Laffer Curves Are Flat

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Abstract

The Laffer curve peaks at the revenue-maximizing top tax rate, where revenue losses from behavioral responses offset revenue gains from a higher tax rate. Prior studies, however, largely overlook the Laffer curve's shape, rely on simplified tax functions, and often omit shifting across business types and tax interactions. We show that modeling distinct tax bases more accurately and incorporating these interactions lowers the revenue-maximizing top tax rate and the associated revenue gains, yielding "flat" Laffer curves. Over this flat region, increasing the top tax rate raises relatively little revenue. Instead, raising top rates primarily trades off between progressivity and growth.

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The Laffer curve shows the tradeoff between top tax rates and total tax revenue. Many studies seek to quantify the revenue-maximizing top tax rate at this curve's peak. But estimates often rely on sufficient-statistic frameworks that miss general-equilibrium effects. Macroeconomic models, in contrast, include general-equilibrium effects and other behavioral channels, but rely on simplifying assumptions about the tax system. In particular, individual income taxes are approximated with smooth tax functions defined over tax bases that are either too broad or too narrow. These simplifying assumptions also differ across analyses, leaving readers ill-equipped to compare estimates across studies. Moreover, a focus on *the* revenue-maximizing top tax rate has diverted attention from the Laffer curve's shape. Using a detailed representation of U.S. federal taxes, we find that long-run Laffer curves are relatively "flat." This has significant policy implications—large changes in top tax rates around the revenue-maximizing rate yield small changes to revenue. Over the flat part of the Laffer curve, the relevant policy choice is between tax progressivity and growth: the equity-efficiency tradeoff.

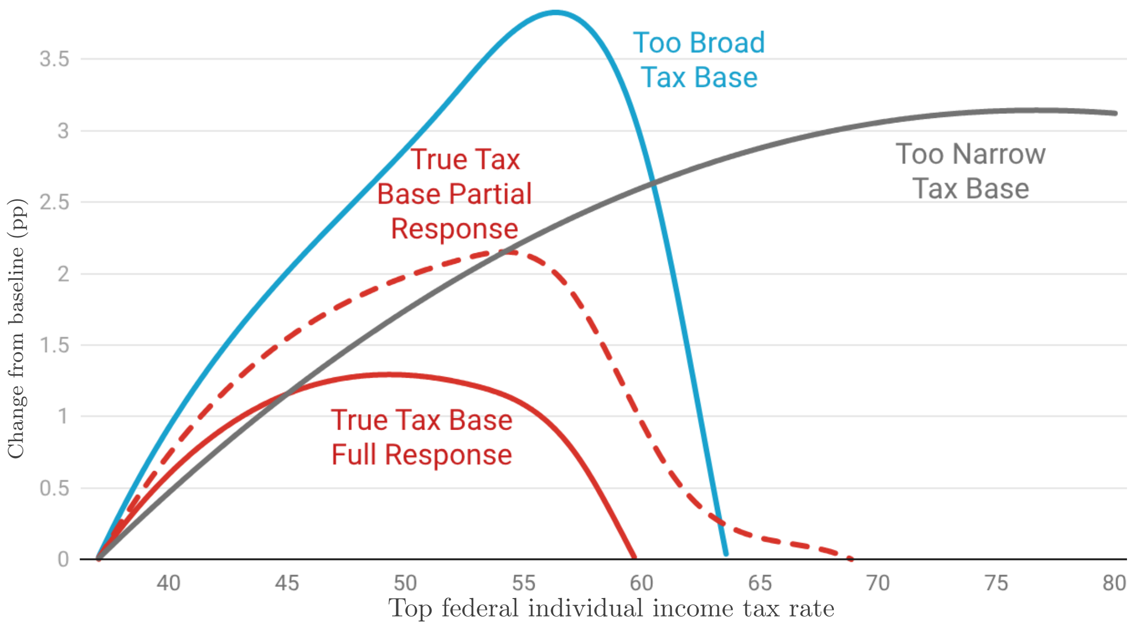
To be policy relevant, a top-rate Laffer curve should show how changes to the top tax rate of the U.S. federal ordinary income tax schedule correspond to changes in total tax revenue. A substantial share of top incomes, however, falls outside this tax base. Under present tax law, individual income taxed at the top 37% rate is wage income and *ordinary* capital income, which includes interest and noncorporate (passthrough) business profits. In contrast, *preferential* capital income, from long-term capital gains and qualified corporate dividends, is taxed at lower rates. Moreover, the ordinary base is reduced through deductions that depend on consumption choices or tax-preferred investment. This paper emphasizes that such tax details matter for policy analysis.

We capture tax details using a realistic representation of the tax system embedded in an overlapping generations model. This macroeconomic model, developed to analyze tax legislation for the U.S. Congress (Moore and Pecoraro, 2020, 2021, 2023), is well suited to studying top tax rates because it is calibrated with detailed administrative tax data covering all very high-income tax returns. It also distinguishes between ordinary and preferential tax bases and includes full firm responses. Whereas "partial" firm responses assume that increases in individual-level tax rates do not feedback into higher business-level tax rates, "full" responses capture the direct exposure of noncorporate businesses to individual income tax rate increases, prompting shifts in real activity to the corporate sector—or historically, in the opposite direction when individual rates fell (Auten et al., 2016; Dyrda and Pugsley, 2025). The model also uses a detailed tax calculator. It captures tax brackets, filing statuses, number of dependents, housing tenure, tax credits, surtaxes, the Alternative Minimum Tax, itemized and standard deductions, the passthrough business deduction, and different tax bases. Relative to standard approaches, these features allow the model to capture a broader set of tax-mediated behavioral responses. For example, as ordinary tax rates rise, households within the model endogenously shift toward tax-deductible charitable giving and tax-preferred owner-occupied housing investments that become relatively more valuable. Incorporating these behavioral responses and realistic taxes in a model to estimate top-rate Laffer curves is the major contribution of this paper.

Although the tax code is complex and contains distinct tax bases, macroeconomic Laffer-curve analyses typically apply simplified tax functions to a single tax base that is either too broad or too narrow. With a *broad base*, total income enters the tax function as a single base, applying the top rate to all income even though much of it qualifies for lower preferential tax rates. This approach has been used in Guner et al. (2016), Uribe-Terán (2021), Imrohoroglu et al. (2023), Di Nola et al. (2025). With a *narrow base*, only wage income enters the tax function, which fails to apply the top tax rate to any capital income. This latter approach was used by Holter et al. (2019, 2023), and Kindermann and Krueger (2022). Readers are unable to assess whether these simplifications are innocuous. In contrast, we isolate the effects of using these popular specifications by comparing them to our realistic tax calculator and true tax base.

Previewing our results, Figure 1 shows four top-rate Laffer curves from steady-state (long-run) equilibria of our macroeconomic model along a balanced growth path. Higher top statutory federal individual income tax rates (x-axis) initially raise federal individual income tax revenue (y-axis). But as top rates rise, behavioral responses contract the tax base to give inverse-U-shaped Laffer curves. Under our true base, three behavioral responses offset mechanical tax-rate increases: reduced labor and capital income in the ordinary base, reduced capital income in the preferential base, and shifts in activity across corporate and noncorporate sectors. In contrast, the narrow base applies first-order behavioral responses only to wage income, understating the ordinary-base response—leaving investment largely unaffected—and overstating the revenue-maximizing top tax rate as exceeding 70%. The broad base includes excess income that overstates the ordinary-base response, exaggerating both initial revenue gains from higher tax rates and subsequent distortions, causing a steep revenue decline beyond this curve's peak. Beyond mischaracterizing tax bases, both approaches omit shifts across ordinary and preferential bases and across sectors. The true tax base yields a flatter Laffer curve and decreases potential revenues by over one percentage point. Allowing for full sectoral shifting responses further flattens the Laffer curve, reducing potential revenues by nearly another percentage point. Online Appendix A.1 formalizes this intuition. These results imply less emphasis should be placed on the precise revenue-maximizing rate, as only modest long-run revenue gains result from increasing the top rate along a flat Laffer curve.

Figure 1: The Laffer curve is flatter with true tax base and sectoral shifts



Note: Y-axis shows percentage-point changes in total federal individual income taxes relative to the 37% top-rate baseline, with respect to x-axis changes in the top statutory federal individual tax rate on ordinary income (which ignores surtaxes of 0.9% on wages and 3.8% on passive investment income). The model is calibrated to the U.S. economy and tax provisions in 2022 and Laffer curves are smoothed versions (via cubic spline interpolation over a coarse grid) estimated for percentage-point intervals of the top rate.

Other taxes also affect Laffer curves (Guner et al., 2016). Accounting for other federal taxes—payroll, corporate, excise, and estate taxes—further flattens the Laffer curve. This implies a revenue-maximizing top federal individual income tax rate of 40% and a total potential federal revenue gain of about 0.1% of GDP from increasing the top tax rate. Also accounting for state and local taxes further flattens Laffer curves, suggesting a negligible change in total government revenue.[1] These findings show that a single model can yield a wide range of revenue-maximizing rates when changing assumptions that receive little scrutiny.

Our contributions directly address three limitations in the policy relevance of prior estimates. Diamond and Saez (2011, p. 166) argue that revenue-maximizing top tax rates, "should be based on an economic mechanism that is empirically relevant... robust to changes in the modeling assumptions... [and] the tax policy prescription needs to be implementable." We address these concerns by using realistic tax bases in a detailed tax calculator, reconciling differences in prior studies, and explicitly modeling the actual top federal individual income tax bracket. The closer these model details align with actual tax policy, the flatter the Laffer curve.

1 Prior literature on revenue-maximizing top tax rates

Prominent estimates of revenue-maximizing top tax rates (including U.S. federal, state, and local taxes) range from 46% to 73%, with some studies estimating even lower and higher rates. This range overlaps with the current top marginal tax rate on labor-and-capital income of about 50% (see Online Appendix A.2). Higher estimates typically arise from reduced-form sufficient-statistic frameworks, while the lower estimates come from dynamic macroeconomic models (Kleven et al., 2025). The approaches considered in Figure 1 span a similarly wide range of results. This reflects the first-order importance of the margins we analyze: tax-base specification, tax interactions, and general-equilibrium behavioral responses.

[1] Laffer curves for all federal taxes and all taxes in Figure 3 are more policy relevant, but focusing on federal individual income taxes in Figure 1 highlights the effects of tax bases and firm responses.

The sufficient-statistic approach to estimating revenue-maximizing top tax rates relies on a top-rate-only framework, as in Diamond and Saez (2011). That approach—also referred to as the Mirrleesian framework (Mankiw et al., 2009)—provides only the revenue-maximizing rate, not the full Laffer curve. The baseline formula uses two inputs: the high-income Pareto inequality parameter and the elasticity of taxable income with respect to the net-of-tax rate. With a Pareto parameter of 1.5 and assuming an elasticity of only 0.25, the framework yields a revenue-maximizing top rate of 73% for all U.S. taxes.

This sufficient-statistic approach, however, is sensitive to the assumed elasticity of taxable income. Empirical evidence suggests that high-income elasticities exceed 0.25 (Mathur et al., 2012). For example, a mid-range empirical estimate of 0.40—which also matches our model's implied "micro" elasticity (Online Appendix A.3)—reduces the sufficient-statistic revenue-maximizing rate to 63%. But elasticities reported in the literature may be downwardly biased (Neisser, 2021). Macnamara et al. (2024) estimate a top-one-percent long-run elasticity of 0.77, which implies a revenue-maximizing top rate of 46%. Model extensions that capture additional behavioral responses suggest even lower revenue-maximizing top rates: interstate mobility lowers it 5 percentage points (Young et al., 2016) to over 50 percentage points (Rauh and Shyu, 2024); income effects can lower it by 10 percentage points (Graber et al., 2025); human capital responses can lower it by 24 percentage points (Badel et al., 2020); and positive externalities from innovation and new ideas can reduce it by about 80 percentage points (Jones, 2022).

The sufficient-statistic approach has other limitations. First, sufficient-statistic estimates are not directly relevant for policy, as they apply to overall tax burdens rather than any actual tax rate. Second, the approach ignores alternative tax bases, such as those taxed at preferential rates, as emphasized in this paper. Accounting for separate bases with cross-elasticities lowers France's revenue-maximizing rate by 14 percentage points (Lefebvre et al., 2025), and tax-code nonconvexities can undermine sufficient-statistic approaches (Dowd and Richards, 2021; Kaplow, 2024). Third, tax administration and compliance can affect estimates of revenue-maximizing top rates (Keen and Slemrod, 2017). Fourth, there is uncertainty regarding distributional assumptions for income and productivity (Mankiw et al., 2009) and this uncertainty substantially decreases optimal top tax rates (Bhandari et al., 2025). Finally, standard sufficient-statistic estimates ignore macroeconomic feedback effects. There are some exceptions. Kleven (2025) incorporates macro-dynamic effects into the sufficient-statistic framework, lowering the revenue-maximizing top rate by 10 percentage points, from 62% to 52%. Badel and Huggett (2017) extend the sufficient-statistic approach to incorporate general-equilibrium effects. But they caution against using existing elasticity estimates to infer revenue-maximizing rates, implying that macroeconomic models are more appropriate.

Macroeconomic models have been used to quantify revenue-maximizing top tax rates in general equilibrium. These models account for human capital accumulation and endogenous earnings profiles (Badel and Huggett, 2017; Badel et al., 2020), income dynamics (Guner et al., 2016; Holter et al., 2019), tax evasion (Uribe-Terán, 2021), occupational choice (Bruggemann, 2021), entity shifting (Di Nola et al., 2025), entrepreneurship versus superstar earners (Imrohoroglu et al., 2023), and joint versus individual taxation (Holter et al., 2023). As in sufficient-statistic approaches, adding additional behavioral responses tends to lower revenue-maximizing top rates in macroeconomic steady states.

Some studies also found flat Laffer curves. Trabandt and Uhlig (2011) consider the proportional taxation of labor versus capital income for a representative agent, finding flat Laffer curves for aggregate capital income. Badel et al. (2020) find that endogenous human capital flattens Laffer curves using a narrow tax base, with top rates raising less than 0.1% of GDP. While our flat Laffer curves show similarly limited potential tax gains, they also result from true tax bases and suggest this applies across a wider range of top tax rates, which diminishes the policy relevance of any exact revenue-maximizing rate.

While existing macroeconomic analyses highlight how behavioral channels reduce revenue-maximizing tax rates, the effects of tax-system assumptions have been largely overlooked. In part, this is because these models rely on simplified tax functions, which usually rely on a few parameters to characterize the complex tax system. The two-parameter tax function was popularized by Bénabou (2002), Guner et al. (2014), and Heathcote et al. (2017), but also used by Feldstein (1969) and introduced by Musgrave and Thin (1948). Whereas these functions simplify the tax system to a smooth function, our detailed tax calculator captures tax brackets as step functions, demographic heterogeneity, deductions that depend on tax-preferred investment and consumption choices, shifting across corporate and noncorporate sectors, and different tax bases.

2 Model

The overlapping generations model is based on Moore and Pecoraro (2023), a heterogeneous-agent general-equilibrium model of the U.S. economy well suited to analyzing Laffer curves. Finitely-lived households optimize over consumption, labor, and financial and housing assets. They are ex-ante heterogeneous by age, marital status, number of children, and labor productivity, allowing the model to reproduce the observed distributions of income, wealth, and taxes. Households are ex-post heterogeneous due to temporary shocks to their life-cycle labor productivity paths, which moves some households across the top tax bracket. Representative corporate and noncorporate (passthrough) firms finance operations with external financing and make optimal labor and capital choices. Income generated by business activity is distributed to households by a financial intermediary as ordinary income (passthrough business income, interest, short-term capital gains, nonqualified dividends) or preferential income (qualified dividends and long-term capital gains), a central distinction of our analysis.

Income misreporting—from tax avoidance and evasion—for tax purposes is implicitly included through calibrations to empirical tax data and scales with changes in true income. This results in adjustments for misreporting that are consistent with IRS tax gap estimates based on random audits (Online Appendix C.2.2). Note that our model does not capture *marginal* increases in rates of avoidance through income reclassification (Heiser et al., 2025) or tax evasion. Accounting for these effects should further lower potential revenue gains and revenue-maximizing top rates (Uribe-Terán, 2021; Di Nola et al., 2025).

Individual income taxes are determined in our preferred specification by a tax calculator within the model that reflects federal tax law in 2022. This includes a top ordinary rate of 37% and parallels current policy under the 2025 tax act, which made permanent most expiring provisions of the 2017 act. The tax calculator captures the difference between ordinary and preferential capital income and surtaxes, as well as factors related to marital status, number of dependents, housing tenure, state-and-local tax deduction caps, and passthrough business deductions. Next, we discuss the households problem and taxes, while briefly describing government, firms, and financial intermediaries. Model and calibration details are in the online appendix.

2.1 Households

2.1.1 Optimization Problem

Households of similar incomes pay different amounts of tax based on demographic characteristics, types of income, and savings and consumption choices. We capture this variation through several sources of household heterogeneity and choice variables. Households have a deterministic number of dependents based on their age j, marital status of single or married $f = \{s, m\}$, and permanent productivity type z. A household begins each year with real liquid financial (net) assets a_j and illiquid home equity h_j^o, and experiences a temporary labor productivity shock $\varepsilon_{t,j}^z$. Households choose labor hours for one or two adults $\{n_j^1, n_j^2\}$ for working ages $j < R$, consumption of a composite good x_j, and savings that determine end-of-year financial assets a_{j+1} and housing equity h_{j+1}^o. The optimization problems for single and married household values $V_{t,j}^{f,z}$ are:

$$V_{t,j}^{s,z}(a_j, h_j^o, \varepsilon_{t,j}^z) = \max_{\substack{a_{j+1}, h_{j+1}^o, x_j, \\ n_j^1 \in \mathbb{N}}} U_{t,j}^{s,z}(x_j, n_j^1, \varepsilon_{t,j}^z) + O_t(a_{j+1}, h_{j+1}^o) + \beta \pi_j \mathbb{E}_t V_{t+1,j+1}^{s,z}(a_{j+1}, h_{j+1}^o, \varepsilon_{t+1,j+1}^z) \tag{2.1}$$

$$V_{t,j}^{m,z}(a_j, h_j^o, \varepsilon_{t,j}^z) = \max_{\substack{a_{j+1}, h_{j+1}^o, x_j, \\ n_j^1, n_j^2 \in \mathbb{N}}} U_{t,j}^{m,z}(x_j, n_j^1, n_j^2, \varepsilon_{t,j}^z) + O_t(a_{j+1}, h_{j+1}^o) + \beta \pi_j \mathbb{E}_t V_{t+1,j+1}^{m,z}(a_{j+1}, h_{j+1}^o, \varepsilon_{t+1,j+1}^z), \tag{2.2}$$

where $U^{f,z}_{t,j}$ and O_t give current utility from consumption and wealth consistent with a balanced growth path (Online Appendix B.1.1). Households have discount rate β and survive with probability $0 < \pi_j \leq 1$ until age J. The population grows at a gross rate Υ_P.

The real budget constraint applies each year:

$$p^x_t x_j + a_{j+1} + h^o_{j+1} \leq (1 + r_t)a_j + (1 - \delta^o)h^o_j + inh^{f,z}_{t,j} + i^{f,z}_{t,j}(\varepsilon^z_{t,j}) - \mathcal{T}^{f,z}_{t,j} - \xi^H_j. \quad (2.3)$$

Left-hand side variables include consumption expenditures on the composite good $p^x_t x_j$, end-of-year financial assets a_{j+1}, and end-of-year owner-occupied housing assets h^o_{j+1}. The composite good captures tax-preferred consumption incentives by nesting with market goods the endogenous quantities of child care, home production, charitable giving, and owner-occupied or rental housing services (Online Appendix B.1.2). Right-hand side variables include the gross return to beginning-of-year financial assets $r_t a_j$, beginning-of-year owner-occupied housing wealth net of economic depreciation $(1 - \delta^o)h^o_j$, inheritances $inh^{f,z}_{t,j}$, earned income $i^{f,z}_{t,j}(\varepsilon^z_{t,j})$ that includes Social Security income, net total taxes $\mathcal{T}^{f,z}_{t,j}$ $= T^{f,z}_{t,j} - trs_t$ that deducts federal transfers (excluding Social Security, Medicare, and Medicaid). Taxes distort labor and capital income and are modeled using either the detailed tax calculator or the tax functions specified in Section 2.2. The portfolio of assets implicit in a_j are endogenously determined by financial intermediaries. This allows for the return on financial assets to be decomposed into "ordinary" $(r_t a^o_t)$ and "preferential" $(r_t a^p_t)$ capital income.

2.1.2 Income Process

Each adult in a working-age household chooses between part-time, full-time, or no work, such that $n_j \in \mathbb{N} \equiv \{n^{PT}, n^{FT}, 0\}$. Under this specification of labor indivisibility, labor supply choices follow an implicit reservation-wage framework where supply elasticities are endogenous (Chang and Kim, 2006). Earned income equals the product of labor hours n_j, real wage rate w_t, and productivity $\mathrm{z}^{f,z}_j \varepsilon^z_{t,j}$ for working ages and Social Security income

$ss_j^{f,z}$ during retirement:

$$i_{t,j}^{f,z}(\varepsilon_{t,j}^z) \equiv \begin{cases} n_j^1 w_t \mathrm{z}_j^{s,z} \varepsilon_{t,j}^z + ss_j^{s,z} & \text{if} f = single \\ (n_j^1 + \mu^z n_j^2) w_t \mathrm{z}_j^{m,z} \varepsilon_{t,j}^z + ss_j^{m,z} & \text{if} f = married, \end{cases} \tag{2.4}$$

where $0 < \mu^z \leq 1$ is an exogenous productivity wedge between spouses. Household productivity type z is permanent, while the deterministic component of labor productivity $\mathrm{z}_j^{f,z}$ varies by age and marital status and is subject to a temporary shock $\varepsilon_{t,j}^z$ drawn from a non-Gaussian distribution $d(\mu_j^z, \sigma_j^z)$ varying by age and productivity type.

2.2 Government

The federal and state-local governments collect taxes from households and corporations to finance public consumption, productive capital expenditures, and transfer payments. Corporate taxes and government outlays are described in Online Appendix Section B.3. A household's total taxes $T_{t,j}^{f,z}$ are federal taxes $fedall_{t,j}^{f,z}$ plus state-local taxes $slt_{t,j}^{f,z}$:

$$T_{t,j}^{f,z} = fedall_{t,j}^{f,z} + slt_{t,j}^{f,z}. \tag{2.5}$$

Individual federal taxes include federal income taxes, payroll taxes associated with the Social Security system $prt_{t,j}^{f,z}$, lump-sum federal taxes $exc_{t,j}^{f,z}$, and estate taxes $est_{t,j}^{f,z}$:

$$fedall_{t,j}^{f,z} = fedinc_{t,j}^{f,z} + prt_{t,j}^{f,z} + exc_{t,j}^{f,z} + est_{t,j}^{f,z}. \tag{2.6}$$

To contrast with prior work, we compare our model's internal tax calculator with popular simplified tax functions. Whether using our tax calculator or a tax function, we account for differences between personal economic income and adjusted gross income by scaling the former to be consistent with income reported in administrative tax data using the calibration-ratio procedure described in Online Appendix C.2.2. Denoting scaled variables with a hat, adjusted ordinary income, $\hat{ord}_{t,j}^{f,z} \equiv \hat{i}_{t,j}^{f,z} + r_t \hat{a}_j^o$, plus adjusted preferential income, $\hat{pci}_{t,j} \equiv r_t \hat{a}_j^p$, equals adjusted gross income:

$$agi_{t,j}^{f,z} = \hat{ord}_{t,j}^{f,z} + \hat{pci}_{t,j}^{f,z}. \tag{2.7}$$

2.2.1 Tax Calculator

Under the tax calculator, ordinary income taxes $oit_{t,j}^{f,z}$ plus preferential income taxes $pct_{t,j}$ equal a household's total federal individual income taxes:

$$fedinc_{t,j}^{f,z} = oit_{t,j}^{f,z} + pct_{t,j}^{f,z}, \tag{2.8}$$

where:

$$oit_{t,j}^{f,z} = \boldsymbol{\tau_t^o}(\hat{ord}_{t,j}^{f,z} - ded_{t,j}^{f,z}) - crd_{t,j}^{f,z} - tra_t^{f,z} + sro_{t,j}^{f,z}, \tag{2.9}$$

$$ded_{t,j}^{f,z} = \boldsymbol{d}\left(\hat{i}_{t,j}^{f,z}, \hat{ord}_{t,j}^{f,z}, \hat{pci}_{t,j}^{f,z}, h_j^o, x_j\right), \tag{2.10}$$

$$crd_{t,j}^{f,z} = \boldsymbol{c}\left(\hat{i}_{t,j}^{f,z}, \hat{ord}_{t,j}^{f,z}, ded_{t,j}^{f,z}, \hat{pci}_{t,j}^{f,z}\right), \tag{2.11}$$

$$pct_{t,j}^{f,z} = \boldsymbol{q}\left(\hat{ord}_{t,j}^{f,z}, \hat{pci}_{t,j}^{f,z}\right) + srp_{t,j}^{f,z}. \tag{2.12}$$

Bold emphasis denotes generalized functions. The effective marginal tax rate $\boldsymbol{\tau_t^o}$ depends on adjusted ordinary income $\hat{ord}_{t,j}^{f,z}$ less deductions $ded_{t,j}^{f,z}$. Deductions depend not only on ordinary and preferential income, but also the amount of labor income, housing wealth h_j^o, and consumption $p_t^x x_j$. Ordinary income taxes are reduced by credits $crd_{t,j}^{f,z}$ and demographic-specific transfers $tra_t^{f,z}$ that align average labor income tax rates, correcting residual differences between the calculator and empirical data. Credits are functions of labor income, ordinary taxable income, and preferential income. Ordinary income tax includes $sro_{t,j}^{f,z}$, the 0.9% Additional Medicare surtax on high wages and relevant 3.8% net investment income surtaxes. Preferential capital income taxes $pct_{t,j}^{f,z}$ depend on total taxable income and includes surtaxes $srp_{t,j}^{f,z}$.

2.2.2 Tax Functions

There are two main versions of federal income tax functions. The first, the *tax function with a broad base*, applies the top tax rate to all adjusted gross income:

$$fedinc_{t,j}^{f,z}(agi_{t,j}^{f,z}) = \begin{cases} agi_{t,j}^{f,z} - \lambda_1^f (agi_{t,j}^{f,z})^{1-\lambda_2^f} & \text{if } agi_{t,j}^{f,z} \leq b_{top}^f \\ b_{top}^f - \lambda_1^f (b_{top}^f)^{1-\lambda_2^f} + \tau_{top}(agi_{t,j}^{f,z} - b_{top}^f) & \text{if } agi_{t,j}^{f,z} > b_{top}^f, \end{cases} \tag{2.13}$$

where b_{top}^f is the top-bracket threshold and τ_{top} is the top statutory rate.

The second common tax function, the *tax function with a narrow base*, applies the top ordinary tax rate only to adjusted wage income $\hat{i}^{f,z}_{t,j}$, and taxes adjusted capital income $r_t\hat{a}_j$ separately using a capital income tax rate τ_a for all ages:

$$fedinc^{f,z}_{t,j}(\hat{i}^{f,z}_{t,j}, r_t\hat{a}_j) = \begin{cases} \hat{i}^{f,z}_{t,j} - \lambda^f_1(\hat{i}^{f,z}_{t,j})^{1-\lambda^f_2} + r_t\hat{a}_j\tau_a & \text{if } \hat{i}^{f,z}_{t,j} \leq b^f_{top} \\ b^f_{top} - \lambda^f_1(b^f_{top})^{1-\lambda^f_2} + \tau_{top}(i^{f,z}_{t,j} - b^f_{top}) + r_t\hat{a}_j\tau_a & \text{if } \hat{i}^{f,z}_{t,j} > b^f_{top}. \end{cases} \tag{2.14}$$

The tax-function parameter values differ depending on the specified tax base. Their calibration is detailed in Online Appendix D, where Figure E1 compares taxes across tax functions and the calculator. In summary, the broad-base tax function taxes all capital income as ordinary, therefore it *overestimates* the tax base. Similarly, the narrow-base tax function omits all capital income from the ordinary income tax base, therefore it *underestimates* the tax base.

2.3 Firms

Output is produced to maximize firm value across two perfectly competitive sectors, corporate and noncorporate indexed by $q = \{c, n\}$, and used for consumption, savings, or investment. Production follows a constant-returns-to-scale Cobb-Douglas function with effective labor, private capital, and public capital, implying decreasing returns in private inputs. Representative firms finance operations with bonds and equity issued through the financial intermediary and hire labor in perfectly competitive markets. Both sectors issue debt to maintain an optimal interest-deduction tax shield as in Barro and Furman (2018).

The sectors differ in their tax treatment, profit distribution, and new equity issuance. The corporate firm can issue or buy back shares, while the noncorporate firm relies solely on debt financing. The corporate firm pays a firm-level tax on profits (corporate taxes) and distributes a fixed fraction of after-tax profits as dividends to equity holders. The noncorporate firm passes all profits to household investors for taxation as ordinary income (after the passthrough deduction) at the household level, exposing noncorporate business income to individual-level income tax rates. For purposes of estimating our Laffer curves, under the "partial" firm responses, tax rates entering the firms' optimization problems are assumed to remain constant at initial baseline values. Under "full" firm responses, this assumption is relaxed so that firms directly internalize the effect of top individual income tax rate changes on tax rates that enter their optimization problem.

2.4 Financial Intermediaries

While each household chooses its own allocation of financial and housing assets, all financial assets are pooled into an investment fund managed by perfectly competitive financial intermediaries. Investment fund assets include corporate and noncorporate equity and bonds, government bonds, and rental housing, the latter of which is managed by financial intermediaries rather than a separate housing market. All pretax returns are distributed back to households as passthrough profits, corporate dividends, interest, or capital gains. These are proportional to their shares of financial assets, so that the aggregate ratio of gross pretax returns to financial assets determines the real rate of return on household financial assets, r_t.

The representative intermediary internalizes the aggregate tax consequences of households' portfolios, investing across private assets so that marginal after-tax rates of return are equalized:

$$R_t^q = (1 - \tau_t^i) i_t^q = (p_t^r - \delta^r) \quad \forall t, q = c, n. \tag{2.15}$$

The marginal after-tax return to equity, $R_t^q \equiv \mathbf{R}(\tau_t^g, \tau_t^{q,hh})$, depends on the aggregate accrual-equivalent tax rate on capital gains, τ_t^g, and the household-level effective marginal tax rate on distributed profits by each sector, $\tau_t^{q,hh}$. This after-tax rate of return on equity equals that on private bonds $(1 - \tau_t^i) i_t^q$ and rental housing net of economic depreciation $(p_t^r - \delta^r)$. The rate of return on government bonds includes an exogenous wedge with respect to the private bond rate.

The no-arbitrage condition determines how households' composition of ordinary versus preferential capital income varies with business activity, and how changes to individual-level taxation affect aggregate portfolio choice. For example, under partial firm response Laffer curves, the tax rates entering the no-arbitrage condition are held constant at baseline levels. Under full firm responses, they are instead model-consistent aggregates of individual-level tax rates and vary over the Laffer curve.

2.5 Distributional Properties

Table 1 compares the distributions of income and taxes in tax data with those implied by our model. Income shares are similar across model tax specifications and align with the data. In our tax-calculator specification, 0.86% of taxpayers face the top rate and account for 7.56% of AGI. In the data, 0.74% face the top rate and account for 7.58% of AGI. While the tax functions' broad and narrow bases can reproduce the distributional pattern of taxes observed in the data, this hides substantial dispersion in taxes at similar levels of income (Online Appendix Figure E1), causing the tax functions to mis-specify tax incentives (Moore and Pecoraro, 2020, 2021).

Table 1: Distributional Estimates: Shares of income and taxes (%) and summary statistics

Income Percentile Class	Income				Federal Indiv. Income Taxes			
	Data	True Base	Broad Base	Narrow Base	Data	True Base	Broad Base	Narrow Base
0–20	2	2	2	2	-2	-4	-3	-2
20–40	6	6	6	6	-3	-3	-3	-2
40–60	11	10	10	10	2	1	-1	-1
60–80	19	17	17	16	11	7	4	7
80–90	15	14	14	14	14	12	10	12
90–95	11	13	13	12	13	15	15	16
95–99	15	22	22	22	23	33	38	34
99–100	21	16	16	16	44	38	41	34
Gini/Kakwani	0.60	0.61	0.61	0.61	0.24	0.27	0.31	0.27
Income Percentile Class	**Federal Taxes**				**All Taxes**			
	Data	True Base	Broad Base	Narrow Base	Data	True Base	Broad Base	Narrow Base
0–20	*	1	1	2	1	3	3	3
20–40	1	-1	*	*	2	1	1	1
40–60	7	5	5	6	7	7	7	7
60–80	16	14	11	13	17	15	13	14
80–90	16	16	15	16	16	14	14	14
90–95	13	15	15	16	13	14	14	14
95–99	19	25	28	26	18	26	28	27
99–100	28	25	26	23	26	20	21	20
Kakwani	0.12	0.16	0.19	0.16	0.10	0.10	0.11	0.10

Note: * denotes shares between -0.5 and 0.5 percent. Income is expanded fiscal income, which includes wage income, capital income in AGI, employer portion of payroll taxes (allocated to employees), Social Security benefits, and corporate taxes. Corporate taxes are allocated similar to Joint Committee on Taxation (2013), with 25% allocated by wages and the rest by capital ownership (no adjustment for foreign ownership). Summary statistics are the Gini coefficient for income and the Kakwani index for taxes, the latter is the tax concentration index (taxes bottom-coded at zero) less the income Gini. Source: Model and data from the Individual Tax Model of Joint Committee on Taxation (2023).

3 Flat Laffer Curves, Realistic Taxes, and Interactions

We highlight three implications of using a more realistic depiction of taxes. First, Laffer curves are relatively flat—meaning that even substantial changes in the top tax rate around the revenue-maximizing rate have only modest effects on total tax revenues. Rather than raising more tax revenue, the central policy tradeoff concerns the balance between tax progressivity and growth: the equity-efficiency tradeoff. Second, interactions between federal individual income taxes and other taxes lead to even flatter Laffer curves and less potential revenue gains. Third, the simplified tax functions common in this literature introduce systematic distortions by failing to accurately represent income tax bases.

3.1 Estimating the Laffer Curve

Under 2022 federal tax law, the top statutory rate of 37% applies to ordinary income above thresholds of $539,900 for single tax units and $647,850 for married households. These thresholds are held constant, and income above them is taxed at the top rate for both tax functions and the tax calculator. As the real top-bracket threshold has been around the current level (sometimes lower) for about half a century—even as top rates changed dramatically—our consideration of top rates changes and a stable top bracket is consistent with "realistic" policy changes. For each tax specification, we compute a steady state for every one-percentage-point change in the top rate. Tax revenues change across steady states, therefore we maintain long-run fiscal balance by adjusting federal investment spending, consumption spending, and transfers proportionally to their observed shares.

Optimizing behavior in the model gives rise to inverted-U-shaped Laffer curves. Tax-rate increases are offset by tax-base decreases arising from real responses, such as lower labor and investment that reduce GDP, and from avoidance that shifts income toward preferentially taxed or tax-exempt sources, such as shifting of real real activity across business sectors. We focus on steady-state responses and exclude capital-gains realization timing changes. In our main results, the tax calculator incorporates the full response for sectoral shifting, while the tax functions do not. Online Appendix Figure E3 shows how the Laffer curves estimated with the tax functions change when the full response is incorporated.

3.2 Realistic Taxes Matter

Simplified tax functions fail to account for preferential income tax treatment, under which certain forms of capital income—long-term capital gains and qualified dividends—are taxed at lower top rates than ordinary income. Ignoring this preferential treatment makes the tax base too broad relative to current law. Similarly, considering only labor income excludes capital income that is taxed at ordinary rates, leaving the tax base too narrow. In contrast, our tax calculator aligns tax bases with actual tax law: ordinary capital income is taxed jointly with labor income using ordinary statutory income tax rates, while preferential capital income constitutes a separate tax base subject to lower rates. The tax calculator also captures other tax policy features that are relevant for top earners, including itemized deductions (and relevant caps), passthrough business income deductions, surtaxes, and the Alternative Minimum Tax.

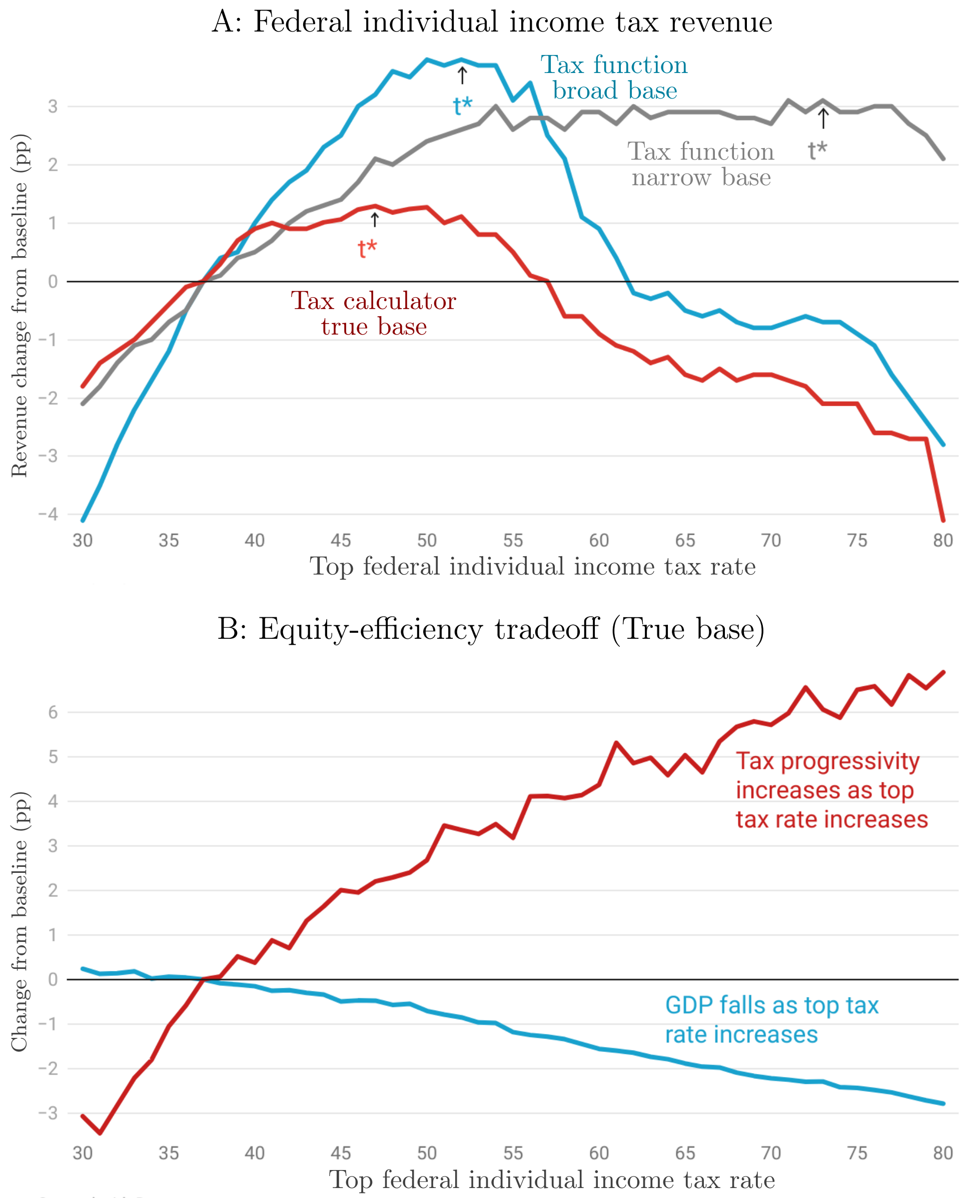
Panel A of Figure 2 shows how federal individual income tax revenues change as the top tax rate varies along the x-axis. Note that revenue is unchanged at the present-law top tax rate of 37% for all three approaches: our tax calculator with a true tax base and tax functions using narrow and broad bases, the common approaches in the literature. Each tax base specification results in a different combination of potential revenue gains and revenue-maximizing top rates. The narrow-base tax function, where the top rate applies only to labor income, has no first-order interaction between taxes on labor and capital income. Therefore, the distortions caused by higher statutory tax rates are muted, allowing the narrow-base Laffer curve to rise gradually and reach a high peak (yielding 3.1% more revenue) at a top federal tax rate of 73%.

The tax function with a broad base, where the top tax rate applies to all labor and capital income, overstates the first-order interaction between labor and capital income taxes because preferential capital income is incorrectly included in the ordinary tax base. Consequently, the distortions from higher statutory tax rates are amplified, causing the broad-base Laffer curve to quickly reach a high peak (yielding 3.8% more revenue) at a moderate revenue-maximizing rate of 52%.[2]

[2] This comparison helps reconcile Kindermann and Krueger (2022)'s narrow-base results and Guner et al. (2016)'s broad-base results. Imrohoroglu et al. (2023) find little effect of changing bases, but this may reflect calibrating tax functions to different initial revenue benchmarks and how entrepreneurs in their model respond to top-rate changes

The true tax base lies between the narrow and the broad base. The Laffer curve estimated using the tax calculator and true base reaches a more modest peak (only 1.3% more tax revenue) at a top tax rate of 47%. Notably, this additional federal income tax revenue is only about 0.1% of GDP. Relative to both the narrow and broad bases, the true base implies smaller potential revenue gains and a lower revenue-maximizing top tax rate.

Figure 2: Laffer curves and equity-efficiency tradeoff



Note: Only federal individual income tax revenues are considered here. Y-axis shows changes in total federal individual income tax revenue (in percentage point terms) relative to the 37% top-rate baseline, with respect to x-axis changes in the top statutory federal individual tax rate on ordinary income (which ignores surtaxes of 0.9% on wages and 3.8% on passive investment income). The model is calibrated to the U.S. economy and tax provisions in 2022 and results are estimated for each percentage-point interval of the top rate.

3.3 Laffer Curves are Flat Around Revenue-Maximizing Top Rates

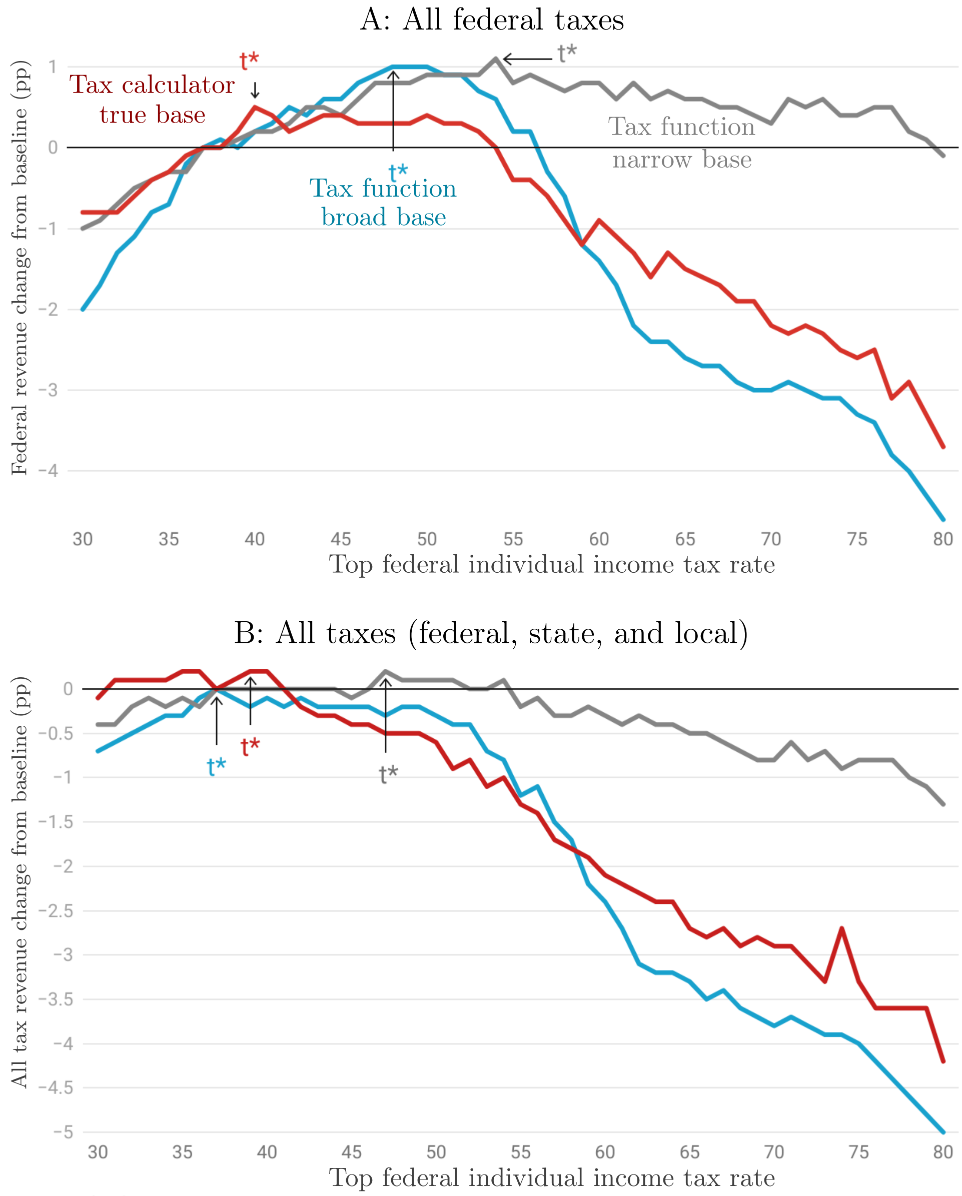
The tax function with a broad base shows a "peaked" top-rate Laffer curve, while the tax calculator with a true base shows a relatively flat Laffer curve. A flat Laffer curve is also seen for the tax function with a narrow base, but it exaggerates the potential revenue gains relative to the true base. For flat Laffer curves, deviations of the top tax rate around the revenue-maximizing rate have minor effects on federal individual income tax revenue. To illustrate this, we consider the range over which revenue changes up to half a percentage point. These modest changes in revenue occur across a 17 percentage point range of top tax rates for the true base curve.

If the top rate lies within the flat range of the Laffer curve, the policy tradeoff centers on tax progressivity versus growth. Panel B of Figure 2 shows the equity-efficiency tradeoff: tax progressivity rises with the top tax rate but real GDP falls as the top rate increases due to behavioral responses. Tax progressivity is measured using the Kakwani index, a summary statistic that captures progressivity across the full income distribution based on Lorenz curves (Splinter, 2020). For context, increases in tax progressivity are modest—a top rate of 70% only increases income tax progressivity one-fifth of the 1985–2015 increase (Splinter, 2019)—while the 2% decrease in steady-state GDP is substantial.

3.4 Interactions with Other Tax Bases Imply Flatter Laffer Curves

For purposes of estimating the revenue-maximizing top tax rate, additional taxes matter (Badel and Huggett, 2017). Considering other federal taxes—in addition to individual income taxes—and state and local taxes, captures additional behavioral responses that affect both federal income tax revenues, as well as the amounts of these other taxes. We find that considering interactions between federal individual income taxes and other taxes results in even flatter Laffer curves. Panel A of Figure 3 shows that all three Laffer curves flatten when moving from accounting only for changes to federal individual income taxes (as in Figure 2) to also including federal payroll, corporate, excise, and estate taxes. This flattening implies both lower revenue-maximizing rates with smaller revenue gains from increasing top tax rates. The tax calculator with a true tax base suggests all federal taxes increase by only 0.5% when the top federal income tax rate increases to 40%.

Figure 3: Policy Interactions Further Flatten Laffer Curves: All Federal Taxes vs. All Government Taxes



Note: Top panel includes all major federal taxes: individual income, payroll, corporate, excise, and estate taxes. Bottom panel includes all major taxes from federal, state, and local governments (e.g., non-federal income, property, corporate, and sales taxes). Y-axis shows changes in these taxes (in percentage point terms) relative to the 37% top-rate baseline, with respect to x-axis changes in the top statutory federal individual tax rate on ordinary income (which ignores surtaxes of 0.9% on wages and 3.8% on passive investment income). These Laffer curves reflect the same policy change as the Laffer curve in Figure 2 but also account for a larger set of general equilibrium responses to other tax bases. The model is calibrated to the U.S. economy and tax provisions in 2022 and curves estimated for each percentage-point interval of the top rate.

Panel B of Figure 3 shows that accounting for state and local taxes further flattens Laffer curves, making results more similar across the tax-base approaches. When interactions across all taxes are considered, total government revenue changes little, even with large top-rate adjustments, and revenue-maximizing top federal individual income tax rates converge across approaches. Under the tax calculator with a true tax base, increasing the top tax rate two percentage points to 39% raises total taxes by only about 0.2%. Thus, when considering all levels of government, increasing the top rate to the revenue-maximizing level results in total revenue gains of less than 0.1% of GDP.

To compare Laffer curve "flatness", we estimate the areas under each curve across rates that increase tax revenue relative to the current top rate (Online Appendix Table E7). The federal individual income tax Laffer curve with a true base is three times flatter than with a broad base and six times flatter than with a narrow base. These differences attenuate or disappear when considering all federal taxes or total taxes, as those curves are even flatter.

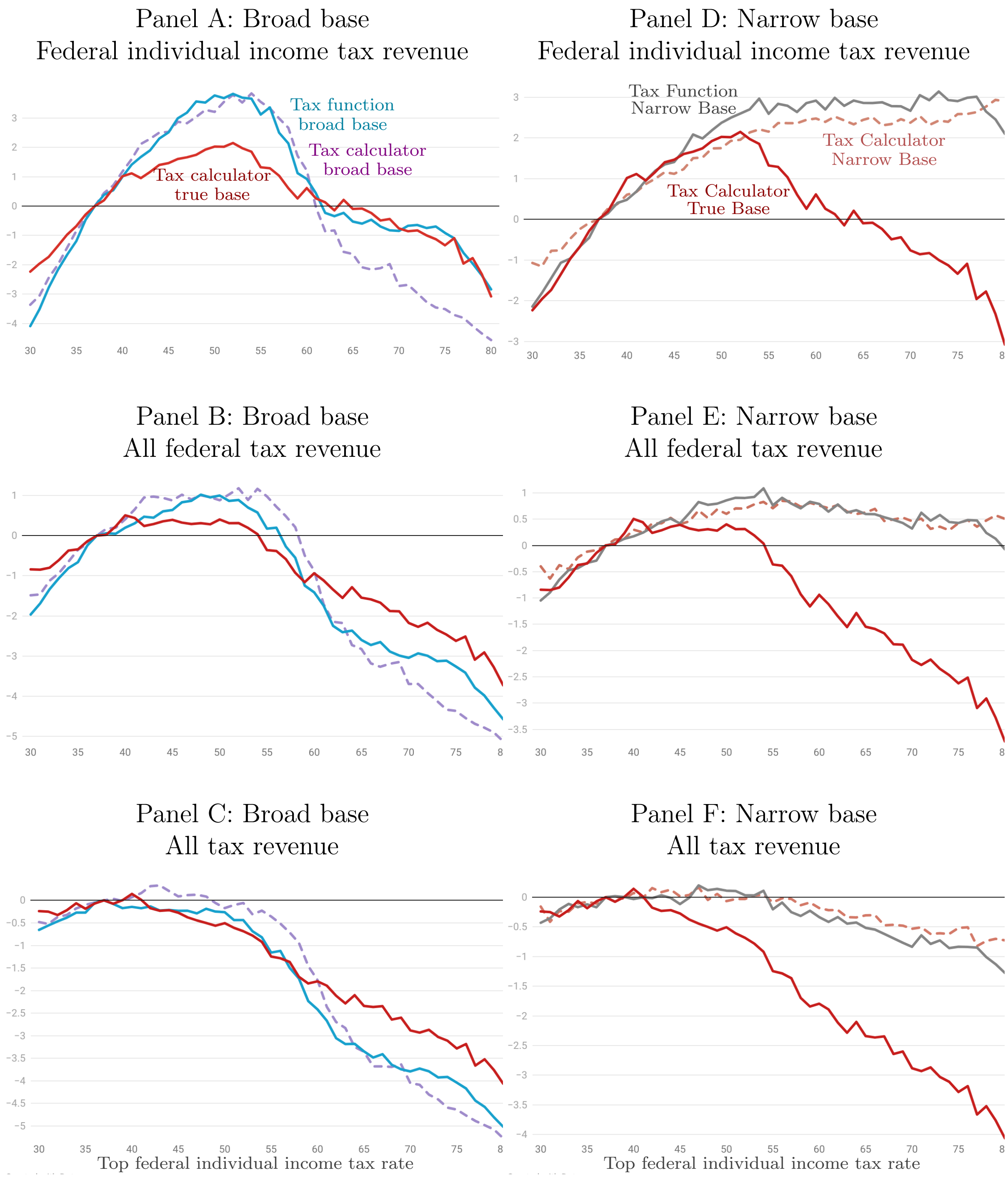
4 Sensitivity Test

Differences in tax bases explain most of the gap between Laffer curves. While traditional tax functions use bases that are either too broad or too narrow relative to actual tax law, our tax calculator models a "Goldilocks" true tax base. To isolate this effect, we construct counterfactual tax calculators with partial firm responses (full firm responses are similar, Online Appendix Figure E2) and bases mis-specified as too broad or too narrow. These estimates confirm that tax-base definitions drive the differences across approaches.

Figures 4A-C show that mis-specifying all capital income as ordinary (dashed lines) aligns tax-calculator curves with tax functions with a *broad* base. The resulting Laffer curves rise more steeply with the larger ordinary-income base, which ignores preferential rates, and decline more sharply as behavioral responses are amplified. In contrast, a more realistic tax base produces a flatter Laffer curve.

Figures 4D-F show that mis-specifying by ignoring all ordinary capital income (dashed lines) aligns tax-calculator curves with tax functions with a *narrow* base. This narrow base has fewer behavioral distortions, producing a mis-estimated Laffer curve that continually rises. Online Appendix Figure E3 isolates effects of full firm responses. The revenue gains are unchanged for the narrow base and decrease by about one percentage point for the broad base.

Figure 4: Tax calculator mimics tax functions when aligning tax bases



Note: Y-axis shows percentage-point changes in relevant tax revenues relative to baseline revenues at the top statutory federal individual tax rate on ordinary income of 37%. Broad base treats all capital income as ordinary. Narrow base treats all capital income as preferential. All three curves have partial firm responses (incomplete sectoral shifting). Top panels include only federal individual income taxes. Middle panels include all major federal taxes: individual income, payroll, corporate, excise, and estate taxes. Bottom panels include all major taxes from federal, state, and local governments. Each Laffer curve reflects the same policy change but accounts for different general equilibrium responses according to the tax base. The model is calibrated to the U.S. economy and tax provisions in 2022 and curves estimated for each percentage-point interval of the top rate.

5 Conclusion

The Laffer curve literature has overlooked important policy details. It focuses on the revenue-maximizing top rate, relies on simplified tax functions, and typically ignores interactions among different taxes. We show that a more realistic depiction of the tax code fundamentally alters the shape of the estimated Laffer curve, the implied revenue-maximizing top rate, and the potential revenue gains from increasing top tax rates. These are not policy recommendations. The potential revenue gains from increasing the top rate are sensitive to other tax system details that are frequently changed (e.g., itemized and passthrough deductions) or rarely changed (e.g., the top-rate threshold and tax-base definitions). Rather, we highlight which details of the tax system are most critical for modeling revenue-maximizing top tax rates.

Our findings have three main implications. First, the standard approaches using simplified tax functions and generalized tax bases can distort policy conclusions. Laffer curves estimated with more realistic taxes are flatter, suggesting less potential revenue gains from top rate increases and a lower revenue-maximizing top rate. This is because standards simplifications miss meaningful behavioral margins—such as shifting across tax bases and sectors—that are captured with more realistic tax details. Second, interactions between federal individual income taxes and other taxes produce even flatter Laffer curves and smaller revenue gains from higher top rates. Third, in the neighborhood of the revenue-maximizing tax rate, further raising top tax rates presents a tradeoff between tax progressivity and growth, rather than an opportunity to raise substantially more revenue.

References

Auten, G., D. Splinter, and S. Nelson (2016). Reactions of high-income taxpayers to major tax reforms. *National Tax Journal 69*(4), 935–964.

Badel, A. and M. Huggett (2017). The sufficient statistics approach: Predicting the top of the Laffer curve. *Journal of Monetary Economics 87*(629), 1–12.

Badel, A., M. Huggett, and W. Luo (2020). Taxing top earners: A human capital perspective. *Economic Journal 130*(629), 1200–1225.

Barro, R. J. and J. Furman (Spring, 2018). Macroeconomic effects of the 2017 tax reform. *Brookings Papers on Economic Activity*.

Bénabou, R. (2002). Tax and education policy in a heterogeneous-agent economy: What levels of redistribution maximize growth and efficiency. *Econometrica 70*(2), 481–517.

Bhandari, A., J. Borovicka, and Y. Yao (2025). Robust bounds on optimal tax progressivity. *NBER Working Paper*.

Bruggemann, B. (2021). Higher taxes at the top: The role of entrepreneurs. *American Economic Journal: Macroeconomics 13*(3), 1–36.

Chang, Y. and S.-B. Kim (2006). From individual to aggregate labor supply: A quantitative analysis based on a heterogeneous agent macroeconomy. *International Economic Review 47*(1), 1–27.

Di Nola, A., G. Kocharkov, A. Scholl, A.-M. Tkhir, and H. Wang (2025). Taxation of top incomes and tax avoidance. *International Economic Review 66*(3), 983–1018.

Diamond, P. and E. Saez (2011). The case for a progressive tax: From basic research to policy recommendations. *Journal of Economic Perspectives 25*(4), 90–165.

Dowd, T. and Z. Richards (2021). Contextualizing elasticities for policymaking: Capital gains and revenue-maximizing tax rates.

Dyrda, S. and B. Pugsley (2025). The rise of pass-throughs: an empirical investigation. *Economic Journal 135*(665), 387–403.

Feldstein, M. (1969). The effects of taxation on risk taking. *Journal of Political Economy 77*(5), 755–764.

Graber, M., M. Havarstein, M. Mogstad, G. Torsvik, and O. L. Vestad (2025). Substitution and income effects of labor income taxation. *Working Paper*.

Guner, N., R. Kaygusuz, and G. Ventura (2014). Income taxation of U.S. households: Facts and parametric estimates. *Review of Economic Dynamics 17*(4), 559–581.

Guner, N., M. Lopez-Daneri, and G. Ventura (2016). Heterogeneity and government revenues: Higher taxes at the top? *Journal of Monetary Economics 80*, 69–85.

Heathcote, J., K. Storesletten, and G. L. Violante (2017). Optimal tax progressivity: An analytical framework. *Quarterly Journal of Economics 132*(4), 1693–1754.

Heiser, E., M. Love, and J. Mortenson (2025). Tax avoidance through corporate accounting: Insights for corporate tax bases. *Journal of Public Economics 244*(105336).

Holter, H. A., D. Krueger, and S. Stepanchuk (2019). How do tax progressivity and household heterogeneity affect Laffer curves? *Quantitative Economics 10*(4), 1317–1356.

Holter, H. A., D. Krueger, and S. Stepanchuk (2023). Until the IRS do us part: (Optimal) taxation of households. *Working Paper*.

Imrohoroglu, A., C. Kumru, J. Jan, and A. Nakornthab (2023). Revisiting taxes on high incomes. *Review of Economic Dynamics 51*, 1159–1184.

Joint Committee on Taxation (2013). Modeling the distribution of taxes on business income. *JCX-14-13*.

Joint Committee on Taxation (2023). Estimating changes in the federal individual income tax: Description of the individual tax model for 2023. *JCX-48-23*.

Jones, C. I. (2022). Taxing top incomes in a world of ideas. *Journal of Political Economy 130*(9), 2227–2274.

Kaplow, L. (2024). Optimal income taxation. *Journal of Economic Literature 62*(2), 637–738.

Keen, M. and J. Slemrod (2017). Optimal tax administration. *Journal of Public Economics 152*(C), 133–142.

Kindermann, F. and D. Krueger (2022). High marginal tax rates on the top 1 percent? Lessons from a lifecycle model with idiosyncratic income risk. *American Economic Journal: Macroeconomics 14*(2), 319–366.

Kleven, H. (2025). Externalities and the taxation of top earners. *NBER Working Paper* (33345).

Kleven, H., C. Kreiner, K. Larsen, and J. Sogaard (2025). Micro vs macro labor supply elasticities: The role of dynamic returns to effort. *American Economic Review 115*(9), 2849–2890.

Lefebvre, M.-N., E. Lehmann, , and M. Sicsic (2025). Estimating the laffer tax rate on capital income: Cross-base responses matter! *Scandinavian Journal of Economics 127*(2), 460–489.

Macnamara, P., M. Pidkuyko, and R. Rossi (2024). Marginal tax rates and income in the long run: Evidence from a structural estimation. *Journal of Monetary Economics 142*, 103514.

Mankiw, G. N., M. Weinzierl, and D. Yagan (2009). Optimal taxation in theory and practices. *Journal of Economic Perspectives 23*(4), 147–174.

Mathur, A., S. Slavov, and M. Strain (2012). Should the top marginal income tax rate be 73 percent? *Tax Notes Nov. 19*, 905–915.

Moore, R. and B. Pecoraro (2020). Macroeconomic implications of modeling the Internal Revenue Code in a heterogeneous-agent framework. *Economic Modelling 87*, 72–91.

Moore, R. and B. Pecoraro (2021). A tale of two bases: Progressive taxation of capital and labor income. *Public Finance Review 49*, 335–391.

Moore, R. and B. Pecoraro (2023). Quantitative analysis of a wealth tax for the United States: Exclusions and expenditures. *Journal of Macroeconomics 78*.

Musgrave, R. and T. Thin (1948). Income tax progression, 1929-48. *Journal of Political Economy 56*(6), 498–514.

Neisser, C. (2021). The elasticity of taxable income: A meta-regression analysis. *Economic Journal 131*(640), 3365–3391.

Rauh, J. and R. Shyu (2024). Behavioral responses to state income taxation of high earners: Evidence from California. *American Economic Journal: Economic Policy 16*(1), 34–86.

Splinter, D. (2019). Who pays no tax? the declining fraction paying income taxes and increasing tax progressivity. *Contemporary Economic Policy 37*(3), 413–426.

Splinter, D. (2020). U.S. tax progressivity and redistribution. *National Tax Journal 73*(4), 1005–1024.

Trabandt, M. and H. Uhlig (2011). The Laffer curve revisited. *Journal of Monetary Economics 58*(4), 305–327.

Uribe-Terán, C. (2021). Higher taxes at the top? The role of tax avoidance. *Journal of Economic Dynamics and Control 129*, 104–187.

Young, C., C. Varner, I. Z. Lurie, and R. Prisinzano (2016). Millionaire migration and taxation of the elite: Evidence from administrative data. *American Sociological Review 81*(3), 421–446.