Washington Center for Equitable Growth

If U.S. tax reform delivers equitable growth, a distribution table will show it

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Overview

Distribution tables—estimates of who wins and who loses from changes in tax law—are central to any debate about tax reform. Such analyses frequently show the plans put forward by Republican politicians to be severely regressive, delivering large income gains for high-income families and little for the overwhelming majority of families. The blueprint for tax reform released by House Republicans in 2016, for example, would increase after-tax incomes for the top 1 percent of families by 13 percent in the first year after enactment but would increase incomes for the bottom 95 percent of families by less than half of 1 percent.[1]

In response, proponents of regressive tax plans often assert—either implicitly or explicitly—that distribution analysis is flawed and fails to account for the benefits of the additional economic growth that the plans would purportedly generate.[2] This view is mistaken. A traditional distribution analysis provides an approximation of the change in economic well-being resulting from a change in tax law. Distributional analysis is thus useful precisely to determine whether tax reform delivers gains for people across the income distribution or only for those at the top.

In the special case of revenue-neutral tax reform—an ostensible target for current reform efforts—distribution tables capture the primary gains from increases in economic efficiency in their estimates of changes in after-tax income. In the case of revenue-losing reform, distribution tables overstate the gains from reform because apparent increases in after-tax incomes will ultimately need to be clawed back through offsetting tax increases or spending cuts. Only in the case of revenue-raising reform will distribution tables understate the gains. Thus, in the most likely cases for tax legislation this fall, distribution tables will either reflect or overstate the gains from any increases in economic efficiency, to the extent they exist at all.

Simply stated, invocations of economic growth cannot be used to wave away regressive distribution results. Reforms such as the 2016 House Republican blueprint would boost incomes for high-income families at the expense of working- and middle-class families.

Focusing on changes in economic output rather than on the distribution of economic gains and losses not only ignores the potential for tax reform to have different impacts for people up and down the income ladder, but also overstates the economic gains from reform by counting increased output as a benefit without accounting for the costs of generating that output. Indeed, the greater risk in the coming months is not that distribution tables will understate the gains from tax reform, but rather that distribution tables will overstate the gains of reform and understate its regressivity if policymakers turn to tax cuts rather than tax reform and include a slate of temporary policies such as a one-time tax on overseas profits.

As Republicans in Congress and the Trump administration continue to develop a proposal for tax reform, it is worth revisiting why traditional distribution tables are precisely the analytical tool they will need to determine if their tax reform plan does, in fact, deliver equitable growth. This brief first explains why static distribution tables are informative about the improvements in economic well-being resulting from revenue-neutral tax reform. It then identifies three reasons that distribution tables may overstate the gains from reforms. Specifically:

- Distribution tables typically do not impose budget balance on the policy changes they assess, which means that in the case of deficit-financed tax cuts, a distribution table will show gains attributable to increased borrowing even though that borrowing must ultimately be financed with spending cuts or tax increases that would make families worse off.

- Timing gimmicks can affect distribution tables just as they can affect revenue estimates. A one-time tax on the repatriation of overseas corporate profits, for example, could reduce the apparent regressivity of a tax cut if distribution tables are estimated only (or primarily) for years in which the temporary policies are in effect.

- If tax reform increases the federal budget deficit, then traditional approaches to measuring the incidence of certain reforms may be invalid.

Despite these limitations, distributional analysis will be critical in understanding the potential gains of any tax reform plan put forward by congressional Republicans and the Trump administration in the coming months. An understanding of what distribution analysis does and does not measure will be essential for policymakers and the public.

Distribution tables reflect the economic gains from revenue-neutral tax reform

To estimate the approximate change in economic well-being from a change in tax law, a static distribution table computes the change in tax burden assuming no change in behavior. The distribution tables produced by the Tax Policy Center and the U.S. Treasury's Office of Tax Analysis are of this type.[3] Assuming unchanged behavior provides a better approximation to the change in economic well-being resulting from a proposal than allowing behavior to change because the behavioral responses have little direct value to the people changing their behavior.[4]

This perhaps counterintuitive conclusion arises from the analytical assumption that people are always doing the best that they can in the economic circumstances they face. From this assumption, it follows that people equate the gains from small changes in behavior to the costs of those changes in making choices about work, consumption, and savings. If they did not do so, then there would be a small change in behavior that made them better off.

As a concrete example, consider workers earning $20 an hour, working 40 hours per week, and facing a 25 percent tax rate. Under current law, the workers' after-tax wage is $15 per hour. The maintained assumption is that the workers could choose to increase or decrease their hours slightly at this wage rate if they wished to do so. As they choose not to, then the value to the workers of that additional $15 is roughly equal to the costs of working more such as increased commuting costs, childcare, or less time for household chores. If the cost of working that additional hour exceeded $15, then reducing hours would make them better off. If the cost were less than $15, then increasing hours would make them better off.

If the tax rate for these workers is reduced to 20 percent and the workers decide to pick up an additional two hours per week, then the net value of those hours to them is not the full $32 in additional take-home pay from working more, but rather only about $1. The reason: At the new, higher number of hours worked, the cost of working longer is roughly $16, again equal to the take-home pay. The total cost of work for those two hours would be roughly $31, or about $15 for the first hour and $16 for the second, leaving our hypothetical workers with only an extra dollar to show for the effort.

Notably, the change in well-being resulting from the behavioral response of these workers to a 5 percentage point reduction in the tax rate is far smaller than both the direct impact of the tax cut ($40 in reduced income taxes) and the impact of the change in behavior on government revenues ($8 in new revenue resulting from the increased working hours: 20 percent of the $40 in additional gross pay).

The economic logic of this simplified example generalizes to other choices about work, consumption, and savings. For a small change in tax rates, changes in behavior provide

essentially no direct benefits. For a larger tax change, the value of the change in behavior would tend to be small relative to the other effects of the proposal. Note, however, that the conclusion that a family is approximately indifferent to changes in behavior applies only to changes in behavior under its control and only for those decisions where the family is unconstrained in its choices. In more complex models, the relevant assumptions could fail in other ways such as through informational imperfections.

The above analysis treats the conclusion that changes in behavior provide little direct benefit as a justification for static distribution tables, but an alternative and likely preferable mode of analysis would be to determine the types of behavior that should be held fixed in a distribution table as precisely those for which small changes leave families indifferent. Changes in behavior that do not satisfy this property should be included, though the details of doing so can be complex. In fact, implicitly, static distribution tables typically allow at least one form of behavioral response: a switch from claiming the standard deduction to itemizing (or the reverse). One justification for including such changes is that they are essentially costless and thus there is no offsetting cost to the gains delivered by making such a change.

The assumption of no (or extremely limited) changes in behavior used in a static distribution table differs from the behavioral assumptions used in both a conventional revenue estimate and a dynamic revenue estimate. A conventional revenue estimate allows for microeconomic behavioral responses—responses that do not change macroeconomic aggregates such as labor hours or the capital stock. For instance, a decrease in the use of an itemized deduction in response to a limitation on that deduction would be a microeconomic behavioral response. A dynamic revenue estimate allows for microeconomic behavioral responses and changes in macroeconomic aggregates. Because the behavioral assumptions underlying a static distribution table and a revenue estimate are not the same, the aggregate tax change shown in a distribution table will not necessarily match the revenue estimate under either conventional scoring or dynamic scoring.

This gap between the revenue estimate for a proposal and the implied aggregate change in tax liability per the distribution table captures the primary economic gains from a proposal. If tax reform delivers positive revenue feedback—whether through microeconomic behavioral responses included in a conventional score or macroeconomic behavioral responses included in a dynamic score—then the revenue cost of the proposal will be smaller than the tax cut implicit in the distribution tables. An efficiency-enhancing tax reform that is revenue neutral including dynamic feedback would thus show a tax cut in the distribution table at no revenue cost to the government. That free-to-the-government tax cut reflects the primary economic benefits of the reform.

Consider a second example. Suppose a person making $50,000 and facing a tax rate of 25 percent can deduct from income certain expenses equal to $10,000. The government then replaces the deduction with a 20 percent tax credit and provides a $900 tax credit instead. The individual responds by reducing spending on the deductible expenses to

$8,000. The government collects the same amount of revenue under this reform as it would under current law. In other words, the revenue estimate is zero.

Moreover, because the amount of the deductible expense was chosen freely prior to the reform, the person was roughly indifferent between an additional dollar of the deductible expense and nondeductible expenses. This will remain approximately the case after the reform, and thus the person realizes only a very modest gain from the behavioral change. Importantly, however, the new tax credit is worth $900 and the limitation on the deduction costs only $500 (before the reduction in such spending), which means the distribution table would show a net tax cut of $400 that was provided at no net cost to the government.

In other words, if policymakers can deliver tax reform with real economic benefits that is revenue neutral on a dynamic basis, then an appropriately constructed distribution table for that tax reform would show a net tax cut. And if the tax reform delivers equitable growth in living standards, then the table will show robust increases in well-being for working- and middle-class families, as well as high-income families.

The validity of the static distribution as a measure of the change in economic well-being also highlights the role of government policy in determining the way the economic gains from tax reform are translated into increases in well-being for families up and down the wealth and income ladders. As the behavioral changes resulting from tax reform are of relatively little direct value to families and the broader efficiency gains generally arise from the impact of reform on the government budget, it is government policy that determines how those gains are allocated. Notably, since the behavioral changes are of relatively little direct value to families, if the static tax cuts are concentrated among high-income families, then growth will not change that fact.

Of course, static distribution tables remain an approximation to the change in economic well-being, and there is plenty to debate about their construction. The quality of the approximation declines as the rate change gets larger, though for a revenue-neutral reform, the overall rate change should be small. A higher-quality approximation would show slightly higher benefits of efficiency-enhancing reform.[5] Many of the assumptions underlying a distribution table and the associated revenue estimates are uncertain such as the responsiveness of labor supply to tax changes and the allocation of the incidence of the corporate income tax to labor and capital. Changes in wage rates and investment returns resulting from behavioral responses can affect the results. Distribution tables do not capture the benefits or costs of simplification proposals, though these are typically modest. Interactions between federal and state revenue streams often receive insufficient attention in federal policymaking.

There is much to debate about the details of distribution tables, but their importance in assessing changes in economic well-being is clear. Static distribution tables provide a reasonable approximation to the change in economic well-being across the income

distribution, and economic growth does not. If revenue-neutral tax reform delivers equitable growth, then a static distribution table will show it.

Distribution tables are more likely to overstate the gains of reform

The greater analytic risk in the coming months is not that distribution tables will understate the gains from reform, but rather that they will overstate the gains from reform and understate its regressivity.

First, as noted above, distribution tables typically do not impose budget balance on the policy changes they assess. In the case of deficit-financed tax cuts, a distribution table will thus show gains attributable to increased borrowing even though that borrowing must ultimately be financed with spending cuts or tax increases. Incorporating those offsetting fiscal policies into the analysis would reduce the apparent gains in the distribution table. In fact, the primary scenario in which static distribution tables understate the gains from tax reform is one in which Congress enacts tax reform that is revenue neutral on a conventional basis and uses the economic gains to reduce the deficit and debt. In this case, the distribution table would show a near-zero change in well-being even though gains have been realized.

Second, timing gimmicks can affect distribution tables just as they can affect revenue estimates. A time-limited policy such as a one-time tax on the repatriation of overseas corporate profits could reduce the apparent regressivity of a tax cut if distribution tables are estimated only or primarily for years in which the temporary policies are in effect. More broadly, practical considerations make the construction of distribution tables on a present-value basis difficult, but there would be substantial analytic value to such an exercise. In the absence of a present-value analysis, caution is required in interpreting distribution tables for policies that differ substantially across years or for which a substantial adjustment period is likely.

Third, if tax reform increases the federal budget deficit, then traditional approaches to measuring tax incidence may be invalid. Distribution tables, for example, typically assign a portion of the incidence of a corporate tax cut to labor and a portion to capital. Most analysts assume a partial pass-through to labor based on anticipated changes in the capital stock. But the capital stock will change only over time, and whether it will grow—and whether that growth will be sustained—depends on whether increased federal budget deficits drive up interest rates and discourage private-sector activity. Thus, deficit financing not only can reverse short-run gains from a proposal and ultimately harm growth, but can also result in misleading distribution estimates that assume labor benefits from capital deepening even as the proposal reduces the capital stock.

Endnotes

1 Leonard E. Burman and others, "An Analysis of the House GOP Tax Plan," *Columbia Journal of Tax Law* 8 (2) (2017): 257–294.

2 See, for example, John Harwood, "Another Dem Like Obama? Our Best Days Are Behind Us: Ryan," CNBC, March 17, 2016, available at http://www.cnbc.com/2016/03/17/another-dem-like-obama-our-best-days-are-behind-us-ryan.html.

3 See Julie-Anne Cronin, "U.S. Treasury Distributional Analysis Methodology" (Washington: U.S. Department of Treasury, 1999), available at https://www.treasury.gov/resource-center/tax-policy/tax-analysis/Documents/WP-85.pdf for a comprehensive description of the U.S. Treasury methodology; U.S. Department of Treasury, "Treasury's Distribution Methodology and Results" (2015), available at https://www.treasury.gov/resource-center/tax-policy/tax-analysis/Documents/Summary-of-Treasurys-Distribution-Analysis.pdf for a more recent summary. Note that while the working paper and summary state that distribution tables do not address economic efficiency, that claim understates the value of distribution tables in the context of revenue-neutral reform as discussed in this brief. In contrast to the distribution tables produced by the U.S. Treasury, distribution tables produced by the Joint Committee on Taxation have historically distributed the change in tax revenue, and thus do not necessarily deliver an estimate of the change in economic well-being. See Edward Kleinbard, "Keynote Address to the 21st Annual Institute on Current Issues in International Taxation in Washington DC," (2008), available at https://www.jct.gov/publications.html?func=startdown&id=1253.

4 For a related analysis from which this analysis draws inspiration, see Jason Furman, "Dynamic Analysis, Welfare, and Implications for Tax Reform," (2016), available at https://obamawhitehouse.archives.gov/sites/default/files/page/files/20160922_furman_nber_dynamic_taxreform_cea.pdf.

5 For an example that incorporates the second-order gains from behavior into the analysis, see Douglas W. Elmendorf and others, "Distributional Effects of the 2001 and 2003 Tax Cuts: How Do Financing and Behavioral Responses Matter?" *National Tax Journal* 61 (3) (2008): 365–380.

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Accelerate cutting-edge analysis into whether and how structural changes in the U.S. economy, particularly related to economic inequality, affect economic growth.

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