



Approximating the Marginal Revenue Maximizing Point: A Brief Analysis Employing the Laffer Curve

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Abstract

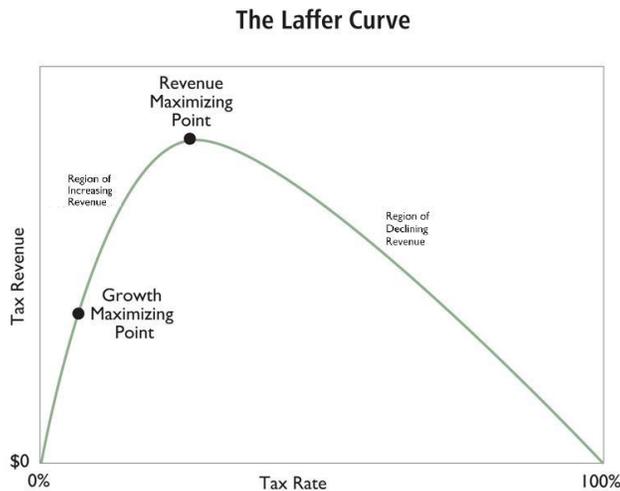
For centuries governments across the world have taxed their people. Different rates are used; however, the ultimate goal is to generate the most revenue. This goal has led governments to raise taxes, as theoretically the higher the tax, the more revenue collected. This was proven to be true only to a certain extent by Arthur Laffer in 1970s. In this paper, I will discuss from an economic standpoint why- regardless of political ideology- taxes rates should not exceed 33 percent.

Keywords: taxation, Laffer curve, optimal taxation, tax efficiency

JEL Codes: H21

I. The Laffer Curve

In the early 1970s Arthur Laffer first presented his model to one of President Ford’s advisers. The Laffer curve illustrates that at 0 and 100 percent taxation the revenue is zero, and as the rate increases from 0 or decreases from 100, the revenue increases (the curve has tax rate on the horizontal axis and revenue on the y axis). This is the case because 0 percent yields nothing and 100 percent disincentivizes people since they won’t keep any of their money.



The Laffer Curve allows for a counterintuitive conclusion to be made: once the tax rate reaches a certain point, revenues will begin to decrease. This point is known as the revenue maximizing point- or RMP- and any point to the right enters into what Laffer referred to as the “prohibitive range”. In this range, tax increases lead to decreases in revenue.

The increase from the left occurs because any increase in tax rates prior to the RMP will increase revenues. Once the RMP is met, any further increases will decrease revenues. This creates a hump shaped graph with a peak somewhere in between the x axis intercepts.

II. Political Implications and Locating the Marginal Revenue Maximizing Point

Politics in the United States now seems more partisan than ever, further dividing the country into liberals and conservatives. Liberals on the far-left advocate for large government and high taxes- especially on the wealthy- to promote economic equality, while conservatives on the far-right advocate for small government and low taxes. These positions are well known and are key differentiators between the groups, which leads to the Romers’ publication.

In a 2010 paper published in the *American Economic Review* titled “The Macroeconomic Effects of Tax Changes: Estimates Based on a New Measure of Fiscal Shocks”, Christina Romer and David Romer- two of the countries most leftist liberal economists from The University of California Berkeley- examined the relationship between national income and tax rates. It was established that “a decrease in the marginal tax rate that raised the after-tax share of income by 1 percent raised reported taxable income by 0.2 percent.” With this in mind, the formula for the tax rate (t) maximizing revenue is:

$$t=1/(1+a*e)$$

Where where **a** is the Pareto parameter of the income distribution, and **e** the elasticity of reported income with respect to 1-t which captures supply side effects (Saez and Stantcheva 2016). In the United States, the Pareto

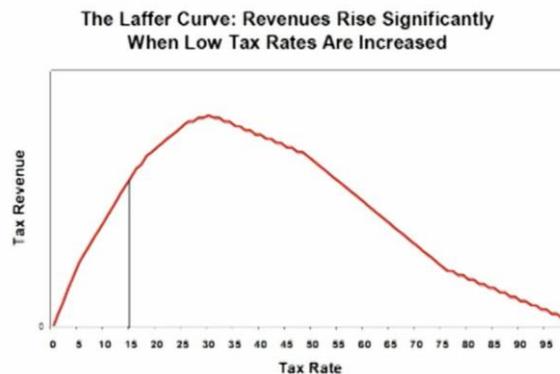
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parameter of the income distribution is estimated to be 2.5, while the elasticity of reported income is estimated to be 0.8. When the values are used in the formula, the following results:

$$\begin{aligned} 1/(1+2.5*0.8) &= \\ 1/(1+2) &= \\ 1/3 \end{aligned}$$

With the data from Romer and Romer (2010) and Saez and Stantcheva (2016), it can be concluded that the resulting rate of 1/3- or 33.3333 percent- is the marginal RMP.

Similar calculations can be made, and the following graph illustrates how revenues rise when low rates are raised as well as the hump at 33 percent.



III. Conclusions

Overall, in order to maximize tax revenue rates should not exceed 33 percent. Some leftist leaning groups advocate for greater economic equality through excessive taxation- which in this case we'll say is over 33 percent. These ideas are irrational as anything above the RMP leads to decreases revenues and less money available for spending on social programs. Regardless of political beliefs, no one should promote greater rates than the RMP.

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