

## DESCRIPTION OF THE TAX POLICY CENTER'S IMPROVED METHODOLOGY FOR ANALYSIS OF THE TAXATION OF PASS-THROUGH INCOME

Technical Methodology Report

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### ABSTRACT

This report describes the Tax Policy Center's (TPC's) improved methodology for analyzing the taxation of pass-through income (income generated through business activities that is taxed at the individual level). Under current law, certain types of pass-through income are taxed at different rates than corporate or ordinary individual income, creating incentives to shift the form in which income is received. Accurate analysis of tax proposals that alter the tax rate on pass-through income therefore requires estimates of the magnitude of such income-shifting. In this project, TPC improved its estimates of the amount of income shifting from wage to pass-through form; introduced estimates of the amount of income shifting from corporate to pass-through form; and used those new estimates to analyze the effects of permanently extending the current law deduction for certain pass-through income (Section 199A).

## OVERVIEW

This brief describes the Tax Policy Center's (TPC's) improved methodology for analyzing the taxation of pass-through income (income generated through business activities that is taxed at the individual level). Under current law, certain types of pass-through income are taxed at different rates than corporate or ordinary individual income, creating incentives to shift the form in which income is received. Accurate analysis of tax proposals that alter the tax rate on pass-through income therefore requires estimates of the magnitude of such income-shifting. In this project, TPC improved its estimates of the amount of income shifting from wage to pass-through form; introduced estimates of the amount of income shifting from corporate to pass-through form; and used those new estimates to analyze the effects of permanently extending the current law deduction for certain pass-through income. The deduction was enacted in the 2017 Tax Cuts and Jobs Act (TCJA) and is scheduled to expire after 2025. The enhancements to TPC's pass-through analysis included updating estimates of the amount of pass-through income eligible for the deduction based on Internal Revenue Service (IRS) Statistics of Income Division (SOI) data; applying estimates of the elasticity of wage to pass-through income shifting with respect to the tax rate differential to the TPC model, based on a review of empirical data; applying estimates of the elasticity of corporate to pass-through income shifting with respect to the tax rate differential; and adjusting those estimated elasticities to reflect limitations of the current pass-through deduction.

## BACKGROUND

Many businesses in the United States are organized as "pass-through" entities rather than as traditional corporations. Those businesses do not pay the corporate income tax; rather, they pass income and deductions (profits and losses) through to owners, who report the income and pay tax on it through their individual income tax returns. Pass-through businesses include sole proprietorships, partnerships, and S corporations.

Pass-through income flows through to owners in the forms reported by pass-through businesses, with most of that income subject to ordinary income tax rates and some of it taxed at the lower capital gains rate. Some pass-through income is also subject to payroll taxes (called Self-Employed Contributions Act [SECA] taxes for self-employed people).

Corporate income, in contrast, is subject to two levels of taxation: profits are taxed at the corporate level, then dividends and realized capital gains are taxed again at the shareholder level (though these individual-level rates are lower than those on ordinary income).

The Tax Cuts and Jobs Act of 2017 (TCJA) reduced tax rates on certain qualifying income of pass-through businesses by providing a new deduction of up to 20 percent of qualified business income (QBI). QBI generally includes the net income from a qualified trade or business, including partnerships, S corporations, and sole proprietorships conducting business in the United States. QBI does not include reasonable compensation from

an S corporation, guaranteed payments from a partnership, or investment income such as capital gains or dividends. More generally, QBI does not include income from providing services as an employee.

The full 20 percent of QBI is deductible for taxpayers below specified income thresholds (\$163,300 for singles, \$326,600 for joint returns). For taxpayers above those thresholds two restrictions apply that can limit the deduction.<sup>1</sup> First, income from a specified service trade or business (SSTB) is not eligible for the deduction. SSTBs includes businesses that provide services in the areas of health, law, accounting, consulting, financial services, performing arts, and athletics, among others. Second, the deduction is limited by the amount of wages paid and property used in production by the business. The deduction may not exceed the greater of 1) 50 percent of the W-2 wages paid with respect to the qualified trade or business, or 2) the sum of 25 percent of the W-2 wages paid with respect to the qualified trade or business plus 2.5 percent of the unadjusted basis, immediately after acquisition, of all qualified property of the qualified trade or business. Qualified property generally includes depreciable assets used in the production of qualified business income.

At the same time as it introduced the QBI deduction, the TCJA also reduced tax rates on corporations and, to a much lesser extent, on individuals. Changing the relative tax rates among pass-through businesses, corporations, and individuals creates incentives to shift the form in which income is received. For example, if pass-through income faces lower tax rates than ordinary income, workers have a tax incentive to reclassify wage or salary income as pass-through income. Similarly, when pass-through income faces lower tax rates than the combined individual and corporate rates on income, firms may have a tax incentive to organize as pass-through businesses rather than corporations.<sup>2</sup> Those behavioral responses complicate analysis of tax policies that change the tax rate on pass-through income. To enhance our ability to analyze tax policies related to pass-through income, we improved our procedure for estimating the amount of wages that shift to pass-through income in response to tax incentives and developed new procedures for estimating the amount of corporate income that shifts to pass-through income.

The QBI deduction is scheduled to expire (along with many other provisions of the TCJA) at the end of 2025. We used the new methods we developed to analyze the revenue and distributional effects of permanently extending the deduction, accounting for income shifting.

The remainder of the paper describes our new methods, and how they were applied to the particular example of extending the QBI deduction.

## SHIFTING FROM WAGES TO PASS-THROUGH INCOME

The Section 199A deduction for qualified business income (QBI) enacted as part of the TCJA reduces the effective individual income tax rate on eligible pass-through income by up to 20 percent. It therefore creates an incentive to recharacterize wage and salary income that would otherwise face ordinary income tax rates as pass-through income that is eligible for the deduction. To reflect this possibility, we produce a revenue estimate for

making the QBI deduction—currently set to expire at the end of 2025—permanent, both with and without this wage recharacterization (or “wage shifting”).

We first estimate the aggregate amount of wage shifting that would occur in 2026 and future years if the QBI deduction were made permanent. The first step in that estimate is to calculate for each tax unit the marginal tax rate on wage and salary income, and that on QBI, in order to gauge the magnitude of the incentive to switch from wage and salary to pass-through income. To do this, we modify the marginal tax rate calculator in the Tax Policy Center’s microsimulation model of the federal tax system.<sup>3</sup> This modification allows us to calculate, for each of the households in our model, both the effective individual income tax rate on wage and salary income and the effective marginal rate on that income if it were instead recharacterized as pass-through income eligible for the QBI deduction.<sup>4</sup> We determine an overall average effective marginal tax rate (EMTR) on each type of income by weighting each household’s EMTR by their amount of wage and salary income. Because wages and pass-through income generally face the same marginal tax rates under the current law baseline after the deduction expires, the difference between the tax rates on the two types of income under extension of the deduction determines the incentive to switch income forms, relative to that baseline. To estimate the extent of this shifting, we first calculate the percentage difference between the net of tax rate (that is, one minus the tax rate) on wages and pass-through income (assuming the deduction is extended) and apply an elasticity derived from past research to estimate the aggregate amount of wage shifting that could occur.<sup>5</sup> Based on a review of the literature, we believe that an elasticity of -0.4 of wage income, with respect to the difference between the net of tax rates on the two forms of income, would capture the amount of potential wage shifting induced by a permanent, newly-implemented policy to provide a tax advantage for all pass-through income.<sup>6</sup>

In our estimates, we use a lower elasticity than the associated estimates in the literature and therefore reduce the amount of wage-shifting that we project, for two primary reasons. First, for high-income taxpayers, the QBI deduction disallows pass-through income derived from a set of specified service trades or businesses and applies limitations based on the wages paid and capital owned by the pass-through business. These “guardrails” would reduce the potential benefits from wage recharacterization. Second, we only want to estimate the incremental wage shifting that would occur from making the current QBI deduction permanent. We assume that some amount of the wage recharacterization that the deduction had previously induced will persist in our economic baseline even after the deduction expires.<sup>7</sup> That is, for 2026 and future years, we assume our current-law baseline includes some tax units that report pass-through income that would have been reported as wage income if the QBI deduction had not been in place through 2025. This wage-shifting inertia occurs because if the deduction were to expire as scheduled, there would be little incentive for those who had previously shifted income from wages to pass-through form to shift the income back to wages and salaries—the EMTRs on wages and pass-through income would be equal for most taxpayers. For both reasons, we reduce our elasticity from -0.4 to -0.2 when calculating the aggregate amount of wage shifting.

Once we have estimated the aggregate wage-shifting for 2026, we then need to determine which taxpayers in our microsimulation model would recharacterize their wage and salary income.<sup>8</sup> We calculate the total individual income tax savings that each taxpayer in our model would realize by recharacterizing all their wages as pass-through income eligible for the 20 percent deduction. We then assume that those taxpayers with a higher potential tax savings as a share of their income would be more likely to recharacterize wages as pass-through income. Specifically, we assume that the probability of shifting equals the taxpayer's tax savings as a share of income raised to the power 'x'.<sup>9</sup> We then compare a random number draw from the uniform distribution to the taxpayer's probability of shifting to determine whether they are chosen to recharacterize their wage and salary income. We calibrate the value of x so that the total amount of shifted wages equals the aggregate amount derived above.<sup>10</sup>

Finally, the elasticity we use in our estimate of wage shifting applies to the long-run effect. However, it may take workers time to renegotiate their employment relationships in order to recharacterize their income. To account for the likelihood that the full amount of income shifting would not occur immediately but only gradually over time, we phase in that effect over three years following enactment of the provision to make the QBI deduction permanent.<sup>11</sup>

Figure 1 shows our estimate of the number of "wage shifters" (tax units that characterize income as wages under the current law baseline but who would characterize it as pass-through income under extension of the deduction) and the amount of income that would be shifted from wages and salaries to qualified business income for 2026 through 2040 if the QBI deduction were made permanent but other individual income tax provisions in the TCJA were allowed to expire as scheduled.

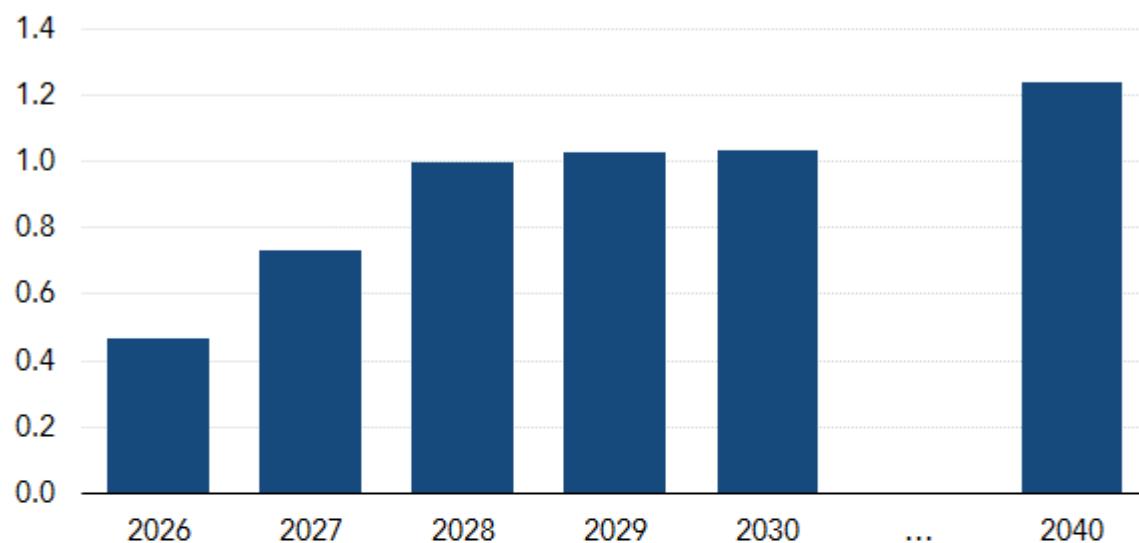
FIGURE 1

## Wage Shifting to Pass-Through Income

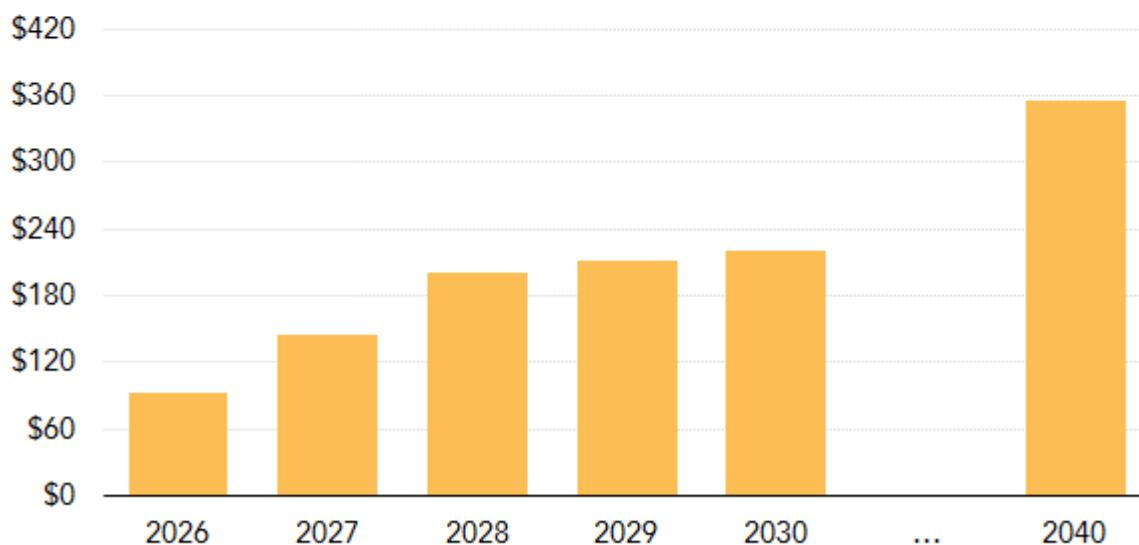
Calendar years 2026 through 2040



*Millions of tax units*



*Billions of dollars*



**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0319-2).

**Notes:** Baseline is the law currently in place for each year as of March 17, 2020, with the qualified business income deduction permanently extended. We assume a wage shifting elasticity with respect to the net of tax rate equal to -0.2, with 50 percent of the full effects phased in during the first year, 75 percent in the second year, and 100 percent in the third year.

Note that in estimating the effect of extending the QBI deduction on income-shifting and revenues we assume that any wages that taxpayers recharacterize as pass-through income would remain subject to payroll taxes.<sup>12</sup> Earnings shifted to sole proprietorship or general partnership income would be subject to self-employment tax at the same rate as the combined employer-employee payroll tax is imposed on wages, even though the shifted earnings would become eligible for the QBI deduction.

The considerations for choosing the S corporate form to shift wages are more complicated. Although S corporation profits are not subject to payroll taxes, owners are required to pay themselves “reasonable compensation” that is taxed as wages. Ultimately, the incentive to elect S corporate form would depend on several factors. They include the rate differential between wages and qualifying pass-through income and the amount of reasonable compensation relative to overall net income. We assume that individuals would prefer to shift their wages to sole proprietorship or partnership income, where all income would be eligible for the QBI deduction, instead of S corporate form, where only the profits portion would benefit.

Our estimates do not consider other behavioral responses that may reduce payroll taxes. One response might be to re-characterize wages as a form of passive income such as a non-guaranteed payment to a limited partner. Alternatively, current owners of closely-held S corporations could substitute profits for wages to benefit from both the payroll tax exemption and the lower income tax rate. Both responses could be characterized as evasion rather than avoidance.

To the extent that we are understating a possible effect on payroll tax receipts, the revenue loss from extending the QBI deduction would be larger than what we show.

## SHIFTING FROM CORPORATE INCOME TO PASS-THROUGH INCOME

The QBI deduction also creates incentives to shift income from corporate to pass-through form. The effect of the enactment of the deduction on such shifting is complicated by the fact that the TCJA reduced the tax rate on corporate income at the same time. However, if the QBI deduction expires at the end of 2025 as scheduled under current law, while the reduction in corporate rates is maintained, then some pass-throughs that no longer receive the deduction for qualified business income (QBI) will incorporate. At that point, entities will gain a tax advantage through incorporation provided that their combined tax rate on corporate income is lower than the tax rate on pass-through income without the QBI deduction. The combined rate on corporate income comprises the 21 percent corporate income tax applied to profits at the business level, as well as individual-level taxes including the 0-20 percent tax rates on qualifying dividends and long-term capital gains and the 3.8 percent tax on net investment income (which includes dividends and capital gains). The 2026 baseline economic projection includes this higher level of corporate income, together with the corresponding dividends and capital gains. However, if the QBI deduction is made permanent, then that increase of incorporation will not occur, so corporate income, dividends and capital gains will be lower, and pass-through income will be higher than in the baseline.

To estimate the magnitude of this effect, we first estimate the share of pass-through income that qualifies for the QBI deduction. Then, we calculate the 2026 weighted average marginal tax rate on that income with and without the QBI deduction. The difference between those rates measures the impact of extension on the gap between the tax rates on pass-throughs and corporations, because the tax rates on corporate income, dividends, and capital gains are the same whether or not the deduction is extended. That gap between pass-through and corporate rates is the measure typically used in empirical estimates of the impact of tax rates on the choice between corporate and pass-through forms of business. Finally, based on that rate differential we calculate the reduction in the corporate income (and increase in pass-through income) resulting from extension of the QBI deduction, along with the corresponding revenue effects.

Some pass-through income recipients are eligible for the QBI deduction without restrictions: If a taxpayer's income is below \$163,300 for singles (\$326,600 for married couples), they can always claim the deduction for their QBI. However, the unqualified deduction is phased out over the next \$50,000 (\$100,000 for joint filers) of income, and income above those thresholds is subject to certain tests in order to qualify for the deduction. Income from a business that provides certain types of services—referred to as a specified service trade or business (SSTB) in the law—is disqualified.<sup>13</sup> Deductibility of non-SSTB income is limited to the lesser of (1) 20 percent of pass-through income and (2) the greater of (i) 50 percent of wage income paid or (ii) the sum of 2.5 percent of depreciable capital and 25 percent of wage income.

To estimate the amount of QBI (that is, the amount of pass-through income eligible for the QBI deduction), we used 2015 industry-level data for each pass-through entity type (sole proprietorship, partnership, or S corporation) published by the Internal Revenue Service (IRS) Statistics of Income Division.<sup>14</sup> Income from the following industries, which is likely to be from an SSTB, was excluded: insurance and finance; professional, scientific, and technical services (comprising net income from legal services, accounting, and management); scientific and technical consulting; health care and social assistance (comprising net income from offices of physicians, dentists, chiropractors, optometrists, mental health practitioners, podiatrists, and outpatient care); arts, entertainment and recreation (comprising net income from performing arts, spectator sports and related industries). Partnership portfolio income was also excluded. Based on that analysis, we estimated that 32 percent of income for sole proprietorships, 15 percent of income for partnerships, and 22 percent of income for S corporations stems from SSTB activities and is therefore ineligible for the QBI deduction if earned by tax units above the income thresholds.

Next, we estimated the effect of the wage and capital restrictions on QBI. To this end, we calculated the ratio of depreciation to depreciable assets by major industry for S-corps (the only type of pass-through entity for which the IRS reports balance-sheet information). We used these ratios to estimate industry-level depreciable capital stocks for partnerships and sole proprietorships. We then calculated for each industry and entity type the greater of 50 percent of wages or 25 percent of wages plus 2.5 percent of assets. The lesser of this amount or 20 percent of net income is used to estimate the total amount of QBI (and non-QBI) by industry and entity type.

Estimated SSTB and income disqualified under the wage and capital restrictions are then summed across industries to derive the total share of non-QBI for each entity type. These shares are 44 percent for sole proprietorships, 20 percent for partnerships, and 22 percent for S corporations. Overall, a weighted average of 30 percent of income in those categories was estimated to be non-QBI, leaving 70 percent qualifying as QBI.

We incorporated these estimates into TPC's microsimulation model in two steps. First, a fraction of pass-through income (32 percent for sole proprietorships, 15 percent for partnerships, and 22 percent for S corporations, as described above) is assumed to come from an SSTB. The SSTB income was randomly assigned to tax units in the model, and for those tax units above the income thresholds the income was assumed to be ineligible for the deduction.

We then disallowed a further share of income from the deduction due to the wage and capital limitations. That process began by using the estimated shares of income that failed the wage and capital restriction based on SOI data, as described above. However, those shares were then adjusted so that TPC's estimates matched the estimates of the Joint Committee on Taxation for the tax expenditure represented by the QBI deduction for tax year 2018. After that adjustment, the fractions of pass-through income estimated to be noncompliant with the wage and capital restrictions was 50 percent for sole proprietorships; 18 percent for S corporations; and 40 percent for partnerships. Those shares were randomly assigned to tax units in the model, and the income was assumed to be ineligible for the deduction for tax units above the income thresholds.

Given the estimated shares of income eligible for the QBI deduction, we then calculated weighted average marginal tax rates for each type of qualifying pass-through under current law in 2026, after expiration of the deduction. These tax rates were: 18.7 percent for sole proprietorships, 29.1 percent for S corporations, and 29.2 percent for partnerships. Given that the deduction is for 20 percent of qualifying income, the percentage point change in the tax rate for each type of income from extension of the QBI deduction is one fifth of those rates. For each type of entity, those rates were then weighted by the share of qualifying income, for a weighted average reduction in the marginal tax rate of 6.3 percentage points from extending the deduction.

To calculate the amount of corporate income shifted as a result of extension of the QBI deduction, that rate change is then multiplied by the share of QBI in total pass-through income (70%) and the average semi-elasticity of the corporate tax base with respect to the corporate-pass through tax rate differential (-0.7), found in the literature.<sup>15</sup> This yields a contraction of the corporate tax base of about 3 percent, or -\$52.1 billion in 2026 (figure 2).<sup>16</sup> Assuming a 50 percent dividend payout ratio and a 75 percent deferral benefit for capital gains<sup>17</sup>, the corresponding changes in dividend and capital gains income are -\$20.6 billion and -\$5.1 billion, respectively. These changes were assumed to take place within the first year of the 199A extension.

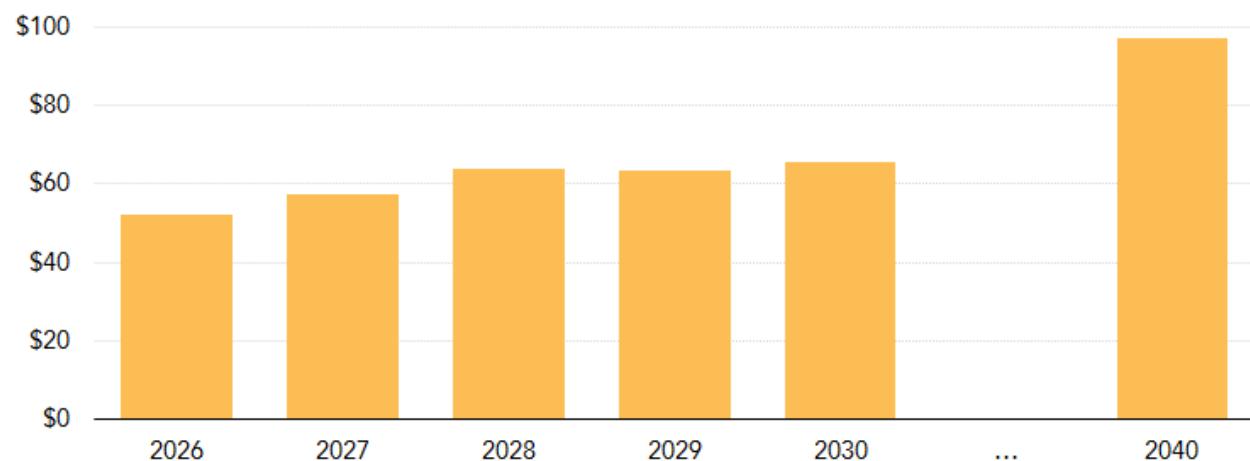
FIGURE 2

## Corporate Income Shifting to Pass-Through Income

Calendar years 2026 through 2040



*Billions of dollars*



**Source:** Urban-Brookings Tax Policy Center Microsimulation Model (version 0319-2).

**Notes:** Baseline is the law currently in place for each year as of March 17, 2020, with the qualified business income deduction permanently extended. We assume a corporate income shifting elasticity of -0.7.

## NOTES

- <sup>1</sup> The restrictions are phased in above the thresholds over \$50,000 for singles and \$100,000 for joint returns.
- <sup>2</sup> The precise tax implications of the choice of organizational form depend on the characteristics of the business, including the amount of income paid out as dividends and/or capital gains. For firms retaining all their profits, rather than paying some out, the relevant comparison is between the corporate income tax rate and the rate on pass-through income.
- <sup>3</sup> The TPC model is a large-scale microsimulation model of the federal tax system. The primary data for the model is the Internal Revenue Service's public-use file (PUF), which consists of a random sample of data from more than 145,000 individual income tax returns that have been modified to remove any identifying information. For more details, see "[A Brief Description of the Tax Model](#)."
- <sup>4</sup> We calculate the effective individual income tax rate on wages and salaries for each of the tax units in our model by first calculating their tax liability under current law. We then add \$1,000 to their wage and salary income and recalculate their income tax liability. Their effective marginal tax rate (EMTR) is then the change in tax divided by the \$1,000 increment. We then return their wage and salary income to its original value and recharacterize that wage and salary income as pass-through income eligible for the QBI deduction. We then increment that pass-through income by \$1,000, assuming the entire amount would be eligible for the QBI deduction and recalculate their income tax. Their EMTR on QBI is the resulting change in tax divided by that \$1,000 increment. We do this calculation for 2026 assuming the QBI deduction was made permanent.
- <sup>5</sup> Using the percentage difference in the net of tax rate in this calculation is analogous to using the percentage difference in the after-tax wage in estimates of the effect of marginal tax rates on labor supply.
- <sup>6</sup> See for example Alstadsæter, Annette, and Martin Jacob. "Dividend taxes and income shifting." *The Scandinavian Journal of Economics* 118.4 (2016): 693-717, <https://www.econstor.eu/bitstream/10419/95958/1/782282393.pdf>; and Harju, Jarkko, and Tuomas Matikka. "The elasticity of taxable income and income shifting between tax bases: what is 'real' and what is not." *Oxford University Centre for Business Taxation Working Paper* 13 (2013): 13, <http://www.nber.org/chapters/c13474.pdf>.
- <sup>7</sup> Our baseline projections of wages and salaries and pass-through income are based on data published by the Congressional Budget Office. See Table 3 in [Revenue Projections by Category, January 2019](#).
- <sup>8</sup> We assume that wage recharacterization is an "all-or-nothing" endeavor. Any given taxpayer will either shift all his or her wages to pass-through income or will not shift at all.
- <sup>9</sup> If the tax saving is zero or negative, we set the taxpayer's probability of shifting at 0; if the saving exceeds the taxpayer's income, we set the probability of shifting at 1.
- <sup>10</sup> To reflect the transaction costs inherent in wage recharacterization, we impose a minimum such that no taxpayer will shift unless their tax saving exceeds \$1,000.
- <sup>11</sup> We assume 50 percent of the fully-phased in amount of shifting would occur in 2026, 75 percent in 2027, and 100 percent for 2028 and thereafter.
- <sup>12</sup> This payroll tax discussion is based on Rohaly, Rosenberg, and Toder, [Options to Reduce the Taxation of Pass-Through Income](#), Tax Policy Center, 2017 (May).
- <sup>13</sup> SSTB is defined as "a trade or business involving the performance of services in the fields of health, law, accounting, actuarial science, performing arts, consulting, athletics, financial services, investing and investment management, trading, dealing in certain assets or any trade or business where the principal asset is the reputation or skill of one or more of its employees or owners." See <https://www.irs.gov/newsroom/tax-cuts-and-jobs-act-provision-11011-section-199a-qualified-business-income-deduction-faqs>
- <sup>14</sup> Internal Revenue Service, Statistics of Income, Nonfarm Sole Proprietorship Statistics (table 1, 2017); Partnership Statistics (table 2, 2017); and S Corporation Statistics (table 6, 2, 2015).

## NOTES

<sup>15</sup> De Mooij and Ederveen, "Corporate Tax Elasticities: A Reader's Guide to Empirical Findings", *Oxford Review of Economic Policy*, Volume 24, Number 4, 2008; Prisinzano and Pearce, "Tax-Based Switching of Business Income" Working Paper 2018-2 <https://budgetmodel.wharton.upenn.edu/papers/2018/3/16/w2018-2>.

<sup>16</sup> The figure does not show the number of tax units shifting from corporate to pass-through income because that shifting was modeled in the aggregate rather than on an entity by entity basis.

<sup>17</sup> These are economy-wide averages cited in Prisinzano and Pearce (2018).

## ABOUT THE AUTHORS

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