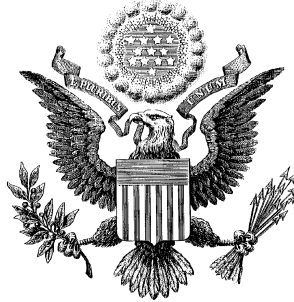# REVENUE MAXIMIZING TAXATION IS NOT OPTIMAL

A JOINT ECONOMIC COMMITTEE REPORT

Jim Saxton (R-NJ)
Chairman

Joint Economic Committee
United States Congress

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Executive Summary

Dr. Lawrence B. Lindsey emphasizes that tax rates tending toward maximization of Federal revenue are not the same as those conducive to economic well-being and economic growth.

His review of the key concept of Excess Burden (the net loss in economic well-being to the taxpayer from a tax) demonstrates that even when higher tax rates increase government revenue, economic offsets include reduced taxpayer well being, a shrinking tax base, and a lower economic output.

Lindsey strongly urges the Congress to recognize this explicit trade off, to change its analytic approach to taxation by taking into account the degree of burden imposed at the margin to collect an additional dollar of Federal revenue, and to consider the cost of maintaining today's high rate structure. This approach, he concludes, would allow Congress to do the best job it can at maximizing economic welfare.

This report was presented as written testimony to the Joint Economic Committee on March 13, 1997.
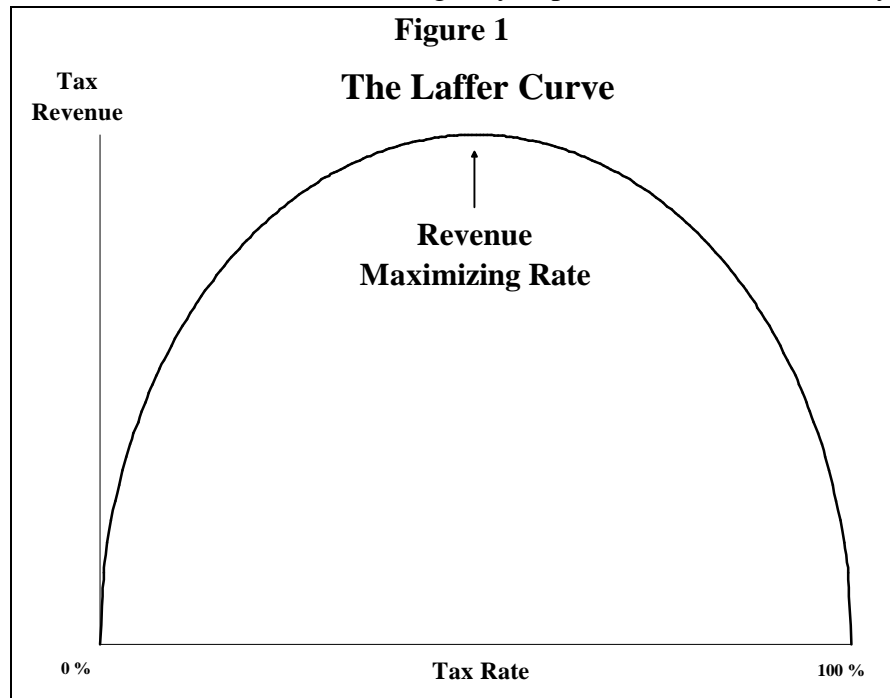
REVENUE MAXIMIZING
TAXATION IS NOT OPTIMAL

by Lawrence B. Lindsey[1]

I believe that Congress is taking a very appropriate look at our tax system with the intent of rebuilding it from the ground up. Ultimately, one would hope that the final product of this work will be a tax system which is less of a burden on the U.S. economy and its taxpayers and therefore more conducive to economic growth. In that regard, it is important to lay an appropriate groundwork for a proper analysis of the issues involved.

My objective is to focus on one very important and widely misunderstood aspect of the analysis of taxation: the existing confusion between "revenue maximization" and "optimal taxation." I believe that this confusion is leading tax and budget policy makers to legislate tax systems with rates which are excessive from the point of view of economic growth.

Oddly enough, I believe that many of those who were most important in pointing out two decades ago that the United States suffered from excessively high tax rates have contributed to the confusion between revenue maximization and optimality. Consider Figure 1. It depicts the Laffer Curve, named for economist Arthur Laffer. Laffer elegantly depicted an economic reality that economists since Adam Smith have recognized: that higher tax rates might not necessarily produce higher revenue. He noted that at tax rates of either zero or 100 percent, government tax collections would be non-existent. He reasoned, correctly, that at some point between these two figures, revenue would be maximized. Although Laffer certainly never claimed that the revenue maximizing rate was the best one, or the optimal one, the construction of the figure naturally leads one to think that there is something good about being at the top.


Figure 1

The Laffer Curve

Tax Revenue

Revenue Maximizing Rate

0 %   Tax Rate   100 %

I believe Laffer's actual point was that being on the right side of that revenue maximizing point was truly foolish. Not only were taxpayers worse off on that right-hand slope, so was the government. The point had real policy relevance, since with tax rates of up to 70 percent, the top portion of the U.S. tax system was clearly in that prohibitive range.

Some analysts who supported lower rates actively led to the confusion about the high point of the Laffer Curve being optimal. For example, Jude Wanniski argued regarding the revenue maximizing point, "It is the point at which the electorate desires to be taxed. It is the task of the statesman to determine the location of [the maximum] and follow its variations as closely as possible."[2]

On this issue, Wanniski was completely wrong. Far from being desirable, the revenue maximizing rate is actually one which any statesman would want to avoid like the plague. As I shall show, only those individuals who care only about the well-being of the Treasury and do not care anything about the well-being of the taxpayer would choose the revenue maximizing point.

I wish to suggest a different way of looking at this issue and introduce the concept of the excess burden of taxation. Consider Figure 2. The figure depicts what I term the "Demand for Taxable Income." Like any demand curve in economics, it is downward sloping. That is, as the price of taxable income falls, people demand more of it. In this case, the price of taxable income is the tax rate. It is how much the taxpayer must pay the government in order to

Figure 2

Demand for Taxable Income
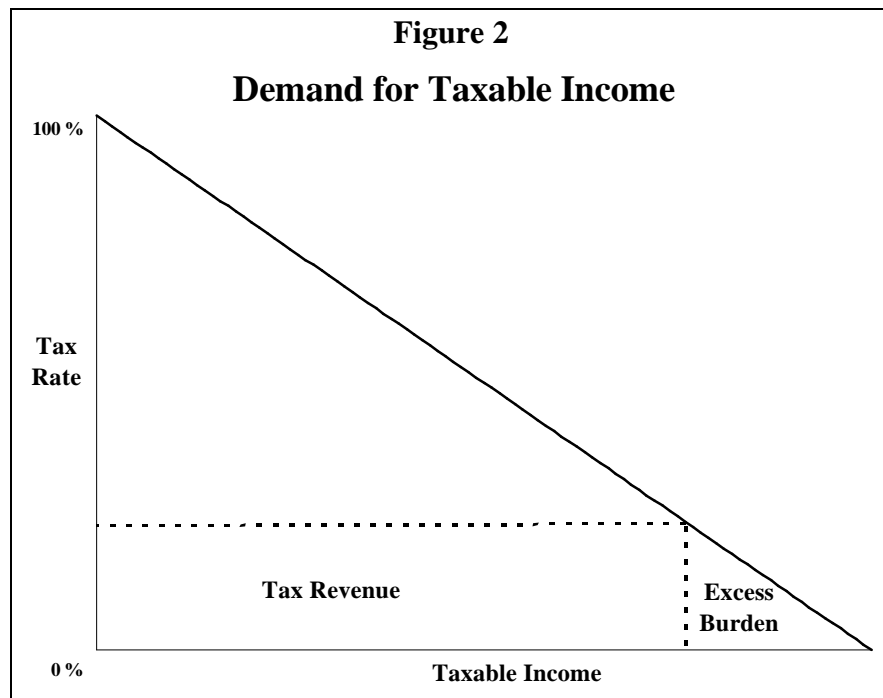
earn another dollar of taxable income. Note that at a tax rate of 100 percent, the taxpayer chooses to earn zero taxable income. At a zero tax rate, the graph depicts the amount of taxable income that a taxpayer would choose in the absence of any taxation.

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[2] Jude Wanniski, "Taxes, Revenues, and the 'Laffer Curve,'" *The Public Interest*, Winter 1978, pp. 4-5.

The Demand for Taxable Income is a useful analytic tool since it helps to graphically depict two important considerations regarding tax policy. The first is tax revenue. The government sets a tax rate and the Demand for Taxable Income shows what the tax base will be at that rate.[3] The amount of tax revenue the government collects is therefore easily shown as a rectangle--the tax rate times the tax base.

The second concept depicted by the Demand for Taxable Income is the excess burden of taxation. The excess burden is a very important concept. First, it is different from tax revenue. After all, paying taxes is a burden to the taxpayer. But, from society's point of view, it is not a net loss in economic well-being. The taxpayer's loss is the government's gain.

Excess burden is the loss in the taxpayer's well-being above and beyond the taxes he pays. There is no offsetting gain to the government from this loss in well-being. The excess burden of the tax is indicated by the triangle to the right of the revenue rectangle. In order to understand why this is the case, we must think about what the Demand for Taxable Income means.

Like any demand curve, the Demand for Taxable Income shows how much the demander (the taxpayer) values receiving another unit of the good, in this case another dollar of taxable income. Note that this value is always less than one dollar. For example, when the tax rate is 20 percent, the taxpayer gives up all those dollars of taxable income which he values at less than 20 cents on the dollar.

Why would a taxpayer value a dollar of taxable income at less than a dollar? It is because he must give up something to get that dollar of taxable income. For example, he may have to work more, giving up leisure. Or he may have to give up a dollar of untaxed enjoyment such as a perk or fringe benefit. So, the demand curve tells us the NET value to the taxpayer of getting another dollar of income; literally this is the dollar minus how much he valued what he had to give up to get that dollar.

Therefore, a taxpayer who values his time spent going fishing instead of working at 80 cents has a net value of getting another dollar of taxable income of 20 cents. If his tax rate on that dollar is more than 20 percent, the cost of giving up his time--80 cents value in fishing plus more than 20 cents in taxes--is more than the value of earning the extra dollar, and he chooses not to earn it. If his tax rate on that dollar is less than 20 cents, on net he comes out ahead and chooses to earn. The demand curve tells us exactly the "break-even point" between earning and not earning.

From the taxpayer's point of view, the net value to him of giving up dollars of taxable income is given by the triangle, the area under the demand curve, on dollars of taxable income not earned because of taxes. This is less than the amount the economy shrinks as a result of the

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[3] This assumes that all taxable income is taxed at a single rate. Mathematically, it can be shown that a progressive rate structure would produce a lower revenue maximizing rate.

tax. Generally, the economic output forgone is dollar for dollar with the process of giving up taxable income. That is because untaxed activities which also do not show up as economic activity, such as going fishing, are substituted for taxed activities.

Thus, excess burden is over and above the cost of paying taxes, but is less than the reduction in economic activity from taxes. It is the net loss in economic well-being to the taxpayer from the tax.

Now, consider Figure 3 to show what happens when a tax rate is increased from rate T1 to rate T2. First, the government collects taxes at a higher rate on the new level of taxable income earned. That is depicted in the box labeled "A." Second, the government gives up some revenue which it would have collected at the old rate of T1 because the level of taxable income falls. That is depicted in the figure by the box labeled "B." So, the net increase in revenue from raising this tax is A minus B, the revenue gained from raising the rate minus the income lost from shrinking the tax base.

Figure 3

Effect of a Tax Rate Increase on Excess Burden
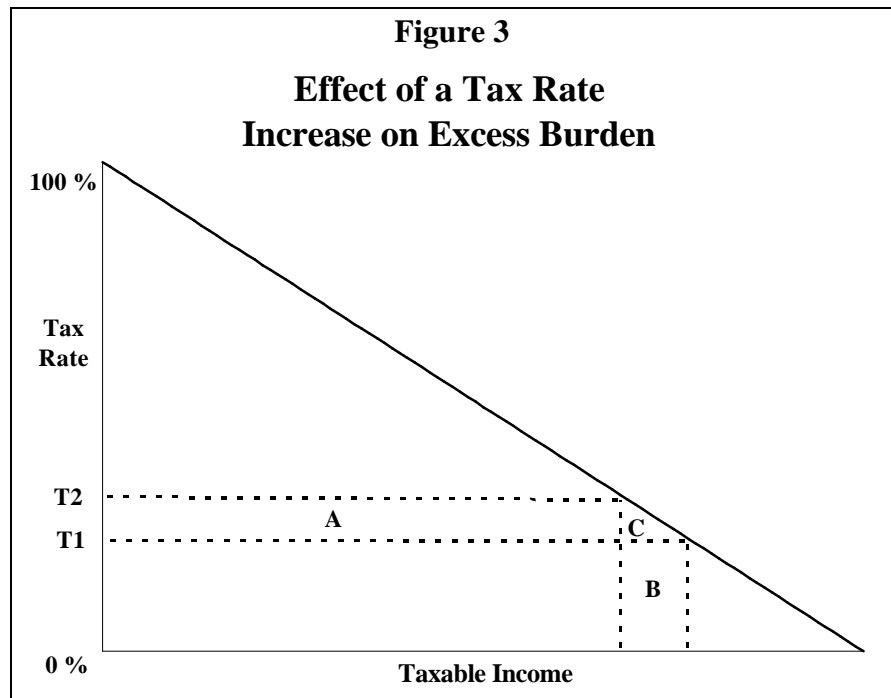
As drawn, this tax increase is a revenue gainer, placing it on the left-hand slope of the Laffer Curve. But does this mean that raising the rate was a good idea? That depends on how much worse off the taxpayer is. Obviously the taxpayer is worse off by rectangle "A," because that is revenue he is now paying the government. But, because the government is ahead by that box, it is not a net loss in well-being for society as a whole, only for the taxpayer. Therefore, it is not counted as an excess burden of the tax.

The **increase** in the excess burden of this tax is given by how much bigger the triangle to the right of the revenue box grew. That is graphically depicted in Figure 3 by rectangle "B" plus little triangle "C." To sum up, the government gained rectangle A and lost rectangle B. The taxpayer lost rectangles A and B and little triangle C. Whether it was a good idea or not to raise taxes depends on how much you value the government's need for revenue and how much you value the taxpayer's well-being.

The concept that I would strongly urge the Congress to begin considering is what is technically called the "Marginal Excess Burden per Extra Dollar of Revenue." In terms of Figure 3, it is a comparison of areas B and C with area A minus area B. As shown in Figure 3, the marginal excess burden is larger than the extra revenue collected. This means that the net loss in social welfare was more than the gain in revenue. Stated differently, the taxpayer lost more than $2 for every $1 the government collected.

So much for the theory. Let me bring this down to a very practical application. I refer you to an editorial in the *Washington Post* on February 20, 1990.[4] In the second paragraph, the *Post* goes through an analysis very similar to the one which I have just performed. A key difference is that the discussion is about CUTTING tax rates, not RAISING them. So, we have to consider the question in reverse: What is the GAIN in taxpayer well-being--or the reduction in EXCESS BURDEN per dollar of revenue lost by the Treasury?

The editorial notes, "The Treasury would lose from the lower rate but gain from the higher volume." In this case, the *Post* is talking about area A as a loss to the Treasury and area B as a gain to the Treasury from an expansion in taxable income. The editorial goes on to talk about the Joint Committee on Taxation (JCT) estimates of the burden of the tax, citing $100 billion as the amount by which taxpayers would be better off over five years. This is the JCT estimate of areas B and C. It then gives an estimate of the net revenue foregone of $11 billion. This is the JCT estimate of area A minus area B.

The marginal excess burden per dollar of revenue collected in the tax change talked about in the *Post* is roughly $9 per dollar of revenue. In the case discussed, the JCT estimated that taxpayers would be made better off for every $1 that the Treasury would sacrifice in revenue. Would this have been a good idea?

Now the *Post* argued that it would not be a good idea. They argued that because these taxpayers who would have seen their burdens reduced were largely well-to-do, the government was smart to keep the rates high. In the *Post's* reasoning, it was sensible to make these taxpayers $9 worse off in order for the Treasury to collect an additional dollar in revenue. The *Post* is entitled to its opinion; after all, this is a political judgment.

I respectfully disagree with the *Post's* conclusion. If the Congress genuinely is interested in improving economic well-being and fostering economic growth, taxes which make society $9 worse off to collect an extra $1 of revenue are luxuries we simply cannot afford. But again, that is a political judgment. The more important issue is the analytic point. If Congress is going to consider how to build a better tax system, it must begin to consider this trade-off explicitly.

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[4] *Washington Post,* "Rich and Poor," February 20, 1990.

Note that this is going to be radically different than looking at the Laffer Curve or searching for the revenue maximizing rate. If you thought that the revenue maximizing rate was where you should head, then you would have to agree with the *Post*. After all, the Treasury did gain from keeping the rate higher. The revenue maximizing rate argument does not factor in the costs to society of collecting the revenue.

It is a mathematical point, but at the very top of the Laffer Curve, the marginal excess burden per extra dollar of revenue is infinite. Literally, by picking the revenue maximizing rate, Congress is saying that it is willing to impose ANY cost on the taxpayer in order to collect more revenue. Frankly, I do not think that is economically defensible, nor do I really believe that members of Congress would care to defend such a position in their districts.

Therefore, my recommendation is for Congress to change its analytic approach and begin to consider how much of a burden is being imposed **at the margin** for maintaining today's rather high tax rate structure. If such calculations are made the basis for analysis, Congress will by definition be doing the best job it can at maximizing economic welfare. Any tax imposed will carry an excess burden. But isn't it smart policy to make that burden as small as possible?

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Dr. Lawrence B. Lindsey joined the American Enterprise Institute in Washington, D.C. on February 6, 1997 as a Resident Scholar and holder of the Arthur F. Burns Chair in Economics. He is also Managing Director of Economic Strategies, an economic advisory service based in New York City.

Dr. Lindsey served as a Member of the Board of Governors of the Federal Reserve System for five years from November 1991 to February 1997. Dr. Lindsey also served three years on the staff of the Council of Economic Advisers during the Reagan Administration where he was Senior Staff Economist for Tax Policy.