LIMITATIONS OF THE LAFFER CURVE AS A JUSTIFICATION FOR TAX CUTS

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Professor Laffer's paper[1] leads me to ask four questions, which I shall address in turn:

1. Is the Laffer curve an accurate depiction of economic reality?
2. Are we in a prohibitive region of the Laffer curve, that is, a region in which a tax rate cut would increase tax revenues?
3. If we are not in a prohibitive region, could we cut income tax rates and get the positive output effects without also cutting government spending?
4. Should we let our answer to the second and third questions determine our position on cutting taxes?

We know that both a zero tax rate and an extremely high tax rate would yield zero revenues and that tax rates in between yield positive revenues, and therefore the Laffer curve may be said to approximate reality. But the curve may not be as simple as the one Laffer is said to have drawn on a napkin in a Washington restaurant in 1974 (see figure 1). It should look instead like figure 2, because a tax rate cut would not necessarily cause people to work more. If people use the higher take-home pay that they get as the result of a tax rate cut (from point A to point B in figure 2) to "buy" more leisure by working less (in economists' jargon, if the income effect

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[1] Arthur B. Laffer, "Government Exactions and Revenue Deficiencies," *Cato Journal*, Vol. 1, No. 1 (Spring 1981): 1.

FIGURE 1
THE SIMPLE LAFFER CURVE

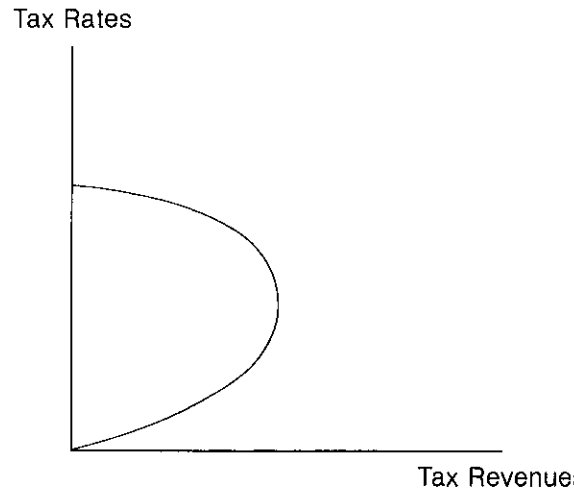
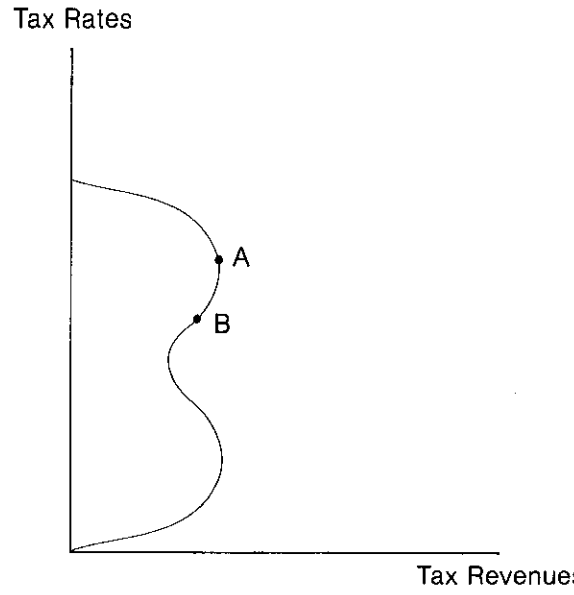


FIGURE 2
A MORE COMPLEX LAFFER CURVE



of a cut in tax rates outweighs the substitution effect), then the tax base would actually decrease and tax revenues could fall proportionately more than tax rates. Laffer excludes this possibility, arguing that the decrease in government services induced by the tax cut lowers people's real income and thus lowers their demand for leisure exactly as much as the increase in real income raises their demand for leisure. But to make his claim, he must assume, as he admits, that people spend their increased real income on goods that they value neither more nor less than the goods that the government would have bought with their money. I find this implausible. It is much more likely that people value goods they can choose themselves more highly than goods that the government would have chosen for them, in which case a tax rate cut would increase both their real income and their demand for leisure. We cannot, therefore, exclude the possibility of a more complicated shape to the Laffer curve.

Whether a decrease in tax rates would increase tax revenues depends to a large extent on the elasticity of labor supply, that is, on how much workers respond to increased incentives.[2] If the average tax rate is 30 percent and the marginal rate is 40 percent,[3] then for a 10 percent cut in tax rates to leave tax revenues unchanged, people would have to respond by working 8.33 percent more. (See Appendix, Part A, for the derivation of this result.) They would do so only if their labor supply elasticity were 1.25, which is higher than the

[2]Professor Moszer (Max Moszer, "A Comment on the Laffer Model," *Cato Journal*, Vol. 1, No. 1 (Spring 1981), p. 23) challenges the idea that people can choose their hours of work, referring to "arbitrary, institutional restraints on both the maximum and minimum number of hours and/or days that can, or need, be marketed." He correctly points out that a person has some difficulty in choosing his hours, but it does not follow that the constraints on hours are arbitrary. Such constraints, where they are not imposed by law, probably represent the preferences of the average or median worker. If most workers' preferences about hours shift, as they would with a general income tax cut, then so would the institutional constraint, since entrepreneurs would compete with each other in choosing working hours that fit their employees' preferences. Even if the constraints are legally imposed, lowering tax rates would increase the incentive to get around them. Moreover, the fact that men's and women's hours of work vary and that their labor supply elasticities are often found to be nonzero is evidence that they can choose their hours.

[3]The marginal tax rate is purposely set high in order to bias the case in Laffer's favor. The higher the marginal rate, the larger the percentage of increase in after-tax wages as a result of a tax cut, and the bigger the incentive effect. To take two extreme cases, a 10 percent cut in the marginal rate from 90 percent to 81 percent raises the after-tax wage from 10 percent to 19 percent of the gross wage, or by 90 percent. A 10 percent cut in a 10 percent marginal rate from 10 percent to 9 percent raises the after-tax wage from 90 percent to 91 percent of the gross wage, or by only 1.1 percent.

average labor supply elasticity found by virtually all economists who have studied the issue. Most economists have found a zero elasticity for men[4] and a positive elasticity between 0.6 and 2.1 for women.[5] However, their findings must be taken with caution for these reasons:

1. Most of these economists fail to subtract taxes from income in arriving at the net wage, and as a result they understate the true elasticity. When gross wages increase by a certain percentage in our progressive tax system, people move into higher tax brackets, and after-tax wages increase by a lower percentage. Dividing the percentage change in hours worked by the percentage change in gross wages gives too low an estimate of elasticity. The correct method would be to divide the percentage change in hours worked by the percentage change in *after-tax* wages.

2. None of the economists takes account of the *intensity* of work effort, their measure of labor supply being simply hours worked. If labor supply elasticities are positive, then failure to account for intensity will understate the true elasticity, since higher wages will induce people to work harder in a given hour.

3. Most of the economists also fail to account for the fact that many people decide how much to work as part of a lifetime plan, and therefore it is misleading to attribute changes in current hours of work only to current wage changes. Workers may have changed current hours in anticipation of future wage changes. However, this may not cause problems since a current wage increase generally indicates higher wages in the future, and a current tax rate cut means higher after-tax wages both currently and in the future.

It would appear, then, that Laffer's argument is stronger than current elasticity estimates would indicate. Moreover, as Laffer points out, using one elasticity and one marginal tax rate for the economy probably understates the labor supply effect of a cut in tax rates because women whose husbands work face an above-average mar-

[4]See Glen G. Cain and Harold W. Watts, "Toward a Summary and Synthesis of the Evidence," in Cain and Watts, eds., *Income Maintenance and Labor Supply,* Institute for Research on Poverty Monograph Series (Chicago: Rand McNally, 1973), pp. 332–35.

[5]See James P. Smith, ed., *Female Labor Supply: Theory and Estimation* (Princeton: Princeton University Press, 1980).

ginal tax rate and have a high labor supply elasticity. On the other hand, since married women's wages and productivity are less than men's, the additional output from their working more would not be as high as otherwise. There is still a good chance that not enough new labor will be supplied to prevent tax revenues from falling.[6]

However, even if labor supply elasticities are too low to make up for lost tax revenues, labor supply is not the only factor that would increase the tax base. As Laffer notes, a decrease in tax rates would also increase saving and capital formation and would reduce the incentive to acquire tax shelters. And as Professor Moszer notes, decreases in tax rates shift production from the "underground" to the "above-ground" sector.[7]

Is there any other way of determining whether a cut in tax rates would increase revenues? We could examine the effects of past tax rate cuts and increases. If tax rate cuts led to revenue increases and if tax rate increases caused revenues to decrease, then a cut in tax rates today would probably increase tax revenues because tax rates are higher now than in all but a few earlier years.

Professor Laffer looks at past tax cuts, quoting evidence from a paper by Canto, Joines, and Webb on the effect of the Kennedy-Johnson tax rate cuts.[8] These three scholars concluded that the 1962 and 1964 cuts in tax rates caused only a small decrease in tax revenues, but they did not correct for any of the other factors that would have expanded the tax base at the same time, such as tariff cuts and the coming of age of the baby-boom generation. Laffer justifies this procedure by citing Charles Nelson's finding that a simple empirical method using only knowledge of the history of a variable usually forecasts as well as or better than a model that takes account of other factors.[9] I hesitate to criticize Laffer on this point because Professor Nelson is a capable and respected time-series analyst, and I know only the rudiments of time-series analysis. But shouldn't Canto, Joines, and Webb or Laffer demonstrate that their method is appropriate in *this* case and not just in most

[6]See Appendix, Part B, for a sample calculation using a women's labor supply elasticity of 2.

[7]Moszer, "A Comment on the Laffer Model," p. 25 .

[8]V. A. Canto, D. H. Joines, and R. I. Webb, "Empirical Evidence on the Effects of Tax Rates on Economic Activity," *Proceedings of the Business and Economics Statistics Section: 1979* (Washington, D.C.: American Statistical Association, 1979).

[9]Charles A. Nelson, *Applied Time-Series Analyses for Managerial Forecasting* (San Francisco: Holden Day, 1973); and "The Predictive Performance of the FRB-MIT-PENN Model of the U.S. Economy," *American Economic Review* 62 (October 1972): 902–17.

cases? I suspect that if they had corrected for the expansion of U.S. trade with other countries and the U.S. labor force expansion, they would have found a large drop in tax revenues due to the early sixties' tax cuts. If so, one would be inclined to believe that a tax rate cut today would also decrease tax revenues.[10]

What if a cut in tax rates does cause tax revenues to fall? Professor Laffer claims that even if a 10 percent cut in tax rates is not completely self-financing immediately, the economic growth it would generate would make up for lost tax revenues in less than two years. But what happens meanwhile? If the government does not decrease spending to match the decrease in revenues, then the Treasury has to increase the deficit, selling bonds to the public or to the Federal Reserve Bank. If it sells bonds to the public, it must at some future date increase taxes to redeem those bonds. Selling bonds to the Federal Reserve Bank will increase inflation, which is also a tax, and thus although the income tax cut would change the tax *structure* it would not necessarily reduce total taxation. Then Laffer's whole argument would collapse. True, the lower income tax rate would encourage production, but the higher anticipated future taxes or the inflationary tax would discourage production. The net effect on production could be positive, negative, or zero.[11]

If we want to argue for a tax cut, we cannot depend on Laffer's claim that the government would not have to cut spending. Nor do we need to. There are many other good reasons for cutting taxes. Taxation takes from us what is ours and denies our freedom to use our income in any peaceful way we see fit. It denies our civil liberties[12] and reduces our material well-being.[13] Taxation has made it

[10]I am pleased to note that in the transition from his oral presentation to his written paper, Laffer has dropped his use of evidence of revenue increases following tax rate cuts in Puerto Rico and California. As I stated in Chicago during my discussion of his oral presentation and as he now points out, because of high labor mobility within a country and low labor mobility between countries (due largely, although he does not mention it, to immigration barriers), the elasticity of factor supply to a locality is much higher than to the country as a whole. Therefore a tax cut within, say, a state, would lead to a greater relative inflow of labor and a greater relative increase in the tax base than a tax cut for the whole nation.

[11]Milton Friedman also makes this argument in "The Kemp-Roth Free Lunch," *Newsweek,* August 7, 1978, p. 59.

[12]See Ronald Hamowy, "The IRS and Civil Liberties: Powers of Search and Seizure," *Cato Journal,* Vol. 1, No. 1 (Spring 1981): 225.

[13]See Jude Wanniski, *The Way the World Works* (New York: Simon and Schuster, 1978).

easier for the government to wage war abroad.[14] These are reasons enough for a tax cut.

In addition, to say that one must call for spending cuts as well as tax cuts is not to say that spending cuts must come first. In fact, if we wait for spending cuts, we may never get tax cuts. A better strategy for reducing taxation would be and has been to cut taxes first and let the legislators and special interests bicker over who gets what. This strategy has been easier to accomplish at the state level[15] (because most states facing debt limits cannot respond to a tax cut by increasing their deficit), but it would be at least partly effective at the federal level also. Presumably the federal government's ability to run deficits would be somewhat constrained, although a constitutional amendment requiring the federal government to balance its budget would certainly help. But the argument for tax cuts on the basis of the Laffer curve is a castle made of sand.

APPENDIX

Part A

Assume that "the" marginal tax rate, that is, the weighted average of all individuals' marginal rates, is 40 percent and the average tax rate is 30 percent. Assume that national income is $1,000. Therefore tax revenues are $300.

A 10 percent tax rate cut reduces the marginal tax rate to 30 percent and the average to 27 percent. If national income remained constant, tax revenues would decrease by 10 percent, from $300.00 to $270.00. Laffer refers to this as the "arithmetic" effect. But the added incentive to work would increase the tax base. The new income generated would be taxed at the marginal rate of 36 percent. Thirty dollars in new tax revenues must be forthcoming to keep tax revenues constant. Therefore national income must increase by $30.00/.36 or $83.33, or 8.33 percent.

The after-tax wage from each additional dollar earned increases from 60 cents to 64 cents, or by 6.67 percent. For income to increase by 8.33 percent, the elasticity of labor supply (which equals the percentage change in labor supplied divided by the percentage change in wage) must be 1.25.

[14] See Lloyd Dumas, "Taxes and Militarism," *Cato Journal*, Vol. 1, No. 1 (Spring 1981): 277.

[15] For instance, when tax indexing reduced projected 1981 revenue in Minnesota, the governor pushed an 8 percent spending cut (*Wall Street Journal*, January 14, 1981).

Part B

Assume that all women are married and women's average work time per week is twenty hours. Assume all men work forty hours. Assume that men's labor supply elasticity is zero and women's is 2. Assume that working women's wages are 60 percent of men's. Assume that national income is $1,000.

When the marginal and average rates fall from 40 and 30 percent respectively, men work the same amount but women work more. Womens' after-tax wage increases by 6.67 percent (as in Part A), and they respond by working 13.34 percent more (since their elasticity is 2), or 2.67 hours more per week. Weekly income in the economy increases by (2.67 × .6) ÷ [(20 × .6) + 40], or 3.1 percent.

Tax revenues were $300.00 before the tax cut (30 percent of $1,000) and would have fallen to $270.00 had the tax cut not increased the tax base. Since income increases by $31.00 (3.1 percent of $1,000), new tax revenues of $11.16 (equal to .36 × $31) are generated, so that tax revenues end up at $281.20. The net effect is still a substantial reduction in tax revenues.