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How Specifications of the Reference Tax System Affect CBO's Estimates of Tax Expenditures

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The Congressional Budget Act of 1974 (the Budget Act) defines tax expenditures as "those revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability."[1] Tax expenditures thus arise from provisions (exclusions, deductions, tax credits, and preferential rates) in the federal tax system that grant special tax treatment for certain types of income, activities, or groups. In turn, those provisions cause government revenues to be lower than they would be if the provisions did not exist.

Tax expenditures have a large effect on the federal budget. On the basis of estimates prepared by the staff of the Joint Committee on Taxation (JCT), the Congressional Budget Office estimates that the value of all tax expenditures in the individual and corporate income tax systems totaled $1.6 trillion, or 7.8 percent of gross domestic product, in fiscal year 2019.[2] That amount was equal to nearly half of all federal revenues, exceeded all discretionary outlays, and totaled about 60 percent of all mandatory spending in the federal budget, which includes spending on Social Security and Medicare.

To identify and measure tax expenditures, the normal tax structure in which such provisions represent special treatment must first be defined. That normal tax structure is known as the *reference tax system*—the underlying framework of tax laws and administrative practices in which tax expenditures are analyzed. Thus, a reference tax system reflects a particular conceptual basis for taxation as well as other features necessary to implement and administer the tax code.

This report outlines how the specifications of the reference tax system used by CBO affect the agency's estimates of tax expenditures. Before the Budget Act became law, both the Treasury and JCT produced estimates of tax expenditures. Although the Budget Act subsequently required CBO to report on tax expenditures, it did not establish a specific framework for identifying or measuring them. As a result, there is no single, consistent definition of the reference tax system or its features that is universally used when analyzing tax expenditures. The specifications of such a system can therefore vary, which has led analysts to disagree about the appropriate specifications for the reference tax system and the resulting estimates of tax expenditures.[3]

Determining the Conceptual Basis of the Reference Tax System: Income Versus Consumption

Conceptually, a reference tax system can be based on either an income tax or a consumption tax.[4] Although the Treasury and JCT have used an income tax as the basis for the reference tax system in their analyses, the U.S. tax system has features of both an income tax and a consumption tax.[5] In theory, the two constructs are closely related because comprehensive income can be defined as consumption plus the change in net worth.

In practice, the specifications of a consumption tax can vary, and such a tax can be administered in more than one way.[6] Although a value-added tax applied at the point of sale is perhaps the most commonly recognized type of consumption tax, modifying the existing income tax to exempt the return on saving and investment would, in effect, be economically similar to basing a reference tax system on a consumption tax.[7] As with an income tax, the particular specifications of a consumption tax have implications for what is considered normal in the tax structure, what is considered special treatment, and thus which provisions qualify as tax expenditures. Does the taxable base comprise all consumption, for example, or are some items, such as spending on services provided by government, excluded in the reference tax system?

When analyzing tax expenditures, it does not matter in many cases whether the reference tax system is defined on the basis of an income tax or a consumption tax. But in some cases, provisions of tax law are considered tax expenditures under one system but not the other. The provisions most sensitive to whether a reference tax system is based on income or consumption are those related to the tax treatment of income from saving and investment.

When an income tax forms the basis of the reference tax system, realized income from saving and investment is part of the tax base. But when a consumption tax is the basis, income from those sources is not part of the tax base. Thus, provisions that offer exclusions for contributions to tax-preferred retirement savings accounts would not be considered tax expenditures in a consumption-based reference tax system.[8] Those provisions highlight the primary difference between such a system and one based on an income tax—that is, whether taxing saving and capital at lower rates is an intentional component of its design or a revenue-reducing deviation from the system.[9]

In other cases, a provision of tax law can represent special treatment in both reference tax systems, but the magnitude of the resulting tax expenditure—or even whether its estimated value is positive or negative—differs.[10] For example, when an income tax forms the basis of the reference tax system, the lower tax rate on certain capital gains qualifies as a positive tax expenditure, or a tax benefit. But in a system based on a consumption tax, the same provision is considered a negative tax expenditure, or a tax penalty.[11] Similarly, accelerated depreciation (that is, providing for a deduction in excess of economic depreciation) qualifies as a tax expenditure in an income-based reference tax system, whereas any tax benefit less than full expensing (that is, fully deducting the amount of an investment when it is made) is considered a negative tax expenditure in a consumption-based system.[12]

Specifying the Provisions of the Reference Tax System

After the conceptual basis of a reference tax system is determined, the provisions that constitute the normal tax structure must be specified to set an appropriate benchmark for measuring tax expenditures. That benchmark is intended to reflect significant fundamental aspects of the tax system as it is practically applied in the tax code.

The standard practice, consistent with the original estimates of tax expenditures produced by the Treasury in the 1960s, is to measure the expenditures relative to an income-based reference tax system with a separate income tax on corporations and with an individual income tax that allows personal exemptions and a standard deduction. Both the Treasury and JCT have consistently applied that practice with certain other modifications that reflect what the government can reasonably enforce and administer.[13]

CBO follows JCT's framework of identifying tax expenditures as deviations from a normal income tax structure that includes certain features that reflect the actual structure of the tax code.[14] In the individual income tax system, those features include graduated tax rates, the standard deduction, personal exemptions, and deductions for certain business expenses. For the corporate income tax, the normal structure includes the statutory tax rate, income defined on an accrual basis, and the alternative depreciation system for recovering costs of capital expenses.[15] Among the provisions that CBO identifies as tax expenditures (using JCT's framework) are the exclusions for employment-based health insurance and for pensions and retirement savings accounts; rates applied to capital gains and dividends that are lower than those rates used for ordinary income; deductions for mortgage interest and for state and local taxes; and credits for earned income and dependents.[16]

Modifying the Reference Tax System to Reflect How the Tax Code Is Implemented and Administered

Although analysts generally use comprehensive income as the theoretical starting point for a reference tax system, they necessarily modify the system to allow for the practicalities of administering the tax code. The results of such modifications for administrative feasibility are not categorized as tax expenditures. One example is in the treatment of capital gains. A theoretical income tax system measures income as it is accrued regardless of when it is realized—including unrealized capital gains, for example.[17] In their analysis of tax expenditures, CBO and JCT define the normal income tax system as one that generally taxes capital gains when realized—for example, when assets are sold—rather than on an accrual basis. As a result, the deferral of tax on income from capital gains until the year in which gains are realized is not treated as though it creates a tax expenditure.[18] Over time and as tax rules change, however, what is considered to be administratively feasible may also change, which can alter how tax expenditures are identified and measured.[19]

For the sake of administrative feasibility, in the reference tax system used by CBO and JCT, nominal income (that is, income measured in current dollars) is taxed without adjusting the value of assets and debts for inflation, whereas a comprehensive income tax system based on real income would adjust that value to remove the effects of inflation. In an environment in which inflation is generally positive and prices rise, the nominal value of items also rises. So, for example, in the treatment of capital gains in the reference tax system, the cost basis, or original value of an asset, is not adjusted for inflation. As a result, the realized income from an investment (the current value minus the original value) is higher than it would be if the original value was adjusted for inflation.

In contrast, under the definition of comprehensive income, the cost basis would be adjusted for inflation, thus yielding a smaller measure of the capital gain. As a consequence, the tax expenditure associated with the lower rate on certain capital gains is larger under a reference tax system that taxes nominal income than under one that adjusts for inflation.[20] Similarly, depreciation of a given asset is generally lower under a reference tax system in which the asset's value is not adjusted for inflation than under one that adjusts for inflation; that leads to smaller deductions than those that would result if the asset's value was adjusted for inflation.

CBO and JCT modify the reference tax system in several other ways. For example, they both exclude certain nonmarket sources of income, such as the rental value of owner-occupied housing, from the measure of income they use when analyzing tax expenditures. Taxing rental income from owner-occupied housing is commonly considered to be both administratively challenging and costly to implement. That exclusion from the tax base under the normal system is not considered a tax expenditure but would be treated differently when considering comprehensive income.[21]

Furthermore, the reference tax system used by CBO and JCT treats income earned by corporations and individuals separately. Under a comprehensive income tax, net income earned by corporations would face the same overall tax rates as wages and other forms of individual income. To ensure that uniform treatment, the taxation of individuals and businesses would need to be integrated so that income is not taxed more than once.[22] In other words, under a comprehensive income tax, dividends and capital gains accruing to individuals would not be distinguished from, or treated separately from, corporate profits, and one set of tax rates would apply to both forms of income. For example, corporate profits would be attributed to a corporation's owners under a comprehensive income tax.[23]

The Congressional Budget Office periodically provides estimates related to the budgetary effects and distribution of tax expenditures. This report, which is part of CBO's continuing efforts to make its work transparent, supplies important information about how the agency identifies and measures tax expenditures. In keeping with CBO's mandate to provide objective, impartial analysis, the report makes no recommendations.

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Mark Doms, Jeffrey Kling, and Robert Sunshine reviewed the report. Scott Craver edited it, and Jorge Salazar prepared the text for publication. The report is available at www.cbo.gov/publication/57543.

CBO seeks feedback to make its work as useful as possible. Please send comments to communications@cbo.gov.

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Notes

1. See sec. 3(3) of the Budget Act, Public Law 93-344 (codified at 2 U.S.C. §622(3) (2006)).

2. See Congressional Budget Office, *The Distribution of Major Tax Expenditures in 2019* (October 2021), www.cbo.gov/publication/57413.

3. For more information about such disagreement and criticisms, see Rosanne Altshuler and Robert Dietz, "Reconsidering Tax Expenditure Estimation," *National Tax Journal*, vol. 64, no. 2.2 (June 2011), pp. 459–490, https://tinyurl.com/yvc7z3rc; and Joint Committee on Taxation, *A Reconsideration of Tax Expenditure Analysis*, JCX-37-08 (May 12, 2008), https://go.usa.gov/xMsKP.

4. The analysis of tax expenditures has also been applied to excise taxes: See Lindsay Oldenski, "Searching for Structure in the Federal Excise Tax System: An Excise Tax Expenditure Budget," *National Tax Journal*, vol. 57, no. 3 (September 2004), pp. 613–637, https://tinyurl.com/295sbnme (PDF, 2.1 MB); and Bruce F. Davie, "Tax Expenditures in the Federal Excise Tax System," *National Tax Journal*, vol. 47, no. 1 (March 1994), pp. 39–62, https://tinyurl.com/mef3xapn (PDF, 1.9 MB). Before 2003, the President's budget included an analysis of tax expenditures in the unified transfer tax, which includes the estate tax and gift tax. That analysis was eliminated beginning with the fiscal year 2003 budget "because there is no generally accepted normal baseline for transfer taxes and this tax has been repealed under the Economic Growth and Tax Relief Reconciliation Act of 2001." The Administration did not resume that analysis when the tax was reinstated by the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 (P.L. 111-312).

5. See Roger Gordon, Laura Kalambokidis, and Joel Slemrod, "Do We *Now* Collect Any Revenue From Taxing Capital Income?" *Journal of Public Economics*, vol. 88, no. 5 (April 2004), pp. 981–1009, https://tinyurl.com/f46w78k6. For a discussion of the changes needed for either a more comprehensive income tax or a consumption tax, see Department of the Treasury, *Blueprints for Basic Tax Reform* (January 1977), https://go.usa.gov/xMs5P (PDF 10.4 MB).

6. See Robert Carroll, David Joulfaian, and James Mackie, "Income Versus Consumption Tax Baselines for Tax Expenditures," *National Tax Journal*, vol. 64, no. 2.2 (June 2011), pp. 491–510, https://tinyurl.com/7tb6fs2k; and Edith Brashares and Laura T. J. Kalambokidis, "Assessing the Equivalence of Different Forms of a Consumption Tax," *Proceedings of the Annual Conference on Taxation Held Under the Auspices of the National Tax Association-Tax Institute of America*, vol. 88 (1995), pp. 248–253, www.jstor.org/stable/42910891.

7. See Alan J. Auerbach, "Tax Equivalences and Their Implications," in Robert A. Moffitt, ed., *Tax Policy and the Economy, Volume 33* (University of Chicago Press, 2019), pp. 81–107, https://tinyurl.com/cm8s9y57; and Elena Patel and John McClelland, *What Would a Cash Flow Tax Look Like for U.S. Companies? Lessons From a Historical Panel*, Working Paper 116 (Office of Tax Analysis, January 2017), https://go.usa.gov/xe2M8 (PDF, 527 KB); and Robert Carroll, David Joulfaian, and James Mackie, "Income Versus Consumption Tax Baselines for Tax Expenditures," *National Tax Journal*, vol. 64, no. 2.2 (June 2011), pp. 491–510, https://tinyurl.com/7tb6fs2k.

8. See Robert Carroll, David Joulfaian, and James Mackie, "Income Versus Consumption Tax Baselines for Tax Expenditures," *National Tax Journal*, vol. 64, no. 2.2 (June 2011), pp. 491–510, https://tinyurl.com/7tb6fs2k; and Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2004: Analytical Perspectives* (February 2003), Chapter 6, Appendix Tables 1 and 2, https://go.usa.gov/xMsRu.

9. See Robert Carroll, David Joulfaian, and James Mackie, "Income Versus Consumption Tax Baselines for Tax Expenditures," *National Tax Journal*, vol. 64, no. 2.2 (June 2011), pp. 491–510, https://tinyurl.com/7tb6fs2k.

10. Recognizing that some provisions identified as tax expenditures are sensitive to the choice of a reference tax system, in 2003 the Treasury presented a reevaluation of tax expenditures using a consumption tax as an alternative starting point. It found that most large tax expenditures would be expenditures under either an income-based or a consumption-based reference tax system. Some income tax expenditures would not be tax expenditures relative to a consumption tax. See Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2004: Analytical Perspectives* (February 2003), Chapter 6, Appendix Tables 1 and 2, https://go.usa.gov/xMsRu.

11. See Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2020–2024*, JCX-23-20 (November 5, 2020), https://go.usa.gov/xM6DU; Robert Carroll, David Joulfaian, and James Mackie, "Income Versus Consumption Tax Baselines for Tax Expenditures," *National Tax Journal*, vol. 64, no. 2.2 (June 2011), pp. 491–510, https://tinyurl.com/7tb6fs2k; and Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2004: Analytical Perspectives* (February 2003), Chapter 6, Appendix Tables 1 and 2, https://go.usa.gov/xMsRu.

12. Economic depreciation is the change in the value of an asset over time, reflecting wear and tear, physical deterioration, or obsolescence, and is generally calculated using a constant rate. The tax code also contains a provision for alternative depreciation, which outlines the allowable deductions for depreciation. Those deductions may differ from economic depreciation. Accelerated depreciation allows for deductions to occur more quickly than under the alternative depreciation system. For more information, see Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2020–2024*, JCX-23-20 (November 5, 2020), https://go.usa.gov/xM6DU; Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2004: Analytical Perspectives* (February 2003), Chapter 6, Appendix Tables 1 and 2, https://go.usa.gov/xMsRu; and Barbara M. Fraumeni, *The Measurement of Depreciation in the U.S. National Income and Product Accounts* (Bureau of Economic Analysis, July 1997), https://go.usa.gov/xeaHf.

13. See Department of the Treasury, Office of Tax Analysis, *Tax Expenditures, FY2022* (June 2021), https://go.usa.gov/xM6Dw; and Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2020–2024*, JCX-23-20 (November 5, 2020), https://go.usa.gov/xM6DU. For additional background on tax expenditures, see Senate Committee on the Budget, *Tax Expenditures: Compendium of Background Material on Individual Provisions*, S. Prt. 115-28 (December 2018), https://go.usa.gov/xexGp.

14. Using the same basis for a reference tax system does not guarantee that the estimates of tax expenditures will be the same. For example, although the Treasury and JCT both begin with a reference tax system based on an income tax, they differ in their judgment about what constitutes the normal features of the system. The Treasury considers economic depreciation as the baseline depreciation system for its normal income tax, whereas JCT uses the alternative depreciation system as part of its normal income tax (see endnote 12). As a result, the Treasury's estimate of the tax expenditure created by accelerated depreciation differs from JCT's. For more information, see Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2020–2024*, JCX-23-20 (November 5, 2020), https://go.usa.gov/xM6DU; and Barbara M. Fraumeni, *The Measurement of Depreciation in the U.S. National Income and Product Accounts* (Bureau of Economic Analysis, July 1997), https://go.usa.gov/xeaHf.

15. See Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2020–2024*, JCX-23-20 (November 5, 2020), https://go.usa.gov/xM6DU; and Congressional Budget Office, *The Budget and Economic Outlook: 2020 to 2030* (January 2020), www.cbo.gov/publication/56020.

16. For more information, see Congressional Budget Office, *The Distribution of Major Tax Expenditures in 2019* (October 2021), www.cbo.gov/publication/57413, and *The Budget and Economic Outlook: 2019 to 2029* (January 2019), www.cbo.gov/publication/54918. The Treasury provides estimates of the effect on payroll taxes of the exclusion of employers' contributions for health insurance: See Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2020: Analytical Perspectives* (March 2019), Chapter 16, Table 16-1, footnote 10, https://go.usa.gov/xM6Wf.

17. See Robert M. Haig, "The Concept of Income–Economic and Legal Aspects," in *The Federal Income Tax* (Columbia University Press, 1921), pp. 1–28; and Henry Simons, *Personal Income Taxation: The Definition of Income as a Problem of Fiscal Policy* (University of Chicago Press, 1938), p. 49.

18. See Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2020–2024*, JCX-23-20 (November 5, 2020), https://go.usa.gov/xM6DU.

19. For example, in 1993, a new provision was added to the tax code requiring certain securities dealers to measure their capital gains and losses on a mark-to-market basis. In other words, those taxpayers were required to measure all accrued gains and losses at year-end values as part of their taxable income, not only those changes in value realized through transactions. In later years, the Internal Revenue Service expanded the availability of the provision, allowing other taxpayers to use the mark-to-market method to calculate capital gains and losses.

20. For more information about adjusting capital gains for inflation, see Jane G. Gravelle, *Indexing Capital Gains Taxes for Inflation,* Report R45229, version 12 (Congressional Research Service, July 24, 2018), https://go.usa.gov/xM6kx.

21. For more information, see Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2020–2024*, JCX-23-20 (November 5, 2020), https://go.usa.gov/xM6DU.

22. There are multiple ways to integrate the tax system. For further discussion, see Department of the Treasury, *Integration of the Individual and Corporate Tax Systems: Taxing Business Income Once* (January 1992), https://go.usa.gov/xM6Wz (PDF, 25.6 MB).

23. For more information, see Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2004: Analytical Perspectives* (February 2003), Chapter 6, https://go.usa.gov/xMsRu.