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DISTRIBUTIONAL EFFECTS OF INDIVIDUAL INCOME TAX EXPENDITURES: AN UPDATE

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September 26, 2016

ABSTRACT

This paper provides estimates of the total cost of non-business tax expenditures claimed on individual tax returns, taking account of interactions among provisions, and of their distributional effects among income groups. We estimate that non-business tax expenditures reduced tax liability by \$1.17 trillion in 2015. Interactions among provisions make the revenue cost of all tax expenditures about 6 percent larger than the sum of the costs of the separate provisions. We also find that tax expenditures, on average, reduce taxes as a share of income more for upper-income than for lower-income taxpayers. Tax expenditures reduce tax liability by over 13.4 percent of income for taxpayers in the top 1 percent of the income distribution and by much smaller amounts in other income groups.

The authors thank Jeffrey Rohaly for expert advice on the model simulations.

The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Tax Policy Center or its funders.

INTRODUCTION

Tax expenditures are defined as “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” (Office of Management and Budget, 2016). The US Treasury first published a list of these tax expenditures in 1967 when Stanley Surrey, then an Assistant Secretary of the US Treasury, requested a list of preferences and concessions currently in the income tax. Since that time, the number of tax expenditures listed in the federal budget has risen to a total of 169 in 2017¹.

Tax expenditures promote a variety of objectives, including social policy goals such as encouraging homeownership and health insurance coverage, strengthening the social safety net, and increasing investment. There remain, however, key questions on how effective these tax expenditures are in promoting their stated policy objectives, how much they cost, and who benefits from them.

This paper updates earlier reports (Burman, Geissler and Toder, 2008; Baneman and Toder, 2012) on estimates of the size and distribution of “non-business” tax expenditures claimed on individual income tax returns. We estimate the total cost of these tax expenditures claimed on individual tax returns, with and without the effects of interactions among provisions.² We then present estimates of the distribution of total tax expenditures and different types of tax expenditures among income groups.

DEFINING TAX EXPENDITURES

Estimating the revenue cost and distributional effect of tax expenditures in the federal income tax requires dividing income tax rules into two sets of provisions:

1. Those provisions that are part of the “normal” or baseline tax system, and

¹ Office of Management and Budget (2016)

² Non-business tax expenditures exclude benefits individual taxpayers receive as owners of their own businesses or as recipients of income from partnerships and subchapter S corporations and which they report on Schedules C, E, and F. It does, however, include as non-business tax expenditures the benefits individuals receive from preferences for passive investment income, such as the exclusion of interest on tax-exempt bonds, the exclusion of income accrued within qualified retirement saving plans, and special rates on dividends and capital gains.

2. Those that are labeled tax expenditures because they are “special” provisions, or exceptions to the general rules, that benefit selected taxpayers or encourage selected activities.

In general, provisions of the baseline tax system include the definition of the tax filing unit (single, married, or head of household), provisions to adjust for family size (personal exemptions), and tax rate schedules applied to taxpayers in each filing status. They also include deductions that adjust for costs of earning income. Tax expenditures are those provisions that are exceptions to these general rules.

For the estimates in this paper, we use the Office of Management and Budget (OMB) definition of tax expenditures (Office of Management and Budget 2016). Therefore, for this paper, we do not address the question of which departures from income measurement should be viewed as a general feature of the federal income tax and which provisions should be viewed as a disguised spending program administered through the income tax (Marron and Toder 2011). Instead, we simply estimate the effects of the subset of tax provisions that OMB, and in most cases the Joint Committee on Taxation (JCT), call tax expenditures (2015). For a more detailed discussion on the issues affecting measurement and interpretation of estimates of the distributional effects of tax expenditures, see Baneman and Toder (2012).

THE COST OF TAX EXPENDITURES AND THE EFFECT OF INTERACTIONS BETWEEN PROVISIONS

TPC has simulated the revenue cost of non-business tax expenditures claimed by individual taxpayers, using the TPC micro-simulation model and accounting for interactions among provisions.³ We estimate that the cost from adding up all the separate revenue losses is \$1.105 trillion, if we compute the cost of each tax expenditure provision as if it were the only change in the tax code from current law, which is the method of the Treasury and JCT (Table 1).⁴

In comparison, we estimate that all provisions taken together cost \$1.168 trillion, or about 5.7 percent more than the sum of the costs of each provision. Thus, failing to take account of interactions among provisions understates the total cost of individual tax expenditures, but by a relatively modest amount.

We group tax expenditures into six separate categories. Among these, the largest category is exclusions from income (\$499.2 billion including interactions), followed by special benefits for capital gains and dividends (\$300.6 billion), itemized deductions (\$151.5 billion) and

³ For earlier simulations with similar calculations, see Burman, Geissler and Toder (2008) and Baneman and Toder (2012).

⁴ Our estimates differ somewhat from Treasury’s, in part because we don’t include all provisions that Treasury counts as tax expenditures. A major difference between our estimates and the Treasury estimates is that we do not include the revenue cost of the exemption of imputed rental income from owner-occupied housing (Treasury estimates it as \$97.9 billion in fiscal year 2015, but the Joint Committee on Taxation does not count it as a tax expenditure.)

refundable credits (\$140.4 billion). The largest exclusions are those for employer contributions to health insurance premiums (including deductible employee premiums) and income accrued within qualified retirement plans.⁵ Benefits for capital gains and dividends include the special lower rates on long-term capital gains and qualified dividends and the exemptions of capital gains transferred at death and most capital gains on owner-occupied housing. The largest itemized deductions are those for home mortgage interest, state and local non-business income and property taxes, and charitable contributions. The estimated \$140 billion cost of refundable credits counts both the refundable and non-refundable portions of these provisions, the largest of which are the earned income tax credit and the child tax credit.

The relatively modest difference between the sum of the cost of all tax expenditures and the total cost of tax expenditures masks large differences within groups of tax expenditures. Interactions raise the estimated cost of benefits for capital gains and dividends by 33 percent and reduce the cost of itemized deductions by 28 percent. For capital gains and dividends, when estimates are done provision by provision, the cost of the exemption of some gains (gains transferred at death and most gains on housing) is the revenue forgone at special capital gains rates. Taxing capital gains at ordinary income rates raises the revenue loss from these exemptions, making the cost of the provisions taken together much larger than the sum of the separate estimates. For itemized deductions, as they are successively eliminated more taxpayers switch to taking the standard deduction, so that removing each additional deduction raises less revenue (because taxpayers claiming the standard deduction are unaffected and those with itemized deductions only just above the standard deduction get relatively little benefit).

In general, eliminating provisions that reduce taxable income will drive taxpayers into higher marginal rate brackets, creating positive interactions between them. These effects are relatively modest, however. For example, the total cost of exclusions estimated simultaneously is only 1.7 percent larger than the sum of the costs of all exclusions.

Note that all these estimates are static, reflecting the revenue loss from tax expenditures with no changes in taxpayer behavior. Eliminating or reducing selective tax expenditures could raise less or more money than the cost of the tax expenditure, depending on behavioral responses. For example, eliminating special rates for realized capital gains would raise much less revenue than the tax expenditure amount because taxpayers would realize fewer gains in response to higher tax rates. In contrast, reducing the subsidy rate for charitable contributions could raise more money than the static gain as taxpayers lower their contributions in response to a reduced subsidy rate.

DISTRIBUTIONAL EFFECTS OF TAX EXPENDITURES

⁵ Our estimates are only for income tax expenditures. Premiums for employer-sponsored health insurance and employer contribution towards retirement accounts are also excluded from payroll tax, but the payroll tax expenditure is not included in our estimates. The net benefit of the payroll tax expenditure is difficult to compute because additional wages subject to payroll taxes raise employees' future Social Security retirement and disability benefits. See Smith and Toder (2014).

All income groups benefit from tax expenditures, but the highest income groups benefit the most (Table 2). Tax expenditures reduce tax liability by over 13.4 percent of income for taxpayers in the top 1 percent of the income distribution and by much smaller amounts in other income groups.⁶ TPC estimates that benefits from individual income tax expenditures average slightly over 8 percent of pre-tax income.⁷

The highest income group receives a larger share of the benefit of tax expenditures (27.5 percent) than their share of pretax income (16.6 percent), but almost the same share of benefits as their share of total taxes paid (27.9 percent).⁸ Shares of benefits received are lower than shares of pretax income for all groups in the bottom 99 percent of the population. As a result of the progressive income tax system, however, shares of benefits from tax expenditures exceed shares of federal income tax burdens for all groups in the bottom three quintiles of the distribution.

While these figures are suggestive of how tax expenditures may redistribute tax burdens and after-tax income, the actual effect of these provisions on the after-tax distribution of income is unknowable because we cannot identify what tax rate schedules Congress would have enacted in their absence. If, for example, Congress is targeting an effective tax rate distribution instead of a statutory rate schedule, then in the absence of tax expenditures, they would cut taxes most as a share of income at the very top of the income distribution in exchange for eliminating tax breaks, thereby preserving the original income distribution. This type of trade-off characterized the 1986 Tax Reform Act, which eliminated preferences mostly used by the highest income taxpayers, such as preferential rates for capital gains and accelerated depreciation of buildings, while reducing the top marginal tax rate more than other rates.

The benefits of the different types of tax expenditures differ substantially by income group (Table 3). Preferences for capital gains and dividends reduced tax burdens by 7.3 percent of income in the top 1 percent of the income distribution, compared with 1.9 percent of income for other taxpayers in the top 5 percent of the income distribution and a diminishing share of income in lower income groups. The higher share of benefits of all tax expenditures as a share of

⁶ We only include non-business individual income tax expenditures. If business tax expenditures were added and we used TPC's methodology (Nunns, 2012) for allocating the burden of the corporate income tax (60 percent to equity income, 20 percent to all capital income, and 20 percent to labor income), we would expect to find a somewhat larger concentration of the benefits of tax expenditures in the highest income group.

⁷ TPC ranks tax units (including non-filers) by a broad measure of economic income that TPC calls expanded cash income (ECI). ECI adds a number of items to adjusted gross income, including tax-exempt interest, the non-taxable portion of Social Security benefits, employee contributions to qualified retirement plans, and imputations for corporate income taxes, the employer share of payroll taxes, the value of employer-sponsored health insurance, and employer contributions to and income accrued within qualified retirement plans. For a discussion of TPC's income measure, see Rosenberg (2013).

⁸ Taxes paid include individual income taxes, corporate income taxes, payroll taxes, the estate and gift tax, and federal excise taxes. TPC allocates individual income taxes and the employee share of payroll taxes to individual taxpayers who remit them, the employer share of payroll taxes to employees, corporate income taxes to shareholders (60 percent), all recipients of capital income (20 percent) and all recipients of labor income (20 percent), estate and gift taxes to potential decedents based on imputed assets and the probability of dying, and excise taxes to labor income and super-normal returns to capital, adjusted for differences in the relative consumption of taxable and tax-free goods. For a discussion of TPC's methods of distributing corporate income taxes and federal excise taxes, see Nunns (2012) and Rosenberg (2013).

income that the top 1 percent receives compared with other groups is almost entirely due to the very large share of benefits they receive from preferences for capital gains and dividends (and the fact that gains and dividends make up the majority of their income). The top 1 percent also receives the highest benefits as a share of income from itemized deductions, mainly from deductions for state and local income taxes and charitable contributions. The benefits of exclusions as a share of income are largest in the 80-99th percentiles of the income distribution and also substantial in the third and fourth quintiles. This largely reflects the distribution of preferences for employer-supplied health insurance and retirement saving. The benefit from exemption of employer-provided health insurance as a share of income rises with income through the middle and upper-middle portions of the distribution as coverage rates rise and higher marginal tax rates increase the value of exempt income, but then declines as health care costs rise less than in proportion to income. The benefit of retirement savings preferences is concentrated in the top fifth of the distribution where coverage rates and dollar contributions to plans are highest, but then declines as a share of income in the top 1 percent because of statutory limits on amounts that can be contributed to qualified plans.

In contrast, benefits from refundable credits – mainly the earned income credit and the child credit, but also the American Opportunity Tax Credit (AOTC) for education – are largest as a share of income for households in the bottom two quintiles of the distribution. The child credit also provides substantial benefits in the middle of the distribution, but phases out at higher income levels.

Taxpayers in the bottom two quintiles receive a significantly larger share of the benefits from refundable credits (mainly the earned income credit and the child credit) relative to their share of total benefits from tax expenditures (Table 4). For the lowest income group, the share of benefits they receive from all other types of tax expenditures is smaller than their share of total benefits. Those in the second and middle quintiles receive a larger share of benefits from both refundable and non-refundable credits than their share of total benefits. Taxpayers in the third and fourth quintiles receive a relatively larger share of benefits from above the line deductions and exclusions than their share of total benefits, and taxpayers in the fourth quintile receive only slightly smaller shares of refundable credits and itemized deductions. Taxpayers in the 80th-99th percentiles receive a larger share of benefits from both exclusions and itemized deductions than their share of total benefits. This illustrates how for taxpayers with higher expanded cash income levels (ECI) groups, itemized deductions and exclusions are both more valuable and more utilized. Finally, taxpayers in the top 1 percent receive a larger share of benefits from preferences for capital gains and dividends (62 percent), other miscellaneous credits (57 percent) and itemized deductions (32 percent) than their share of total benefits (28 percent), but relatively smaller shares of the tax benefits from non-refundable credits (24 percent), above-the-line deductions (14 percent), exclusions (13 percent) and refundable credits (zero).

CONCLUSION

Non-business tax expenditures claimed on individual income tax returns reduced Federal tax liability by \$1.17 trillion in 2015. The total cost of tax expenditures was about 6 percent larger than the sum of individual provisions, due to interactions among them.

The revenue loss from tax expenditures exceeds the sum of gains from individual provisions within most tax expenditure categories, with the exception of itemized deductions. The cost of all itemized deductions is only about 75 percent of the sum of the costs of the separate deductions because each time an itemized deduction is eliminated, more taxpayers move onto the standard deduction, reducing the gain from eliminating remaining deductions. In contrast, the total cost of eliminating preferences for capital gains and dividends is a third larger than the cost of separate provisions because the cost of exemptions for capital gains on housing and gains transferred at death is much larger when capital gains are taxed at ordinary income rates than when they face current preferential rates.

Although all taxpayers benefit from tax expenditures, these provisions are more generous to the highest income taxpayers (as a share of income) than to other taxpayers. Their benefits vary substantially, however, by provision. The very highest income taxpayers, people in the top 1 percent of the distribution, benefit the most from the special rates for capital gains and dividends and the exemption of gains transferred at death. Upper middle-income taxpayers benefit the most from exclusions and itemized deductions, including exemption of income earned within retirement savings accounts and deductions for mortgage interest and charitable contributions. The lowest income taxpayers, people in the bottom two quintiles of the distribution, benefit the most from refundable credits.

The distributional effects of proposals to limit tax expenditures depend on which tax expenditures are eliminated or cut back and on how the revenue from removing tax expenditures is used. If, for example, the revenue from eliminating of tax expenditures were used to provide an equal percentage reduction in all tax rates, then upper income taxpayers would benefit modestly because their share of benefits from tax expenditures is slightly less than their share of all taxes paid. Alternatively, if the revenue were used to provide everyone with the same tax cut in proportion to their income, upper income taxpayers would pay more because their share of benefits from tax expenditures is greater than their share of income.

TABLES

TABLE 1
Effects of Interactions on Estimates of the Cost of Non-Business Tax Expenditures
 Billions of dollars, 2015



Type of Provision	Total Cost without Interactions	Total Cost with Interactions	Percent Change due to Interactions
Exclusions	491.00	499.20	1.70%
Above the Line Deductions	11.20	11.20	0.10%
Benefits for Capital Gains and Qualified Dividends	226.30	300.60	32.80%
Itemized Deductions	210.50	151.50	-28.00%
Non-refundable Credits	12.60	14.00	10.00%
Refundable Credits	140.40	140.40	0.00%
Miscellaneous Provisions	12.90	12.90	Not estimated
Sum of All Categories	1,104.80	1,129.90	2.30%
Total, All Provisions*	1,104.80	1,167.80	5.70%

Source: TPC Micro-simulation model. Off-model provisions based on tax expenditure estimates from U.S. Treasury Department, Office of Tax Analysis, adjusted for changes in marginal tax rates due to elimination of tax expenditures that were simulated with the TPC model.
Notes: *Sum of all provisions excludes some tax expenditures estimated by Treasury, most notably the exclusion of imputed rental income on owner-occupied housing, which is counted as a tax expenditure provision by the Treasury Department but not by the Joint Committee on Taxation.

TABLE 2
Distribution of Nonbusiness Individual Income Tax Expenditures
 Current Law, 2015



Cash Income Percentile	Benefit as Percentage of Pretax Income	Share of Tax Benefit	Share of Pretax Income	Share of Tax Liability
Lowest quintile	6.7%	3.6%	4.3%	0.8%
2nd quintile	7.5%	7.9%	8.5%	3.4%
3rd quintile	6.3%	10.8%	13.9%	9.2%
4th quintile	6.3%	15.8%	20.4%	17.5%
80-90th percentiles	7.2%	12.6%	14.2%	14.3%
90-95th percentiles	7.6%	9.3%	9.9%	10.8%
95-99th percentiles	7.9%	12.2%	12.5%	15.9%
Top 1 percent	13.4%	27.5%	16.6%	27.9%
Total	8.1%	100.0%	100.0%	100.0%

Source: TPC Micro-simulation model.

TABLES

TABLE 3
Benefit as Percentage of Pretax Income for Various Categories of Individual Income Tax Expenditures
2015



Cash Income Percentile	Exclusions	Capital gains and dividends	Itemized deductions	Above-the-line deductions	Non-refundable credits	Refundable credits	Other	Total
Lowest quintile	0.6%	0.2%	0.0%	0.0%	0.1%	5.4%	0.0%	6.7%
2nd quintile	2.7%	0.4%	0.1%	0.1%	0.2%	4.0%	0.0%	7.5%
3rd quintile	3.5%	0.6%	0.4%	0.1%	0.1%	1.5%	0.0%	6.3%
4th quintile	3.3%	0.9%	0.7%	0.1%	0.1%	0.6%	0.0%	6.3%
80-90th percentiles	4.0%	1.3%	1.2%	0.1%	0.1%	0.3%	0.1%	7.2%
90-95th percentiles	4.4%	1.4%	1.5%	0.1%	0.1%	0.0%	0.1%	7.6%
95-99th percentiles	4.3%	1.9%	1.7%	0.1%	0.0%	0.0%	0.1%	7.9%
Top 1 percent	2.7%	7.3%	2.1%	0.1%	0.1%	0.0%	0.3%	13.4%
Total	3.4%	2.1%	1.1%	0.1%	0.1%	0.9%	0.1%	8.1%

Source: TPC Micro-simulation model

Notes: Separate Categories do not add up to total because of interactions among provisions.

TABLE 4
Distribution of Benefits of Various Categories of Individual Income Tax Expenditures
2015



Cash Income Percentile	Exclusions	Capital gains and dividends	Itemized deductions	Above-the-line deductions	Non-refundable credits	Refundable credits	Other	Share of Tax Benefit
Lowest quintile	0.8%	0.3%	0.1%	1.0%	3.1%	24.3%	0.4%	3.6%
2nd quintile	6.7%	1.2%	0.8%	6.7%	14.0%	36.1%	3.3%	7.9%
3rd quintile	14.2%	3.6%	4.6%	17.3%	18.5%	21.2%	5.0%	10.8%
4th quintile	19.9%	7.8%	14.3%	21.4%	18.9%	13.4%	7.4%	15.8%
80-90th percentiles	16.8%	7.8%	15.2%	13.7%	10.7%	4.2%	8.6%	12.6%
90-95th percentiles	12.8%	6.0%	13.5%	9.3%	6.0%	0.4%	7.9%	9.3%
95-99th percentiles	15.8%	10.6%	19.3%	16.8%	5.1%	0.0%	10.2%	12.2%
Top 1 percent	13.0%	62.2%	32.3%	13.6%	23.6%	0.0%	57.2%	27.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: TPC Micro-simulation model

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