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DISTRIBUTIONAL EFFECTS OF INDIVIDUAL INCOME TAX EXPENDITURES AFTER THE 2017 TAX CUTS AND JOBS ACT

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ABSTRACT

This paper provides estimates of the total cost of and distributional effects of nonbusiness tax expenditures claimed on individual tax returns after enactment of the 2017 Tax Cuts and Jobs Act, taking account of interactions among provisions. Nonbusiness tax expenditures will reduce tax liability by $1.2 trillion in 2019, about 5 percent more than the sum of the costs of the separate provisions. Tax expenditures, on average, reduce taxes as a share of income more for upper-income than for lower-income taxpayers. The Tax Cuts and Jobs Act reduced the total cost of tax expenditures and made their distribution among income groups slightly less unequal.

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 2019). 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 then, the number of tax expenditures listed in the federal budget has risen from fewer than 60 to a total of 172 in 2019.[1]

Tax expenditures have a variety of goals, including encouraging homeownership and health insurance coverage, strengthening the social safety net, and increasing investment. But key questions remain regarding how well these tax expenditures promote their stated policy objectives, how much they cost, and who benefits from them.

This report updates earlier reports (Burman, Geissler and Toder, 2008; Baneman and Toder, 2012; Toder, Berger and Powers, 2016) on estimates of the size and distribution of "nonbusiness" tax expenditures claimed on individual income tax returns. [2] The new estimates reflect the major restructuring of the federal income tax by the Tax Cuts and Jobs Act of 2017 (TCJA). That legislation reduced some tax expenditure provisions, eliminated others, and introduced and expanded still others.[3] The law also increased the standard deduction and lowered individual rates, which reduces the number of individual income taxpayers who are using some tax expenditure provisions (such as itemized deductions) and the value of the tax benefits they receive. On balance, we find that TCJA reduces the cost of tax expenditures, although the effects will diminish after 2025, when most of the new law's individual tax changes expire.

In this report, we first estimate the total cost of nonbusiness tax expenditures claimed on individual tax returns with and without the effects of interactions among provisions. We then present estimates of the distribution of total tax expenditures and different types of tax expenditures among income groups. In the final sections of the paper, we discuss the major changes in both individual and business tax expenditures caused by the TCJA.

DEFINING TAX EXPENDITURES

Estimating the revenue cost and distributional effects 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
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 include most forms of economic income but allow deductions that adjust

for the costs of earning income. Tax expenditures are those provisions that are exceptions to these general rules.

For the estimates in this report, we use the Treasury Department's definition of tax expenditures. The Office of Tax Analysis in the Treasury Department prepares those estimates for the Office of Management and Budget to include in the *Analytical Perspectives* addendum to the annual federal budget submission (Office of Management and Budget 2019). We do not consider the question of which departures from the baseline tax system 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 tax code (Marron and Toder 2012). Instead, we simply estimate the effects of the subset of tax provisions that the Treasury—and in most cases, the Joint Committee on Taxation, or JCT—call tax expenditures (JCT 2018). For a more detailed discussion of 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

Using the Urban-Brooking Tax Policy Center's (TPC's) microsimulation model and accounting for interactions among provisions, we simulate the revenue cost of nonbusiness tax expenditures claimed by individual taxpayers. We first 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 estimating tax expenditure provisions that the Treasury and JCT use (table 1).[4] Then we add up all the separate revenue losses in 2019 for an aggregate cost of $1.142 trillion.

For comparison, we estimate that all provisions taken together cost $1.201 trillion, or about 5.1 percent more than the sum of the costs of each provision (table 1). Thus, failing to take account of interactions among provisions understates the total cost of individual tax expenditures by about $60 billion in 2019.

We group tax expenditures into six categories. (The provisions in each category are listed in the appendix.) Among these, the largest category is exclusions from income ($536.3 billion including interactions), followed by special benefits for capital gains and dividends ($329.5 billion), refundable credits ($180.2 billion, of which net refunds make up about three-quarters of the total), and itemized deductions ($70.2 billion). The largest exclusions from income 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 as well as the exemptions of capital gains transferred at death and of most capital gains on owner-occupied housing. 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, the child tax credit, and the credit for

health insurance premiums under the Affordable Care Act. The largest itemized deductions are those for charitable contributions, home mortgage interest, and state and local non-business income and property taxes.

TABLE 1

Effects of Interactions on Estimates of the Reduction in Tax Burden From Non-Business Tax Expenditures

Billions of dollars, calendar year 2019

Type of Provision	Total Cost without Interactions	Total Cost with Interactions	Percent Change due to Interactions
Exclusions	537.8	536.3	-0.3%
Above the Line Deductions	13.1	13.0	-0.5%
Benefits for Capital Gains and Qualified Dividends	251.3	329.5	31.1%
Itemized Deductions	97.4	70.2	-27.9%
Non-refundable Credits	9.1	9.5	4.8%
Refundable Credits	177.0	180.2	1.8%
Miscellaneous Provisions	56.3	55.1	-2.2%
Sum of All Categories	**1,141.9**	**1,194.2**	**4.6%**
Total, All Provisions[a]	**1,141.9**	**1,200.5**	**5.1%**

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.
(a) 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.

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 31 percent and reduce the cost of itemized deductions by 27 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 estimated cost of all the capital gains provisions much larger than the sum of the estimated cost of each provision taken by itself. As itemized deductions are successively eliminated, more taxpayers switch to taking the standard deduction, so removing each additional deduction raises less revenue (because taxpayers claiming the standard deduction are unaffected, and those with itemized deductions slightly greater than the standard deduction get relatively little benefit).

Eliminating provisions that reduce taxable income will drive some taxpayers into higher marginal rate brackets, generally increasing the revenue loss from eliminating additional tax expenditures. These effects are relatively modest, however, and may be offset in some cases by other factors. For example, the total cost of exclusions estimated simultaneously is 0.3 percent smaller than the sum of the costs of all exclusions because including employer-sponsored health insurance (ESI) in income increases adjusted gross income, which then reduces tax benefits from contributions to individual retirement accounts for taxpayers in the range where allowable individual retirement account deductions and allowable contributions to Roth accounts phase out with increases in adjusted gross income.

All these estimates reflect the revenue loss from tax expenditures with no changes in taxpayer behavior. This is the conventional method of estimating tax expenditures. The actual revenue effect of eliminating or reducing tax expenditures could be larger or smaller than the tax expenditure estimate, 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 tax expenditure for charitable contributions by lowering marginal tax rates 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

All income groups benefit to some extent from tax expenditures, but the highest-income groups see the most benefit as a share of their pretax income (table 2). TPC estimates that tax expenditures reduce tax liability by 9.8 percent of income for taxpayers in the top 1 percent of the income distribution and by smaller amounts in other income groups.[6] Benefits from individual income tax expenditures across all income groups average about 6.5 percent of pretax income. [7]

TABLE 2

Distribution of Benefits of Nonbusiness Individual Income Tax Expenditures

Current Law, 2019

Cash Income Percentile	Benefit as Share of Pretax Income	Share of Tax Benefit	Share of Income	Share of Tax Liability
Lowest quintile	7.1%	4.3%	3.9%	0.7%
2nd quintile	6.7%	8.6%	8.4%	3.5%
3rd quintile	5.4%	11.6%	13.9%	9.4%
4th quintile	5.3%	16.7%	20.5%	17.7%
80-90th percentiles	5.9%	13.0%	14.3%	14.7%
90-95th percentiles	6.2%	9.3%	9.9%	11.0%
95-99th percentiles	6.3%	12.4%	13.0%	16.1%
Top 1 percent	9.8%	24.1%	16.1%	26.7%
Total	**6.5%**	**100.0%**	**100.0%**	**100.0%**

Source: TPC Micro-simulation model.

The highest-income group receives a larger share of the benefit of tax expenditures (24.1 percent) than their share of pretax income (16.1 percent) but a slightly smaller share of benefits than their share of total taxes paid (26.7 percent).[8] Shares of benefits received are lower than shares of pretax income for all groups between the 40th and 99th percentiles of the income distribution, but those shares are slightly higher than shares of pretax income for the bottom two quintiles. But because of the progressive income tax system, under which average tax rates increase with income, shares of benefits from tax expenditures exceed shares of federal income tax burdens for all groups in the bottom 60 percent of the distribution.

Although these estimates suggest 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, absent tax expenditures, legislators would cut taxes most as a share of income at the very top of the income distribution in exchange for eliminating tax breaks, thereby holding the distribution of after-tax income fixed. This type of trade-off characterized the 1986 Tax Reform Act, which was designed to hold the distribution of tax burdens among income groups constant. It eliminated preferences mostly used by the highest-income taxpayers, such as preferential rates for long-term capital gains and faster depreciation of buildings, while reducing the top marginal tax rate by a larger percentage than other rates.

The benefits of the different types of tax expenditures differ substantially by income group (table 3). Preferences for capital gain and dividend income will reduce tax burdens in 2019 by 5.7 percent of income in the top 1 percent of the income distribution, compared with 1.4 percent of income for other taxpayers in the top 5 percent of the income distribution and a smaller share of income for lower-income groups. The higher tax expenditure benefits as a share of income that the top 1 percent receive is almost entirely because of the very benefits they receive from preferences for capital gains and dividends (because gains and dividends make up a large share of their income). The top 1 percent also receives the most benefits as a share of income from itemized deductions, mainly because of their deductions for charitable contributions. The benefits of exclusions as a share of income are largest in the 80th to 95th percentiles of the income distribution and are substantial in the third and fourth quintiles and the 95th to 99th percentiles. This largely reflects the distribution of preferences for employer-provided benefits such as ESI and retirement saving. The benefit from exempting ESI 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 tax-exempt compensation, but it then declines as health insurance premiums begin to increase at a slower rate than the increase in income. The benefit of retirement savings preferences is concentrated in the top fifth of the distribution, where marginal tax rates, coverage rates, and dollar contributions to plans are highest, but it then declines as a share of income in the top 1 percent because of statutory limits on how much individuals can contribute to qualified plans.

TABLE 3

Benefit as a Share of Pretax Income for Various Categories of Individual Income Tax Expenditures

2019

Cash Income Percentile	Exclusions	Capital gains and dividends	Itemized deductions	Above-the-line deductions	Non-refundable credits	Refundable credits	Other	All Provisions
Lowest quintile	0.8%	0.0%	0.0%	0.0%	0.1%	5.9%	0.0%	7.1%
2nd quintile	2.7%	0.2%	0.0%	0.1%	0.1%	3.6%	0.0%	6.7%
3rd quintile	3.5%	0.4%	0.1%	0.1%	0.1%	1.4%	0.1%	5.4%
4th quintile	3.6%	0.5%	0.2%	0.1%	0.1%	0.8%	0.1%	5.3%
80-90th percentiles	4.0%	0.8%	0.3%	0.1%	0.1%	0.6%	0.2%	5.9%
90-95th percentiles	4.1%	1.0%	0.5%	0.1%	0.0%	0.4%	0.3%	6.2%
95-99th percentiles	3.6%	1.4%	0.7%	0.1%	0.0%	0.2%	0.5%	6.3%
Top 1 percent	1.8%	5.7%	1.1%	0.1%	0.0%	0.0%	1.1%	9.8%
Total	**3.2%**	**1.5%**	**0.4%**	**0.1%**	**0.1%**	**1.0%**	**0.3%**	**6.5%**

Source: TPC Micro-simulation model.
Notes: Separate Categories do not add up to total because of interactions among provisions.

In contrast, benefits from refundable credits (including the nonrefundable portion of these credits) are largest as a share of income for households in the bottom two quintiles of the distribution. The child tax credit also provides substantial benefits in the middle of the distribution, and the TCJA expanded these benefits to higher-income taxpayers by increasing the income levels at which the credit phases out.

TABLE 4

Distribution of Benefits of Various Categories of Individual Income Tax Expenditures

2019

Cash Income Percentile	Exclusions	Capital gains and dividends	Itemized deductions	Above-the-line deductions	Non-refundable credits	Refundable credits	Other	All Provisions
Lowest quintile	0.9%	0.1%	0.0%	1.1%	4.5%	22.3%	0.1%	4.3%
2nd quintile	7.1%	0.9%	0.7%	7.0%	16.8%	29.2%	0.8%	8.6%
3rd quintile	15.0%	3.4%	3.7%	18.5%	22.4%	18.4%	2.6%	11.6%
4th quintile	22.9%	7.2%	11.2%	24.7%	26.5%	15.8%	6.5%	16.7%
80-90th percentiles	17.9%	7.5%	11.4%	15.3%	13.2%	8.8%	7.7%	13.0%
90-95th percentiles	12.7%	6.6%	10.8%	9.4%	6.9%	3.4%	7.5%	9.3%
95-99th percentiles	14.5%	12.1%	21.7%	14.1%	6.1%	1.8%	19.3%	12.4%
Top 1 percent	8.9%	62.1%	40.4%	9.9%	3.5%	0.0%	55.4%	24.1%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Source: TPC Micro-simulation model.

Different tax expenditures are relatively more important for different income groups (table 4). Compared with all tax expenditures, exclusions are relatively more important to households in the middle and upper (40th to 99th) percentiles of the income distribution. Itemized deductions and other tax expenditures (mainly the 20 percent deduction for pass-through income) are relatively more important to households in the top 5 percent of

the income distribution. Refundable credits are relatively more important to households in the bottom three quintiles, while nonrefundable credits are relatively more important to households in the middle three quintiles.

EFFECTS OF THE TAX CUTS AND JOBS ACT ON THE COST AND DISTRIBUTION OF TAX EXPENDITURES

Tax reform typically aims to improve horizontal equity and efficiency by reducing marginal tax rates and broadening the tax base, thereby reducing differences in effective tax rates among different economic activities and among taxpayers with equal ability to pay tax. Lower tax rates and a broader base reduce the cost of tax expenditures directly by eliminating special deductions, exclusions, credits, and preferential tax rates, and they reduce them indirectly because lower marginal rates reduce the value of remaining deductions and exclusions.

Reforms that reduce tax expenditures do not necessarily increase tax receipts. Cutting back on the generosity of tax expenditure provisions reduces tax expenditures and raises tax receipts, but other changes, such as reduced marginal tax rates or an increase in the standard deduction that taxpayers may claim in lieu of itemized deductions, reduce both tax expenditures and tax receipts.

TABLE 5

Effects of the Tax Cuts and Jobs Act on Total Cost of Tax Expenditures
2019–27

	2019	2025	2019–25	2027
Sum of tax expenditures				
Pre-TCJA law	$1,609	$2,130	$12,899	$2,338
Post-TCJA law	$1,380	$1,657	$10,655	$2,110
Tax expenditures as share of GDP				
Pre-TCJA law	7.6%	8.0%	7.7%	8.1%
Post-TCJA law	6.5%	6.2%	6.4%	7.3%

Sources: US Treasury estimates, October 2017 and October 2018. GDP from CBO Economic Update, August 2018.
Note: US treasury estimates, in billions of dollars. Does not include interactions among provisions. Includes effects on outlays. Excludes exemption of imputed rent on owner-occupied homes.
GDP = gross domestic product; TCJA = Tax Cuts and Jobs Act.

The TCJA did not follow the traditional tax reform paradigm of lowering tax rates and broadening the tax base. It directly reduced the benefits of some tax expenditure provisions, eliminated others, and introduced and expanded still others. The law also increased the standard deduction and lowered corporate and individual

rates, which cut tax expenditures indirectly by reducing the number of taxpayers using certain tax expenditure provisions (e.g., itemized deductions) and the value of the benefits they receive.

Based on estimates of individual income tax expenditures by the Office of Tax Analysis in the US Treasury Department performed in October 2017 and 2018 and reported in the federal budget the following year (Office of Management and Budget, 2018; Office of Management and Budget, 2019),[9] we calculate that the sum of tax expenditures in 2019 will decline from an estimate performed in the last year prior to TCJA of $1.6 trillion to an estimate performed after TCJA of $1.4 trillion, or from about 7.6 to 6.5 percent of GDP (table 5).[10] From fiscal years 2019 through 2025, the TCJA reduces estimated tax expenditures from about 7.7 to 6.4 percent of GDP. In 2027, after most individual tax changes in TCJA expire, the law reduces projected tax expenditures from $2.3 trillion to $2.1 trillion, or from 8.1 to 7.3 percent of GDP—just a bit lower than the pre-TCJA level.

Sources of Biggest Declines in Tax Expenditures

The five tax expenditures that decline the most in fiscal years 2019 through 2025 (table 6) are (1) the deductions for nonbusiness state and local income, sales, and property taxes ($1.2 trillion, or 87 percent of its pre-TCJA value); (2) the reduced taxation of active income of controlled foreign corporations ($740 billion, or 77 percent); (3) the deductibility of interest on owner-occupied homes ($424 billion, or 63 percent); (4) the exclusion of employer contributions for medical insurance premiums and medical care ($361 billion, or 18 percent); and (5) the deductibility of charitable contributions ($171 billion, or 31 percent).

TABLE 6

Effects of the Tax Cuts and Jobs Act on Major Tax Expenditures

	Amount[a]	Percent Change
Tax expenditure reductions, 2019–25		
Deductibility of nonbusiness state and local taxes	-$1,187.8	-87.2%
Reduced tax rate on active income of controlled foreign corporations (formerly deferral)	-$739.6	-76.9%
Deductibility of mortgage interest on owner-occupied homes	-$423.7	-62.6%
Exclusion of employer contributions for medical insurance premiums and medical care	-$361.2	-17.6%
Deductibility of charitable contributions	-$170.6	-30.6%
Tax expenditure increases, 2019–25		
Child and dependents credits	$505.7	136.1%
Allow 20 percent deduction to certain pass-through income	$454.3	*
Accelerated depreciation of machinery and equipment (normal tax method)	$295.2	803.5%
Step-up basis of capital gains at death	$109.8	38.0%

Sources: US Treasury estimates, October 2017 and October 2018.
Note: Comparison between Treasury Tax Expenditure Estimates, October 2017 and October 2018. Change in tax expenditures are mostly due to the Tax Cuts and Jobs Act, but also reflect changes in economic projections.
(a) Amounts in billions of dollars.
* New provision in Tax Cuts and Jobs Act

The decline in the cost of the state and local tax (SALT) deduction reflects both direct and indirect effects. The TCJA imposed a cap of $10,000 on the SALT deduction, which directly reduced the amount individuals can claim. The law also reduced the number of taxpayers who claim the SALT deduction and the benefit for those who continue to claim it by almost doubling standard deduction amounts. And it reduced the benefit for those continuing to claim the SALT deduction by lowering marginal individual income tax rates. These effects were partially offset for higher-income taxpayers by an increase in the exempt amount under the individual alternative minimum tax, which reduced the number of filers subject to the alternative minimum tax, which disallows the SALT deduction.

The changes in the international provisions in the TCJA substantially reduced business tax expenditures. Under pre-TCJA law, US-resident multinational corporations could defer tax on income they earned in their foreign affiliates until the profits were repatriated as a dividend payment to the US parent corporation. Treasury and JCT scored this provision, known as deferral, as a tax expenditure relative to a baseline in which US corporations were taxable every year on their worldwide profits (albeit with a credit for foreign income taxes paid).[11] The TCJA eliminated the taxation of repatriated profits but replaced it with a new annual minimum tax on global intangible low tax income, defined as foreign source income above a 10 percent return on the depreciated value of tangible property, and it allowed companies to claim a deduction of 50 percent of global intangible low tax income (reduced to 37.5 percent after 2025). The revenue shortfall under these new rules compared with full taxation of foreign-source income at the new corporate rate is counted as a tax expenditure. The cost of this new tax expenditure provision, which the Treasury labels the "reduced rate on the active income of controlled foreign corporations," is much less than the prior cost of deferral.

In scoring the effect of the international provisions, JCT in 2017 estimated that the sum of all provisions was roughly revenue neutral, except for a temporary revenue gain from a one-time tax on foreign profits accrued before the TCJA's enactment. This suggests that the reduction in the cost of the preferential treatment of foreign corporate profits largely reflects the effects of the reduction in the corporate tax rate from 35 to 21 percent rather than reflecting changes in the foreign provisions themselves.

The other largest cuts in tax expenditures were for the mortgage interest deduction, the deduction for charitable contributions, and the exclusion of employer contributions for medical insurance and medical care (the ESI exclusion). The TCJA reduced the ceiling on the amount of mortgage debt on which a deduction could be claimed from $1 million to $750,000 and eliminated the deductibility of home equity loans not used for home improvements. But the reduced cost of the mortgage interest deduction is largely caused by the indirect effects from the higher standard deduction, the cap on the SALT deduction, and reduced marginal tax rates. These same indirect effects reduced the cost of the charitable deduction (because the basic structure of the deduction does not change). TPC estimates that overall, the TCJA reduced the number of itemizers in 2018 from about 26 percent of tax units to about 11 percent (Gale et al. 2018).

Finally, the TCJA reduces the cost of the ESI exclusion by $361 billion, but this amount largely reflects the high cost of this tax expenditure provision in the baseline: the cost reduction is only about 18 percent of the total. The lower cost of the ESI exclusion is largely because of the reduction in marginal income tax rates, although it also may reflect changing assumptions about the growth in health care costs and coverage.

Sources of Biggest Increases in Tax Expenditures

The tax expenditures in prior law that increase the most because of the TCJA are (1) credits for children and other dependents ($506 billion, or 136 percent), (2) accelerated depreciation of machinery and equipment ($295 billion, or 803 percent), and (3) the step-up in basis of capital gains at death ($110 billion, or 38 percent). The new 20 percent deduction for business income is expected to cost $454 billion between fiscal years 2019 and 2025.

The TCJA doubled the child tax credit from $1,000 to $2,000 per child and introduced a new $500 credit for other dependents and children not eligible for the regular child tax credit. It also substantially increased the income levels at which the credit phases out and increased the amount of the credit that could be claimed as a refund because it exceeds individual income tax liability. However, because the TCJA eliminated personal exemptions, the increase in the child tax credit overstates how much the new law benefited families with children. Both the Treasury and JCT have considered personal exemptions as part of the normal or baseline tax system rather than as tax expenditures. This is based on the idea that one thing any tax system must do is define its unit of measurement and the appropriate way to adjust for differences in ability to pay based on unit size is to allow an extra deduction for additional taxpayers and dependents. Because credits represent a direct payment to taxpayers and not a reduction in the tax base because of a unit's ability to pay, the two organizations have counted the new and larger credits as tax expenditures. Nonetheless, it appears a somewhat arbitrary distinction: credits that reduce tax liability by larger families by a dollar for each additional dollar of credit are tax expenditures, but those families' personal exemptions that reduce tax liability by reducing their taxable income are not.

The largest increase in tax expenditures for business taxpayers was the increase in the tax expenditure for accelerated depreciation. The TCJA enacted bonus depreciation for five years, under which businesses can deduct immediately the cost of investments in qualifying machinery and equipment instead of capitalizing the costs and deducting them over a period of years as the asset value declines. After 2022, bonus depreciation phases out at a rate of 20 percent a year. This means firms can deduct immediately 80 percent of qualifying investment in 2023, 60 percent in 2024, 40 percent in 2025, and 20 percent in 2026. The revenue loss of bonus depreciation in the first five years overstates its subsidy value because businesses that deduct the cost of their investments sooner will then claim smaller deductions in future years. In 2027, the tax expenditure for accelerated depreciation increases receipts because firms will not claim deductions on old assets in 2027 because of bonus depreciation deductions they claimed in prior years, but they will not be able to claim bonus depreciation on new investments. Despite the reported negative value of the subsidy, however, accelerated

depreciation rules will still be providing a net benefit to firms for new investments firms make in 2027 relative to depreciation rules that reflect the estimated actual decline in the value of assets.

The major new tax expenditure in TCJA is the 20 percent deduction for qualifying business income, which will amount to $454 billion between fiscal years 2019 and 2025. This deduction effectively reduces the top income tax rate on qualifying business income from 37 percent to 29.6 percent. It is subject to a variety of limits for taxpayers with taxable income over $157,500 for single returns and $315,000 for joint returns. The qualifying business income deduction is scheduled to expire at the end of 2025.

Changes in Distributional Effects of Nonbusiness Tax Expenditures

Mostly because of the TCJA, the benefit from nonbusiness tax expenditures declined between 2015 and 2019 as a percentage of pretax income for all income groups except the bottom quintile and declined the most for taxpayers in the top 1 percent (table 7). Overall benefits from tax expenditures declined by 1.6 percent of income, fell by 2.8 percent of income for tax units in the top 1 percent, and increased by 0.3 percent of income for tax units in the bottom quintile.

TABLE 7

Change in Benefit as a Share of Pretax Income for Various Categories of Individual Income Tax Expenditures

2015–19

Cash Income Percentile	Exclusions	Capital gains and dividends	Itemized deductions	Above-the-line deductions	Non-refundable credits	Refundable credits	Other	All Provisions
Lowest quintile	0.0%	-0.2%	0.0%	0.0%	0.0%	0.5%	0.0%	0.3%
2nd quintile	0.0%	-0.2%	-0.1%	0.0%	-0.1%	-0.4%	0.0%	-0.8%
3rd quintile	0.0%	-0.2%	-0.3%	0.0%	0.0%	-0.1%	0.1%	-0.5%
4th quintile	0.3%	-0.4%	-0.5%	0.0%	0.0%	0.2%	0.1%	-0.3%
80-90th percentiles	0.0%	-0.5%	-0.9%	0.0%	0.0%	0.3%	0.1%	-1.0%
90-95th percentiles	-0.3%	-0.4%	-1.0%	0.0%	-0.1%	0.4%	0.2%	-1.2%
95-99th percentiles	-0.7%	-0.5%	-1.0%	0.0%	0.0%	0.2%	0.4%	-1.6%
Top 1 percent	-0.9%	-1.6%	-1.0%	0.0%	-0.1%	0.0%	0.8%	-2.8%
Total	**-0.2%**	**-0.6%**	**-0.7%**	**0.0%**	**0.0%**	**0.1%**	**0.2%**	**-1.2%**

Source: TPC Micro-simulation model.

The main sources of the declines in tax expenditures for tax units in the top 1 percent of the income distribution from 2015 to 2019 were (1) declines in the benefits from preferences for capital gains and dividends (1.6 percent of income), (2) declines in benefits from itemized deductions (1.0 percent of income), and (3) declines in the benefits of exclusions (0.9 percent of income). Lower individual marginal rates reduced the benefit from preferential tax rates on capital gains and dividends (which remained the same) and from exclusions and itemized deductions. The benefit from itemized deductions in the top 1 percent also declined because of the cap on the SALT deduction. These declines were partially offset by an increased benefit of 0.8

percent of income in the "other" category, mainly reflecting the benefit of the new 20 percent deduction for qualified business income.

The benefit of itemized deductions also declined by about 1 percent of income for income groups in the 80th to 99th percentiles of the distribution, again largely reflecting the cap on the SALT deduction and the increase in the standard deduction. The benefit of refundable credits as a share of income increased in the bottom quintile, largely reflecting the increase in refundable portion of the child credit.

Although the distribution of tax expenditures became somewhat less regressive after the TCJA's enactment, the distribution of the tax burden overall became somewhat less progressive (Gale et al. 2018). Reduced corporate and individual tax rates and the increase in the AMT exemption provided larger benefits as a share of income to higher-income taxpayers than to lower-income taxpayers, but the lower rates and higher standard deduction also reduced the value of many tax expenditures that benefit higher-income groups the most.

CONCLUSION

Nonbusiness tax expenditures claimed on individual income tax returns are expected to reduce federal tax liability by $1.2 trillion in 2019. The total cost of tax expenditures is about 5 percent larger than the sum of individual provisions because of interactions among them.

The revenue loss from tax expenditures exceeds the sum of gains from individual provisions for most tax expenditure categories except itemized deductions. The cost of all itemized deductions is less than three-quarters of the sum of the costs of the separate deductions because each time an itemized deduction is eliminated, more taxpayers instead take the standard deduction, reducing the gain from eliminating remaining deductions. In contrast, the total cost of eliminating preferences for capital gains and dividends is almost one-third larger than the cost of the separate capital gains provisions because the cost of exemptions for capital gains on housing and gains transferred at death is much larger when capital gains are taxed as ordinary income than when they face the current-law preferential rates.

Although taxpayers at all income levels benefit from tax expenditures to some degree, these provisions are more generous to the highest-income taxpayers (as a share of income) than to other taxpayers. But their benefits vary substantially by provision. People in the top 1 percent of the income distribution benefit the most as a share of income from the special rates for capital gains and dividends, the exemption of gains transferred at death, itemized deductions, and the new deduction for pass-through income. Middle- and upper middle–income taxpayers benefit the most from income tax exclusions, especially the exemption of income earned within individual retirement accounts and the ESI exclusion. 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 generated from removing the tax expenditures is used. If, for example, the revenue from eliminating all nonbusiness tax expenditures were used to provide an equal percentage reduction in all tax rates, then higher-income taxpayers would benefit modestly because their share of benefits from tax expenditures is slightly less than their share of all taxes paid; the lowest-income taxpayers would be hurt the most. Alternatively, if the revenue from eliminating nonbusiness tax expenditures were used to provide everyone with the same tax cut as a share of their income, the highest- and lowest-income taxpayers would pay more tax because their shares of benefits from tax expenditures are greater than their shares of income, and middle-income taxpayers would benefit the most.

The TCJA will reduce all tax expenditures (including business tax benefits) by about 1.3 percent of GDP between 2019 and 2025, but it will reduce them by only about 0.8 percent of GDP in 2027, after most individual income tax provisions in TCJA have expired. The biggest reductions in tax expenditures from 2019 to 2025 come from the cap in the SALT deduction, cuts in the value of itemized deductions caused by the cap on the SALT deduction, the increase in the standard deduction, lower marginal rates, and a reduction in the value of tax expenditures for foreign-source income, largely reflecting the decline in the corporate tax rate. These tax expenditure cuts were partially offset by increases in some tax expenditures in the TCJA, the largest being increases in the child tax credit, accelerated depreciation for machinery and equipment, and the new 20 percent deduction for qualified business income. The TCJA reduced the value of nonbusiness tax expenditures the most as a share of income for taxpayers in the top 1 percent of the income distribution, but these taxpayers also received a larger tax cut as a share of income than taxpayers on average.

APPENDIX: LIST OF TAX EXPENDITURE PROVISIONS BY TYPE

Exclusions

- Exclusion of benefits allowed to armed forces personnel
- Exclusion of income earned abroad by US citizens
- Exclusion of certain allowances for federal employees abroad
- Exclusion of interest spread on financial institutions
- Discharge of mortgage indebtedness
- Exclusion of reimbursed employee parking expenses
- Exclusion for employer-provided transit passes
- Distributions from retirement plans for premiums for health and long-term care insurance
- Exclusion of railroad retirement (Social Security equivalent) benefits
- Deferral of interest on US savings bonds
- Qualified energy conservation bonds
- Exclusion of life insurance death benefits
- Exclusion of interest on public-purpose state and local bonds
- Exclusion of interest on energy facility bonds
- Exclusion of interest on small-issue bonds
- Exclusion of interest on bonds for highway projects and rail-truck transfer facilities
- Exclusion of interest on veterans housing bonds
- Exclusion of interest on owner-occupied mortgage subsidy bonds
- Exclusion of interest on rental housing bonds
- Exclusion of interest for airport, dock, and similar bonds
- Recovery zone bonds

- Exclusion of employer contributions for medical insurance premiums and medical care
- Exclusion of interest on hospital construction bonds
- Qualified school construction bonds
- Exclusion of scholarship and fellowship income
- Education individual retirement accounts
- Qualified tuition programs
- Exclusion of interest on savings bonds redeemed to finance educational expenses
- Exclusion of employer-provided educational assistance
- Employer-provided child care exclusion
- Exclusion of employee meals and lodging (other than military)
- Exclusion of certain foster care payments
- Exclusion of parsonage allowances
- Exclusion of workers' compensation benefits
- Exclusion of public assistance benefits
- Exclusion of special benefits for disabled coal miners
- Exclusion of military disability payments
- Premiums on group-term life insurance
- Premiums on accident and disability insurance
- Income of trusts to finance supplemental employment benefits
- Special rules for Employee Stock Ownership Plans
- Exclusion of veterans' death benefits and disability compensation
- Exclusion of veterans' pensions
- Exclusion of GI bill benefits
- Social Security benefits for retired and disabled workers and spouses, dependents, and survivors
- Exclusion of interest on bonds for water, sewage, and hazardous waste facilities

- Tribal economic development bonds
- Exclusion of interest on student loan bonds
- Exclusion of interest on bonds for private nonprofit educational facilities
- Medical savings accounts and health savings accounts
- Defined-benefit employer plans
- Defined-contribution employer plans
- Individual retirement accounts
- Self-employed plans

Above-the-Line Deductions

- Discharge of student loan indebtedness
- Special deduction for teacher expenses
- Deductibility of student loan interest
- Self-employed medical insurance premiums
- Additional deduction for the blind
- Additional deductions for the elderly

Benefits for Capital Gains and Dividends

- Capital gains treatment of royalties on coal
- Deferral of income from installment sales
- Capital gains exclusion on home sales
- Exceptions from imputed interest rules
- Step-up in basis for capital gains at death
- Carryover basis of capital gains on gifts
- Ordinary income treatment of loss from small business corporation stock sale
- Deferral of gains from like-kind exchanges
- Capital gains exclusion of small corporation stock

- Capital gains treatment of certain timber income
- Capital gains treatment of certain agriculture income
- Treatment of qualified dividends
- Capital gains (except agriculture, timber, iron ore, and coal)

Itemized Deductions

- Deducibility of mortgage interest on owner-occupied homes
- Deductibility of state and local property tax on owner-occupied homes
- Deductibility of nonbusiness state and local taxes other than on owner-occupied homes
- Deductibility of charitable contributions
- Deductibility of medical expenses
- Deductibility of casualty losses

Nonrefundable Credits

- Tax credit for the elderly and disabled
- Tax credits for clean-fuel burning vehicles and refueling property
- Credit for holding clean renewable energy bonds
- Credit for construction of new energy efficient homes
- Credit for disabled access expenditures
- Credit for energy efficient improvements to existing homes
- Credit for employee health insurance expenses of small business
- Credit for residential energy efficient property
- Assistance for adopted foster children
- Adoption credit and exclusion
- Credit for child and dependent care expenses
- Low- and moderate-income savers credit
- Lifetime learning credit

- Credit for holders of Gulf tax credit bonds
- Credit for holders of zone academy bonds

Refundable Credits

- Tax credit for health insurance purchased by certain displaced and retired individuals
- Refundable premium assistance credit
- Child tax credit
- Earned income tax credit
- American opportunity tax credit

Miscellaneous Provisions

- Exception from passive loss rules for $25,000 of rental loss
- Allow 20 percent deduction to certain pass-through income

NOTES

[1] Office of Management and Budget (2019)

[2] Nonbusiness tax expenditures exclude most tax benefits individual taxpayers receive as owners of their own businesses or as recipients of income from partnerships and subchapter S corporations and that they report on Schedules C, E, and F. We include as nonbusiness 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. We also include the new 20 percent deduction for qualified business income enacted in the TCJA. We include this provision because the deduction is claimed on individual income tax returns only and does not directly affect the measurement of business profits.

[3] "How Did the TCJA Affect Tax Expenditures," Tax Policy Center Briefing Book, accessed May 7, 2019, https://www.taxpolicycenter.org/briefing-book/how-did-tcja-affect-tax-expenditures.

[4] Our estimates differ somewhat from the Treasury's, in part because we do not 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 (the Treasury estimates it as $121.1 billion in fiscal year 2019, but the Joint Committee on Taxation does not count it as a tax expenditure).

[5] Our estimates are only for income tax expenditures. Premiums for ESI and employer contributions toward retirement accounts are also excluded from payroll taxes, 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 (Smith and Toder 2014). Our estimate of the benefit of retirement saving provisions differs conceptually from the estimate of the revenue loss from these provisions computed by the Treasury and JCT. They measure the 2019 revenue loss as the difference between current-law receipts in 2019 and what receipts would have been if contributions to qualified retirement saving accounts were treated the same as ordinary savings accounts, with contributions and earnings within accounts included in taxable income and distribution in retirement tax-free. The revenue loss is the sum of the revenue loss from allowing the exclusion from income tax of contributions to qualified retirement plans and income accrued within these accounts less the gain from taxing distributions from the accounts. In contrast, we measure the benefit from contributions to qualified retirement saving accounts in 2019 as the estimated increase in the present value of future retirement income from investing contributions within instead of outside of qualified retirement saving plans.

[6] We only include nonbusiness 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 nonfilers) by a broad measure of economic income that TPC calls expanded cash income. Expanded cash income adds some items to adjusted gross income, including tax-exempt interest; the nontaxable portion of Social Security benefits; deductible employee contributions to qualified retirement plans; and imputations for corporate income taxes, the employer share of payroll taxes, the value of ESI, 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 supernormal 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).

[9] The Treasury's last pre-TCJA report on tax expenditures was produced in October 2017 and included in the Analytical Perspectives Section of the Fiscal Year 2019 Budget of the United States government, published by the Office of

NOTES

Management and Budget in February 2018. The Treasury's first post-TCJA report on tax expenditures is dated October 2018 and is now posted on the Treasury website; it is included in the Analytical Perspective section of the fiscal year 2020 budget (Office of Management and Budget 2019).

[10] As our calculations in table 1 suggest, the failure to account for interactions may cause these figures to understate the total cost of tax expenditures by around 5 percent. The figures reported in table 5 also exclude the Treasury's estimate of the cost of excluding from tax net imputed rent on owner-occupied housing (over $100 billion a year). JCT does not count the exclusion of imputed rent as a tax expenditure, nor did the Treasury for most of the years it has prepared tax expenditure reports.

[11] Although the Treasury and JCT counted deferral as a tax expenditure, deferral was arguably less generous than the treatment of foreign-source income by our major trading partners, most of whom allowed exemption of active foreign-source income of their resident multinational corporations.

REFERENCES

Baneman, Daniel, and Eric Toder. 2012. "Distributional Effects of Individual Income Tax Expenditures: An Update." Washington, DC: Urban-Brookings Tax Policy Center.

Burman, Leonard, Christopher Geissler, and Eric Toder. 2008. "How Big are Total Individual Income Tax Expenditures and Who Benefits from Them?" Discussion Paper 31. Washington, DC: Urban-Brookings Tax Policy Center.

Gale, William G., Hilary Gelfond, Aaron Krupkin, Mark J. Mazur, and Eric Toder. 2018. "A Preliminary Assessment of the Tax Cuts and Jobs Act of 2017." *National Tax Journal* 71 (4): 589–612.

Joint Committee on Taxation. 2018. "Estimates of Federal Tax Expenditures for Fiscal Years 2018-2022." JCX-81-18. Washington, DC: Joint Committee on Taxation.

Marron, Donald, and Eric Toder. 2012. "How Big is the Federal Government?" Washington, DC: Urban-Brookings Tax Policy Center.

Nunns, James R. 2012. "How TPC Distributes the Corporate Income Tax." Washington, DC: Urban-Brookings Tax Policy Center.

Office of Management and Budget. 2018. Budget of the United States Government. *Analytical Perspectives*. Washington, DC: Office of Management and Budget. https://www.whitehouse.gov/wp-content/uploads/2018/02/spec-fy2019.pdf

Office of Management and Budget. 2019. *Budget of the United States Government. Analytical Perspectives.* Washington, DC: Office of Management and Budget. https://www.whitehouse.gov/wp-content/uploads/2019/03/ap_14_receipts-fy2020.pdf.

Rosenberg, Joseph. 2013. "Measuring Income for Distributional Analysis." Washington, DC: Urban-Brookings Tax Policy Center.

Smith, Karen E., and Eric Toder. 2014. "Adding Employer Contributions to Health Insurance to Social Security's Earnings and Tax Base." Working paper 2014-3. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Toder, Eric, Daniel Berger, and Yifan Powers. 2016. "Distributional Effects of Individual Income Tax Expenditures: An Update." Washington, DC: Urban-Brookings Tax Policy Center.

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