Is the Laffer Curve Flat?

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Summary

A revenue-maximizing top tax rate results from the trade-off between revenue gains from a higher tax rate and revenue losses from behavioral responses along a Laffer curve. The literature on revenue-maximizing top tax rates, however, has ignored critical policy implications by focusing only on revenue-maximizing top rates, relying on simplified tax functions, and usually overlooking relevant tax interactions. We show that a more accurate and realistic depiction of the tax code fundamentally alters the shape of the estimated Laffer curve, the implied revenue-maximizing top rate, and potential revenue gains from increasing the top tax rate. This has three implications. First, Laffer curves are relatively flat—thus even substantial changes in the top rate around the revenue-maximizing rate have only modest effects on total tax revenues. Second, we show that simplified tax functions fail to correctly account for income tax bases, which can profoundly distort policy conclusions. Laffer curves estimated using more realistic tax representations are flatter, suggesting less potential revenue from a top rate increase and a lower revenue-maximizing top rate. Finally, we show that interactions of federal individual income taxes with other taxes suggest even flatter Laffer curves. Instead of raising more tax revenue by adjusting top tax rates, we highlight that the relevant policy tradeoff is between equity and efficiency.

This research embodies work undertaken for the staff of the Joint Committee on Taxation, but as members of both parties and both houses of Congress comprise the Joint Committee on Taxation, this work should not be construed to represent the position of any member of the Committee. This work is integral to the Joint Committee on Taxation staff's work and its ability to model and estimate the macroeconomic effects of tax policy changes.

I. Motivation and Literature Review

A revenue-maximizing top tax rate results from the trade-off between revenue gains from a higher tax rate and revenue losses from behavioral responses along a Laffer curve. Diamond and Saez (2011), in the *Journal of Economic Perspectives*, is the seminal paper in this rapidly growing literature. Building off that framework are many micro and macro extensions considering additional behavioral channels.[1] But the former cannot directly account for general equilibrium effects and the latter use unrealistic tax functions to model income taxes, with tax bases that are either too broad or too narrow. That is, the assumptions embedded within the macroeconomic models used to estimate revenue-maximizing rates—particularly each model's simplified representation of the federal tax system—leave readers ill-equipped to compare estimates across studies and provide distorted policy conclusions. In contrast, we advocate for using realistic tax detail within the macroeconomic model itself and highlight the most relevant policy conclusion resulting from this feature—flat Laffer curves. These flat curves imply that even for large top-tax-rate changes around the revenue-maximizing rate there is little change in total revenue. Instead, the relevant policy tradeoff is between equity and efficiency.

We begin this paper by first presenting estimates of the Laffer curve that show how changes to the top statutory tax rate of the U.S. federal ordinary income tax schedule correspond with changes to aggregate tax revenue in general equilibrium.[2] We show that these Laffer curves are generally "flat" in the neighborhood of the revenue-maximizing rate. This framing contrasts with the presentation in the macroeconomic literature, which generally omits reporting of the full range of the top-rate Laffer curve.[3] This omission leaves readers unable to assess how much revenue is forgone by maintaining a top tax rate that is only somewhat below or above a particular estimate of the revenue-maximizing rate. Because movement away from the revenue-maximizing rate along the curve in either direction results in small revenue changes, we argue that the meaningful policy tradeoff is between redistribution and behavioral responses—the equity-efficiency tradeoff.

Next, we assess the simplified and unrealistic representations of the U.S. federal income tax system used within the macroeconomic models in this literature. A major issue associated with these representations is the failure to align the tax base with actual tax law. These simplified approaches use simple, often two-parameter functions, and can apply to different tax bases.[4] For *tax functions with a broad base*, total income enters the tax function as a single tax base, problematically applying the top tax rate to all income, even though a substantial share of top incomes are subject to lower "preferential" tax rates. This approach has been used in many studies, including Guner, Lopez-Daneri, and Ventura (2016), Uribe-Teran (2021), and Imrohoroglu et al. (2023). For *tax functions with a narrow base*, only labor income enters the tax function, which fails to apply the top tax rate to any capital income, even though those at the top of the income distribution have substantial capital income taxed at the "ordinary" top rate.[5] This latter approach was used by Holter, Kreuger, and Stepanchuk (2023) and Holter, Kreuger, and Stepanchuk (2019). A variation of this approach is the piecewise-linear tax function over labor income, as in Badel, Huggett, and Luo (2020), Jones (2022), and Kindermann and Kreuger (2022).[6]

As each paper in this top-tax-rate literature uses only one representation of the federal income tax system, the reader is unable to assess how simplifications affect estimates of the revenue-maximizing top tax rate itself, as well as the associated tax revenues. In contrast, we present results for these two tax functions—a narrow base and a broad base—as well as a more realistic tax calculator. This allows a rigorous questioning of the standard "simplified" tax functions that have shaped recommendations of revenue-maximizing top tax rates and Laffer curve analyses. We argue that these

[1] A recent micro paper is Kleven (2025). Waud (1988) and Keen and Slemrod (2017) consider tax compliance.

[2] To construct Laffer curve estimates, this paper uses an overlapping generations model built by the authors for use by the staff of the Joint Committee on Taxation to provide the U.S. Congress with macroeconomic analysis of major tax legislation. Model details are in Moore and Pecoraro (2023) and applications in Moore and Pecoraro (2020, 2021).

[3] The common practice, as in Diamond and Saez (2011), is to report only the estimated revenue-maximizing tax rate. Some papers show additional information about the estimated Laffer curve, such as truncated curves or select points.

[4] This two-parameter function was recently popularized by Heathcote, Storesletten, and Violante (2017), but was also used by Bénabou (2002) and Feldstein (1969), and appears to originate from Musgrave and Thin (1948).

[5] When using the narrow base, capital income is taxed as a separate tax base from labor income using a fixed proportional tax rate that is uniform across taxpayers that is insensitive to the tax rates used for the Laffer curve.

[6] Policy questions other than just top tax rates, are considered in a literature on overall optimal tax progressivity. These papers may show similar curves of how revenue varies by tax progressivity—as opposed to top tax rates—such as Guner, Lopez-Daneri, and Ventura (2016). Another related literature considers economy-wide tax changes in a single-agent model (Trabandt and Uhlig, 2011).

simplified tax functions are an inadequate representation when tested against the complexity of the real federal tax system. Our goal is to provide motivation for thinking more critically about what tax details present in the real world should be incorporated in modeling.

Our contributions directly address the three main limitations noted by Diamond and Saez (2011, p. 166). They argue that 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 by using a realistic representation of the tax system, addressing inconsistencies and lack of robustness in the previous literature, and modeling that is based on the actual top tax bracket of the federal individual income taxes.

II. Model Background

We show that top-rate Laffer curves are "flat" around the revenue-maximizing rate, modeling income taxes realistically matters, and interactions with other taxes (such as payroll, corporate, and state and local taxes) leads to even flatter Laffer curves. To provide context with the current literature, we use popular tax functions to estimate steady-state top-rate Laffer curves within the same quantitative macroeconomic model, an overlapping generations model based on Moore and Pecoraro (2023).[7] We compare these "tax function" Laffer curves against those estimated using a "tax calculator," which is a realistic representation of the tax system based upon Moore and Pecoraro (2020, 2021). This approach explicitly incorporates federal individual income tax provisions within the macroeconomic model using an internal tax calculator. Each of the specifications are consistent with respect to economic and tax targets and yield the same level of aggregate ordinary capital and labor income and preferential capital income. This is achieved by using the same adjustments to economic income described in Moore and Pecoraro (2023). The consistency allows us to isolate the effects of how federal taxes are incorporated within the model when using either popular "simplified" tax functions or the realistic tax calculator.

III. Flat Laffer Curves, Realistic Taxes, and Interaction Effects

We highlight three implications from using more a realistic depiction of taxes. First, Laffer curves are relatively flat—thus even substantial changes in the top rate around the revenue-maximizing rate have only modest effects on total tax revenues. Instead of raising more tax revenue by adjusting top tax rates, we highlight that the relevant policy tradeoff is between equity and efficiency. Second, simplified tax functions—which are conventionally used in this literature—fail to correctly account for income tax bases. Laffer curves estimated using more realistic tax representations are flatter, suggesting less potential revenue from a top rate increase and a lower revenue-maximizing top rate. Finally, we show that interactions of federal individual income taxes with other taxes suggest even flatter Laffer curves.

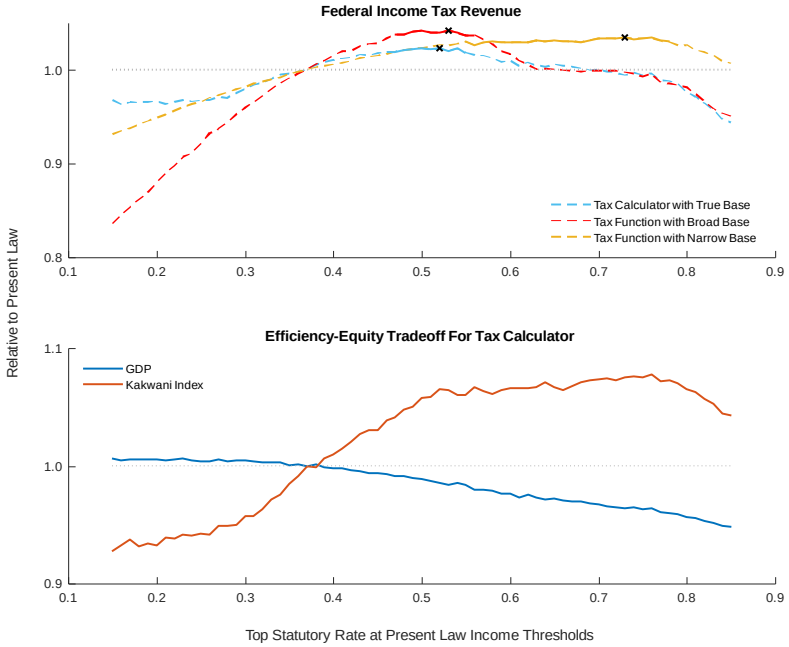
A. Laffer Curves are locally "flat" around the revenue-maximizing top tax rate

The top panel of Figure 1 shows that when using either of the two "simplified" tax function approaches in the literature, or our preferred tax-calculator approach, the top-rate Laffer curve is "flat." That is, deviations of the top tax rate in either direction around the revenue-maximizing rate have little consequences for federal individual income tax revenue. To illustrate "flatness," we show in bolded solid lines the portion of each Laffer curve that yields less than half of one percent point change in tax revenue, which often occurs for top tax rates about 10 percentage points in either direction of the revenue-maximizing rate. If the actual top rate is in this range, the policy implication is that the meaningful tradeoff from adjusting the top rate is not about raising a different amount of revenue, but between efficiency and equity. The bottom panel of Figure 1 shows this tradeoff—GDP falls as the top rate increases due to efficiency-distorting behavioral responses while tax progressivity increases.[8] This highlights the equity-efficiency tradeoff.

[7] Tax revenues change across steady states, therefore we maintain long-run fiscal balance by adjusting federal investment spending, consumption spending, and transfers in proportion to their observed share. Our main points are not sensitive to this assumption.

[8] Tax progressivity is measured here by the Kakwani index, a summary statistic accounting for the full range of taxes over the income distribution using Lorenz curves (for details, see Splinter 2020).

Fig 1: Flat Laffer Curves: Small effects around revenue-maximizing top tax rates



Note: Solid lines on the Laffer Curves represent the range of top tax rates that yield within +/- 0.5 percentage points of the tax revenue associated with the revenue maximizing rate.

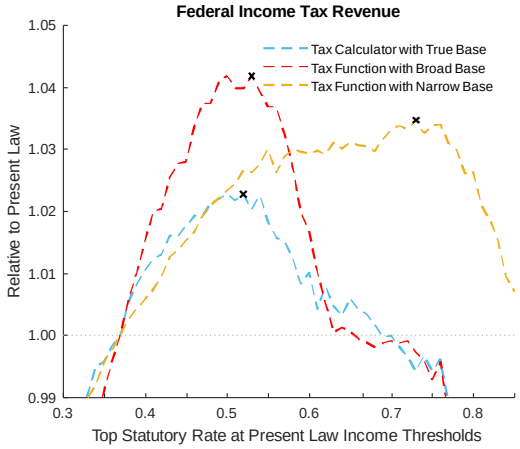
B. Realistic taxes matter

Simplified tax functions fail to account for preferential capital income tax treatment, where certain forms of capital income (long-term capital gains and qualified dividends) are subject to lower top tax rates than other "ordinary" income. Ignoring this preferential treatment leaves the tax base too broad relative to current federal tax law. Similarly, only considering labor incomes ignores capital income subject to ordinary rates and leaves the tax base too narrow. In contrast, our tax calculator approach is consistent with current law: Ordinary capital income is taxed jointly with labor income using the ordinary statutory income tax schedule, while preferential capital income is taxed as a separate base with lower rates. The tax calculator also captures other tax policy details that are relevant for top earners, such as itemized deductions, passthrough business income deduction, Medicare surtaxes, and the Alternative Minimum Tax.

Narrow, broad, or true tax bases result in different revenue-maximizing top tax rates. The tax function with the narrow base (i.e., top rate only applies to labor income) has no first-order interaction between the tax liabilities on labor and capital income. Therefore, the distortions resulting from higher statutory tax rates are attenuated, allowing the narrow-base Laffer curve to slowly increase and reach a high peak (yielding about 3 percent more revenue) at a relatively high top federal tax rate of about 73 percent. The tax function with the broad base (i.e., top tax rate applies to all labor and capital income) has an overstated first-order interaction between tax liabilities on labor and capital income because preferential capital income is incorrectly included in the ordinary tax base. Therefore, the distortions resulting from higher statutory tax rates are exaggerated, making the broad-base Laffer curve quickly reach a high peak (yielding about 4 percent more revenue) at a relatively moderate top tax rate of about 53 percent.[9] The true tax base is between the narrow and the broad base. Therefore, the Laffer curve estimated using the tax calculator reaches a more modest peak (yielding only 2 percent more revenue) at a top tax rate of about 51 percent. Note that the true tax base implies a lower revenue-maximizing top tax rate and smaller potential revenue gains.

[9] This finding helps reconcile the largely disparate conclusions of Kindermann and Krueger (2022), who use the tax function with a narrow base, and Guner, Lopez-Daneri, and Ventura (2016), who use a tax function with a broad base.

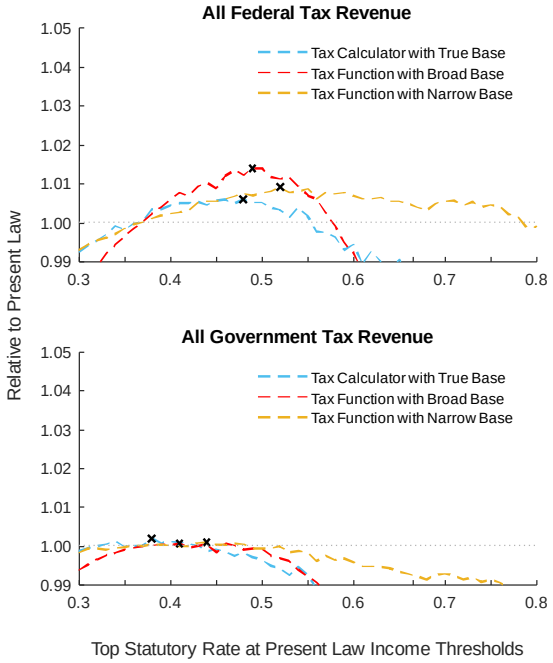
Fig 2: Realistic taxes matter: Incorrect tax bases exaggerate potential revenue increases



C. Interactions with other tax bases imply flatter Laffer curves

For purposes of estimating the revenue-maximizing top tax rate, considering additional taxes besides federal individual income taxes matters (Badel and Hugget, 2017). Other taxes change the general equilibrium feedback that is incorporated. For example, two papers that maximize labor income tax revenue from top one percent—Diamond and Saez (2011) and Kinderman and Kreuger (2022)—consider neither general equilibrium feedback to individuals outside of the top one percent, nor general equilibrium feedback from other tax bases. Under these assumptions, the revenue-maximizing top tax rate can differ substantially.

Fig 3: Policy interactions further flatten Laffer curves



Note: These Laffer curves reflect the same policy change as the Laffer curves in Figure 2 but also account for a larger set of general equilibrium responses to other tax bases.

Considering more taxes results in even flatter Laffer curves. The top panel of Figure 3 shows that when going from only accounting for changes to federal individual income taxes (in Figure 2) to also accounting for federal payroll, corporate, excise, and estate taxes in addition, all three Laffer curves flatten. This flattening implies both lower revenue-maximizing top tax rates and less revenue gain from increasing top tax rates. The bottom panel of Figure 3 shows that also accounting for state and local taxes further flattens all the Laffer curves, such that the results are similar across the different tax base approaches. When accounting for interactions from all taxes, there is little change in total government revenue even from large changes in top tax rates.

We consider a measure of Laffer curve "flatness" that allows for comparisons across different estimates. Table 1 shows the areas under respective Laffer curves over the range of top tax rates that increase tax revenues relative to the present-law federal statutory top rate (37%) on ordinary income. These integrals provide a useful measure to compare the degree of "flatness" across Laffer curves. For example, the Laffer curve for federal individual income taxes estimated using the tax calculator is more than five times "flatter" than that estimated using the narrow-base tax function.

Table 1: Comparing Laffer Curve Flatness: Integrating over the revenue increasing range

	Tax Calculator with True Base	Tax Function with Broad Base	Tax Function with Narrow Base
Federal Individual Income Taxes	1.0	3.3	5.5
All Federal Taxes	0.4	0.9	1.0
All Government Taxes	0.0	0.0	0.0

Note: Integrals normalized so that the top-rate Laffer Curve defined over federal individual income taxes estimated by the tax calculator is 1.

V. Summary

The literature on revenue-maximizing top tax rates has ignored policy implications in three ways. It focuses only on the revenue-maximizing top rate, relies on simplified tax functions, and usually overlooks the impact of interactions among different taxes. We show that a more accurate and realistic depiction of the tax code fundamentally alters the shape of the estimated Laffer curve, the implied revenue-maximizing top rate, and potential revenue gains from increasing top tax rates. This has three main implications. First, Laffer curves are relatively flat. This implies that even substantial changes in top rates around the revenue-maximizing rate have modest effects on total tax revenues. Second, by moving beyond stylized assumptions about taxes, we show that simplified tax functions' incorrectly accounting for income bases and tax detail can profoundly distort policy conclusions. Laffer curves using more realistic taxes are flatter, suggesting less potential revenue from top rate increases and lower revenue-maximizing top rates. Finally, we show that interactions of federal income taxes with other taxes produce even flatter curves, suggesting even less potential revenue from top rate increases.

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