case of Gravelle and Lindsey, reject the simple taxes-paid table as a measure of the distribution of tax burdens and benefits and, indeed, suggest that the "constant realizations" measure understates the benefits of a tax change. For example, Auten and Cordes state: "Additional taxes paid on induced realizations result from voluntary sales of assets, and taxpayers who choose to sell assets must be at least as well off as if they didn't change their behavior."⁸ Similarly, Davis states: "I have argued that a relatively simple 'static' approach -- recalculation of tax liabilities -- produced satisfactory measurements for the distribution of benefits from a capital gains tax cut. If these measures were biased, they understated the size of the tax benefit."⁹

It is also important to note that the JCT's estimate of the realizations response, which, as will be shown below, so affects the distributional results, is not a response that is measured with any precision; indeed, recent research suggests that it may be too large.¹⁰

⁶ Statement of Kenneth W. Gideon, Assistant Secretary (Tax Policy), Department of the Treasury, Before the Committee on Finance, United States Senate, March 6, 1990.

⁷ Technically speaking, the burden of a tax is the sum of the taxes paid and the "excess burden" that results from the implicit cost of changing behavior.

⁸ Gerald A. Auten and Joseph J. Cordes, Policy Watch: Cutting the Capital Gains Tax, *Journal of Economic Perspectives*, Vol. 5, Winter 1991, p. 188.

⁹ Albert J. Davis, Measuring the Distributional Effects of Tax Changes for the Congress. *National Tax Journal*, Vol. 44, September 1991, p. 265.

¹⁰ The issue of the realizations response is by no means resolved, since the current literature contains a significant range of estimates. Moreover, the Joint Committee's estimate dates from 1990, and some research since that time has indicated that, at least after the first year or so, the realizations response is probably much lower. See Jane G. Gravelle, *The Economic Effects of Taxing Capital Income*, Chapter 6, Cambridge, Mass. MIT Press, 1994 for a review of the realizations literature.

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ATTRIBUTION OF CORPORATE TAXES

The JCT distribution tables do not include the corporate tax, even though it is clear that someone must pay the corporate tax. As discussed below, the corporate tax reductions -- primarily the depreciation changes - are responsible for perhaps a third or so of the tax reduction.

What is a reasonable assumption here? Generally, in the short run, it is presumed that the tax falls on the owners of the firm, who are unable to alter their capital stock. In the long run, the traditional economics literature indicates that the tax is likely to fall on capital in general.¹¹

The JCT has indicated in its tables that it does not include the corporate tax because of the uncertainties about where the burden of the tax falls. In general, it was the JCT's practice for many years simply not to attribute the corporate tax. In the "Red Book," however, the JCT subsequently indicated a decision to distribute the tax to the owners of corporate equities, essentially reflecting a short run assumption. This decision has apparently been reversed.

The Treasury Department attributes the tax to capital in general, consistent with the economics literature and their longer term perspective on distributional analysis. (Actually, the attribution of the tax to corporate equity owners would make the distribution of the tax in distributional tables more progressive, and increase the fraction of the tax benefit that accrues to higher income individuals). The Treasury did not always attribute the corporate tax. For example, in the 1986 Tax Reform Act, corporate tax liabilities were not attributed; indeed, this was the subject of an analysis by Feldstein discussing how the distributional effects of the tax might be modified with attribution of the corporate tax. (Feldstein assigned the tax to all capital as does the Treasury in its current analysis.)¹² For the last several years, however, the Treasury has been attributing the tax

¹¹ The Harberger model of the tax (Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, *Journal of Political Economy*, vol. 70, June 1962, pp. 215-240) shows that the tax can in some cases fall more than 100 percent on capital (and benefit labor) and in other cases fall less than 100 percent on capital, but the general tendency is for the tax to fall on capital, under reasonable behavioral assumptions. This model was one of a closed economy. However, assuming that capital, although mobile, cannot be perfectly substituted around the world and that imports and domestic production are imperfect substitutions, this finding also tends to hold in an open economy. See Jane G. Gravelle, *Corporate Tax Incidence in an Open Economy*, 1993 Proceedings of the National Tax Association, Tax Institute of America, pp. 175-178.

¹² See Martin Feldstein, *Imputing Corporate Tax Liabilities to Individual Taxpayers*, *National Tax Journal*, March 1988, vol 41, pp. 37-60. This issue was also explored by several other researchers. See Jane G. Gravelle, *Equity Effects of the Tax Reform Act of 1986*, *Journal of Economic Perspectives*, Vol. 6, Winter 1992, pp. 27-44 for a discussion of these analyses.

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to all capital and it is continuing that treatment in its distributional estimates of the Contract with America tax proposals.

The attribution of corporate taxes has a significant effect on the estimated revenue cost of the tax proposals and (given that the timing issue can be effectively dealt with) will have a large effect on distribution of the tax benefit when attributed to capital, since capital income is more concentrated in the higher income classes. The major provision is the Neutral Cost Recovery System (NCRS) which will eventually involve substantial amounts of revenue losses and is largely not included in the JCT's tables.

TIMING ISSUES

The provisions in the bill are estimated to bring about much larger revenue losses over time that reflect, primarily, the timing of tax benefits. Overall, the magnitude of cash flow benefits increases substantially over time, as can be seen in OTA's revenue estimates which cover an additional five years, from 2001-2005. (Overall, the estimates actually cover six years for the Joint Tax Committee, and 11 years for the Treasury, but the first year, FY 1995, has very small effects on the totals and actually make them larger).

According to the Treasury Department the cost from 1995-2000 is \$178.1 billion, while the cost from 1995-2005 is \$630.2 billion. Thus, the second-five-year cost of \$452.1 billion is much larger than the first five years. Assuming a nominal growth of 6 percent to project the normal growth that would be expected, the increase in the second five years, holding income constant, is about 90 percent; thus the costs almost double between the first and the second five years.

This growth is due only to certain provisions, as can be seen by examining the dominant revenue losers in each period. In the first five-year period, the \$500 child credit accounts for 62 percent of the cost, capital gains for 16 percent, the Alternative Minimum Tax Provision for 11 percent, the elimination of taxes on part of social security for 9 percent, and the marriage penalty relief for 5 percent. In the second five-year period, however, the largest revenue loser was the neutral cost recovery system, accounting for 31 percent. The child care credit has declined in share to 28 percent, the capital gains provision is about the same at 14 percent, the social security provision is about the same at 8 percent, and the IRA provision is responsible for 6 percent.

These changes occur for a variety of reasons. NCRS is designed so that it raises revenue in the first five years (through the slow-down in depreciation) but its true benefit is large and it grows rapidly until it becomes the single largest provision. Its growth far outstrips the growth in the overall size of the package. The child care credit, however, has not changed much in nominal terms, perhaps because any growth due to inflation is small and offset by demographic changes. Thus, it falls in share by over fifty percent. Capital gains revenue losses are growing rapidly because of indexation (and the interaction of this further tax cut with behavioral effects), and have grown about as fast as the overall cost. Social security is also growing naturally though demographics and benefit growth. Finally, IRAs

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become more important because of the accumulation of amounts in tax-favored accounts. The AMT has, however, diminished in relative size along with the marriage penalty relief.

These trends actually continue -- the real cost of the package will continue to grow due to certain provisions that tend to grow (NCRS, capital gains, and individual retirement accounts). In particular, neutral cost recovery, will likely continue to rise in real terms for many years.¹⁸

The treatment of timing issues is not always straightforward and it is hard to develop a consistent rule, although it is frequently the case that a cash flow measure will be misleading. The JCT has simply examined several years and used the cash flow approach, even through this causes the form of the tax benefit to strongly influence the projected revenue costs.

The Treasury Department has used an approach that is consistent, at least for these provisions, with their focus on the permanent distributional effects of tax changes. They have used fully phased-in provisions (e.g. full indexing) with long run behavior. For those provisions such as depreciation and IRAs where the same economic benefit can produce dramatically different cash flow patterns, they have calculated the present value of tax benefits associated with this year's investment or savings. Essentially, the depreciation benefits have been converted into an investment credit of equivalent value; similarly, the IRA benefits are measured as an initial credit. This is a pattern that will yield the same result for provisions with the same economic value. By contrast, the JCT's cash flow approach would yield very different effects if different forms of benefits were chosen (i.e. front-loaded rather than back-loaded IRAs, or direct expensing rather than the expensing equivalent via increased future depreciation deductions).

INCOME CLASSIFIERS

The JCT and the Treasury also differ in the measurement of income classes. The JCT uses tax return data and adds back to adjusted gross income to generate an expanded income class that includes nine separate classes. Adjusted gross income is increased by health care fringe benefits, tax-exempt interest, social security

¹⁸ See Jane G. Gravelle, Estimating Long-Run Revenue Effects of Tax Law Changes, *Eastern Economic Journal*, Vol. 19, No. 4, Fall 1993, pp. 481-494, for a general discussion of the revenue estimating issues arising with tax changes that have uneven patterns over time; this discussion includes a graphical presentation of the time path of back-loaded vs. front-loaded IRAs and prospective capital gains tax indexing. The revenue patterns of several tax provisions in the Contract are discussed in other CRS products. NCRS is discussed in David L. Brumbaugh and Jane G. Gravelle, *The Neutral Cost Recovery System and the House Republican Contract*, Congressional Research Service report 95-161 E; capital gains tax change in testimony of Jane G. Gravelle, on Capital Gains Tax Proposals, Before the Committee on Finance, February 15, 1995 and IRA proposals in Jane G. Gravelle, *Individual Retirement Accounts (IRAs) and Related Proposals*, Congressional Research Service Report 95-420, March 24, 1995.

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benefits not otherwise included in income, the insurance value of medicare, the employer's share of the FICA tax, certain tax preference items, and excluded income of individuals living abroad. Individuals with zero incomes are excluded.

The Treasury Department uses an expanded income concept that is more consistent with economists' income concepts, including not only most of the items included by the JCT but also additional returns to capital (such as imputed income on owner-occupied housing, the returns to pension and related plans, and adjustments for accrued, real capital gains). Income is measured on a family income basis so that individuals living in families who might file separate returns are combined, and is reported in two ways -- by the same income classes (with two combined) as the JCT data (which we term OTA -I), and by population shares (which we term OTA-II). It also includes individuals with zero or negative incomes.

In comparing the distributional tables it is important to distinguish between the differences due to different measures of income and those due to other methodological differences. Table 1 provides a comparison of these income classifiers by juxtaposing income shares with dollar levels of income. In this and all other comparisons, we use the JCT estimates for the year 2000 which move closer to

Table 1: Income Classes and Population Shares, JCT and OTA Distribution Tables

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles. The total units in the OTA tables is 109.4 million (families); total units in the JCT tables are 136.2 million (returns).

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a permanent distribution than any of the other years. (Income categories are measured at 1995 levels for the JCT, but the distribution reflects year 2000 distributions of returns; all data are measured at 1996 income levels for the OTA data). Note also that some members of a high income family in the family classification of the OTA could appear as lower income tax returns in the JCT distribution.

As this table shows, although both report the same income levels, much more of the population is in the higher income levels for OTA -I than for JCT. Twice as large a share of the population units is in the OTA's \$200,000 class than in the JCT's \$200,000.

The table also shows that although the OTA- II table, which involves shares of the population, is actually more closely comparable to the JCT than either is to OTA - I, even though the nominal income levels are different. Again this is due to the expanded income concept which includes much more imputed, unrealized and transferred income than the JCT income concept.

PRESENTATION OF INFORMATION

The JCT and OTA tables also differ in how the information is presented. Both present overall tax reductions by income class, but this raw information has no frame of reference (i.e., one does not know whether the amounts in a category are large because the benefit is large or because there are a lot of people in the category). Rather, this information must be transformed in some way to provide information on distributional effects.

The JCT tables present only one type of direct distributional measure: the percentage change in tax liabilities. The OTA presents five different types of measures: the average tax reduction, the percentage distribution of the tax reduction, and the tax change as a percent of pre-tax income, after-tax income, and taxes paid.¹⁴

In discussing these measures it may be appropriate to distinguish between absolute measures and relative measures. For example, average tax reductions per unit provide information on the absolute size of a tax benefit across the income classes, which is a straightforward measure. Another way of examining this same effect is to compare the distribution of the tax benefit with the distribution of the population. If each proportion of the population is getting the same share of the benefit, then the benefits are equal. Both of these measures can inform us about how a tax cut is changing income without being misleading.

¹⁴ Most of the measures presented in the OTA tables can be derived from the JCT tables except for those that require a distribution of returns (e.g. average tax benefit per return). Data on the distribution of returns is, however, available from the JCT. Since, they also present effective tax rates before and after the changes, it would be a simple matter to see the change as a percent of pre-tax income).

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A different type of measure is a relative one that tries to examine how the tax benefit is changing the overall distribution of income in the country -- that is, is it making incomes more equal or less equal? In general, the best method for measuring this is to examine the percentage change in disposable (after-tax) income. If the percentage change is equal, then the tax change is not making incomes more equal or less equal. If the percentages are higher among higher income individuals the change is making incomes less equal.

What about the role of the other percentage measures -- of pre-tax income and of taxable income. The former will tend to produce slightly different percentages (and smaller ones) when taxes are already present and is not as precise in indicating the overall effects on income equality. The percentage of tax changes can, however, be misleading. If the percentages rise across the income levels (given an initial progressive system, the results indicate less equality. If they fall, however, the percentages can be very misleading. For example, suppose that a family pays only \$10 dollars in income tax. A ten dollar tax cut will, therefore, be a 100 percent tax reduction and will appear very large. For this reason, tables of percentage changes in taxes paid may indicate very little about the distributional benefits of a tax change.

COMPARISON OF DISTRIBUTIONAL EFFECTS

This section examines the distributional tables and calculates measures that can be used to examine the distributional of benefits of the tax cut and the causes of the different results in the two measures.

ABSOLUTE MEASURES

Table 2 presents data that show the average tax saving and the share of taxes saved (the data on income class and population from table 1 is reproduced as well). Recall that JCT is more comparable, based on income shares, with OTA II.

All three measures show rising dollar amounts across the income scale, but the amounts are larger and rise faster with the OTA numbers than with the JCT numbers. For example, in the top one percent of the population (approximately), the tax benefit is close to \$5,000 on average (\$4600 for the top 1.3 percent) in the JCT numbers but is four times as large -- \$20,000 -- in the OTA numbers. The top one percent gets somewhat less than 15 percent of the total tax saving in the JCT numbers, and 20 percent in the OTA numbers. Thus, based on absolute benefits, higher income individuals receive substantially more than do lower income individuals.

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Table 2: Average Tax Benefit and Distribution of Tax Benefit

JCT Average Tax \$ Saving	OTA - I Average Tax \$ Saving	OTA - II Average Tax \$ Saving	JCT Share of Tax Saving (Percent)	OTA - I Share of Tax Saving (Percent)	OTA - II Share of Tax Saving (Percent)
11	20	36	0.4	0.2	0.7
53	90	205	2.6	1.3	4.1
153	247	555	6.0	3.3	10.9
356	569	1021	20.5	11.6	20.2
651	997	1689	22.6	16.4	16.6
921	1572	2274	15.6	15.2	11.3
1378	2466	4122	17.2	23.4	16.2
4605	11266	20362	15.3	28.1	20.1

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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RELATIVE MEASURES

Two relative measures are presented in table 8: the percentage change in taxes paid, which is the only direct measure in the JCT tables, and the percentage change in after tax income, which measures whether the income distribution became more or less equal.

The percentage of tax changes in the JCT numbers are ones that might lead to the impression that the tax benefit is favoring the middle incomes, since the percentage changes are largest in \$30,000 to \$75,000 classes, and smaller at the lower incomes. (Actually, this group covers from the 33rd percentile to the 87th percentile). This pattern does not comport with the OTA measures, which show a generally rising (although declining slightly in some spots) percentage reduction in taxes.

The second measure shows that the tax changes are making the distribution of after tax income more uneven over time under any of the measures. In this case, the percentage changes are not much larger (e.g. 3.1 percent for JCT and 3.3 percent for OTA -II in the top bracket) in the OTA analysis, especially in the top bracket. There are two opposing forces -- the tax cut is larger, but so is economic income.

PROVISIONS THAT CONTRIBUTE TO LARGER TAX BENEFITS IN THE OTA ANALYSIS

While it is not possible to pinpoint exactly the provisions that contribute to the much larger benefits, particularly for higher income individuals, given the data supplied (which OTA only separates for the child credit and capital gains), it is clear that capital gains plays an important role and that the child credit does not. There has been some argument that the child credit should be dropped for families with incomes above \$100,000. This change would have little effect on the distributional results. The child credit is responsible for only 7 percent of the tax benefit in the next to the top bracket of OTA-II (roughly corresponding to the \$100,000 to \$200,000 expanded JCT class and somewhat above the \$100,000 adjusted gross income class). It is more important in the next lower class, (roughly corresponding to the \$75,000 to \$100,000 JCT class), where it accounts for 17 percent. (It has no effect on the top class).

Part of the cause of large tax benefits in the higher incomes is clearly the capital gains tax. The JCT's top bracket, accounting for 1.3 percent of the population distribution, has \$9804 in capital gains tax cuts, while OTA II has \$8037. (These amounts are 83 percent and 39 percent respectively of the total tax cut). Thus perhaps about a third of the differences can be attributed to capital gains. The remainder is probably due to the corporate tax cut attributions (especially neutral cost recovery) and the timing effects both for corporate tax attributions and for IRAs and noncorporate depreciation.

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Table 3. Percentage Changes in Taxes and in Disposable Income

JCT Percent Change: Taxes	OTA - I Percent Change: Taxes	OTA - II Percent Change: Taxes	JCT Percent Change: After-Tax Income	OTA - I Percent Change: After-Tax Income	OTA - II Percent Change: After-Tax Income
-2.3	-4.4	-5.5	0.3	0.4	0.5
-3.4	-6.8	-7.3	0.3	0.7	1.0
-3.9	-7.4	-8.3	0.7	1.1	1.7
-4.4	-8.3	-8.2	1.0	1.8	2.0
-4.4	-8.1	-8.6	1.1	2.0	2.3
-4.0	-8.7	-8.3	1.4	2.3	2.4
-3.7	-8.6	-9.3	2.0	2.4	2.6
-2.9	-9.9	-10.0	3.1	3.1	3.3

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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CONCLUSION

The OTA distributional tables in general indicate larger tax benefits from the Contract with America tax bill and a larger concentration of benefits in higher income classes. Among the highest income group, a significant part of that effect is due to the treatment of capital gains (reflecting both the fixed realizations assumption and the long run treatment). Probably the largest effect is from the attribution of corporate tax benefits (corrected for timing), but there are also effects from the differential treatment of the timing issues associated with IRAs and noncorporate depreciation. On the whole, the OTA methodology is more consistent with how economists would measure burden.

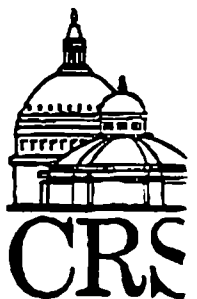
Both the JCT and the OTA data, however, show much larger average tax reductions in the higher income classes than in the lower ones, a significant fraction of the tax benefits accruing to very high income individuals, and a general move toward greater inequality in the distribution of disposable income.

CRS Report for Congress

Distributional Effects of Tax Provisions in the Contract with America as Reported by the Ways and Means Committee

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April 3, 1995



Congressional Research Service • The Library of Congress



SUMMARY

The House Republican Contract tax proposals, with some modifications, have been reported by the Ways and Means Committee. Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports. The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid, while the OTA provides a more comprehensive measure that is more consistent with how economists would measure the bill's benefits to individuals in different income classes.

Certain aspects of the JCT's distribution tables seem to suggest that the tax benefit is greater for middle income individuals, since the largest percentage changes in tax liability occur in the middle incomes. Treasury's tables indicate that the benefits are concentrated at the higher income levels using a variety of absolute and percentage measures of change.

The OTA analysis has a number of methodological differences from the JCT analysis that are likely to improve their measures of the distribution of benefits of the tax cut, including a "fixed realizations" measure of the capital gains tax cut, attribution of corporate tax cuts (which eventually constitute a third or more of the revenue loss), and corrections to deal with timing problems. The JCT and the OTA also differ in how they measure and classify income. The tables provided also differ in the type of distributional measures presented, with the JCT tables presenting data in terms of percentage changes in tax liability (although they also have some data on new and old effective tax rates from which tax changes as a percent of income can easily be calculated). The OTA presents a variety of measures, including average taxes paid, distribution of the tax cut, and percentage changes in pre-tax income, after-tax income, and tax liability.

Despite the data differences, both distributions show rising average tax cuts across the income classes and a significant portion of the total tax cut accruing to higher income individuals. Use of the appropriate measure of relative effect on income inequality (the percentage change in disposable income) also indicates similar findings in both data sets -- the tax benefits tend to make disposable incomes less equal. Tax reductions as a percentage of taxes paid which show the largest percentage changes in the middle income classes in the JCT (but not the OTA) data can be misleading as indicators of relative income distribution effects.

In the top income group (approximately one percent of the population), the average tax cut is close to \$5,000 in the JCT estimate (for the year 2000) and about \$20,000 in the OTA data. The most important tax provisions contributing to this discrepancy (given the methodological differences) are probably capital gains and neutral cost recovery. While some attention has been given to the child credit's role in the distribution of tax benefits, it is not very important for high income individuals, accounting for none of the top one percent of the population's tax cut, and about seven percent of the next four percent of the population in the OTA's data.

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DISTRIBUTIONAL EFFECTS OF TAX PROVISIONS IN THE CONTRACT WITH AMERICA

The House Republican Contract tax bill, with some modifications, has been reported by the Ways and Means Committee.¹ Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports.² The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid for each year from 1995-2000, while the OTA provides a more comprehensive measure more consistent with how economists would measure the bill's benefits to individuals in different income classes. There are also differences in how income is classified and how results are presented. In particular, some results of the JCT analyses seem to suggest that the benefits are more concentrated toward middle income taxpayers, while the OTA analysis suggests the benefits accrue more heavily to high income taxpayers.

The first section of this report summarizes the different distributional analyses provided by the JCT and the OTA. The next section explains the methodological differences between the two, and their consequences for distribution measures. The next section interprets the results of the distributional analysis in the light of this methodological analysis. It also identifies which of the tax provisions strongly influence the results. The final section sums up.

DIFFERENCES IN DISTRIBUTIONAL ANALYSIS

The House Republican Contract tax proposal, with some modifications, has been reported by the Ways and Means Committee. By and large, it retains the original provisions -- the child credit, a fifty percent capital gains exclusion, more generous depreciation benefits under the neutral cost recovery system (NCRS), tax-favored savings accounts, phase-out of the 85 percent maximum inclusion rate for social security, and a number of smaller provisions. It adds some minimum tax relief, however, and restricts the inflation indexing provisions for capital gains.

Both the JCT and the OTA have provided distributional analyses of the effects of the proposal, with substantial differences between their reports both in the underlying data and the method of presentation.

¹ The bill was originally reported as H.R. 1215, and is now a part of H.R. 1327.

² The JCT's estimates are contained in a series of distributional tables dated March 8 and March 9, 1995. The OTA's estimates are contained in a press release issued March 14, 1995.

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The JCT presents individual distribution tables for each year from 1995 to 2000, which measure their estimates of the changes in taxes paid by income class. The only distributional number presented directly in their study is the percentage change in taxes paid. Data presented include the aggregate tax change in each class and the percentage change, current and proposed federal tax distributions across the categories (in dollar aggregates and percentages) and effective tax rates before and after the tax. The OTA presents a distributional analysis that reflects fully phased in law; it also includes several distributional measures -- average tax reductions, share of reductions by income class and income quintile, tax change as a percent of income, tax change as a percent of after-tax income, and tax change as a percent of taxes paid.

DIFFERENCES IN FUNDAMENTAL METHODOLOGIES

There are several methodological differences between the JCT's tables and the OTA's tables. These differences have the effect of making the relative benefits of the tax change for high income individuals smaller in the Joint Tax Committee's tables than in the Treasury's tables. In general, the Treasury Department's treatment is more consistent with how economists would analyze the distributional burden of a tax change. There are also differences in how the data are presented that can make a difference in the impression conveyed by these tables.

The following subsections discuss these methodological and presentational differences, which include treatment of behavioral responses, imputation of corporate tax, timing of tax benefits, differences in income classifiers, and differences in presentation.

BEHAVIORAL RESPONSES AND CAPITAL GAINS TAX CUTS

Any tax analysis involves some types of behavioral responses, if nothing more than making individual decisions (such as choosing whether or not to itemize deductions) that have virtually no real consequences other than to take full advantage of tax savings. There are also behavioral responses that involve a benefit or cost that is very real (such as choosing to work or save more, which involves changing patterns of consumption). Specifically, the important behavioral response of this latter type included in the revenue estimates for the Contract is the assumption that individuals will increase their realizations of capital gains as a result of the tax cut.

Both the JCT's and the OTA's revenue estimates of the proposal have included a variety of behavioral responses, but they differ in the treatment of the realizations response in their distributional tables.

The JCT has departed from previous practice (a change that was also made with some tables prepared in 1994) by simply reporting the distribution of taxes paid after taking into account expected changes in realizations.

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The OTA calculated taxes paid holding realizations constant (unchanged by the new tax provisions). The OTA approach is generally consistent with historical practices (as, for example, practiced during consideration of the Tax Reform Act of 1986). In some cases, OTA departed from this practice in the Bush Administration, by providing tables showing the distribution of taxes paid.

Note that these behavioral effects did not matter very much for the tax legislation in 1993 and no significant tax legislation was considered in 1994; thus, in a sense the issue of how to prepare distributional tables has not been a subject of direct policy significance since 1992 (when capital gains was last considered).

While this issue is not important when behavioral responses are small, they are important when they are large. The current revenue estimating practices of the Joint Committee on Taxation include a significant increase in realizations when capital gains tax cuts are introduced.

A table that reports taxes paid after behavioral responses are taken into account shows how the increased or decreased revenues will be spread across the income classes -- that is, which classes are actually expected to be paying more or less taxes and by how much.

Using the distribution of taxes paid as now reported by the Joint Tax Committee (after behavioral responses) may not yield a full or proper measure of the tax burden, and in particular that it can be misleading in the case of the capital gains tax where a large behavioral response is incorporated. This rationale is spelled out in the following quotation from a paper about the capital gains tax co-authored by Gravelle and Lindsey:⁹

"When considering the issue of tax equity, it is important to distinguish between the distribution of taxes paid and the distribution of the tax burden. For example, suppose a reduction in the capital gains tax rate led to substantially more capital gains realizations and actually increased the tax revenue paid by upper-income groups. While the distribution of taxes paid would have been shifted more into upper-income groups, it would be totally inappropriate to say that their tax burden had increased. After all, with a lower tax rate, these upper-income taxpayers are less burdened than they were before, even though they pay more taxes.

In this regard it is important to note that the distributional tables compiled by the Joint Committee on Taxation ignore the effect of taxpayer behavior when considering the distributional effect of a given tax change. This method is correct for considering the impact of the tax burden, but does not accurately reflect the distribution of taxes paid...

⁹ Jane G. Gravelle and Lawrence B. Lindsey, Capital Gains, Tax Notes, January 25, 1988, p. 399.

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...Distributional equity focuses on the total burden imposed by the tax, not on the revenue collected."

As suggested in this quote, the use of taxes paid in distributional tables could imply, under some circumstances, that cutting tax rates harms taxpayers and that increasing them benefits taxpayers.

While current behavioral responses used in revenue estimating are not large enough to actually result in increased revenues for the capital gains tax cut (except perhaps for some taxpayers in the initial year), especially given the size of the tax cut, the magnitude of tax reductions will be greatly reduced. They will also be disproportionately reduced for high income taxpayers. For example, considering just the exclusion, the realization response for taxpayers in the highest rate brackets will reduce revenue losses by 80 percent after the first year. For the 28 percent bracket, losses will be reduced by about 60 percent, and for the 15 percent bracket, by 30 percent. Thus, incorporating capital gains into the distributional tables after accounting for realizations responses, as is done in the Joint Committee's estimates, greatly diminishes the importance of the capital gains tax (which primarily benefits higher income individuals) in the distributional numbers.

In any case, the behavioral response that results in more tax payments is a voluntary action that could not be expected to make the individual worse off - rather he is willing to pay this tax for something that is of as great or greater value (presumably the benefits of converting an investment into some other form). Indeed, if anything, the benefit of the capital gains tax cut is larger than the static revenue effect.⁴

This sentiment that using taxes paid is not a good measure of the actual benefits or burdens of a tax change is echoed in certain publications of these official organizations as well. For example, in an earlier analysis of the methodology (hereafter called the "Red Book") of distributional tables, the Joint Tax Committee stated in discussing the distributional effects of a change in the tax rate: "For changes in the rate of a preexisting tax, the static revenue change generally is a superior approximation to the change in economic well being."⁵

The OTA produced tables of the distribution of taxes paid for the 1990 capital gains tax cut proposal and argued that it would raise revenues and that taxes

⁴ This observation means, of course, that the existing measure of tax burden is also too small; in fact, the burden is, in theory, the sum of actual taxes paid and the implicit cost of any behavioral distortions induced by the tax -- in the case of capital gains, the lock-in effect. Also, the static estimate of an increase in the tax burden would also be too small; but the static estimate would still be a better measure than the even smaller measure of taxes paid after avoidance behavior is initiated.

⁵ Joint Committee on Taxation. Methodology and Issues in Measuring Changes in the Distribution of Tax Burdens. Joint Committee Print, Washington, D.C.: U.S. Government Printing Office, June 14, 1993.

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paid was the appropriate measure of distribution. Notably, they also produced tables of static estimates, and were clearly aware of the inappropriate implications for these tables, noting: "...while high-income taxpayers would pay more in taxes, they would be better off because the lower capital gains tax rates will allow them to make investment decisions with less concern about the tax impact."⁶

This issue is not likely to arise in the economics literature where the fundamentals of how, in theory, to measure benefits are well established -- and the recognition that the benefit of cutting a tax is likely to be larger than the reduction in tax assuming no behavioral change is basic to tax analysis.⁷ When the policy making process is discussed, however, economists would, as in the case of Gravelle and Lindsey, reject the simple taxes-paid table as a measure of the distribution of tax burdens and benefits and, indeed, suggest that the "constant realizations" measure understates the benefits of a tax change. For example, Auten and Cordes state: "Additional taxes paid on induced realizations result from voluntary sales of assets, and taxpayers who choose to sell assets must be at least as well off as if they didn't change their behavior."⁸ Similarly, Davis states: "I have argued that a relatively simple "static" approach -- recalculation of tax liabilities -- produced satisfactory measurements for the distribution of benefits from a capital gains tax cut. If these measures were biased, they understated the size of the tax benefit."⁹

It is also important to note that the JCT's estimate of the realizations response, which, as will be shown below, so affects the distributional results, is not a response that is measured with any precision; indeed, recent research suggests that it may be too large.¹⁰

⁶ Statement of Kenneth W. Gideon, Assistant Secretary (Tax Policy), Department of the Treasury, Before the Committee on Finance, United States Senate, March 6, 1990.

⁷ Technically speaking, the burden of a tax is the sum of the taxes paid and the "excess burden" that results from the implicit cost of changing behavior.

⁸ Gerald A. Auten and Joseph J. Cordes, Policy Watch: Cutting the Capital Gains Tax, *Journal of Economic Perspectives*, Vol. 5, Winter 1991, p. 188.

⁹ Albert J. Davis, Measuring the Distributional Effects of Tax Changes for the Congress. *National Tax Journal*, Vol. 44, September 1991, p. 265.

¹⁰ The issue of the realizations response is by no means resolved, since the current literature contains a significant range of estimates. Moreover, the Joint Committee's estimate dates from 1990, and some research since that time has indicated that, at least after the first year or so, the realizations response is probably much lower. See Jane G. Gravelle, *The Economic Effects of Taxing Capital Income*, Chapter 6, Cambridge, Mass. MIT Press, 1994 for a review of the realizations literature.

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ATTRIBUTION OF CORPORATE TAXES

The JCT distribution tables do not include the corporate tax, even though it is clear that someone must pay the corporate tax. As discussed below, the corporate tax reductions -- primarily the depreciation changes - are responsible for perhaps a third or so of the tax reduction.

What is a reasonable assumption here? Generally, in the short run, it is presumed that the tax falls on the owners of the firm, who are unable to alter their capital stock. In the long run, the traditional economics literature indicates that the tax is likely to fall on capital in general.¹¹

The JCT has indicated in its tables that it does not include the corporate tax because of the uncertainties about where the burden of the tax falls. In general, it was the JCT's practice for many years simply not to attribute the corporate tax. In the "Red Book," however, the JCT subsequently indicated a decision to distribute the tax to the owners of corporate equities, essentially reflecting a short run assumption. This decision has apparently been reversed.

The Treasury Department attributes the tax to capital in general, consistent with the economics literature and their longer term perspective on distributional analysis. (Actually, the attribution of the tax to corporate equity owners would make the distribution of the tax in distributional tables more progressive, and increase the fraction of the tax benefit that accrues to higher income individuals). The Treasury did not always attribute the corporate tax. For example, in the 1986 Tax Reform Act, corporate tax liabilities were not attributed; indeed, this was the subject of an analysis by Feldstein discussing how the distributional effects of the tax might be modified with attribution of the corporate tax. (Feldstein assigned the tax to all capital as does the Treasury in its current analysis.)¹² For the last several years, however, the Treasury has been attributing the tax

¹¹ The Harberger model of the tax (Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, *Journal of Political Economy*, vol. 70, June 1962, pp. 215-240) shows that the tax can in some cases fall more than 100 percent on capital (and benefit labor) and in other cases fall less than 100 percent on capital, but the general tendency is for the tax to fall on capital, under reasonable behavioral assumptions. This model was one of a closed economy. However, assuming that capital, although mobile, cannot be perfectly substituted around the world and that imports and domestic production are imperfect substitutions, this finding also tends to hold in an open economy. See Jane G. Gravelle, *Corporate Tax Incidence in an Open Economy*, 1993 Proceedings of the National Tax Association, Tax Institute of America, pp. 175-178.

¹² See Martin Feldstein, *Imputing Corporate Tax Liabilities to Individual Taxpayers*, *National Tax Journal*, March 1988, vol 41, pp. 37-60. This issue was also explored by several other researchers. See Jane G. Gravelle, *Equity Effects of the Tax Reform Act of 1986*, *Journal of Economic Perspectives*, Vol. 6, Winter 1992, pp. 27-44 for a discussion of these analyses.

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to all capital and it is continuing that treatment in its distributional estimates of the Contract with America tax proposals.

The attribution of corporate taxes has a significant effect on the estimated revenue cost of the tax proposals and (given that the timing issue can be effectively dealt with) will have a large effect on distribution of the tax benefit when attributed to capital, since capital income is more concentrated in the higher income classes. The major provision is the Neutral Cost Recovery System (NCRS) which will eventually involve substantial amounts of revenue losses and is largely not included in the JCT's tables.

TIMING ISSUES

The provisions in the bill are estimated to bring about much larger revenue losses over time that reflect, primarily, the timing of tax benefits. Overall, the magnitude of cash flow benefits increases substantially over time, as can be seen in OTA's revenue estimates which cover an additional five years, from 2001-2005. (Overall, the estimates actually cover six years for the Joint Tax Committee, and 11 years for the Treasury, but the first year, FY 1995, has very small effects on the totals and actually make them larger).

According to the Treasury Department the cost from 1995-2000 is \$178.1 billion, while the cost from 1995-2005 is \$630.2 billion. Thus, the second-five-year cost of \$452.1 billion is much larger than the first five years. Assuming a nominal growth of 6 percent to project the normal growth that would be expected, the increase in the second five years, holding income constant, is about 90 percent; thus the costs almost double between the first and the second five years.

This growth is due only to certain provisions, as can be seen by examining the dominant revenue losers in each period. In the first five-year period, the \$500 child credit accounts for 62 percent of the cost, capital gains for 16 percent, the Alternative Minimum Tax Provision for 11 percent, the elimination of taxes on part of social security for 9 percent, and the marriage penalty relief for 5 percent. In the second five-year period, however, the largest revenue loser was the neutral cost recovery system, accounting for 31 percent. The child care credit has declined in share to 28 percent, the capital gains provision is about the same at 14 percent, the social security provision is about the same at 8 percent, and the IRA provision is responsible for 6 percent.

These changes occur for a variety of reasons. NCRS is designed so that it raises revenue in the first five years (through the slow-down in depreciation) but its true benefit is large and it grows rapidly until it becomes the single largest provision. Its growth far outstrips the growth in the overall size of the package. The child care credit, however, has not changed much in nominal terms, perhaps because any growth due to inflation is small and offset by demographic changes. Thus, it falls in share by over fifty percent. Capital gains revenue losses are growing rapidly because of indexation (and the interaction of this further tax cut with behavioral effects), and have grown about as fast as the overall cost. Social security is also growing naturally though demographics and benefit growth. Finally, IRAs

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become more important because of the accumulation of amounts in tax-favored accounts. The AMT has, however, diminished in relative size along with the marriage penalty relief.

These trends actually continue -- the real cost of the package will continue to grow due to certain provisions that tend to grow (NCRS, capital gains, and individual retirement accounts). In particular, neutral cost recovery, will likely continue to rise in real terms for many years.¹⁸

The treatment of timing issues is not always straightforward and it is hard to develop a consistent rule, although it is frequently the case that a cash flow measure will be misleading. The JCT has simply examined several years and used the cash flow approach, even through this causes the form of the tax benefit to strongly influence the projected revenue costs.

The Treasury Department has used an approach that is consistent, at least for these provisions, with their focus on the permanent distributional effects of tax changes. They have used fully phased-in provisions (e.g. full indexing) with long run behavior. For those provisions such as depreciation and IRAs where the same economic benefit can produce dramatically different cash flow patterns, they have calculated the present value of tax benefits associated with this year's investment or savings. Essentially, the depreciation benefits have been converted into an investment credit of equivalent value; similarly, the IRA benefits are measured as an initial credit. This is a pattern that will yield the same result for provisions with the same economic value. By contrast, the JCT's cash flow approach would yield very different effects if different forms of benefits were chosen (i.e. front-loaded rather than back-loaded IRAs, or direct expensing rather than the expensing equivalent via increased future depreciation deductions).

INCOME CLASSIFIERS

The JCT and the Treasury also differ in the measurement of income classes. The JCT uses tax return data and adds back to adjusted gross income to generate an expanded income class that includes nine separate classes. Adjusted gross income is increased by health care fringe benefits, tax-exempt interest, social security

¹⁸ See Jane G. Gravelle, Estimating Long-Run Revenue Effects of Tax Law Changes, *Eastern Economic Journal*, Vol. 19, No. 4, Fall 1993, pp. 481-494, for a general discussion of the revenue estimating issues arising with tax changes that have uneven patterns over time; this discussion includes a graphical presentation of the time path of back-loaded vs. front-loaded IRAs and prospective capital gains tax indexing. The revenue patterns of several tax provisions in the Contract are discussed in other CRS products. NCRS is discussed in David L. Brumbaugh and Jane G. Gravelle, *The Neutral Cost Recovery System and the House Republican Contract*, Congressional Research Service report 95-161 E; capital gains tax change in testimony of Jane G. Gravelle, on Capital Gains Tax Proposals, Before the Committee on Finance, February 15, 1995 and IRA proposals in Jane G. Gravelle, *Individual Retirement Accounts (IRAs) and Related Proposals*, Congressional Research Service Report 95-420, March 24, 1995.

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benefits not otherwise included in income, the insurance value of medicare, the employer's share of the FICA tax, certain tax preference items, and excluded income of individuals living abroad. Individuals with zero incomes are excluded.

The Treasury Department uses an expanded income concept that is more consistent with economists' income concepts, including not only most of the items included by the JCT but also additional returns to capital (such as imputed income on owner-occupied housing, the returns to pension and related plans, and adjustments for accrued, real capital gains). Income is measured on a family income basis so that individuals living in families who might file separate returns are combined, and is reported in two ways -- by the same income classes (with two combined) as the JCT data (which we term OTA -I), and by population shares (which we term OTA-II). It also includes individuals with zero or negative incomes.

In comparing the distributional tables it is important to distinguish between the differences due to different measures of income and those due to other methodological differences. Table 1 provides a comparison of these income classifiers by juxtaposing income shares with dollar levels of income. In this and all other comparisons, we use the JCT estimates for the year 2000 which move closer to

Table 1: Income Classes and Population Shares, JCT and OTA Distribution Tables

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles. The total units in the OTA tables is 109.4 million (families); total units in the JCT tables are 136.2 million (returns).

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a permanent distribution than any of the other years. (Income categories are measured at 1995 levels for the JCT, but the distribution reflects year 2000 distributions of returns; all data are measured at 1996 income levels for the OTA data). Note also that some members of a high income family in the family classification of the OTA could appear as lower income tax returns in the JCT distribution.

As this table shows, although both report the same income levels, much more of the population is in the higher income levels for OTA - I than for JCT. Twice as large a share of the population units is in the OTA's \$200,000 class than in the JCT's \$200,000.

The table also shows that although the OTA- II table, which involves shares of the population, is actually more closely comparable to the JCT than either is to OTA - I, even though the nominal income levels are different. Again this is due to the expanded income concept which includes much more imputed, unrealized and transferred income than the JCT income concept.

PRESENTATION OF INFORMATION

The JCT and OTA tables also differ in how the information is presented. Both present overall tax reductions by income class, but this raw information has no frame of reference (i.e., one does not know whether the amounts in a category are large because the benefit is large or because there are a lot of people in the category). Rather, this information must be transformed in some way to provide information on distributional effects.

The JCT tables present only one type of direct distributional measure: the percentage change in tax liabilities. The OTA presents five different types of measures: the average tax reduction, the percentage distribution of the tax reduction, and the tax change as a percent of pre-tax income, after-tax income, and taxes paid.¹⁴

In discussing these measures it may be appropriate to distinguish between absolute measures and relative measures. For example, average tax reductions per unit provide information on the absolute size of a tax benefit across the income classes, which is a straightforward measure. Another way of examining this same effect is to compare the distribution of the tax benefit with the distribution of the population. If each proportion of the population is getting the same share of the benefit, then the benefits are equal. Both of these measures can inform us about how a tax cut is changing income without being misleading.

¹⁴ Most of the measures presented in the OTA tables can be derived from the JCT tables except for those that require a distribution of returns (e.g. average tax benefit per return). Data on the distribution of returns is, however, available from the JCT. Since, they also present effective tax rates before and after the changes, it would be a simple matter to see the change as a percent of pre-tax income).

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A different type of measure is a relative one that tries to examine how the tax benefit is changing the overall distribution of income in the country -- that is, is it making incomes more equal or less equal? In general, the best method for measuring this is to examine the percentage change in disposable (after-tax) income. If the percentage change is equal, then the tax change is not making incomes more equal or less equal. If the percentages are higher among higher income individuals the change is making incomes less equal.

What about the role of the other percentage measures -- of pre-tax income and of taxable income. The former will tend to produce slightly different percentages (and smaller ones) when taxes are already present and is not as precise in indicating the overall effects on income equality. The percentage of tax changes can, however, be misleading. If the percentages rise across the income levels (given an initial progressive system, the results indicate less equality. If they fall, however, the percentages can be very misleading. For example, suppose that a family pays only \$10 dollars in income tax. A ten dollar tax cut will, therefore, be a 100 percent tax reduction and will appear very large. For this reason, tables of percentage changes in taxes paid may indicate very little about the distributional benefits of a tax change.

COMPARISON OF DISTRIBUTIONAL EFFECTS

This section examines the distributional tables and calculates measures that can be used to examine the distributional of benefits of the tax cut and the causes of the different results in the two measures.

ABSOLUTE MEASURES

Table 2 presents data that show the average tax saving and the share of taxes saved (the data on income class and population from table 1 is reproduced as well). Recall that JCT is more comparable, based on income shares, with OTA II.

All three measures show rising dollar amounts across the income scale, but the amounts are larger and rise faster with the OTA numbers than with the JCT numbers. For example, in the top one percent of the population (approximately), the tax benefit is close to \$5,000 on average (\$4600 for the top 1.3 percent) in the JCT numbers but is four times as large -- \$20,000 -- in the OTA numbers. The top one percent gets somewhat less than 15 percent of the total tax saving in the JCT numbers, and 20 percent in the OTA numbers. Thus, based on absolute benefits, higher income individuals receive substantially more than do lower income individuals.

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Table 2: Average Tax Benefit and Distribution of Tax Benefit

JCT Average Tax \$ Saving	OTA - I Average Tax \$ Saving	OTA - II Average Tax \$ Saving	JCT Share of Tax Saving (Percent)	OTA - I Share of Tax Saving (Percent)	OTA - II Share of Tax Saving (Percent)
11	20	36	0.4	0.2	0.7
53	90	205	2.6	1.3	4.1
153	247	555	6.0	3.3	10.9
356	569	1021	20.5	11.6	20.2
651	997	1689	22.6	16.4	16.6
921	1572	2274	15.6	15.2	11.3
1378	2466	4122	17.2	23.4	16.2
4605	11266	20362	15.3	28.1	20.1

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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RELATIVE MEASURES

Two relative measures are presented in table 8: the percentage change in taxes paid, which is the only direct measure in the JCT tables, and the percentage change in after tax income, which measures whether the income distribution became more or less equal.

The percentage of tax changes in the JCT numbers are ones that might lead to the impression that the tax benefit is favoring the middle incomes, since the percentage changes are largest in \$30,000 to \$75,000 classes, and smaller at the lower incomes. (Actually, this group covers from the 33rd percentile to the 87th percentile). This pattern does not comport with the OTA measures, which show a generally rising (although declining slightly in some spots) percentage reduction in taxes.

The second measure shows that the tax changes are making the distribution of after tax income more uneven over time under any of the measures. In this case, the percentage changes are not much larger (e.g. 3.1 percent for JCT and 3.3 percent for OTA -II in the top bracket) in the OTA analysis, especially in the top bracket. There are two opposing forces -- the tax cut is larger, but so is economic income.

PROVISIONS THAT CONTRIBUTE TO LARGER TAX BENEFITS IN THE OTA ANALYSIS

While it is not possible to pinpoint exactly the provisions that contribute to the much larger benefits, particularly for higher income individuals, given the data supplied (which OTA only separates for the child credit and capital gains), it is clear that capital gains plays an important role and that the child credit does not. There has been some argument that the child credit should be dropped for families with incomes above \$100,000. This change would have little effect on the distributional results. The child credit is responsible for only 7 percent of the tax benefit in the next to the top bracket of OTA-II (roughly corresponding to the \$100,000 to \$200,000 expanded JCT class and somewhat above the \$100,000 adjusted gross income class). It is more important in the next lower class, (roughly corresponding to the \$75,000 to \$100,000 JCT class), where it accounts for 17 percent. (It has no effect on the top class).

Part of the cause of large tax benefits in the higher incomes is clearly the capital gains tax. The JCT's top bracket, accounting for 1.3 percent of the population distribution, has \$3804 in capital gains tax cuts, while OTA II has \$8037. (These amounts are 83 percent and 39 percent respectively of the total tax cut). Thus perhaps about a third of the differences can be attributed to capital gains. The remainder is probably due to the corporate tax cut attributions (especially neutral cost recovery) and the timing effects both for corporate tax attributions and for IRAs and noncorporate depreciation.

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Table 3. Percentage Changes in Taxes and in Disposable Income

JCT Percent Change: Taxes	OTA - I Percent Change: Taxes	OTA - II Percent Change: Taxes	JCT Percent Change: After-Tax Income	OTA - I Percent Change: After-Tax Income	OTA - II Percent Change: After-Tax Income
-2.3	-4.4	-5.5	0.3	0.4	0.5
-3.4	-6.8	-7.3	0.3	0.7	1.0
-3.9	-7.4	-8.3	0.7	1.1	1.7
-4.4	-8.3	-8.2	1.0	1.8	2.0
-4.4	-8.1	-8.6	1.1	2.0	2.3
-4.0	-8.7	-8.3	1.4	2.3	2.4
-3.7	-8.6	-9.3	2.0	2.4	2.6
-2.9	-9.9	-10.0	3.1	3.1	3.3

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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CONCLUSION

The OTA distributional tables in general indicate larger tax benefits from the Contract with America tax bill and a larger concentration of benefits in higher income classes. Among the highest income group, a significant part of that effect is due to the treatment of capital gains (reflecting both the fixed realizations assumption and the long run treatment). Probably the largest effect is from the attribution of corporate tax benefits (corrected for timing), but there are also effects from the differential treatment of the timing issues associated with IRAs and noncorporate depreciation. On the whole, the OTA methodology is more consistent with how economists would measure burden.

Both the JCT and the OTA data, however, show much larger average tax reductions in the higher income classes than in the lower ones, a significant fraction of the tax benefits accruing to very high income individuals, and a general move toward greater inequality in the distribution of disposable income. <

CRS Report for Congress

Distributional Effects of Tax Provisions in the Contract with America as Reported by the Ways and Means Committee

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April 3, 1995



Congressional Research Service - The Library of Congress



SUMMARY

The House Republican Contract tax proposals, with some modifications, have been reported by the Ways and Means Committee. Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports. The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid, while the OTA provides a more comprehensive measure that is more consistent with how economists would measure the bill's benefits to individuals in different income classes.

Certain aspects of the JCT's distribution tables seem to suggest that the tax benefit is greater for middle income individuals, since the largest percentage changes in tax liability occur in the middle incomes. Treasury's tables indicate that the benefits are concentrated at the higher income levels using a variety of absolute and percentage measures of change.

The OTA analysis has a number of methodological differences from the JCT analysis that are likely to improve their measures of the distribution of benefits of the tax cut, including a "fixed realizations" measure of the capital gains tax cut, attribution of corporate tax cuts (which eventually constitute a third or more of the revenue loss), and corrections to deal with timing problems. The JCT and the OTA also differ in how they measure and classify income. The tables provided also differ in the type of distributional measures presented, with the JCT tables presenting data in terms of percentage changes in tax liability (although they also have some data on new and old effective tax rates from which tax changes as a percent of income can easily be calculated). The OTA presents a variety of measures, including average taxes paid, distribution of the tax cut, and percentage changes in pre-tax income, after-tax income, and tax liability.

Despite the data differences, both distributions show rising average tax cuts across the income classes and a significant portion of the total tax cut accruing to higher income individuals. Use of the appropriate measure of relative effect on income inequality (the percentage change in disposable income) also indicates similar findings in both data sets - the tax benefits tend to make disposable incomes less equal. Tax reductions as a percentage of taxes paid which show the largest percentage changes in the middle income classes in the JCT (but not the OTA) data can be misleading as indicators of relative income distribution effects.

In the top income group (approximately one percent of the population), the average tax cut is close to \$5,000 in the JCT estimate (for the year 2000) and about \$20,000 in the OTA data. The most important tax provisions contributing to this discrepancy (given the methodological differences) are probably capital gains and neutral cost recovery. While some attention has been given to the child credit's role in the distribution of tax benefits, it is not very important for high income individuals, accounting for none of the top one percent of the population's tax cut, and about seven percent of the next four percent of the population in the OTA's data.

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DISTRIBUTIONAL EFFECTS OF TAX PROVISIONS IN THE CONTRACT WITH AMERICA

The House Republican Contract tax bill, with some modifications, has been reported by the Ways and Means Committee.¹ Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports.² The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid for each year from 1995-2000, while the OTA provides a more comprehensive measure more consistent with how economists would measure the bill's benefits to individuals in different income classes. There are also differences in how income is classified and how results are presented. In particular, some results of the JCT analyses seem to suggest that the benefits are more concentrated toward middle income taxpayers, while the OTA analysis suggests the benefits accrue more heavily to high income taxpayers.

The first section of this report summarizes the different distributional analyses provided by the JCT and the OTA. The next section explains the methodological differences between the two, and their consequences for distribution measures. The next section interprets the results of the distributional analysis in the light of this methodological analysis. It also identifies which of the tax provisions strongly influence the results. The final section sums up.

DIFFERENCES IN DISTRIBUTIONAL ANALYSIS

The House Republican Contract tax proposal, with some modifications, has been reported by the Ways and Means Committee. By and large, it retains the original provisions -- the child credit, a fifty percent capital gains exclusion, more generous depreciation benefits under the neutral cost recovery system (NCRS), tax-favored savings accounts, phase-out of the 85 percent maximum inclusion rate for social security, and a number of smaller provisions. It adds some minimum tax relief, however, and restricts the inflation indexing provisions for capital gains.

Both the JCT and the OTA have provided distributional analyses of the effects of the proposal, with substantial differences between their reports both in the underlying data and the method of presentation.

¹ The bill was originally reported as H.R. 1215, and is now a part of H.R. 1327.

² The JCT's estimates are contained in a series of distributional tables dated March 8 and March 9, 1995. The OTA's estimates are contained in a press release issued March 14, 1995.

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The JCT presents individual distribution tables for each year from 1995 to 2000, which measure their estimates of the changes in taxes paid by income class. The only distributional number presented directly in their study is the percentage change in taxes paid. Data presented include the aggregate tax change in each class and the percentage change, current and proposed federal tax distributions across the categories (in dollar aggregates and percentages) and effective tax rates before and after the tax. The OTA presents a distributional analysis that reflects fully phased in law; it also includes several distributional measures — average tax reductions, share of reductions by income class and income quintile, tax change as a percent of income, tax change as a percent of after-tax income, and tax change as a percent of taxes paid.

DIFFERENCES IN FUNDAMENTAL METHODOLOGIES

There are several methodological differences between the JCT's tables and the OTA's tables. These differences have the effect of making the relative benefits of the tax change for high income individuals smaller in the Joint Tax Committee's tables than in the Treasury's tables. In general, the Treasury Department's treatment is more consistent with how economists would analyze the distributional burden of a tax change. There are also differences in how the data are presented that can make a difference in the impression conveyed by these tables.

The following subsections discuss these methodological and presentational differences, which include treatment of behavioral responses, imputation of corporate tax, timing of tax benefits, differences in income classifiers, and differences in presentation.

BEHAVIORAL RESPONSES AND CAPITAL GAINS TAX CUTS

Any tax analysis involves some types of behavioral responses, if nothing more than making individual decisions (such as choosing whether or not to itemize deductions) that have virtually no real consequences other than to take full advantage of tax savings. There are also behavioral responses that involve a benefit or cost that is very real (such as choosing to work or save more, which involves changing patterns of consumption). Specifically, the important behavioral response of this latter type included in the revenue estimates for the Contract is the assumption that individuals will increase their realizations of capital gains as a result of the tax cut.

Both the JCT's and the OTA's revenue estimates of the proposal have included a variety of behavioral responses, but they differ in the treatment of the realizations response in their distributional tables.

The JCT has departed from previous practice (a change that was also made with some tables prepared in 1994) by simply reporting the distribution of taxes paid after taking into account expected changes in realizations.

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The OTA calculated taxes paid holding realizations constant (unchanged by the new tax provisions). The OTA approach is generally consistent with historical practices (as, for example, practiced during consideration of the Tax Reform Act of 1986). In some cases, OTA departed from this practice in the Bush Administration, by providing tables showing the distribution of taxes paid.

Note that these behavioral effects did not matter very much for the tax legislation in 1993 and no significant tax legislation was considered in 1994; thus, in a sense the issue of how to prepare distributional tables has not been a subject of direct policy significance since 1992 (when capital gains was last considered).

While this issue is not important when behavioral responses are small, they are important when they are large. The current revenue estimating practices of the Joint Committee on Taxation include a significant increase in realizations when capital gains tax cuts are introduced.

A table that reports taxes paid after behavioral responses are taken into account shows how the increased or decreased revenues will be spread across the income classes -- that is, which classes are actually expected to be paying more or less taxes and by how much.

Using the distribution of taxes paid as now reported by the Joint Tax Committee (after behavioral responses) may not yield a full or proper measure of the tax burden, and in particular that it can be misleading in the case of the capital gains tax where a large behavioral response is incorporated. This rationale is spelled out in the following quotation from a paper about the capital gains tax co-authored by Gravelle and Lindsey:³

"When considering the issue of tax equity, it is important to distinguish between the distribution of taxes paid and the distribution of the tax burden. For example, suppose a reduction in the capital gains tax rate led to substantially more capital gains realizations and actually increased the tax revenue paid by upper-income groups. While the distribution of taxes paid would have been shifted more into upper-income groups, it would be totally inappropriate to say that their tax burden had increased. After all, with a lower tax rate, these upper-income taxpayers are less burdened than they were before, even though they pay more taxes.

In this regard it is important to note that the distributional tables compiled by the Joint Committee on Taxation ignore the effect of taxpayer behavior when considering the distributional effect of a given tax change. This method is correct for considering the impact of the tax burden, but does not accurately reflect the distribution of taxes paid...

³ Jane G. Gravelle and Lawrence B. Lindsey, Capital Gains, Tax Notes, January 25, 1988, p. 399.

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...Distributional equity focuses on the total burden imposed by the tax, not on the revenue collected."

As suggested in this quote, the use of taxes paid in distributional tables could imply, under some circumstances, that cutting tax rates harms taxpayers and that increasing them benefits taxpayers.

While current behavioral responses used in revenue estimating are not large enough to actually result in increased revenues for the capital gains tax cut (except perhaps for some taxpayers in the initial year), especially given the size of the tax cut, the magnitude of tax reductions will be greatly reduced. They will also be disproportionately reduced for high income taxpayers. For example, considering just the exclusion, the realization response for taxpayers in the highest rate brackets will reduce revenue losses by 80 percent after the first year. For the 28 percent bracket, losses will be reduced by about 60 percent, and for the 15 percent bracket, by 30 percent. Thus, incorporating capital gains into the distributional tables after accounting for realizations responses, as is done in the Joint Committee's estimates, greatly diminishes the importance of the capital gains tax (which primarily benefits higher income individuals) in the distributional numbers.

In any case, the behavioral response that results in more tax payments is a voluntary action that could not be expected to make the individual worse off - rather he is willing to pay this tax for something that is of as great or greater value (presumably the benefits of converting an investment into some other form). Indeed, if anything, the benefit of the capital gains tax cut is larger than the static revenue effect.⁴

This sentiment that using taxes paid is not a good measure of the actual benefits or burdens of a tax change is echoed in certain publications of these official organizations as well. For example, in an earlier analysis of the methodology (hereafter called the "Red Book") of distributional tables, the Joint Tax Committee stated in discussing the distributional effects of a change in the tax rate: "For changes in the rate of a preexisting tax, the static revenue change generally is a superior approximation to the change in economic well being."⁵

The OTA produced tables of the distribution of taxes paid for the 1990 capital gains tax cut proposal and argued that it would raise revenues and that taxes

⁴ This observation means, of course, that the existing measure of tax burden is also too small; in fact, the burden is, in theory, the sum of actual taxes paid and the implicit cost of any behavioral distortions induced by the tax -- in the case of capital gains, the lock-in effect. Also, the static estimate of an increase in the tax burden would also be too small; but the static estimate would still be a better measure than the even smaller measure of taxes paid after avoidance behavior is initiated.

⁵ Joint Committee on Taxation. Methodology and Issues in Measuring Changes in the Distribution of Tax Burdens. Joint Committee Print, Washington, D.C.: U.S. Government Printing Office, June 14, 1993.

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paid was the appropriate measure of distribution. Notably, they also produced tables of static estimates, and were clearly aware of the inappropriate implications for these tables, noting: "...while high-income taxpayers would pay more in taxes, they would be better off because the lower capital gains tax rates will allow them to make investment decisions with less concern about the tax impact."⁶

This issue is not likely to arise in the economics literature where the fundamentals of how, in theory, to measure benefits are well established -- and the recognition that the benefit of cutting a tax is likely to be larger than the reduction in tax assuming no behavioral change is basic to tax analysis.⁷ When the policy making process is discussed, however, economists would, as in the case of Gravelle and Lindsey, reject the simple taxes-paid table as a measure of the distribution of tax burdens and benefits and, indeed, suggest that the "constant realizations" measure understates the benefits of a tax change. For example, Auten and Cordes state: "Additional taxes paid on induced realizations result from voluntary sales of assets, and taxpayers who choose to sell assets must be at least as well off as if they didn't change their behavior."⁸ Similarly, Davis states: "I have argued that a relatively simple "static" approach -- recalculation of tax liabilities -- produced satisfactory measurements for the distribution of benefits from a capital gains tax cut. If these measures were biased, they understated the size of the tax benefit."⁹

It is also important to note that the JCT's estimate of the realizations response, which, as will be shown below, so affects the distributional results, is not a response that is measured with any precision; indeed, recent research suggests that it may be too large.¹⁰

⁶ Statement of Kenneth W. Gideon, Assistant Secretary (Tax Policy), Department of the Treasury, Before the Committee on Finance, United States Senate, March 6, 1990.

⁷ Technically speaking, the burden of a tax is the sum of the taxes paid and the "excess burden" that results from the implicit cost of changing behavior.

⁸ Gerald A. Auten and Joseph J. Cordes, Policy Watch: Cutting the Capital Gains Tax, *Journal of Economic Perspectives*, Vol. 5, Winter 1991, p. 188.

⁹ Albert J. Davis, Measuring the Distributional Effects of Tax Changes for the Congress. *National Tax Journal*, Vol. 44, September 1991, p. 265.

¹⁰ The issue of the realizations response is by no means resolved, since the current literature contains a significant range of estimates. Moreover, the Joint Committee's estimate dates from 1990, and some research since that time has indicated that, at least after the first year or so, the realizations response is probably much lower. See Jane G. Gravelle, *The Economic Effects of Taxing Capital Income*, Chapter 6, Cambridge, Mass. MIT Press, 1994 for a review of the realizations literature.

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ATTRIBUTION OF CORPORATE TAXES

The JCT distribution tables do not include the corporate tax, even though it is clear that someone must pay the corporate tax. As discussed below, the corporate tax reductions -- primarily the depreciation changes - are responsible for perhaps a third or so of the tax reduction.

What is a reasonable assumption here? Generally, in the short run, it is presumed that the tax falls on the owners of the firm, who are unable to alter their capital stock. In the long run, the traditional economics literature indicates that the tax is likely to fall on capital in general.¹¹

The JCT has indicated in its tables that it does not include the corporate tax because of the uncertainties about where the burden of the tax falls. In general, it was the JCT's practice for many years simply not to attribute the corporate tax. In the "Red Book," however, the JCT subsequently indicated a decision to distribute the tax to the owners of corporate equities, essentially reflecting a short run assumption. This decision has apparently been reversed.

The Treasury Department attributes the tax to capital in general, consistent with the economics literature and their longer term perspective on distributional analysis. (Actually, the attribution of the tax to corporate equity owners would make the distribution of the tax in distributional tables more progressive, and increase the fraction of the tax benefit that accrues to higher income individuals). The Treasury did not always attribute the corporate tax. For example, in the 1986 Tax Reform Act, corporate tax liabilities were not attributed; indeed, this was the subject of an analysis by Feldstein discussing how the distributional effects of the tax might be modified with attribution of the corporate tax. (Feldstein assigned the tax to all capital as does the Treasury in its current analysis.)¹² For the last several years, however, the Treasury has been attributing the tax

¹¹ The Harberger model of the tax (Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, *Journal of Political Economy*, vol. 70, June 1962, pp. 215-240) shows that the tax can in some cases fall more than 100 percent on capital (and benefit labor) and in other cases fall less than 100 percent on capital, but the general tendency is for the tax to fall on capital, under reasonable behavioral assumptions. This model was one of a closed economy. However, assuming that capital, although mobile, cannot be perfectly substituted around the world and that imports and domestic production are imperfect substitutions, this finding also tends to hold in an open economy. See Jane G. Gravelle, *Corporate Tax Incidence in an Open Economy*, 1993 Proceedings of the National Tax Association, Tax Institute of America, pp. 175-178.

¹² See Martin Feldstein, *Imputing Corporate Tax Liabilities to Individual Taxpayers*, *National Tax Journal*, March 1988, vol 41, pp. 37-60. This issue was also explored by several other researchers. See Jane G. Gravelle, *Equity Effects of the Tax Reform Act of 1986*, *Journal of Economic Perspectives*, Vol. 6, Winter 1992, pp. 27-44 for a discussion of these analyses.

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to all capital and it is continuing that treatment in its distributional estimates of the Contract with America tax proposals.

The attribution of corporate taxes has a significant effect on the estimated revenue cost of the tax proposals and (given that the timing issue can be effectively dealt with) will have a large effect on distribution of the tax benefit when attributed to capital, since capital income is more concentrated in the higher income classes. The major provision is the Neutral Cost Recovery System (NCRS) which will eventually involve substantial amounts of revenue losses and is largely not included in the JCT's tables.

TIMING ISSUES

The provisions in the bill are estimated to bring about much larger revenue losses over time that reflect, primarily, the timing of tax benefits. Overall, the magnitude of cash flow benefits increases substantially over time, as can be seen in OTA's revenue estimates which cover an additional five years, from 2001-2005. (Overall, the estimates actually cover six years for the Joint Tax Committee, and 11 years for the Treasury, but the first year, FY 1995, has very small effects on the totals and actually make them larger).

According to the Treasury Department the cost from 1995-2000 is \$178.1 billion, while the cost from 1995-2005 is \$630.2 billion. Thus, the second-five-year cost of \$452.1 billion is much larger than the first five years. Assuming a nominal growth of 6 percent to project the normal growth that would be expected, the increase in the second five years, holding income constant, is about 90 percent; thus the costs almost double between the first and the second five years.

This growth is due only to certain provisions, as can be seen by examining the dominant revenue losers in each period. In the first five-year period, the \$500 child credit accounts for 62 percent of the cost, capital gains for 16 percent, the Alternative Minimum Tax Provision for 11 percent, the elimination of taxes on part of social security for 9 percent, and the marriage penalty relief for 5 percent. In the second five-year period, however, the largest revenue loser was the neutral cost recovery system, accounting for 31 percent. The child care credit has declined in share to 28 percent, the capital gains provision is about the same at 14 percent, the social security provision is about the same at 8 percent, and the IRA provision is responsible for 6 percent.

These changes occur for a variety of reasons. NCRS is designed so that it raises revenue in the first five years (through the slow-down in depreciation) but its true benefit is large and it grows rapidly until it becomes the single largest provision. Its growth far outstrips the growth in the overall size of the package. The child care credit, however, has not changed much in nominal terms, perhaps because any growth due to inflation is small and offset by demographic changes. Thus, it falls in share by over fifty percent. Capital gains revenue losses are growing rapidly because of indexation (and the interaction of this further tax cut with behavioral effects), and have grown about as fast as the overall cost. Social security is also growing naturally though demographics and benefit growth. Finally, IRAs

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become more important because of the accumulation of amounts in tax-favored accounts. The AMT has, however, diminished in relative size along with the marriage penalty relief.

These trends actually continue -- the real cost of the package will continue to grow due to certain provisions that tend to grow (NCRS, capital gains, and individual retirement accounts). In particular, neutral cost recovery, will likely continue to rise in real terms for many years.¹⁸

The treatment of timing issues is not always straightforward and it is hard to develop a consistent rule, although it is frequently the case that a cash flow measure will be misleading. The JCT has simply examined several years and used the cash flow approach, even through this causes the form of the tax benefit to strongly influence the projected revenue costs.

The Treasury Department has used an approach that is consistent, at least for these provisions, with their focus on the permanent distributional effects of tax changes. They have used fully phased-in provisions (e.g. full indexing) with long run behavior. For those provisions such as depreciation and IRAs where the same economic benefit can produce dramatically different cash flow patterns, they have calculated the present value of tax benefits associated with this year's investment or savings. Essentially, the depreciation benefits have been converted into an investment credit of equivalent value; similarly, the IRA benefits are measured as an initial credit. This is a pattern that will yield the same result for provisions with the same economic value. By contrast, the JCT's cash flow approach would yield very different effects if different forms of benefits were chosen (i.e. front-loaded rather than back-loaded IRAs, or direct expensing rather than the expensing equivalent via increased future depreciation deductions).

INCOME CLASSIFIERS

The JCT and the Treasury also differ in the measurement of income classes. The JCT uses tax return data and adds back to adjusted gross income to generate an expanded income class that includes nine separate classes. Adjusted gross income is increased by health care fringe benefits, tax-exempt interest, social security

¹⁸ See Jane G. Gravelle, Estimating Long-Run Revenue Effects of Tax Law Changes, *Eastern Economic Journal*, Vol. 19, No. 4, Fall 1993, pp. 481-494, for a general discussion of the revenue estimating issues arising with tax changes that have uneven patterns over time; this discussion includes a graphical presentation of the time path of back-loaded vs. front-loaded IRAs and prospective capital gains tax indexing. The revenue patterns of several tax provisions in the Contract are discussed in other CRS products. NCRS is discussed in David L. Brumbaugh and Jane G. Gravelle, *The Neutral Cost Recovery System and the House Republican Contract*, Congressional Research Service report 95-161 E; capital gains tax change in testimony of Jane G. Gravelle, on *Capital Gains Tax Proposals*, Before the Committee on Finance, February 15, 1995 and *IRA proposals* in Jane G. Gravelle, *Individual Retirement Accounts (IRAs) and Related Proposals*, Congressional Research Service Report 95-420, March 24, 1995.

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benefits not otherwise included in income, the insurance value of medicare, the employer's share of the FICA tax, certain tax preference items, and excluded income of individuals living abroad. Individuals with zero incomes are excluded.

The Treasury Department uses an expanded income concept that is more consistent with economists' income concepts, including not only most of the items included by the JCT but also additional returns to capital (such as imputed income on owner-occupied housing, the returns to pension and related plans, and adjustments for accrued, real capital gains). Income is measured on a family income basis so that individuals living in families who might file separate returns are combined, and is reported in two ways -- by the same income classes (with two combined) as the JCT data (which we term OTA -I), and by population shares (which we term OTA-II). It also includes individuals with zero or negative incomes.

In comparing the distributional tables it is important to distinguish between the differences due to different measures of income and those due to other methodological differences. Table 1 provides a comparison of these income classifiers by juxtaposing income shares with dollar levels of income. In this and all other comparisons, we use the JCT estimates for the year 2000 which move closer to

Table 1: Income Classes and Population Shares, JCT and OTA Distribution Tables

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles. The total units in the OTA tables is 109.4 million (families); total units in the JCT tables are 136.2 million (returns).

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a permanent distribution than any of the other years. (Income categories are measured at 1995 levels for the JCT, but the distribution reflects year 2000 distributions of returns; all data are measured at 1996 income levels for the OTA data). Note also that some members of a high income family in the family classification of the OTA could appear as lower income tax returns in the JCT distribution.

As this table shows, although both report the same income levels, much more of the population is in the higher income levels for OTA -I than for JCT. Twice as large a share of the population units is in the OTA's \$200,000 class than in the JCT's \$200,000.

The table also shows that although the OTA- II table, which involves shares of the population, is actually more closely comparable to the JCT than either is to OTA - I, even though the nominal income levels are different. Again this is due to the expanded income concept which includes much more imputed, unrealized and transferred income than the JCT income concept.

PRESENTATION OF INFORMATION

The JCT and OTA tables also differ in how the information is presented. Both present overall tax reductions by income class, but this raw information has no frame of reference (i.e., one does not know whether the amounts in a category are large because the benefit is large or because there are a lot of people in the category). Rather, this information must be transformed in some way to provide information on distributional effects.

The JCT tables present only one type of direct distributional measure: the percentage change in tax liabilities. The OTA presents five different types of measures: the average tax reduction, the percentage distribution of the tax reduction, and the tax change as a percent of pre-tax income, after-tax income, and taxes paid.¹⁴

In discussing these measures it may be appropriate to distinguish between absolute measures and relative measures. For example, average tax reductions per unit provide information on the absolute size of a tax benefit across the income classes, which is a straightforward measure. Another way of examining this same effect is to compare the distribution of the tax benefit with the distribution of the population. If each proportion of the population is getting the same share of the benefit, then the benefits are equal. Both of these measures can inform us about how a tax cut is changing income without being misleading.

¹⁴ Most of the measures presented in the OTA tables can be derived from the JCT tables except for those that require a distribution of returns (e.g. average tax benefit per return). Data on the distribution of returns is, however, available from the JCT. Since, they also present effective tax rates before and after the changes, it would be a simple matter to see the change as a percent of pre-tax income).

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A different type of measure is a relative one that tries to examine how the tax benefit is changing the overall distribution of income in the country -- that is, is it making incomes more equal or less equal? In general, the best method for measuring this is to examine the percentage change in disposable (after-tax) income. If the percentage change is equal, then the tax change is not making incomes more equal or less equal. If the percentages are higher among higher income individuals the change is making incomes less equal.

What about the role of the other percentage measures -- of pre-tax income and of taxable income. The former will tend to produce slightly different percentages (and smaller ones) when taxes are already present and is not as precise in indicating the overall effects on income equality. The percentage of tax changes can, however, be misleading. If the percentages rise across the income levels (given an initial progressive system, the results indicate less equality. If they fall, however, the percentages can be very misleading. For example, suppose that a family pays only \$10 dollars in income tax. A ten dollar tax cut will, therefore, be a 100 percent tax reduction and will appear very large. For this reason, tables of percentage changes in taxes paid may indicate very little about the distributional benefits of a tax change.

COMPARISON OF DISTRIBUTIONAL EFFECTS

This section examines the distributional tables and calculates measures that can be used to examine the distributional of benefits of the tax cut and the causes of the different results in the two measures.

ABSOLUTE MEASURES

Table 2 presents data that show the average tax saving and the share of taxes saved (the data on income class and population from table 1 is reproduced as well). Recall that JCT is more comparable, based on income shares, with OTA II.

All three measures show rising dollar amounts across the income scale, but the amounts are larger and rise faster with the OTA numbers than with the JCT numbers. For example, in the top one percent of the population (approximately), the tax benefit is close to \$5,000 on average (\$4600 for the top 1.3 percent) in the JCT numbers but is four times as large -- \$20,000 -- in the OTA numbers. The top one percent gets somewhat less than 15 percent of the total tax saving in the JCT numbers, and 20 percent in the OTA numbers. Thus, based on absolute benefits, higher income individuals receive substantially more than do lower income individuals.

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Table 2: Average Tax Benefit and Distribution of Tax Benefit

JCT Average Tax \$ Saving	OTA - I Average Tax \$ Saving	OTA - II Average Tax \$ Saving	JCT Share of Tax Saving (Percent)	OTA - I Share of Tax Saving (Percent)	OTA - II Share of Tax Saving (Percent)
11	20	36	0.4	0.2	0.7
53	90	205	2.6	1.3	4.1
153	247	555	6.0	3.3	10.9
356	569	1021	20.5	11.6	20.2
651	997	1689	22.6	16.4	16.6
921	1572	2274	15.6	15.2	11.3
1378	2466	4122	17.2	23.4	16.2
4605	11266	20362	15.3	28.1	20.1

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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RELATIVE MEASURES

Two relative measures are presented in table 8: the percentage change in taxes paid, which is the only direct measure in the JCT tables, and the percentage change in after tax income, which measures whether the income distribution became more or less equal.

The percentage of tax changes in the JCT numbers are ones that might lead to the impression that the tax benefit is favoring the middle incomes, since the percentage changes are largest in \$30,000 to \$75,000 classes, and smaller at the lower incomes. (Actually, this group covers from the 33rd percentile to the 87th percentile). This pattern does not comport with the OTA measures, which show a generally rising (although declining slightly in some spots) percentage reduction in taxes.

The second measure shows that the tax changes are making the distribution of after tax income more uneven over time under any of the measures. In this case, the percentage changes are not much larger (e.g. 3.1 percent for JCT and 3.3 percent for OTA-II in the top bracket) in the OTA analysis, especially in the top bracket. There are two opposing forces -- the tax cut is larger, but so is economic income.

PROVISIONS THAT CONTRIBUTE TO LARGER TAX BENEFITS IN THE OTA ANALYSIS

While it is not possible to pinpoint exactly the provisions that contribute to the much larger benefits, particularly for higher income individuals, given the data supplied (which OTA only separates for the child credit and capital gains), it is clear that capital gains plays an important role and that the child credit does not. There has been some argument that the child credit should be dropped for families with incomes above \$100,000. This change would have little effect on the distributional results. The child credit is responsible for only 7 percent of the tax benefit in the next to the top bracket of OTA-II (roughly corresponding to the \$100,000 to \$200,000 expanded JCT class and somewhat above the \$100,000 adjusted gross income class). It is more important in the next lower class, (roughly corresponding to the \$75,000 to \$100,000 JCT class), where it accounts for 17 percent. (It has no effect on the top class).

Part of the cause of large tax benefits in the higher incomes is clearly the capital gains tax. The JCT's top bracket, accounting for 1.3 percent of the population distribution, has \$3804 in capital gains tax cuts, while OTA II has \$8037. (These amounts are 83 percent and 39 percent respectively of the total tax cut). Thus perhaps about a third of the differences can be attributed to capital gains. The remainder is probably due to the corporate tax cut attributions (especially neutral cost recovery) and the timing effects both for corporate tax attributions and for IRAs and noncorporate depreciation.

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Table 3. Percentage Changes in Taxes and in Disposable Income

JCT Percent Change: Taxes	OTA - I Percent Change: Taxes	OTA - II Percent Change: Taxes	JCT Percent Change: After-Tax Income	OTA - I Percent Change: After-Tax Income	OTA - II Percent Change: After-Tax Income
-2.3	-4.4	-5.5	0.3	0.4	0.5
-3.4	-6.8	-7.3	0.3	0.7	1.0
-3.9	-7.4	-8.3	0.7	1.1	1.7
-4.4	-8.3	-8.2	1.0	1.8	2.0
-4.4	-8.1	-8.6	1.1	2.0	2.3
-4.0	-8.7	-8.3	1.4	2.3	2.4
-3.7	-8.6	-9.3	2.0	2.4	2.6
-2.9	-9.9	-10.0	3.1	3.1	3.3

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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CONCLUSION

The OTA distributional tables in general indicate larger tax benefits from the Contract with America tax bill and a larger concentration of benefits in higher income classes. Among the highest income group, a significant part of that effect is due to the treatment of capital gains (reflecting both the fixed realizations assumption and the long run treatment). Probably the largest effect is from the attribution of corporate tax benefits (corrected for timing), but there are also effects from the differential treatment of the timing issues associated with IRAs and noncorporate depreciation. On the whole, the OTA methodology is more consistent with how economists would measure burden.

Both the JCT and the OTA data, however, show much larger average tax reductions in the higher income classes than in the lower ones, a significant fraction of the tax benefits accruing to very high income individuals, and a general move toward greater inequality in the distribution of disposable income.

CRS Report for Congress

Distributional Effects of Tax Provisions in the Contract with America as Reported by the Ways and Means Committee

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April 3, 1995



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SUMMARY

The House Republican Contract tax proposals, with some modifications, have been reported by the Ways and Means Committee. Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports. The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid, while the OTA provides a more comprehensive measure that is more consistent with how economists would measure the bill's benefits to individuals in different income classes.

Certain aspects of the JCT's distribution tables seem to suggest that the tax benefit is greater for middle income individuals, since the largest percentage changes in tax liability occur in the middle incomes. Treasury's tables indicate that the benefits are concentrated at the higher income levels using a variety of absolute and percentage measures of change.

The OTA analysis has a number of methodological differences from the JCT analysis that are likely to improve their measures of the distribution of benefits of the tax cut, including a "fixed realizations" measure of the capital gains tax cut, attribution of corporate tax cuts (which eventually constitute a third or more of the revenue loss), and corrections to deal with timing problems. The JCT and the OTA also differ in how they measure and classify income. The tables provided also differ in the type of distributional measures presented, with the JCT tables presenting data in terms of percentage changes in tax liability (although they also have some data on new and old effective tax rates from which tax changes as a percent of income can easily be calculated). The OTA presents a variety of measures, including average taxes paid, distribution of the tax cut, and percentage changes in pre-tax income, after-tax income, and tax liability.

Despite the data differences, both distributions show rising average tax cuts across the income classes and a significant portion of the total tax cut accruing to higher income individuals. Use of the appropriate measure of relative effect on income inequality (the percentage change in disposable income) also indicates similar findings in both data sets - the tax benefits tend to make disposable incomes less equal. Tax reductions as a percentage of taxes paid which show the largest percentage changes in the middle income classes in the JCT (but not the OTA) data can be misleading as indicators of relative income distribution effects.

In the top income group (approximately one percent of the population), the average tax cut is close to \$5,000 in the JCT estimate (for the year 2000) and about \$20,000 in the OTA data. The most important tax provisions contributing to this discrepancy (given the methodological differences) are probably capital gains and neutral cost recovery. While some attention has been given to the child credit's role in the distribution of tax benefits, it is not very important for high income individuals, accounting for none of the top one percent of the population's tax cut, and about seven percent of the next four percent of the population in the OTA's data.

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DISTRIBUTIONAL EFFECTS OF TAX PROVISIONS IN THE CONTRACT WITH AMERICA

The House Republican Contract tax bill, with some modifications, has been reported by the Ways and Means Committee.¹ Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports.² The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid for each year from 1995-2000, while the OTA provides a more comprehensive measure more consistent with how economists would measure the bill's benefits to individuals in different income classes. There are also differences in how income is classified and how results are presented. In particular, some results of the JCT analyses seem to suggest that the benefits are more concentrated toward middle income taxpayers, while the OTA analysis suggests the benefits accrue more heavily to high income taxpayers.

The first section of this report summarizes the different distributional analyses provided by the JCT and the OTA. The next section explains the methodological differences between the two, and their consequences for distribution measures. The next section interprets the results of the distributional analysis in the light of this methodological analysis. It also identifies which of the tax provisions strongly influence the results. The final section sums up.

DIFFERENCES IN DISTRIBUTIONAL ANALYSIS

The House Republican Contract tax proposal, with some modifications, has been reported by the Ways and Means Committee. By and large, it retains the original provisions -- the child credit, a fifty percent capital gains exclusion, more generous depreciation benefits under the neutral cost recovery system (NCRS), tax-favored savings accounts, phase-out of the 85 percent maximum inclusion rate for social security, and a number of smaller provisions. It adds some minimum tax relief, however, and restricts the inflation indexing provisions for capital gains.

Both the JCT and the OTA have provided distributional analyses of the effects of the proposal, with substantial differences between their reports both in the underlying data and the method of presentation.

¹ The bill was originally reported as H.R. 1215, and is now a part of H.R. 1327.

² The JCT's estimates are contained in a series of distributional tables dated March 8 and March 9, 1995. The OTA's estimates are contained in a press release issued March 14, 1995.

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The JCT presents individual distribution tables for each year from 1995 to 2000, which measure their estimates of the changes in taxes paid by income class. The only distributional number presented directly in their study is the percentage change in taxes paid. Data presented include the aggregate tax change in each class and the percentage change, current and proposed federal tax distributions across the categories (in dollar aggregates and percentages) and effective tax rates before and after the tax. The OTA presents a distributional analysis that reflects fully phased in law; it also includes several distributional measures — average tax reductions, share of reductions by income class and income quintile, tax change as a percent of income, tax change as a percent of after-tax income, and tax change as a percent of taxes paid.

DIFFERENCES IN FUNDAMENTAL METHODOLOGIES

There are several methodological differences between the JCT's tables and the OTA's tables. These differences have the effect of making the relative benefits of the tax change for high income individuals smaller in the Joint Tax Committee's tables than in the Treasury's tables. In general, the Treasury Department's treatment is more consistent with how economists would analyze the distributional burden of a tax change. There are also differences in how the data are presented that can make a difference in the impression conveyed by these tables.

The following subsections discuss these methodological and presentational differences, which include treatment of behavioral responses, imputation of corporate tax, timing of tax benefits, differences in income classifiers, and differences in presentation.

BEHAVIORAL RESPONSES AND CAPITAL GAINS TAX CUTS

Any tax analysis involves some types of behavioral responses, if nothing more than making individual decisions (such as choosing whether or not to itemize deductions) that have virtually no real consequences other than to take full advantage of tax savings. There are also behavioral responses that involve a benefit or cost that is very real (such as choosing to work or save more, which involves changing patterns of consumption). Specifically, the important behavioral response of this latter type included in the revenue estimates for the Contract is the assumption that individuals will increase their realizations of capital gains as a result of the tax cut.

Both the JCT's and the OTA's revenue estimates of the proposal have included a variety of behavioral responses, but they differ in the treatment of the realizations response in their distributional tables.

The JCT has departed from previous practice (a change that was also made with some tables prepared in 1994) by simply reporting the distribution of taxes paid after taking into account expected changes in realizations.

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The OTA calculated taxes paid holding realizations constant (unchanged by the new tax provisions). The OTA approach is generally consistent with historical practices (as, for example, practiced during consideration of the Tax Reform Act of 1986). In some cases, OTA departed from this practice in the Bush Administration, by providing tables showing the distribution of taxes paid.

Note that these behavioral effects did not matter very much for the tax legislation in 1993 and no significant tax legislation was considered in 1994; thus, in a sense the issue of how to prepare distributional tables has not been a subject of direct policy significance since 1992 (when capital gains was last considered).

While this issue is not important when behavioral responses are small, they are important when they are large. The current revenue estimating practices of the Joint Committee on Taxation include a significant increase in realizations when capital gains tax cuts are introduced.

A table that reports taxes paid after behavioral responses are taken into account shows how the increased or decreased revenues will be spread across the income classes -- that is, which classes are actually expected to be paying more or less taxes and by how much.

Using the distribution of taxes paid as now reported by the Joint Tax Committee (after behavioral responses) may not yield a full or proper measure of the tax burden, and in particular that it can be misleading in the case of the capital gains tax where a large behavioral response is incorporated. This rationale is spelled out in the following quotation from a paper about the capital gains tax co-authored by Gravelle and Lindsey:²

"When considering the issue of tax equity, it is important to distinguish between the distribution of taxes paid and the distribution of the tax burden. For example, suppose a reduction in the capital gains tax rate led to substantially more capital gains realizations and actually increased the tax revenue paid by upper-income groups. While the distribution of taxes paid would have been shifted more into upper-income groups, it would be totally inappropriate to say that their tax burden had increased. After all, with a lower tax rate, these upper-income taxpayers are less burdened than they were before, even though they pay more taxes.

In this regard it is important to note that the distributional tables compiled by the Joint Committee on Taxation ignore the effect of taxpayer behavior when considering the distributional effect of a given tax change. This method is correct for considering the impact of the tax burden, but does not accurately reflect the distribution of taxes paid...

² Jane G. Gravelle and Lawrence B. Lindsey, Capital Gains, Tax Notes, January 25, 1988, p. 399.

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...Distributional equity focuses on the total burden imposed by the tax, not on the revenue collected."

As suggested in this quote, the use of taxes paid in distributional tables could imply, under some circumstances, that cutting tax rates harms taxpayers and that increasing them benefits taxpayers.

While current behavioral responses used in revenue estimating are not large enough to actually result in increased revenues for the capital gains tax cut (except perhaps for some taxpayers in the initial year), especially given the size of the tax cut, the magnitude of tax reductions will be greatly reduced. They will also be disproportionately reduced for high income taxpayers. For example, considering just the exclusion, the realization response for taxpayers in the highest rate brackets will reduce revenue losses by 80 percent after the first year. For the 28 percent bracket, losses will be reduced by about 60 percent, and for the 15 percent bracket, by 30 percent. Thus, incorporating capital gains into the distributional tables after accounting for realizations responses, as is done in the Joint Committee's estimates, greatly diminishes the importance of the capital gains tax (which primarily benefits higher income individuals) in the distributional numbers.

In any case, the behavioral response that results in more tax payments is a voluntary action that could not be expected to make the individual worse off - rather he is willing to pay this tax for something that is of as great or greater value (presumably the benefits of converting an investment into some other form). Indeed, if anything, the benefit of the capital gains tax cut is larger than the static revenue effect.⁴

This sentiment that using taxes paid is not a good measure of the actual benefits or burdens of a tax change is echoed in certain publications of these official organizations as well. For example, in an earlier analysis of the methodology (hereafter called the "Red Book") of distributional tables, the Joint Tax Committee stated in discussing the distributional effects of a change in the tax rate: "For changes in the rate of a preexisting tax, the static revenue change generally is a superior approximation to the change in economic well being."⁵

The OTA produced tables of the distribution of taxes paid for the 1990 capital gains tax cut proposal and argued that it would raise revenues and that taxes

⁴ This observation means, of course, that the existing measure of tax burden is also too small; in fact, the burden is, in theory, the sum of actual taxes paid and the implicit cost of any behavioral distortions induced by the tax -- in the case of capital gains, the lock-in effect. Also, the static estimate of an increase in the tax burden would also be too small; but the static estimate would still be a better measure than the even smaller measure of taxes paid after avoidance behavior is initiated.

⁵ Joint Committee on Taxation. *Methodology and Issues in Measuring Changes in the Distribution of Tax Burdens*. Joint Committee Print, Washington, D.C.: U.S. Government Printing Office, June 14, 1993.

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paid was the appropriate measure of distribution. Notably, they also produced tables of static estimates, and were clearly aware of the inappropriate implications for these tables, noting: "...while high-income taxpayers would pay more in taxes, they would be better off because the lower capital gains tax rates will allow them to make investment decisions with less concern about the tax impact."⁶

This issue is not likely to arise in the economics literature where the fundamentals of how, in theory, to measure benefits are well established -- and the recognition that the benefit of cutting a tax is likely to be larger than the reduction in tax assuming no behavioral change is basic to tax analysis.⁷ When the policy making process is discussed, however, economists would, as in the case of Gravelle and Lindsey, reject the simple taxes-paid table as a measure of the distribution of tax burdens and benefits and, indeed, suggest that the "constant realizations" measure understates the benefits of a tax change. For example, Auten and Cordes state: "Additional taxes paid on induced realizations result from voluntary sales of assets, and taxpayers who choose to sell assets must be at least as well off as if they didn't change their behavior."⁸ Similarly, Davis states: "I have argued that a relatively simple 'static' approach -- recalculation of tax liabilities -- produced satisfactory measurements for the distribution of benefits from a capital gains tax cut. If these measures were biased, they understated the size of the tax benefit."⁹

It is also important to note that the JCT's estimate of the realizations response, which, as will be shown below, so affects the distributional results, is not a response that is measured with any precision; indeed, recent research suggests that it may be too large.¹⁰

⁶ Statement of Kenneth W. Gideon, Assistant Secretary (Tax Policy), Department of the Treasury, Before the Committee on Finance, United States Senate, March 6, 1990.

⁷ Technically speaking, the burden of a tax is the sum of the taxes paid and the "excess burden" that results from the implicit cost of changing behavior.

⁸ Gerald A. Auten and Joseph J. Cordes, Policy Watch: Cutting the Capital Gains Tax, *Journal of Economic Perspectives*, Vol. 5, Winter 1991, p. 188.

⁹ Albert J. Davis, Measuring the Distributional Effects of Tax Changes for the Congress. *National Tax Journal*, Vol. 44, September 1991, p. 265.

¹⁰ The issue of the realizations response is by no means resolved, since the current literature contains a significant range of estimates. Moreover, the Joint Committee's estimate dates from 1990, and some research since that time has indicated that, at least after the first year or so, the realizations response is probably much lower. See Jane G. Gravelle, *The Economic Effects of Taxing Capital Income*, Chapter 6, Cambridge, Mass. MIT Press, 1994 for a review of the realizations literature.

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ATTRIBUTION OF CORPORATE TAXES

The JCT distribution tables do not include the corporate tax, even though it is clear that someone must pay the corporate tax. As discussed below, the corporate tax reductions -- primarily the depreciation changes -- are responsible for perhaps a third or so of the tax reduction.

What is a reasonable assumption here? Generally, in the short run, it is presumed that the tax falls on the owners of the firm, who are unable to alter their capital stock. In the long run, the traditional economics literature indicates that the tax is likely to fall on capital in general.¹¹

The JCT has indicated in its tables that it does not include the corporate tax because of the uncertainties about where the burden of the tax falls. In general, it was the JCT's practice for many years simply not to attribute the corporate tax. In the "Red Book," however, the JCT subsequently indicated a decision to distribute the tax to the owners of corporate equities, essentially reflecting a short run assumption. This decision has apparently been reversed.

The Treasury Department attributes the tax to capital in general, consistent with the economics literature and their longer term perspective on distributional analysis. (Actually, the attribution of the tax to corporate equity owners would make the distribution of the tax in distributional tables more progressive, and increase the fraction of the tax benefit that accrues to higher income individuals). The Treasury did not always attribute the corporate tax. For example, in the 1986 Tax Reform Act, corporate tax liabilities were not attributed; indeed, this was the subject of an analysis by Feldstein discussing how the distributional effects of the tax might be modified with attribution of the corporate tax. (Feldstein assigned the tax to all capital as does the Treasury in its current analysis.)¹² For the last several years, however, the Treasury has been attributing the tax

¹¹ The Harberger model of the tax (Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, *Journal of Political Economy*, vol. 70, June 1962, pp. 215-240) shows that the tax can in some cases fall more than 100 percent on capital (and benefit labor) and in other cases fall less than 100 percent on capital, but the general tendency is for the tax to fall on capital, under reasonable behavioral assumptions. This model was one of a closed economy. However, assuming that capital, although mobile, cannot be perfectly substituted around the world and that imports and domestic production are imperfect substitutions, this finding also tends to hold in an open economy. See Jane G. Gravelle, *Corporate Tax Incidence in an Open Economy*, 1993 Proceedings of the National Tax Association, Tax Institute of America, pp. 175-178.

¹² See Martin Feldstein, *Imputing Corporate Tax Liabilities to Individual Taxpayers*, *National Tax Journal*, March 1988, vol 41, pp. 37-60. This issue was also explored by several other researchers. See Jane G. Gravelle, *Equity Effects of the Tax Reform Act of 1986*, *Journal of Economic Perspectives*, Vol. 6, Winter 1992, pp. 27-44 for a discussion of these analyses.

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to all capital and it is continuing that treatment in its distributional estimates of the Contract with America tax proposals.

The attribution of corporate taxes has a significant effect on the estimated revenue cost of the tax proposals and (given that the timing issue can be effectively dealt with) will have a large effect on distribution of the tax benefit when attributed to capital, since capital income is more concentrated in the higher income classes. The major provision is the Neutral Cost Recovery System (NCRS) which will eventually involve substantial amounts of revenue losses and is largely not included in the JCT's tables.

TIMING ISSUES

The provisions in the bill are estimated to bring about much larger revenue losses over time that reflect, primarily, the timing of tax benefits. Overall, the magnitude of cash flow benefits increases substantially over time, as can be seen in OTA's revenue estimates which cover an additional five years, from 2001-2005. (Overall, the estimates actually cover six years for the Joint Tax Committee, and 11 years for the Treasury, but the first year, FY 1995, has very small effects on the totals and actually make them larger).

According to the Treasury Department the cost from 1995-2000 is \$178.1 billion, while the cost from 1995-2005 is \$630.2 billion. Thus, the second-five-year cost of \$452.1 billion is much larger than the first five years. Assuming a nominal growth of 6 percent to project the normal growth that would be expected, the increase in the second five years, holding income constant, is about 90 percent; thus the costs almost double between the first and the second five years.

This growth is due only to certain provisions, as can be seen by examining the dominant revenue losers in each period. In the first five-year period, the \$500 child credit accounts for 62 percent of the cost, capital gains for 16 percent, the Alternative Minimum Tax Provision for 11 percent, the elimination of taxes on part of social security for 9 percent, and the marriage penalty relief for 5 percent. In the second five-year period, however, the largest revenue loser was the neutral cost recovery system, accounting for 31 percent. The child care credit has declined in share to 28 percent, the capital gains provision is about the same at 14 percent, the social security provision is about the same at 8 percent, and the IRA provision is responsible for 6 percent.

These changes occur for a variety of reasons. NCRS is designed so that it raises revenue in the first five years (through the slow-down in depreciation) but its true benefit is large and it grows rapidly until it becomes the single largest provision. Its growth far outstrips the growth in the overall size of the package. The child care credit, however, has not changed much in nominal terms, perhaps because any growth due to inflation is small and offset by demographic changes. Thus, it falls in share by over fifty percent. Capital gains revenue losses are growing rapidly because of indexation (and the interaction of this further tax cut with behavioral effects), and have grown about as fast as the overall cost. Social security is also growing naturally though demographics and benefit growth. Finally, IRAs

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become more important because of the accumulation of amounts in tax-favored accounts. The AMT has, however, diminished in relative size along with the marriage penalty relief.

These trends actually continue -- the real cost of the package will continue to grow due to certain provisions that tend to grow (NCRS, capital gains, and individual retirement accounts). In particular, neutral cost recovery, will likely continue to rise in real terms for many years.¹⁸

The treatment of timing issues is not always straightforward and it is hard to develop a consistent rule, although it is frequently the case that a cash flow measure will be misleading. The JCT has simply examined several years and used the cash flow approach, even through this causes the form of the tax benefit to strongly influence the projected revenue costs.

The Treasury Department has used an approach that is consistent, at least for these provisions, with their focus on the permanent distributional effects of tax changes. They have used fully phased-in provisions (e.g. full indexing) with long run behavior. For those provisions such as depreciation and IRAs where the same economic benefit can produce dramatically different cash flow patterns, they have calculated the present value of tax benefits associated with this year's investment or savings. Essentially, the depreciation benefits have been converted into an investment credit of equivalent value; similarly, the IRA benefits are measured as an initial credit. This is a pattern that will yield the same result for provisions with the same economic value. By contrast, the JCT's cash flow approach would yield very different effects if different forms of benefits were chosen (i.e. front-loaded rather than back-loaded IRAs, or direct expensing rather than the expensing equivalent via increased future depreciation deductions).

INCOME CLASSIFIERS

The JCT and the Treasury also differ in the measurement of income classes. The JCT uses tax return data and adds back to adjusted gross income to generate an expanded income class that includes nine separate classes. Adjusted gross income is increased by health care fringe benefits, tax-exempt interest, social security

¹⁸ See Jane G. Gravelle, Estimating Long-Run Revenue Effects of Tax Law Changes, *Eastern Economic Journal*, Vol. 19, No. 4, Fall 1993, pp. 481-494, for a general discussion of the revenue estimating issues arising with tax changes that have uneven patterns over time; this discussion includes a graphical presentation of the time path of back-loaded vs. front-loaded IRAs and prospective capital gains tax indexing. The revenue patterns of several tax provisions in the Contract are discussed in other CRS products. NCRS is discussed in David L. Brumbaugh and Jane G. Gravelle, *The Neutral Cost Recovery System and the House Republican Contract*, Congressional Research Service report 95-161 E; capital gains tax change in testimony of Jane G. Gravelle, on Capital Gains Tax Proposals, Before the Committee on Finance, February 15, 1995 and IRA proposals in Jane G. Gravelle, *Individual Retirement Accounts (IRAs) and Related Proposals*, Congressional Research Service Report 95-420, March 24, 1995.

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benefits not otherwise included in income, the insurance value of medicare, the employer's share of the FICA tax, certain tax preference items, and excluded income of individuals living abroad. Individuals with zero incomes are excluded.

The Treasury Department uses an expanded income concept that is more consistent with economists' income concepts, including not only most of the items included by the JCT but also additional returns to capital (such as imputed income on owner-occupied housing, the returns to pension and related plans, and adjustments for accrued, real capital gains). Income is measured on a family income basis so that individuals living in families who might file separate returns are combined, and is reported in two ways -- by the same income classes (with two combined) as the JCT data (which we term OTA -I), and by population shares (which we term OTA-II). It also includes individuals with zero or negative incomes.

In comparing the distributional tables it is important to distinguish between the differences due to different measures of income and those due to other methodological differences. Table 1 provides a comparison of these income classifiers by juxtaposing income shares with dollar levels of income. In this and all other comparisons, we use the JCT estimates for the year 2000 which move closer to

Table 1: Income Classes and Population Shares, JCT and OTA Distribution Tables

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-II refers to the distribution by quintiles. The total units in the OTA tables is 109.4 million (families); total units in the JCT tables are 136.2 million (returns).

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a permanent distribution than any of the other years. (Income categories are measured at 1995 levels for the JCT, but the distribution reflects year 2000 distributions of returns; all data are measured at 1996 income levels for the OTA data). Note also that some members of a high income family in the family classification of the OTA could appear as lower income tax returns in the JCT distribution.

As this table shows, although both report the same income levels, much more of the population is in the higher income levels for OTA - I than for JCT. Twice as large a share of the population units is in the OTA's \$200,000 class than in the JCT's \$200,000.

The table also shows that although the OTA- II table, which involves shares of the population, is actually more closely comparable to the JCT than either is to OTA - I, even though the nominal income levels are different. Again this is due to the expanded income concept which includes much more imputed, unrealized and transferred income than the JCT income concept.

PRESENTATION OF INFORMATION

The JCT and OTA tables also differ in how the information is presented. Both present overall tax reductions by income class, but this raw information has no frame of reference (i.e., one does not know whether the amounts in a category are large because the benefit is large or because there are a lot of people in the category). Rather, this information must be transformed in some way to provide information on distributional effects.

The JCT tables present only one type of direct distributional measure: the percentage change in tax liabilities. The OTA presents five different types of measures: the average tax reduction, the percentage distribution of the tax reduction, and the tax change as a percent of pre-tax income, after-tax income, and taxes paid.¹⁴

In discussing these measures it may be appropriate to distinguish between absolute measures and relative measures. For example, average tax reductions per unit provide information on the absolute size of a tax benefit across the income classes, which is a straightforward measure. Another way of examining this same effect is to compare the distribution of the tax benefit with the distribution of the population. If each proportion of the population is getting the same share of the benefit, then the benefits are equal. Both of these measures can inform us about how a tax cut is changing income without being misleading.

¹⁴ Most of the measures presented in the OTA tables can be derived from the JCT tables except for those that require a distribution of returns (e.g. average tax benefit per return). Data on the distribution of returns is, however, available from the JCT. Since, they also present effective tax rates before and after the changes, it would be a simple matter to see the change as a percent of pre-tax income).

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A different type of measure is a relative one that tries to examine how the tax benefit is changing the overall distribution of income in the country -- that is, is it making incomes more equal or less equal? In general, the best method for measuring this is to examine the percentage change in disposable (after-tax) income. If the percentage change is equal, then the tax change is not making incomes more equal or less equal. If the percentages are higher among higher income individuals the change is making incomes less equal.

What about the role of the other percentage measures -- of pre-tax income and of taxable income. The former will tend to produce slightly different percentages (and smaller ones) when taxes are already present and is not as precise in indicating the overall effects on income equality. The percentage of tax changes can, however, be misleading. If the percentages rise across the income levels (given an initial progressive system, the results indicate less equality. If they fall, however, the percentages can be very misleading. For example, suppose that a family pays only \$10 dollars in income tax. A ten dollar tax cut will, therefore, be a 100 percent tax reduction and will appear very large. For this reason, tables of percentage changes in taxes paid may indicate very little about the distributional benefits of a tax change.

COMPARISON OF DISTRIBUTIONAL EFFECTS

This section examines the distributional tables and calculates measures that can be used to examine the distributional of benefits of the tax cut and the causes of the different results in the two measures.

ABSOLUTE MEASURES

Table 2 presents data that show the average tax saving and the share of taxes saved (the data on income class and population from table 1 is reproduced as well). Recall that JCT is more comparable, based on income shares, with OTA II.

All three measures show rising dollar amounts across the income scale, but the amounts are larger and rise faster with the OTA numbers than with the JCT numbers. For example, in the top one percent of the population (approximately), the tax benefit is close to \$5,000 on average (\$4600 for the top 1.3 percent) in the JCT numbers but is four times as large -- \$20,000 -- in the OTA numbers. The top one percent gets somewhat less than 15 percent of the total tax saving in the JCT numbers, and 20 percent in the OTA numbers. Thus, based on absolute benefits, higher income individuals receive substantially more than do lower income individuals.

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Table 2: Average Tax Benefit and Distribution of Tax Benefit

JCT Average Tax \$ Saving	OTA - I Average Tax \$ Saving	OTA - II Average Tax \$ Saving	JCT Share of Tax Saving (Percent)	OTA - I Share of Tax Saving (Percent)	OTA - II Share of Tax Saving (Percent)
11	20	36	0.4	0.2	0.7
53	90	205	2.6	1.3	4.1
153	247	555	6.0	3.3	10.9
356	569	1021	20.5	11.6	20.2
651	997	1689	22.6	16.4	16.6
921	1572	2274	15.6	15.2	11.3
1378	2466	4122	17.2	23.4	16.2
4605	11266	20362	15.3	28.1	20.1

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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RELATIVE MEASURES

Two relative measures are presented in table 8: the percentage change in taxes paid, which is the only direct measure in the JCT tables, and the percentage change in after tax income, which measures whether the income distribution became more or less equal.

The percentage of tax changes in the JCT numbers are ones that might lead to the impression that the tax benefit is favoring the middle incomes, since the percentage changes are largest in \$30,000 to \$75,000 classes, and smaller at the lower incomes. (Actually, this group covers from the 33rd percentile to the 87th percentile). This pattern does not comport with the OTA measures, which show a generally rising (although declining slightly in some spots) percentage reduction in taxes.

The second measure shows that the tax changes are making the distribution of after tax income more uneven over time under any of the measures. In this case, the percentage changes are not much larger (e.g. 3.1 percent for JCT and 3.3 percent for OTA -II in the top bracket) in the OTA analysis, especially in the top bracket. There are two opposing forces -- the tax cut is larger, but so is economic income.

PROVISIONS THAT CONTRIBUTE TO LARGER TAX BENEFITS IN THE OTA ANALYSIS

While it is not possible to pinpoint exactly the provisions that contribute to the much larger benefits, particularly for higher income individuals, given the data supplied (which OTA only separates for the child credit and capital gains), it is clear that capital gains plays an important role and that the child credit does not. There has been some argument that the child credit should be dropped for families with incomes above \$100,000. This change would have little effect on the distributional results. The child credit is responsible for only 7 percent of the tax benefit in the next to the top bracket of OTA-II (roughly corresponding to the \$100,000 to \$200,000 expanded JCT class and somewhat above the \$100,000 adjusted gross income class). It is more important in the next lower class, (roughly corresponding to the \$75,000 to \$100,000 JCT class), where it accounts for 17 percent. (It has no effect on the top class).

Part of the cause of large tax benefits in the higher incomes is clearly the capital gains tax. The JCT's top bracket, accounting for 1.3 percent of the population distribution, has \$3804 in capital gains tax cuts, while OTA II has \$8037. (These amounts are 83 percent and 39 percent respectively of the total tax cut). Thus perhaps about a third of the differences can be attributed to capital gains. The remainder is probably due to the corporate tax cut attributions (especially neutral cost recovery) and the timing effects both for corporate tax attributions and for IRAs and noncorporate depreciation.

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Table 3. Percentage Changes in Taxes and in Disposable Income

JCT Percent Change: Taxes	OTA - I Percent Change: Taxes	OTA - II Percent Change: Taxes	JCT Percent Change: After-Tax Income	OTA - I Percent Change: After-Tax Income	OTA - II Percent Change: After-Tax Income
-2.3	-4.4	-5.5	0.3	0.4	0.5
-3.4	-6.8	-7.3	0.3	0.7	1.0
-3.9	-7.4	-8.3	0.7	1.1	1.7
-4.4	-8.3	-8.2	1.0	1.8	2.0
-4.4	-8.1	-8.6	1.1	2.0	2.3
-4.0	-8.7	-8.3	1.4	2.3	2.4
-3.7	-8.6	-9.3	2.0	2.4	2.6
-2.9	-9.9	-10.0	3.1	3.1	3.3

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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CONCLUSION

The OTA distributional tables in general indicate larger tax benefits from the Contract with America tax bill and a larger concentration of benefits in higher income classes. Among the highest income group, a significant part of that effect is due to the treatment of capital gains (reflecting both the fixed realizations assumption and the long run treatment). Probably the largest effect is from the attribution of corporate tax benefits (corrected for timing), but there are also effects from the differential treatment of the timing issues associated with IRAs and noncorporate depreciation. On the whole, the OTA methodology is more consistent with how economists would measure burden.

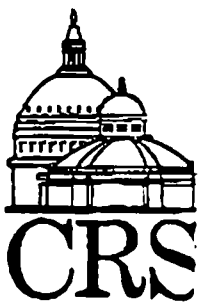
Both the JCT and the OTA data, however, show much larger average tax reductions in the higher income classes than in the lower ones, a significant fraction of the tax benefits accruing to very high income individuals, and a general move toward greater inequality in the distribution of disposable income.

CRS Report for Congress

Distributional Effects of Tax Provisions in the Contract with America as Reported by the Ways and Means Committee

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April 3, 1995



Congressional Research Service - The Library of Congress



SUMMARY

The House Republican Contract tax proposals, with some modifications, have been reported by the Ways and Means Committee. Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports. The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid, while the OTA provides a more comprehensive measure that is more consistent with how economists would measure the bill's benefits to individuals in different income classes.

Certain aspects of the JCT's distribution tables seem to suggest that the tax benefit is greater for middle income individuals, since the largest percentage changes in tax liability occur in the middle incomes. Treasury's tables indicate that the benefits are concentrated at the higher income levels using a variety of absolute and percentage measures of change.

The OTA analysis has a number of methodological differences from the JCT analysis that are likely to improve their measures of the distribution of benefits of the tax cut, including a "fixed realizations" measure of the capital gains tax cut, attribution of corporate tax cuts (which eventually constitute a third or more of the revenue loss), and corrections to deal with timing problems. The JCT and the OTA also differ in how they measure and classify income. The tables provided also differ in the type of distributional measures presented, with the JCT tables presenting data in terms of percentage changes in tax liability (although they also have some data on new and old effective tax rates from which tax changes as a percent of income can easily be calculated). The OTA presents a variety of measures, including average taxes paid, distribution of the tax cut, and percentage changes in pre-tax income, after-tax income, and tax liability.

Despite the data differences, both distributions show rising average tax cuts across the income classes and a significant portion of the total tax cut accruing to higher income individuals. Use of the appropriate measure of relative effect on income inequality (the percentage change in disposable income) also indicates similar findings in both data sets - the tax benefits tend to make disposable incomes less equal. Tax reductions as a percentage of taxes paid which show the largest percentage changes in the middle income classes in the JCT (but not the OTA) data can be misleading as indicators of relative income distribution effects.

In the top income group (approximately one percent of the population), the average tax cut is close to \$5,000 in the JCT estimate (for the year 2000) and about \$20,000 in the OTA data. The most important tax provisions contributing to this discrepancy (given the methodological differences) are probably capital gains and neutral cost recovery. While some attention has been given to the child credit's role in the distribution of tax benefits, it is not very important for high income individuals, accounting for none of the top one percent of the population's tax cut, and about seven percent of the next four percent of the population in the OTA's data.

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DISTRIBUTIONAL EFFECTS OF TAX PROVISIONS IN THE CONTRACT WITH AMERICA

The House Republican Contract tax bill, with some modifications, has been reported by the Ways and Means Committee.¹ Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports.² The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid for each year from 1995-2000, while the OTA provides a more comprehensive measure more consistent with how economists would measure the bill's benefits to individuals in different income classes. There are also differences in how income is classified and how results are presented. In particular, some results of the JCT analyses seem to suggest that the benefits are more concentrated toward middle income taxpayers, while the OTA analysis suggests the benefits accrue more heavily to high income taxpayers.

The first section of this report summarizes the different distributional analyses provided by the JCT and the OTA. The next section explains the methodological differences between the two, and their consequences for distribution measures. The next section interprets the results of the distributional analysis in the light of this methodological analysis. It also identifies which of the tax provisions strongly influence the results. The final section sums up.

DIFFERENCES IN DISTRIBUTIONAL ANALYSIS

The House Republican Contract tax proposal, with some modifications, has been reported by the Ways and Means Committee. By and large, it retains the original provisions -- the child credit, a fifty percent capital gains exclusion, more generous depreciation benefits under the neutral cost recovery system (NCRS), tax-favored savings accounts, phase-out of the 85 percent maximum inclusion rate for social security, and a number of smaller provisions. It adds some minimum tax relief, however, and restricts the inflation indexing provisions for capital gains.

Both the JCT and the OTA have provided distributional analyses of the effects of the proposal, with substantial differences between their reports both in the underlying data and the method of presentation.

¹ The bill was originally reported as H.R. 1215, and is now a part of H.R. 1327.

² The JCT's estimates are contained in a series of distributional tables dated March 8 and March 9, 1995. The OTA's estimates are contained in a press release issued March 14, 1995.

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The JCT presents individual distribution tables for each year from 1995 to 2000, which measure their estimates of the changes in taxes paid by income class. The only distributional number presented directly in their study is the percentage change in taxes paid. Data presented include the aggregate tax change in each class and the percentage change, current and proposed federal tax distributions across the categories (in dollar aggregates and percentages) and effective tax rates before and after the tax. The OTA presents a distributional analysis that reflects fully phased in law; it also includes several distributional measures -- average tax reductions, share of reductions by income class and income quintile, tax change as a percent of income, tax change as a percent of after-tax income, and tax change as a percent of taxes paid.

DIFFERENCES IN FUNDAMENTAL METHODOLOGIES

There are several methodological differences between the JCT's tables and the OTA's tables. These differences have the effect of making the relative benefits of the tax change for high income individuals smaller in the Joint Tax Committee's tables than in the Treasury's tables. In general, the Treasury Department's treatment is more consistent with how economists would analyze the distributional burden of a tax change. There are also differences in how the data are presented that can make a difference in the impression conveyed by these tables.

The following subsections discuss these methodological and presentational differences, which include treatment of behavioral responses, imputation of corporate tax, timing of tax benefits, differences in income classifiers, and differences in presentation.

BEHAVIORAL RESPONSES AND CAPITAL GAINS TAX CUTS

Any tax analysis involves some types of behavioral responses, if nothing more than making individual decisions (such as choosing whether or not to itemize deductions) that have virtually no real consequences other than to take full advantage of tax savings. There are also behavioral responses that involve a benefit or cost that is very real (such as choosing to work or save more, which involves changing patterns of consumption). Specifically, the important behavioral response of this latter type included in the revenue estimates for the Contract is the assumption that individuals will increase their realizations of capital gains as a result of the tax cut.

Both the JCT's and the OTA's revenue estimates of the proposal have included a variety of behavioral responses, but they differ in the treatment of the realizations response in their distributional tables.

The JCT has departed from previous practice (a change that was also made with some tables prepared in 1994) by simply reporting the distribution of taxes paid after taking into account expected changes in realizations.

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The OTA calculated taxes paid holding realizations constant (unchanged by the new tax provisions). The OTA approach is generally consistent with historical practices (as, for example, practiced during consideration of the Tax Reform Act of 1986). In some cases, OTA departed from this practice in the Bush Administration, by providing tables showing the distribution of taxes paid.

Note that these behavioral effects did not matter very much for the tax legislation in 1993 and no significant tax legislation was considered in 1994; thus, in a sense the issue of how to prepare distributional tables has not been a subject of direct policy significance since 1992 (when capital gains was last considered).

While this issue is not important when behavioral responses are small, they are important when they are large. The current revenue estimating practices of the Joint Committee on Taxation include a significant increase in realizations when capital gains tax cuts are introduced.

A table that reports taxes paid after behavioral responses are taken into account shows how the increased or decreased revenues will be spread across the income classes -- that is, which classes are actually expected to be paying more or less taxes and by how much.

Using the distribution of taxes paid as now reported by the Joint Tax Committee (after behavioral responses) may not yield a full or proper measure of the tax burden, and in particular that it can be misleading in the case of the capital gains tax where a large behavioral response is incorporated. This rationale is spelled out in the following quotation from a paper about the capital gains tax co-authored by Gravelle and Lindsey:³

"When considering the issue of tax equity, it is important to distinguish between the distribution of taxes paid and the distribution of the tax burden. For example, suppose a reduction in the capital gains tax rate led to substantially more capital gains realizations and actually increased the tax revenue paid by upper-income groups. While the distribution of taxes paid would have been shifted more into upper-income groups, it would be totally inappropriate to say that their tax burden had increased. After all, with a lower tax rate, these upper-income taxpayers are less burdened than they were before, even though they pay more taxes.

In this regard it is important to note that the distributional tables compiled by the Joint Committee on Taxation ignore the effect of taxpayer behavior when considering the distributional effect of a given tax change. This method is correct for considering the impact of the tax burden, but does not accurately reflect the distribution of taxes paid...

³ Jane G. Gravelle and Lawrence B. Lindsey, Capital Gains, Tax Notes, January 25, 1988, p. 399.

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...Distributional equity focuses on the total burden imposed by the tax, not on the revenue collected."

As suggested in this quote, the use of taxes paid in distributional tables could imply, under some circumstances, that cutting tax rates harms taxpayers and that increasing them benefits taxpayers.

While current behavioral responses used in revenue estimating are not large enough to actually result in increased revenues for the capital gains tax cut (except perhaps for some taxpayers in the initial year), especially given the size of the tax cut, the magnitude of tax reductions will be greatly reduced. They will also be disproportionately reduced for high income taxpayers. For example, considering just the exclusion, the realization response for taxpayers in the highest rate brackets will reduce revenue losses by 80 percent after the first year. For the 28 percent bracket, losses will be reduced by about 60 percent, and for the 15 percent bracket, by 30 percent. Thus, incorporating capital gains into the distributional tables after accounting for realizations responses, as is done in the Joint Committee's estimates, greatly diminishes the importance of the capital gains tax (which primarily benefits higher income individuals) in the distributional numbers.

In any case, the behavioral response that results in more tax payments is a voluntary action that could not be expected to make the individual worse off - rather he is willing to pay this tax for something that is of as great or greater value (presumably the benefits of converting an investment into some other form). Indeed, if anything, the benefit of the capital gains tax cut is larger than the static revenue effect.⁴

This sentiment that using taxes paid is not a good measure of the actual benefits or burdens of a tax change is echoed in certain publications of these official organizations as well. For example, in an earlier analysis of the methodology (hereafter called the "Red Book") of distributional tables, the Joint Tax Committee stated in discussing the distributional effects of a change in the tax rate: "For changes in the rate of a preexisting tax, the static revenue change generally is a superior approximation to the change in economic well being."⁵

The OTA produced tables of the distribution of taxes paid for the 1990 capital gains tax cut proposal and argued that it would raise revenues and that taxes

⁴ This observation means, of course, that the existing measure of tax burden is also too small; in fact, the burden is, in theory, the sum of actual taxes paid and the implicit cost of any behavioral distortions induced by the tax -- in the case of capital gains, the lock-in effect. Also, the static estimate of an increase in the tax burden would also be too small; but the static estimate would still be a better measure than the even smaller measure of taxes paid after avoidance behavior is initiated.

⁵ Joint Committee on Taxation. Methodology and Issues in Measuring Changes in the Distribution of Tax Burdens. Joint Committee Print, Washington, D.C.: U.S. Government Printing Office, June 14, 1993.

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paid was the appropriate measure of distribution. Notably, they also produced tables of static estimates, and were clearly aware of the inappropriate implications for these tables, noting: "...while high-income taxpayers would pay more in taxes, they would be better off because the lower capital gains tax rates will allow them to make investment decisions with less concern about the tax impact."⁶

This issue is not likely to arise in the economics literature where the fundamentals of how, in theory, to measure benefits are well established -- and the recognition that the benefit of cutting a tax is likely to be larger than the reduction in tax assuming no behavioral change is basic to tax analysis.⁷ When the policy making process is discussed, however, economists would, as in the case of Gravelle and Lindsey, reject the simple taxes-paid table as a measure of the distribution of tax burdens and benefits and, indeed, suggest that the "constant realizations" measure understates the benefits of a tax change. For example, Auten and Cordes state: "Additional taxes paid on induced realizations result from voluntary sales of assets, and taxpayers who choose to sell assets must be at least as well off as if they didn't change their behavior."⁸ Similarly, Davis states: "I have argued that a relatively simple "static" approach -- recalculation of tax liabilities -- produced satisfactory measurements for the distribution of benefits from a capital gains tax cut. If these measures were biased, they understated the size of the tax benefit."⁹

It is also important to note that the JCT's estimate of the realizations response, which, as will be shown below, so affects the distributional results, is not a response that is measured with any precision; indeed, recent research suggests that it may be too large.¹⁰

⁶ Statement of Kenneth W. Gideon, Assistant Secretary (Tax Policy), Department of the Treasury, Before the Committee on Finance, United States Senate, March 6, 1990.

⁷ Technically speaking, the burden of a tax is the sum of the taxes paid and the "excess burden" that results from the implicit cost of changing behavior.

⁸ Gerald A. Auten and Joseph J. Cordes, Policy Watch: Cutting the Capital Gains Tax, *Journal of Economic Perspectives*, Vol. 5, Winter 1991, p. 188.

⁹ Albert J. Davis, Measuring the Distributional Effects of Tax Changes for the Congress. *National Tax Journal*, Vol. 44, September 1991, p. 265.

¹⁰ The issue of the realizations response is by no means resolved, since the current literature contains a significant range of estimates. Moreover, the Joint Committee's estimate dates from 1990, and some research since that time has indicated that, at least after the first year or so, the realizations response is probably much lower. See Jane G. Gravelle, *The Economic Effects of Taxing Capital Income*, Chapter 6, Cambridge, Mass. MIT Press, 1994 for a review of the realizations literature.

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ATTRIBUTION OF CORPORATE TAXES

The JCT distribution tables do not include the corporate tax, even though it is clear that someone must pay the corporate tax. As discussed below, the corporate tax reductions -- primarily the depreciation changes - are responsible for perhaps a third or so of the tax reduction.

What is a reasonable assumption here? Generally, in the short run, it is presumed that the tax falls on the owners of the firm, who are unable to alter their capital stock. In the long run, the traditional economics literature indicates that the tax is likely to fall on capital in general.¹¹

The JCT has indicated in its tables that it does not include the corporate tax because of the uncertainties about where the burden of the tax falls. In general, it was the JCT's practice for many years simply not to attribute the corporate tax. In the "Red Book," however, the JCT subsequently indicated a decision to distribute the tax to the owners of corporate equities, essentially reflecting a short run assumption. This decision has apparently been reversed.

The Treasury Department attributes the tax to capital in general, consistent with the economics literature and their longer term perspective on distributional analysis. (Actually, the attribution of the tax to corporate equity owners would make the distribution of the tax in distributional tables more progressive, and increase the fraction of the tax benefit that accrues to higher income individuals). The Treasury did not always attribute the corporate tax. For example, in the 1986 Tax Reform Act, corporate tax liabilities were not attributed; indeed, this was the subject of an analysis by Feldstein discussing how the distributional effects of the tax might be modified with attribution of the corporate tax. (Feldstein assigned the tax to all capital as does the Treasury in its current analysis.)¹² For the last several years, however, the Treasury has been attributing the tax

¹¹ The Harberger model of the tax (Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, *Journal of Political Economy*, vol. 70, June 1962, pp. 215-240) shows that the tax can in some cases fall more than 100 percent on capital (and benefit labor) and in other cases fall less than 100 percent on capital, but the general tendency is for the tax to fall on capital, under reasonable behavioral assumptions. This model was one of a closed economy. However, assuming that capital, although mobile, cannot be perfectly substituted around the world and that imports and domestic production are imperfect substitutions, this finding also tends to hold in an open economy. See Jane G. Gravelle, *Corporate Tax Incidence in an Open Economy*, 1993 Proceedings of the National Tax Association, Tax Institute of America, pp. 175-178.

¹² See Martin Feldstein, *Imputing Corporate Tax Liabilities to Individual Taxpayers*, *National Tax Journal*, March 1988, vol. 41, pp. 37-60. This issue was also explored by several other researchers. See Jane G. Gravelle, *Equity Effects of the Tax Reform Act of 1986*, *Journal of Economic Perspectives*, Vol. 6, Winter 1992, pp. 27-44 for a discussion of these analyses.

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to all capital and it is continuing that treatment in its distributional estimates of the Contract with America tax proposals.

The attribution of corporate taxes has a significant effect on the estimated revenue cost of the tax proposals and (given that the timing issue can be effectively dealt with) will have a large effect on distribution of the tax benefit when attributed to capital, since capital income is more concentrated in the higher income classes. The major provision is the Neutral Cost Recovery System (NCRS) which will eventually involve substantial amounts of revenue losses and is largely not included in the JCT's tables.

TIMING ISSUES

The provisions in the bill are estimated to bring about much larger revenue losses over time that reflect, primarily, the timing of tax benefits. Overall, the magnitude of cash flow benefits increases substantially over time, as can be seen in OTA's revenue estimates which cover an additional five years, from 2001-2006. (Overall, the estimates actually cover six years for the Joint Tax Committee, and 11 years for the Treasury, but the first year, FY 1995, has very small effects on the totals and actually make them larger).

According to the Treasury Department the cost from 1995-2000 is \$178.1 billion, while the cost from 1995-2006 is \$630.2 billion. Thus, the second-five-year cost of \$452.1 billion is much larger than the first five years. Assuming a nominal growth of 6 percent to project the normal growth that would be expected, the increase in the second five years, holding income constant, is about 90 percent; thus the costs almost double between the first and the second five years.

This growth is due only to certain provisions, as can be seen by examining the dominant revenue losers in each period. In the first five-year period, the \$500 child credit accounts for 62 percent of the cost, capital gains for 16 percent, the Alternative Minimum Tax Provision for 11 percent, the elimination of taxes on part of social security for 9 percent, and the marriage penalty relief for 5 percent. In the second five-year period, however, the largest revenue loser was the neutral cost recovery system, accounting for 31 percent. The child care credit has declined in share to 28 percent, the capital gains provision is about the same at 14 percent, the social security provision is about the same at 8 percent, and the IRA provision is responsible for 6 percent.

These changes occur for a variety of reasons. NCRS is designed so that it raises revenue in the first five years (through the slow-down in depreciation) but its true benefit is large and it grows rapidly until it becomes the single largest provision. Its growth far outstrips the growth in the overall size of the package. The child care credit, however, has not changed much in nominal terms, perhaps because any growth due to inflation is small and offset by demographic changes. Thus, it falls in share by over fifty percent. Capital gains revenue losses are growing rapidly because of indexation (and the interaction of this further tax cut with behavioral effects), and have grown about as fast as the overall cost. Social security is also growing naturally through demographics and benefit growth. Finally, IRAs

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become more important because of the accumulation of amounts in tax-favored accounts. The AMT has, however, diminished in relative size along with the marriage penalty relief.

These trends actually continue -- the real cost of the package will continue to grow due to certain provisions that tend to grow (NCRS, capital gains, and individual retirement accounts). In particular, neutral cost recovery, will likely continue to rise in real terms for many years.¹⁸

The treatment of timing issues is not always straightforward and it is hard to develop a consistent rule, although it is frequently the case that a cash flow measure will be misleading. The JCT has simply examined several years and used the cash flow approach, even though this causes the form of the tax benefit to strongly influence the projected revenue costs.

The Treasury Department has used an approach that is consistent, at least for these provisions, with their focus on the permanent distributional effects of tax changes. They have used fully phased-in provisions (e.g. full indexing) with long run behavior. For those provisions such as depreciation and IRAs where the same economic benefit can produce dramatically different cash flow patterns, they have calculated the present value of tax benefits associated with this year's investment or savings. Essentially, the depreciation benefits have been converted into an investment credit of equivalent value; similarly, the IRA benefits are measured as an initial credit. This is a pattern that will yield the same result for provisions with the same economic value. By contrast, the JCT's cash flow approach would yield very different effects if different forms of benefits were chosen (i.e. front-loaded rather than back-loaded IRAs, or direct expensing rather than the expensing equivalent via increased future depreciation deductions).

INCOME CLASSIFIERS

The JCT and the Treasury also differ in the measurement of income classes. The JCT uses tax return data and adds back to adjusted gross income to generate an expanded income class that includes nine separate classes. Adjusted gross income is increased by health care fringe benefits, tax-exempt interest, social security

¹⁸ See Jane G. Gravelle, Estimating Long-Run Revenue Effects of Tax Law Changes, *Eastern Economic Journal*, Vol. 19, No. 4, Fall 1993, pp. 481-494, for a general discussion of the revenue estimating issues arising with tax changes that have uneven patterns over time; this discussion includes a graphical presentation of the time path of back-loaded vs. front-loaded IRAs and prospective capital gains tax indexing. The revenue patterns of several tax provisions in the Contract are discussed in other CRS products. NCRS is discussed in David L. Brumbaugh and Jane G. Gravelle, *The Neutral Cost Recovery System and the House Republican Contract*, Congressional Research Service report 95-161 E; capital gains tax change in testimony of Jane G. Gravelle, on Capital Gains Tax Proposals, Before the Committee on Finance, February 15, 1995 and IRA proposals in Jane G. Gravelle, *Individual Retirement Accounts (IRAs) and Related Proposals*, Congressional Research Service Report 95-420, March 24, 1995.

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benefits not otherwise included in income, the insurance value of medicare, the employer's share of the FICA tax, certain tax preference items, and excluded income of individuals living abroad. Individuals with zero incomes are excluded.

The Treasury Department uses an expanded income concept that is more consistent with economists' income concepts, including not only most of the items included by the JCT but also additional returns to capital (such as imputed income on owner-occupied housing, the returns to pension and related plans, and adjustments for accrued, real capital gains). Income is measured on a family income basis so that individuals living in families who might file separate returns are combined, and is reported in two ways -- by the same income classes (with two combined) as the JCT data (which we term OTA -I), and by population shares (which we term OTA-II). It also includes individuals with zero or negative incomes.

In comparing the distributional tables it is important to distinguish between the differences due to different measures of income and those due to other methodological differences. Table 1 provides a comparison of these income classifiers by juxtaposing income shares with dollar levels of income. In this and all other comparisons, we use the JCT estimates for the year 2000 which move closer to

Table 1: Income Classes and Population Shares, JCT and OTA Distribution Tables

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles. The total units in the OTA tables is 109.4 million (families); total units in the JCT tables are 136.2 million (returns).

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a permanent distribution than any of the other years. (Income categories are measured at 1995 levels for the JCT, but the distribution reflects year 2000 distributions of returns; all data are measured at 1996 income levels for the OTA data). Note also that some members of a high income family in the family classification of the OTA could appear as lower income tax returns in the JCT distribution.

As this table shows, although both report the same income levels, much more of the population is in the higher income levels for OTA -I than for JCT. Twice as large a share of the population units is in the OTA's \$200,000 class than in the JCT's \$200,000.

The table also shows that although the OTA- II table, which involves shares of the population, is actually more closely comparable to the JCT than either is to OTA - I, even though the nominal income levels are different. Again this is due to the expanded income concept which includes much more imputed, unrealized and transferred income than the JCT income concept.

PRESENTATION OF INFORMATION

The JCT and OTA tables also differ in how the information is presented. Both present overall tax reductions by income class, but this raw information has no frame of reference (i.e., one does not know whether the amounts in a category are large because the benefit is large or because there are a lot of people in the category). Rather, this information must be transformed in some way to provide information on distributional effects.

The JCT tables present only one type of direct distributional measure: the percentage change in tax liabilities. The OTA presents five different types of measures: the average tax reduction, the percentage distribution of the tax reduction, and the tax change as a percent of pre-tax income, after-tax income, and taxes paid.¹⁴

In discussing these measures it may be appropriate to distinguish between absolute measures and relative measures. For example, average tax reductions per unit provide information on the absolute size of a tax benefit across the income classes, which is a straightforward measure. Another way of examining this same effect is to compare the distribution of the tax benefit with the distribution of the population. If each proportion of the population is getting the same share of the benefit, then the benefits are equal. Both of these measures can inform us about how a tax cut is changing income without being misleading.

¹⁴ Most of the measures presented in the OTA tables can be derived from the JCT tables except for those that require a distribution of returns (e.g. average tax benefit per return). Data on the distribution of returns is, however, available from the JCT. Since, they also present effective tax rates before and after the changes, it would be a simple matter to see the change as a percent of pre-tax income).

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A different type of measure is a relative one that tries to examine how the tax benefit is changing the overall distribution of income in the country -- that is, is it making incomes more equal or less equal? In general, the best method for measuring this is to examine the percentage change in disposable (after-tax) income. If the percentage change is equal, then the tax change is not making incomes more equal or less equal. If the percentages are higher among higher income individuals the change is making incomes less equal.

What about the role of the other percentage measures -- of pre-tax income and of taxable income. The former will tend to produce slightly different percentages (and smaller ones) when taxes are already present and is not as precise in indicating the overall effects on income equality. The percentage of tax changes can, however, be misleading. If the percentages rise across the income levels (given an initial progressive system, the results indicate less equality. If they fall, however, the percentages can be very misleading. For example, suppose that a family pays only \$10 dollars in income tax. A ten dollar tax cut will, therefore, be a 100 percent tax reduction and will appear very large. For this reason, tables of percentage changes in taxes paid may indicate very little about the distributional benefits of a tax change.

COMPARISON OF DISTRIBUTIONAL EFFECTS

This section examines the distributional tables and calculates measures that can be used to examine the distributional of benefits of the tax cut and the causes of the different results in the two measures.

ABSOLUTE MEASURES

Table 2 presents data that show the average tax saving and the share of taxes saved (the data on income class and population from table 1 is reproduced as well). Recall that JCT is more comparable, based on income shares, with OTA II.

All three measures show rising dollar amounts across the income scale, but the amounts are larger and rise faster with the OTA numbers than with the JCT numbers. For example, in the top one percent of the population (approximately), the tax benefit is close to \$5,000 on average (\$4600 for the top 1.3 percent) in the JCT numbers but is four times as large -- \$20,000 -- in the OTA numbers. The top one percent gets somewhat less than 15 percent of the total tax saving in the JCT numbers, and 20 percent in the OTA numbers. Thus, based on absolute benefits, higher income individuals receive substantially more than do lower income individuals.

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Table 2: Average Tax Benefit and Distribution of Tax Benefit

JCT Average Tax \$ Saving	OTA - I Average Tax \$ Saving	OTA - II Average Tax \$ Saving	JCT Share of Tax Saving (Percent)	OTA - I Share of Tax Saving (Percent)	OTA - II Share of Tax Saving (Percent)
11	20	36	0.4	0.2	0.7
53	90	205	2.6	1.3	4.1
153	247	555	6.0	3.3	10.9
356	569	1021	20.5	11.6	20.2
651	997	1689	22.6	16.4	16.6
921	1572	2274	15.6	15.2	11.3
1378	2466	4122	17.2	23.4	16.2
4605	11266	20362	15.3	28.1	20.1

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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RELATIVE MEASURES

Two relative measures are presented in table 8: the percentage change in taxes paid, which is the only direct measure in the JCT tables, and the percentage change in after tax income, which measures whether the income distribution became more or less equal.

The percentage of tax changes in the JCT numbers are ones that might lead to the impression that the tax benefit is favoring the middle incomes, since the percentage changes are largest in \$30,000 to \$75,000 classes, and smaller at the lower incomes. (Actually, this group covers from the 33rd percentile to the 87th percentile). This pattern does not comport with the OTA measures, which show a generally rising (although declining slightly in some spots) percentage reduction in taxes.

The second measure shows that the tax changes are making the distribution of after tax income more uneven over time under any of the measures. In this case, the percentage changes are not much larger (e.g. 3.1 percent for JCT and 3.3 percent for OTA -II in the top bracket) in the OTA analysis, especially in the top bracket. There are two opposing forces -- the tax cut is larger, but so is economic income.

PROVISIONS THAT CONTRIBUTE TO LARGER TAX BENEFITS IN THE OTA ANALYSIS

While it is not possible to pinpoint exactly the provisions that contribute to the much larger benefits, particularly for higher income individuals, given the data supplied (which OTA only separates for the child credit and capital gains), it is clear that capital gains plays an important role and that the child credit does not. There has been some argument that the child credit should be dropped for families with incomes above \$100,000. This change would have little effect on the distributional results. The child credit is responsible for only 7 percent of the tax benefit in the next to the top bracket of OTA-II (roughly corresponding to the \$100,000 to \$200,000 expanded JCT class and somewhat above the \$100,000 adjusted gross income class). It is more important in the next lower class, (roughly corresponding to the \$75,000 to \$100,000 JCT class), where it accounts for 17 percent. (It has no effect on the top class).

Part of the cause of large tax benefits in the higher incomes is clearly the capital gains tax. The JCT's top bracket, accounting for 1.3 percent of the population distribution, has \$3804 in capital gains tax cuts, while OTA II has \$8037. (These amounts are 83 percent and 39 percent respectively of the total tax cut). Thus perhaps about a third of the differences can be attributed to capital gains. The remainder is probably due to the corporate tax cut attributions (especially neutral cost recovery) and the timing effects both for corporate tax attributions and for IRAs and noncorporate depreciation.

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Table 3. Percentage Changes in Taxes and in Disposable Income

JCT Percent Change: Taxes	OTA - I Percent Change: Taxes	OTA - II Percent Change: Taxes	JCT Percent Change: After-Tax Income	OTA - I Percent Change: After-Tax Income	OTA - II Percent Change: After-Tax Income
-2.3	-4.4	-5.5	0.3	0.4	0.5
-3.4	-6.8	-7.3	0.3	0.7	1.0
-3.9	-7.4	-8.3	0.7	1.1	1.7
-4.4	-8.3	-8.2	1.0	1.8	2.0
-4.4	-8.1	-8.6	1.1	2.0	2.3
-4.0	-8.7	-8.3	1.4	2.3	2.4
-3.7	-8.6	-9.3	2.0	2.4	2.6
-2.9	-9.9	-10.0	3.1	3.1	3.3

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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CONCLUSION

The OTA distributional tables in general indicate larger tax benefits from the Contract with America tax bill and a larger concentration of benefits in higher income classes. Among the highest income group, a significant part of that effect is due to the treatment of capital gains (reflecting both the fixed realizations assumption and the long run treatment). Probably the largest effect is from the attribution of corporate tax benefits (corrected for timing), but there are also effects from the differential treatment of the timing issues associated with IRAs and noncorporate depreciation. On the whole, the OTA methodology is more consistent with how economists would measure burden.

Both the JCT and the OTA data, however, show much larger average tax reductions in the higher income classes than in the lower ones, a significant fraction of the tax benefits accruing to very high income individuals, and a general move toward greater inequality in the distribution of disposable income.

CRS Report for Congress

Distributional Effects of Tax Provisions in the Contract with America as Reported by the Ways and Means Committee

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April 3, 1995



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SUMMARY

The House Republican Contract tax proposals, with some modifications, have been reported by the Ways and Means Committee. Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports. The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid, while the OTA provides a more comprehensive measure that is more consistent with how economists would measure the bill's benefits to individuals in different income classes.

Certain aspects of the JCT's distribution tables seem to suggest that the tax benefit is greater for middle income individuals, since the largest percentage changes in tax liability occur in the middle incomes. Treasury's tables indicate that the benefits are concentrated at the higher income levels using a variety of absolute and percentage measures of change.

The OTA analysis has a number of methodological differences from the JCT analysis that are likely to improve their measures of the distribution of benefits of the tax cut, including a "fixed realizations" measure of the capital gains tax cut, attribution of corporate tax cuts (which eventually constitute a third or more of the revenue loss), and corrections to deal with timing problems. The JCT and the OTA also differ in how they measure and classify income. The tables provided also differ in the type of distributional measures presented, with the JCT tables presenting data in terms of percentage changes in tax liability (although they also have some data on new and old effective tax rates from which tax changes as a percent of income can easily be calculated). The OTA presents a variety of measures, including average taxes paid, distribution of the tax cut, and percentage changes in pre-tax income, after-tax income, and tax liability.

Despite the data differences, both distributions show rising average tax cuts across the income classes and a significant portion of the total tax cut accruing to higher income individuals. Use of the appropriate measure of relative effect on income inequality (the percentage change in disposable income) also indicates similar findings in both data sets - the tax benefits tend to make disposable incomes less equal. Tax reductions as a percentage of taxes paid which show the largest percentage changes in the middle income classes in the JCT (but not the OTA) data can be misleading as indicators of relative income distribution effects.

In the top income group (approximately one percent of the population), the average tax cut is close to \$5,000 in the JCT estimate (for the year 2000) and about \$20,000 in the OTA data. The most important tax provisions contributing to this discrepancy (given the methodological differences) are probably capital gains and neutral cost recovery. While some attention has been given to the child credit's role in the distribution of tax benefits, it is not very important for high income individuals, accounting for none of the top one percent of the population's tax cut, and about seven percent of the next four percent of the population in the OTA's data.

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DISTRIBUTIONAL EFFECTS OF TAX PROVISIONS IN THE CONTRACT WITH AMERICA

The House Republican Contract tax bill, with some modifications, has been reported by the Ways and Means Committee.¹ Both the Joint Committee on Taxation (JCT) and the Treasury Department's Office of Tax Analysis (OTA) have provided distributional analyses of the effects of the proposal, with substantial differences between their reports.² The JCT provides a cash-flow, post-behavioral-effects distribution of taxes paid for each year from 1995-2000, while the OTA provides a more comprehensive measure more consistent with how economists would measure the bill's benefits to individuals in different income classes. There are also differences in how income is classified and how results are presented. In particular, some results of the JCT analyses seem to suggest that the benefits are more concentrated toward middle income taxpayers, while the OTA analysis suggests the benefits accrue more heavily to high income taxpayers.

The first section of this report summarizes the different distributional analyses provided by the JCT and the OTA. The next section explains the methodological differences between the two, and their consequences for distribution measures. The next section interprets the results of the distributional analysis in the light of this methodological analysis. It also identifies which of the tax provisions strongly influence the results. The final section sums up.

DIFFERENCES IN DISTRIBUTIONAL ANALYSIS

The House Republican Contract tax proposal, with some modifications, has been reported by the Ways and Means Committee. By and large, it retains the original provisions -- the child credit, a fifty percent capital gains exclusion, more generous depreciation benefits under the neutral cost recovery system (NCRS), tax-favored savings accounts, phase-out of the 85 percent maximum inclusion rate for social security, and a number of smaller provisions. It adds some minimum tax relief, however, and restricts the inflation indexing provisions for capital gains.

Both the JCT and the OTA have provided distributional analyses of the effects of the proposal, with substantial differences between their reports both in the underlying data and the method of presentation.

¹ The bill was originally reported as H.R. 1215, and is now a part of H.R. 1327.

² The JCT's estimates are contained in a series of distributional tables dated March 8 and March 9, 1995. The OTA's estimates are contained in a press release issued March 14, 1995.

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The JCT presents individual distribution tables for each year from 1995 to 2000, which measure their estimates of the changes in taxes paid by income class. The only distributional number presented directly in their study is the percentage change in taxes paid. Data presented include the aggregate tax change in each class and the percentage change, current and proposed federal tax distributions across the categories (in dollar aggregates and percentages) and effective tax rates before and after the tax. The OTA presents a distributional analysis that reflects fully phased in law; it also includes several distributional measures -- average tax reductions, share of reductions by income class and income quintile, tax change as a percent of income, tax change as a percent of after-tax income, and tax change as a percent of taxes paid.

DIFFERENCES IN FUNDAMENTAL METHODOLOGIES

There are several methodological differences between the JCT's tables and the OTA's tables. These differences have the effect of making the relative benefits of the tax change for high income individuals smaller in the Joint Tax Committee's tables than in the Treasury's tables. In general, the Treasury Department's treatment is more consistent with how economists would analyze the distributional burden of a tax change. There are also differences in how the data are presented that can make a difference in the impression conveyed by these tables.

The following subsections discuss these methodological and presentational differences, which include treatment of behavioral responses, imputation of corporate tax, timing of tax benefits, differences in income classifiers, and differences in presentation.

BEHAVIORAL RESPONSES AND CAPITAL GAINS TAX CUTS

Any tax analysis involves some types of behavioral responses, if nothing more than making individual decisions (such as choosing whether or not to itemize deductions) that have virtually no real consequences other than to take full advantage of tax savings. There are also behavioral responses that involve a benefit or cost that is very real (such as choosing to work or save more, which involves changing patterns of consumption). Specifically, the important behavioral response of this latter type included in the revenue estimates for the Contract is the assumption that individuals will increase their realizations of capital gains as a result of the tax cut.

Both the JCT's and the OTA's revenue estimates of the proposal have included a variety of behavioral responses, but they differ in the treatment of the realizations response in their distributional tables.

The JCT has departed from previous practice (a change that was also made with some tables prepared in 1994) by simply reporting the distribution of taxes paid after taking into account expected changes in realizations.

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The OTA calculated taxes paid holding realizations constant (unchanged by the new tax provisions). The OTA approach is generally consistent with historical practices (as, for example, practiced during consideration of the Tax Reform Act of 1986). In some cases, OTA departed from this practice in the Bush Administration, by providing tables showing the distribution of taxes paid.

Note that these behavioral effects did not matter very much for the tax legislation in 1993 and no significant tax legislation was considered in 1994; thus, in a sense the issue of how to prepare distributional tables has not been a subject of direct policy significance since 1992 (when capital gains was last considered).

While this issue is not important when behavioral responses are small, they are important when they are large. The current revenue estimating practices of the Joint Committee on Taxation include a significant increase in realizations when capital gains tax cuts are introduced.

A table that reports taxes paid after behavioral responses are taken into account shows how the increased or decreased revenues will be spread across the income classes — that is, which classes are actually expected to be paying more or less taxes and by how much.

Using the distribution of taxes paid as now reported by the Joint Tax Committee (after behavioral responses) may not yield a full or proper measure of the tax burden, and in particular that it can be misleading in the case of the capital gains tax where a large behavioral response is incorporated. This rationale is spelled out in the following quotation from a paper about the capital gains tax co-authored by Gravelle and Lindsey:³

"When considering the issue of tax equity, it is important to distinguish between the distribution of taxes paid and the distribution of the tax burden. For example, suppose a reduction in the capital gains tax rate led to substantially more capital gains realizations and actually increased the tax revenue paid by upper-income groups. While the distribution of taxes paid would have been shifted more into upper-income groups, it would be totally inappropriate to say that their tax burden had increased. After all, with a lower tax rate, these upper-income taxpayers are less burdened than they were before, even though they pay more taxes.

In this regard it is important to note that the distributional tables compiled by the Joint Committee on Taxation ignore the effect of taxpayer behavior when considering the distributional effect of a given tax change. This method is correct for considering the impact of the tax burden, but does not accurately reflect the distribution of taxes paid...

³ Jane G. Gravelle and Lawrence B. Lindsey, Capital Gains, Tax Notes, January 25, 1988, p. 399.

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...Distributional equity focuses on the total burden imposed by the tax, not on the revenue collected."

As suggested in this quote, the use of taxes paid in distributional tables could imply, under some circumstances, that cutting tax rates harms taxpayers and that increasing them benefits taxpayers.

While current behavioral responses used in revenue estimating are not large enough to actually result in increased revenues for the capital gains tax cut (except perhaps for some taxpayers in the initial year), especially given the size of the tax cut, the magnitude of tax reductions will be greatly reduced. They will also be disproportionately reduced for high income taxpayers. For example, considering just the exclusion, the realization response for taxpayers in the highest rate brackets will reduce revenue losses by 80 percent after the first year. For the 28 percent bracket, losses will be reduced by about 60 percent, and for the 15 percent bracket, by 30 percent. Thus, incorporating capital gains into the distributional tables after accounting for realizations responses, as is done in the Joint Committee's estimates, greatly diminishes the importance of the capital gains tax (which primarily benefits higher income individuals) in the distributional numbers.

In any case, the behavioral response that results in more tax payments is a voluntary action that could not be expected to make the individual worse off - rather he is willing to pay this tax for something that is of as great or greater value (presumably the benefits of converting an investment into some other form). Indeed, if anything, the benefit of the capital gains tax cut is larger than the static revenue effect.⁴

This sentiment that using taxes paid is not a good measure of the actual benefits or burdens of a tax change is echoed in certain publications of these official organizations as well. For example, in an earlier analysis of the methodology (hereafter called the "Red Book") of distributional tables, the Joint Tax Committee stated in discussing the distributional effects of a change in the tax rate: "For changes in the rate of a preexisting tax, the static revenue change generally is a superior approximation to the change in economic well being."⁵

The OTA produced tables of the distribution of taxes paid for the 1990 capital gains tax cut proposal and argued that it would raise revenues and that taxes

⁴ This observation means, of course, that the existing measure of tax burden is also too small; in fact, the burden is, in theory, the sum of actual taxes paid and the implicit cost of any behavioral distortions induced by the tax -- in the case of capital gains, the lock-in effect. Also, the static estimate of an increase in the tax burden would also be too small; but the static estimate would still be a better measure than the even smaller measure of taxes paid after avoidance behavior is initiated.

⁵ Joint Committee on Taxation. Methodology and Issues in Measuring Changes in the Distribution of Tax Burdens. Joint Committee Print, Washington, D.C.: U.S. Government Printing Office, June 14, 1993.

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paid was the appropriate measure of distribution. Notably, they also produced tables of static estimates, and were clearly aware of the inappropriate implications for these tables, noting: "...while high-income taxpayers would pay more in taxes, they would be better off because the lower capital gains tax rates will allow them to make investment decisions with less concern about the tax impact."⁶

This issue is not likely to arise in the economics literature where the fundamentals of how, in theory, to measure benefits are well established -- and the recognition that the benefit of cutting a tax is likely to be larger than the reduction in tax assuming no behavioral change is basic to tax analysis.⁷ When the policy making process is discussed, however, economists would, as in the case of Gravelle and Lindsey, reject the simple taxes-paid table as a measure of the distribution of tax burdens and benefits and, indeed, suggest that the "constant realizations" measure understates the benefits of a tax change. For example, Auten and Cordes state: "Additional taxes paid on induced realizations result from voluntary sales of assets, and taxpayers who choose to sell assets must be at least as well off as if they didn't change their behavior."⁸ Similarly, Davis states: "I have argued that a relatively simple 'static' approach -- recalculation of tax liabilities -- produced satisfactory measurements for the distribution of benefits from a capital gains tax cut. If these measures were biased, they understated the size of the tax benefit."⁹

It is also important to note that the JCT's estimate of the realizations response, which, as will be shown below, so affects the distributional results, is not a response that is measured with any precision; indeed, recent research suggests that it may be too large.¹⁰

⁶ Statement of Kenneth W. Gideon, Assistant Secretary (Tax Policy), Department of the Treasury, Before the Committee on Finance, United States Senate, March 6, 1990.

⁷ Technically speaking, the burden of a tax is the sum of the taxes paid and the "excess burden" that results from the implicit cost of changing behavior.

⁸ Gerald A. Auten and Joseph J. Cordes, Policy Watch: Cutting the Capital Gains Tax, *Journal of Economic Perspectives*, Vol. 5, Winter 1991, p. 188.

⁹ Albert J. Davis, Measuring the Distributional Effects of Tax Changes for the Congress. *National Tax Journal*, Vol. 44, September 1991, p. 265.

¹⁰ The issue of the realizations response is by no means resolved, since the current literature contains a significant range of estimates. Moreover, the Joint Committee's estimate dates from 1990, and some research since that time has indicated that, at least after the first year or so, the realizations response is probably much lower. See Jane G. Gravelle, *The Economic Effects of Taxing Capital Income*, Chapter 6, Cambridge, Mass. MIT Press, 1994 for a review of the realizations literature.

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ATTRIBUTION OF CORPORATE TAXES

The JCT distribution tables do not include the corporate tax, even though it is clear that someone must pay the corporate tax. As discussed below, the corporate tax reductions -- primarily the depreciation changes -- are responsible for perhaps a third or so of the tax reduction.

What is a reasonable assumption here? Generally, in the short run, it is presumed that the tax falls on the owners of the firm, who are unable to alter their capital stock. In the long run, the traditional economics literature indicates that the tax is likely to fall on capital in general.¹¹

The JCT has indicated in its tables that it does not include the corporate tax because of the uncertainties about where the burden of the tax falls. In general, it was the JCT's practice for many years simply not to attribute the corporate tax. In the "Red Book," however, the JCT subsequently indicated a decision to distribute the tax to the owners of corporate equities, essentially reflecting a short run assumption. This decision has apparently been reversed.

The Treasury Department attributes the tax to capital in general, consistent with the economics literature and their longer term perspective on distributional analysis. (Actually, the attribution of the tax to corporate equity owners would make the distribution of the tax in distributional tables more progressive, and increase the fraction of the tax benefit that accrues to higher income individuals). The Treasury did not always attribute the corporate tax. For example, in the 1986 Tax Reform Act, corporate tax liabilities were not attributed; indeed, this was the subject of an analysis by Feldstein discussing how the distributional effects of the tax might be modified with attribution of the corporate tax. (Feldstein assigned the tax to all capital as does the Treasury in its current analysis.)¹² For the last several years, however, the Treasury has been attributing the tax

¹¹ The Harberger model of the tax (Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, *Journal of Political Economy*, vol. 70, June 1962, pp. 215-240) shows that the tax can in some cases fall more than 100 percent on capital (and benefit labor) and in other cases fall less than 100 percent on capital, but the general tendency is for the tax to fall on capital, under reasonable behavioral assumptions. This model was one of a closed economy. However, assuming that capital, although mobile, cannot be perfectly substituted around the world and that imports and domestic production are imperfect substitutions, this finding also tends to hold in an open economy. See Jane G. Gravelle, *Corporate Tax Incidence in an Open Economy*, 1993 Proceedings of the National Tax Association, Tax Institute of America, pp. 175-178.

¹² See Martin Feldstein, *Imputing Corporate Tax Liabilities to Individual Taxpayers*, *National Tax Journal*, March 1988, vol. 41, pp. 37-60. This issue was also explored by several other researchers. See Jane G. Gravelle, *Equity Effects of the Tax Reform Act of 1986*, *Journal of Economic Perspectives*, Vol. 6, Winter 1992, pp. 27-44 for a discussion of these analyses.

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to all capital and it is continuing that treatment in its distributional estimates of the Contract with America tax proposals.

The attribution of corporate taxes has a significant effect on the estimated revenue cost of the tax proposals and (given that the timing issue can be effectively dealt with) will have a large effect on distribution of the tax benefit when attributed to capital, since capital income is more concentrated in the higher income classes. The major provision is the Neutral Cost Recovery System (NCRS) which will eventually involve substantial amounts of revenue losses and is largely not included in the JCT's tables.

TIMING ISSUES

The provisions in the bill are estimated to bring about much larger revenue losses over time that reflect, primarily, the timing of tax benefits. Overall, the magnitude of cash flow benefits increases substantially over time, as can be seen in OTA's revenue estimates which cover an additional five years, from 2001-2005. (Overall, the estimates actually cover six years for the Joint Tax Committee, and 11 years for the Treasury, but the first year, FY 1995, has very small effects on the totals and actually make them larger).

According to the Treasury Department the cost from 1995-2000 is \$178.1 billion, while the cost from 1995-2005 is \$630.2 billion. Thus, the second-five-year cost of \$452.1 billion is much larger than the first five years. Assuming a nominal growth of 6 percent to project the normal growth that would be expected, the increase in the second five years, holding income constant, is about 90 percent; thus the costs almost double between the first and the second five years.

This growth is due only to certain provisions, as can be seen by examining the dominant revenue losers in each period. In the first five-year period, the \$500 child credit accounts for 62 percent of the cost, capital gains for 16 percent, the Alternative Minimum Tax Provision for 11 percent, the elimination of taxes on part of social security for 9 percent, and the marriage penalty relief for 5 percent. In the second five-year period, however, the largest revenue loser was the neutral cost recovery system, accounting for 31 percent. The child care credit has declined in share to 28 percent, the capital gains provision is about the same at 14 percent, the social security provision is about the same at 8 percent, and the IRA provision is responsible for 6 percent.

These changes occur for a variety of reasons. NCRS is designed so that it raises revenue in the first five years (through the slow-down in depreciation) but its true benefit is large and it grows rapidly until it becomes the single largest provision. Its growth far outstrips the growth in the overall size of the package. The child care credit, however, has not changed much in nominal terms, perhaps because any growth due to inflation is small and offset by demographic changes. Thus, it falls in share by over fifty percent. Capital gains revenue losses are growing rapidly because of indexation (and the interaction of this further tax cut with behavioral effects), and have grown about as fast as the overall cost. Social security is also growing naturally though demographics and benefit growth. Finally, IRAs

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become more important because of the accumulation of amounts in tax-favored accounts. The AMT has, however, diminished in relative size along with the marriage penalty relief.

These trends actually continue -- the real cost of the package will continue to grow due to certain provisions that tend to grow (NCRS, capital gains, and individual retirement accounts). In particular, neutral cost recovery, will likely continue to rise in real terms for many years.¹⁸

The treatment of timing issues is not always straightforward and it is hard to develop a consistent rule, although it is frequently the case that a cash flow measure will be misleading. The JCT has simply examined several years and used the cash flow approach, even through this causes the form of the tax benefit to strongly influence the projected revenue costs.

The Treasury Department has used an approach that is consistent, at least for these provisions, with their focus on the permanent distributional effects of tax changes. They have used fully phased-in provisions (e.g. full indexing) with long run behavior. For those provisions such as depreciation and IRAs where the same economic benefit can produce dramatically different cash flow patterns, they have calculated the present value of tax benefits associated with this year's investment or savings. Essentially, the depreciation benefits have been converted into an investment credit of equivalent value; similarly, the IRA benefits are measured as an initial credit. This is a pattern that will yield the same result for provisions with the same economic value. By contrast, the JCT's cash flow approach would yield very different effects if different forms of benefits were chosen (i.e. front-loaded rather than back-loaded IRAs, or direct expensing rather than the expensing equivalent via increased future depreciation deductions).

INCOME CLASSIFIERS

The JCT and the Treasury also differ in the measurement of income classes. The JCT uses tax return data and adds back to adjusted gross income to generate an expanded income class that includes nine separate classes. Adjusted gross income is increased by health care fringe benefits, tax-exempt interest, social security

¹⁸ See Jane G. Gravelle, Estimating Long-Run Revenue Effects of Tax Law Changes, *Eastern Economic Journal*, Vol. 19, No. 4, Fall 1993, pp. 481-494, for a general discussion of the revenue estimating issues arising with tax changes that have uneven patterns over time; this discussion includes a graphical presentation of the time path of back-loaded vs. front-loaded IRAs and prospective capital gains tax indexing. The revenue patterns of several tax provisions in the Contract are discussed in other CRS products. NCRS is discussed in David L. Brumbaugh and Jane G. Gravelle, *The Neutral Cost Recovery System and the House Republican Contract*, Congressional Research Service report 95-161 E; capital gains tax change in testimony of Jane G. Gravelle, on Capital Gains Tax Proposals, Before the Committee on Finance, February 15, 1995 and IRA proposals in Jane G. Gravelle, *Individual Retirement Accounts (IRAs) and Related Proposals*, Congressional Research Service Report 95-420, March 24, 1995.

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benefits not otherwise included in income, the insurance value of medicare, the employer's share of the FICA tax, certain tax preference items, and excluded income of individuals living abroad. Individuals with zero incomes are excluded.

The Treasury Department uses an expanded income concept that is more consistent with economists' income concepts, including not only most of the items included by the JCT but also additional returns to capital (such as imputed income on owner-occupied housing, the returns to pension and related plans, and adjustments for accrued, real capital gains). Income is measured on a family income basis so that individuals living in families who might file separate returns are combined, and is reported in two ways -- by the same income classes (with two combined) as the JCT data (which we term OTA -I), and by population shares (which we term OTA-ID. It also includes individuals with zero or negative incomes.

In comparing the distributional tables it is important to distinguish between the differences due to different measures of income and those due to other methodological differences. Table 1 provides a comparison of these income classifiers by juxtaposing income shares with dollar levels of income. In this and all other comparisons, we use the JCT estimates for the year 2000 which move closer to

Table 1: Income Classes and Population Shares, JCT and OTA Distribution Tables

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles. The total units in the OTA tables is 109.4 million (families); total units in the JCT tables are 136.2 million (returns).

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a permanent distribution than any of the other years. (Income categories are measured at 1995 levels for the JCT, but the distribution reflects year 2000 distributions of returns; all data are measured at 1996 income levels for the OTA data). Note also that some members of a high income family in the family classification of the OTA could appear as lower income tax returns in the JCT distribution.

As this table shows, although both report the same income levels, much more of the population is in the higher income levels for OTA - I than for JCT. Twice as large a share of the population units is in the OTA's \$200,000 class than in the JCT's \$200,000.

The table also shows that although the OTA- II table, which involves shares of the population, is actually more closely comparable to the JCT than either is to OTA - I, even though the nominal income levels are different. Again this is due to the expanded income concept which includes much more imputed, unrealized and transferred income than the JCT income concept.

PRESENTATION OF INFORMATION

The JCT and OTA tables also differ in how the information is presented. Both present overall tax reductions by income class, but this raw information has no frame of reference (i.e., one does not know whether the amounts in a category are large because the benefit is large or because there are a lot of people in the category). Rather, this information must be transformed in some way to provide information on distributional effects.

The JCT tables present only one type of direct distributional measure: the percentage change in tax liabilities. The OTA presents five different types of measures: the average tax reduction, the percentage distribution of the tax reduction, and the tax change as a percent of pre-tax income, after-tax income, and taxes paid.¹⁴

In discussing these measures it may be appropriate to distinguish between absolute measures and relative measures. For example, average tax reductions per unit provide information on the absolute size of a tax benefit across the income classes, which is a straightforward measure. Another way of examining this same effect is to compare the distribution of the tax benefit with the distribution of the population. If each proportion of the population is getting the same share of the benefit, then the benefits are equal. Both of these measures can inform us about how a tax cut is changing income without being misleading.

¹⁴ Most of the measures presented in the OTA tables can be derived from the JCT tables except for those that require a distribution of returns (e.g. average tax benefit per return). Data on the distribution of returns is, however, available from the JCT. Since, they also present effective tax rates before and after the changes, it would be a simple matter to see the change as a percent of pre-tax income).

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A different type of measure is a relative one that tries to examine how the tax benefit is changing the overall distribution of income in the country -- that is, is it making incomes more equal or less equal? In general, the best method for measuring this is to examine the percentage change in disposable (after-tax) income. If the percentage change is equal, then the tax change is not making incomes more equal or less equal. If the percentages are higher among higher income individuals the change is making incomes less equal.

What about the role of the other percentage measures -- of pre-tax income and of taxable income. The former will tend to produce slightly different percentages (and smaller ones) when taxes are already present and is not as precise in indicating the overall effects on income equality. The percentage of tax changes can, however, be misleading. If the percentages rise across the income levels (given an initial progressive system, the results indicate less equality. If they fall, however, the percentages can be very misleading. For example, suppose that a family pays only \$10 dollars in income tax. A ten dollar tax cut will, therefore, be a 100 percent tax reduction and will appear very large. For this reason, tables of percentage changes in taxes paid may indicate very little about the distributional benefits of a tax change.

COMPARISON OF DISTRIBUTIONAL EFFECTS

This section examines the distributional tables and calculates measures that can be used to examine the distributional of benefits of the tax cut and the causes of the different results in the two measures.

ABSOLUTE MEASURES

Table 2 presents data that show the average tax saving and the share of taxes saved (the data on income class and population from table 1 is reproduced as well). Recall that JCT is more comparable, based on income shares, with OTA II.

All three measures show rising dollar amounts across the income scale, but the amounts are larger and rise faster with the OTA numbers than with the JCT numbers. For example, in the top one percent of the population (approximately), the tax benefit is close to \$5,000 on average (\$4600 for the top 1.3 percent) in the JCT numbers but is four times as large -- \$20,000 -- in the OTA numbers. The top one percent gets somewhat less than 15 percent of the total tax saving in the JCT numbers, and 20 percent in the OTA numbers. Thus, based on absolute benefits, higher income individuals receive substantially more than do lower income individuals.

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Table 2: Average Tax Benefit and Distribution of Tax Benefit

JCT Average Tax \$ Saving	OTA - I Average Tax \$ Saving	OTA - II Average Tax \$ Saving	JCT Share of Tax Saving (Percent)	OTA - I Share of Tax Saving (Percent)	OTA - II Share of Tax Saving (Percent)
11	20	36	0.4	0.2	0.7
53	90	205	2.6	1.3	4.1
153	247	555	6.0	3.3	10.9
356	569	1021	20.5	11.6	20.2
651	997	1689	22.6	16.4	16.6
921	1572	2274	15.6	15.2	11.3
1378	2466	4122	17.2	23.4	16.2
4605	11266	20382	15.3	28.1	20.1

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
30-50	30-50	49-79	23.3	20.8	20
50-75	50-75	79-109	14.0	16.8	10
75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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RELATIVE MEASURES

Two relative measures are presented in table 8: the percentage change in taxes paid, which is the only direct measure in the JCT tables, and the percentage change in after tax income, which measures whether the income distribution became more or less equal.

The percentage of tax changes in the JCT numbers are ones that might lead to the impression that the tax benefit is favoring the middle incomes, since the percentage changes are largest in \$30,000 to \$75,000 classes, and smaller at the lower incomes. (Actually, this group covers from the 33rd percentile to the 87th percentile). This pattern does not comport with the OTA measures, which show a generally rising (although declining slightly in some spots) percentage reduction in taxes.

The second measure shows that the tax changes are making the distribution of after tax income more uneven over time under any of the measures. In this case, the percentage changes are not much larger (e.g. 3.1 percent for JCT and 3.3 percent for OTA -II in the top bracket) in the OTA analysis, especially in the top bracket. There are two opposing forces -- the tax cut is larger, but so is economic income.

PROVISIONS THAT CONTRIBUTE TO LARGER TAX BENEFITS IN THE OTA ANALYSIS

While it is not possible to pinpoint exactly the provisions that contribute to the much larger benefits, particularly for higher income individuals, given the data supplied (which OTA only separates for the child credit and capital gains), it is clear that capital gains plays an important role and that the child credit does not. There has been some argument that the child credit should be dropped for families with incomes above \$100,000. This change would have little effect on the distributional results. The child credit is responsible for only 7 percent of the tax benefit in the next to the top bracket of OTA-II (roughly corresponding to the \$100,000 to \$200,000 expanded JCT class and somewhat above the \$100,000 adjusted gross income class). It is more important in the next lower class, (roughly corresponding to the \$75,000 to \$100,000 JCT class), where it accounts for 17 percent. (It has no effect on the top class).

Part of the cause of large tax benefits in the higher incomes is clearly the capital gains tax. The JCT's top bracket, accounting for 1.3 percent of the population distribution, has \$3804 in capital gains tax cuts, while OTA II has \$8037. (These amounts are 83 percent and 39 percent respectively of the total tax cut). Thus perhaps about a third of the differences can be attributed to capital gains. The remainder is probably due to the corporate tax cut attributions (especially neutral cost recovery) and the timing effects both for corporate tax attributions and for IRAs and noncorporate depreciation.

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Table 3. Percentage Changes in Taxes and in Disposable Income

JCT Percent Change: Taxes	OTA - I Percent Change: Taxes	OTA - II Percent Change: Taxes	JCT Percent Change: After-Tax Income	OTA - I Percent Change: After-Tax Income	OTA - II Percent Change: After-Tax Income
-2.3	-4.4	-5.5	0.3	0.4	0.5
-3.4	-6.8	-7.3	0.3	0.7	1.0
-3.9	-7.4	-8.3	0.7	1.1	1.7
-4.4	-8.3	-8.2	1.0	1.8	2.0
-4.4	-8.1	-8.6	1.1	2.0	2.3
-4.0	-8.7	-8.3	1.4	2.3	2.4
-3.7	-8.6	-9.3	2.0	2.4	2.6
-2.9	-9.9	-10.0	3.1	3.1	3.3

(Note: For the convenience of the reader, table 1, showing the income classes and population shares of the eight rows, is reproduced below.)

JCT Income Classes (\$000)	OTA - I Income Classes (\$000)	OTA - II Income Classes (\$000)	JCT Population Share (Percent)	OTA - I Population Share (Percent)	OTA - II Population Share (Percent)
<10	<10	<16	14.2	11.5	20
10-20	10-20	16-30	19.4	14.9	20
20-30	20-30	30-49	15.8	13.9	20
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75-100	75-100	109-145	6.8	9.9	5
100-200	100-200	145-349	5.1	9.7	4
>200	>200	>349	1.3	2.6	1

Note: JCT numbers are for the year 2000. OTA-I refers to the distribution by income class; OTA-2 refers to the distribution by quintiles.

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CONCLUSION

The OTA distributional tables in general indicate larger tax benefits from the Contract with America tax bill and a larger concentration of benefits in higher income classes. Among the highest income group, a significant part of that effect is due to the treatment of capital gains (reflecting both the fixed realizations assumption and the long run treatment). Probably the largest effect is from the attribution of corporate tax benefits (corrected for timing), but there are also effects from the differential treatment of the timing issues associated with IRAs and noncorporate depreciation. On the whole, the OTA methodology is more consistent with how economists would measure burden.

Both the JCT and the OTA data, however, show much larger average tax reductions in the higher income classes than in the lower ones, a significant fraction of the tax benefits accruing to very high income individuals, and a general move toward greater inequality in the distribution of disposable income.