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On the Use and Misuse of the Laffer Curve

Abstract – The main use to which the economics profession has put the Laffer curve (at least if you judge by a representative sample of principles and intermediate textbooks) is to choose that tax rate which maximizes governmental revenues. To say the least, this enterprise cannot be justified by a resort to positive economics. Necessarily associated to a Laffer curve, is an income curve over the same (tax rate) domain, which we illustrate and that starkly demonstrates, the conflict between the government and the citizenry over optimal tax policy. As an empirical issue, our paper casts doubt on the claim that tax rate reductions in the 1980s were responsible for budget deficits.

Keywords – Laffer curve, optimal taxation, optimal tax rate, public policy

JEL classification codes – C0, E62, H2, H21

1. – Introduction

The thesis of the present paper is that the Laffer curve has been misunderstood and hence misused by the economics profession. The implicit, and oft-times not so implicit premise of those who have utilized this model is that the optimal tax rate is that which optimizes governmental revenues. A related difficulty is that most commentators mistakenly believe that tax reductions caused budget deficits during the 1980s.

Our paper is organized as follows: in section 2 we discuss the misuse of the Laffer curve from a geometrical point of view; section 3 is devoted to a discussion of the public policy recommendations which emanate from this mistaken analysis; in section 4 we introduce a new curve into the analysis, and on the basis of it we call into question the geometrical analysis and public policy recommendations made in its absence. Section 5 is given over to
a critique of the claim that during the 1980s tax reductions caused budget deficits, and we conclude in section 6.

2. - The geometry of the Laffer curve analysis

The Laffer curve is used to illustrate the point that, from the perspective of maximizing (total) tax revenues, sometimes income tax rates can be so high as to be counterproductive. It is a curve that relates tax revenues, \( R \), to the average tax rate, \( T \). The idea behind the Laffer curve is the common sense notion that if average tax rates are zero, then, by necessity, tax revenues will also be nil. At the other end of the spectrum, the revenues going to the government will also be zero if tax rates are 100%, or perhaps, something less\(^1\), as no one will earn anything if everything he earns\(^2\) will be taken away from him.

We define \( T_o \) as that minimum\(^3\) positive \( T \) at which \( R \) falls to zero because no one has any incentive to earn an income\(^4\), as all, or at least too high a percentage of income is being commandeered\(^5\). For example, if people stop working, entirely, when the tax rate rises to 90%, then that level is defined as \( T_o \). The maximum value \( T_o \) can take on is of course 100%\(^6\).

\[ \begin{align*}
R &= \text{tax revenues} \\
T &= \text{average tax rate} \\
T_o &= \text{minimum positive tax rate} \\
T_{max} &= \text{maximum tax rate} \\
R_{max} &= \text{maximum tax revenue}
\end{align*} \]

\(^1\) The government's rate of income seizure need not be 100% in order to reach the situation where it derives no revenues at all. Quite possibly, this result might obtain at a slightly lower tax rate, say, between 90-99%. Here, too, the state might receive no payments, if all income earners decide to forego such activities.

\(^2\) Although the Laffer curve concerns an income tax, the same point can be made, mutatis mutandis, for virtually any other tax, under certain interpretations, albeit with exceptions. Consider in this regard specific taxes; e.g., a head tax, a poll tax, or a tax per gallon of gasoline. At a zero rate, the IRS will of course collect nothing. But what will be the fiscal effects of a 100% tax? It is impossible even so much as to define such levies.

\(^3\) Depending on what criteria are used to define the relevant tax rates, the Laffer curve may be defined as the maximum rate at which tax revenues first become zero (the minimum rate at which tax revenue goes to zero is, of course, zero). No matter which way you look at it, the reason tax revenues become zero at \( T_o \) is that the rate has become so onerous that no one will earn an income and therefore no matter what the (positive) rate is, when multiplied by zero income it yields zero revenue.

\(^4\) Whether by work or any other action

\(^5\) Alternatively, \( T_o \) may be defined as the minimum rate at which tax revenues first become zero (the minimum rate at which tax revenue goes to zero is, of course, zero). No matter which way you look at it, the reason tax revenues become zero at \( T_o \) is that the rate has become so onerous that no one will earn an income and therefore no matter what the (positive) rate is, when multiplied by zero income it yields zero revenue.

\(^6\) Gordon [1993, p. 398] disputes the claim that tax revenues would be zero at tax rates of 100%: 'Even this is not clear. Some people seem to enjoy their work so much that they might continue

Figure 1

Figure 1 depicts the Laffer curve, \( L \). It is drawn based on: a) the fact that if \( T = 0 \), \( \Rightarrow R = 0 \); b) the assumption that for \( T = T_o \), \( 0 < T < T_o \), \( R > 0 \); and, c) that \( R \) is defined as the rate at which tax revenues first become zero (the minimum rate at which tax revenue goes to zero is, of course, zero). No matter which way you look at it, the reason tax revenues become zero at \( T_o \) is that the rate has become so onerous that no one will earn an income and therefore no matter what the (positive) rate is, when multiplied by zero income it yields zero revenue.

3. - The public policy recommendations

Our claim is that the members of the economics profession who have entered the Laffer curve debate base their public policy recommendations up-to work even at a tax rate of 100 percent'. This, of course, ignores the fact that people without any income at all would quickly cease to exist. Fullerton [1982], who was cited by Abel – Bernanke [1992, p. 377] claimed that at that time the revenue maximizing tax rate was 79%. Based on 'casual empiricism', however, this figure seems very high to the current authors.
a critique of the claim that during the 1980s tax reductions caused budget deficits, and we conclude in section 6.

2. — The geometry of the Laffer curve analysis

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Figure 1 depicts the Laffer curve, \( L \). It is drawn based on: a) the fact that if \( T = 0, \Rightarrow R = 0 \); b) the assumption that for \( T = T_0, 0 < T_0 \leq 1, \Rightarrow R = 0 \); and, c) that \( V T, 0 < T < T_0, R > 0 \). Specifically, figure 1 is an example of a Laffer curve, drawn with the usual assumption that \( T_0 = 1 \). Note that in this figure, in the region marked \( A \) tax revenues rise as a result of a boost in the tax rate, while in the region marked \( B \) tax revenues increase as a result of a decrease in the tax rate.

The use made of this model concerns the 'proper' rate of taxation. Typically, the premise of the analysis assumes that the appropriate tax rate is the rate that maximizes government revenues, \( T_{\text{max}} \). Given this, the point at issue becomes, are present tax rates higher or lower than this one? That is, in terms of figure 1 are we in region \( B \) or \( A \)? If the former, then, for most commentators the public policy prescription that follows ineluctably is to lower tax rates so as to increase revenues; if the latter, then raise them, again with this same end in mind of enhancing government coffers.

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Our claim is that the members of the economics profession who have entered the Laffer curve debate base their public policy recommendations up-to work even at a tax rate of 100 percent'. This, of course, ignores the fact that people without any income at all would quickly cease to exist. Fullerton [1982], who was cited by Abel – Bernanke [1992, p. 377] claimed that at that time the revenue maximizing tax rate was 79%. Based on casual empiricism', however, this figure seems very high to the current authors.
on the result that will most enhance the scope of government. If tax revenues can be maximized by low tax rates, they favor this alternative. If, on the other hand, they are convinced that the income of the state can be increased by higher tax rates, they argue in behalf of them. Consider in this regard the following statements from the authors of introductory economic textbooks:\footnote{We surveyed the following introductory texts [ARNOLD, 2001; BOYES, 2002; CASE – FAIR, 2002; COLANDER, 1998; FARMER, 2002; GOTTHEIL, 2002; MCCONNELL, 2002; SEXTON, 2002; TUCKER, 2003] and intermediate texts [ABEL - BERMANKE, 1992; DORNBUSCH – FISCHER, 1987; BROVEN, 1999; GORDON, 1993; MILLER – VAN HOOSE, 2001]. We have chosen textbooks as our main source of information as to how economists deal with the Laffer curve since they tend to be the distillation of knowledge of the profession at any given time, with a suitable lag.}

1. «The point at which the Laffer curve peaks is important because it determines whether or not tax cuts from their current rates will increase the budget deficit. If the economy [...] is beyond the point of maximum revenue; tax cuts will stimulate the economy and increase revenue» [COLANDER, 1998, p. 449].
2. «The result of lowering taxes? Not very positive. Tax revenues did not increase [...]» [GOTTHEIL, 2002, p. 318; material in brackets inserted by present authors].
3. «The big debate in the 1980s was whether tax rates in the United States put the country on the upper or lower part of the (Laffer) curve in Figure 29.2. The supply-side school claimed the United States was [above the tax rate at which government revenue would be maximized] and taxes should be cut. Others argued that the United States was [below the tax rate at which government revenue would be maximized] and tax cuts would lead to lower tax revenue» [CASE – FAIR, 2002, p. 662; material in brackets inserted by present authors].

Nor were the authors of intermediate level texts immune from this mistake; i.e., from thinking that the optimal tax rate is that which maximizes government’s revenues rather than that which maximizes the aggregate income of the members of society.

4. «The Laffer curve indicates that if the income tax rate is sufficiently high, cutting the tax rate will raise income tax revenues. Only at lower rates will tax rate reductions necessarily reduce tax revenues [...] The difficult problem, naturally, is determining the location of the top point of the Laffer curve» [MILLER – VAN HOOSE, 2004, p. 185].
5. «Whatever the theoretical possibilities, the Kemp-Roth tax cuts did not lead to an increase in government revenue. Even if we concentrate on the full-employment budget, we do not see an increase in government revenue result from the tax cuts. This excessively optimistic element in supply-side economics [...]» [DORNBUSCH – FISCHER, 1987, p. 601].

6. «But the supply side claim was stronger than a claim that a cut in income tax rates would motivate people to work more. The supply-side claim was that, despite the cut in the tax rate, total tax revenue would rise because a lot more work would be done» [DORNBUSCH – FISCHER, 1987, p. 599].

Relying on Fullerton’s [1982] claim that the tax rate that maximized government revenue at that time was 79% (see footnote 6, supra), and given the fact that average tax rates have never been that high, Abel – Bernanke [1992, 377] conclude that we are always on that part of the L curve where lower tax rates lead to reduced government revenues, and hence any lowering of tax rates is contraindicated.

Based on the foregoing, it is not unfair to charge that in its Laffer curve analysis the profession seems mainly interested in determining whether or not changes in tax rates will increase or decrease government revenues, with the aim of achieving the former.

4. – The missing curve

But this conclusion is never justified in the literature surrounding the Laffer curve.\footnote{Of course, this is strictly an issue of the elasticity of Y with respect to T. (R = T Y(T) = T Y + Y and T > 0) = dY/dT > 0 if and only if T > 1. \footnote{There are of course numerous attempts to justify taxation in public finance texts. For a sampling mentioned by a critic of these efforts, see Block [1989, 1993].} The use of static scoring to forecast the effects of a proposed reduction in tax rates means that either some other tax rate has to be increased or some expenditure decreased (see Title II, Congressional Budget Act of 1974). Given the aversion of Congress to cutting expenditures, all of which benefit one constituency or another, static scoring makes it very difficult for proposed cuts in tax rates to become law.\footnote{The use of the assumption that underlies the Laffer curve analysis – that changes in tax rates can and do affect tax revenues – to forecast changes in tax revenues consequent on changes in tax rates is referred to as ‘dynamic scoring’. As recently as 1999 there was an attempt to change the law to require dynamic scoring (see HR 29, 1st Session 106th Congress).} The difficult problem, naturally, is determining the location of the top point of the Laffer curve.\footnote{Income (T), hereafter refers to aggregate pecuniary income.} »

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4. – The missing curve

But this conclusion is never justified in the literature surrounding the Laffer curve. Moreover, the curve, in and of itself, does not allow for a more complete analysis that focuses on some of the complexities involved. In order to remedy this weakness, we introduce a second curve, depicting the relationship between T and Y, income of the tax base. In figure 2 this appears as the...
intercept of $Y$ is positive, at a ‘small’ level of GDP. Here, we are implicitly assuming that government is not a necessary condition for economic performance. Rather, that without it, things will not be so chaotic that no income whatsoever will be earned by anyone; instead, the tax base will be ‘small’.

Figure 1 is divided into two (2) regions, $A$ and $B$. An increase in tax rates results in an increase in tax revenues and an increase in income in region $A$, and a decrease in both in region $B$. In figure 2, region $B$ remains the same; however, region $A$ is subdivided into regions $A1$ and $A2$. An increase in tax rates results in an increase in governmental revenues in both of these regions; however, national income increases in region $A1$ and decreases in region $A2$.

We see, then, that in region $A1$ both tax revenues and income rise as a result of an increase in the tax rate, whereas in region $B$ both tax revenues and income are enhanced as a result of a decrease in the tax rate; conversely, in region $A2$ tax revenues increase but income decreases as a result of a boost in the tax rate or, alternatively stated, it is the region in which tax revenues decrease but income increases as a result of a fall in the tax rate.

Having addressed the behavior of the $Y$ curve at $T = 0$, we now look at its relation with $L$ at the other end of the diagram, where the tax rate $T_y$ reaches the 100% level. We note that wherever $L$ intersects the horizontal axis, $Y$ will do so at precisely the same point. For the intersection of $L$ with the horizontal axis is defined as the point at which the populace no longer seeks to earn an income, given the voraciousness of the tax rate. But if no one produces anything, then, necessarily, there will be no income, $Y$, on the basis of which taxes are calculated. Hence, $Y$ and $L$ intersect the horizontal axis at precisely the same point.

Implicit in the analysis is that: a) tax revenue is equal to the product of the tax rate and income, $R = TY$; b) income is dependent on the tax rate.

14 If we assume that without any revenue no governmental entity could exist and that in such a case conditions would be so chaotic that no one will produce any income whatsoever, then in a figure representing that situation the $L$ and $Y$ curves would intersect at the origin.

15 The anarcho-capitalist contention that, absent government (i.e., tax rates and revenues are zero) not only will GDP not be zero, nor, even, ‘small’, but will actually be maximized. In a figure illustrating that case, the $Y$ curve would be at its maximum at $T = 0$; i.e., where it intercepted the vertical axis, and slope downward continuously until it intercepted the horizontal axis at $T = T_y = 1$. Actually, there are several conditions required for the anarcho-capitalism thesis to be true. Not only must government refrain from any and all taxation, it must also desist from demanding a monopoly position; e.g., it cannot preclude entry of private defense and court firms. As well, if it is to be a truly limited government, it cannot impose policies such as economic regulation. On this see Benson [1990], Friedman [1989], Kinsella [1995], Stringham [1998; 1999].

16 We use ‘national income’ not in some collective sense, but, rather, as the sum of individual pecuniary incomes.

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12 None of the texts mentioned in footnote 7, supra, utilize the $Y$ curve along with the $L$ curve, nor mention the possibility that tax revenues might be zero at tax rates less than 100%; indeed, to the best of our knowledge no publication at all utilizes this technique, which, hence, is being introduced here for the first time.

13 Swedish *marginal* tax rates rose above 100% during the 1970s. Tennis star Bjorn Borg was faced with paying *more* than he earned for some of his income.
curve \( Y = Y(T) \)\(^{12}\). Without the \( Y \) curve, the Laffer curve analysis devolves into one of ascertaining whether or not we are presently located to the left or right of the point of maximum government revenue. With the addition of the \( Y \) curve, we are in a position to gain greater insight into the advantages and disadvantages of tax policy to the government and the taxpayers.

First, let us consider the relationship between the income curve, \( Y \), and the Laffer curve, \( L \). It is clear that the former must everywhere lie above the latter. This is because, unless tax rates rise above 100\%\(^{13}\), the government’s take must necessarily be less than the GDP. In figure 2 the vertical intercept of \( Y \) is positive, at a ‘small’ level of GDP. Here, we are implicitly assuming that government is not a necessary condition for economic performance. Rather, that without it, things will not be so chaotic that no income whatsoever will be earned by anyone\(^{14}\); instead, the tax base will be ‘small’\(^{15}\).

Figure 1 is divided into two (2) regions, \( A \) and \( B \). An increase in tax rates results in an increase in tax revenues and an increase in income in region \( A \), and a decrease in both in region \( B \). In figure 2, region \( B \) remains the same; however, region \( A \) is subdivided into regions \( A1 \) and \( A2 \). An increase in tax rates results in an increase in governmental revenues in both of these regions; however, national income\(^{16}\) increases in region \( A1 \) and decreases in region \( A2 \).

We see, then, that in region \( A1 \) both tax revenues and income rise as a result of an increase in the tax rate, whereas in region \( B \) both tax revenues and income are enhanced as a result of a decrease in the tax rate; conversely, in region \( A2 \) tax revenues increase but income decreases as a result of a boost in the tax rate or, alternatively stated, it is the region in which tax revenues decrease but income increases as a result of a fall in the tax rate.

Having addressed the behavior of the \( Y \) curve at \( T = 0 \), we now look at its relation with \( L \) at the other end of the diagram, where the tax rate \( T \), reaches the 100\% level. We note that wherever \( L \) intersects the horizontal axis, \( Y \) will do so at precisely the same point. For the intersection of \( L \) with the horizontal axis is defined as the point at which the populace no longer seeks to earn an income, given the voraciousness of the tax rate. But if no one produces anything, then, necessarily, there will be no income, \( Y \), on the basis of which taxes are calculated. Hence, \( Y \) and \( L \) intersect the horizontal axis at precisely the same point.

Implicit in the analysis is that: a) tax revenue is equal to the product of the tax rate and income; i.e., \( R = T \cdot Y \); b) income is dependent on the tax rate;

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i.e., \( Y = Y(T); \) c) \( Y \geq 0 \) at \( T = 0 \); d) \( Y = 0 \) at \( T = T_0 \); e) \( 0 < T_0 \leq 1 \); and, f) \( Y > 0 \) \( \forall 0 < T < T_p \).

The failure to include the \( Y(T) \) curve in the usual Laffer curve analysis makes it easy to overlook an important point. It is that the tax rate at which national income is maximized is necessarily lower than that at which tax revenues are maximized because the only way for tax revenues to peak (and then decline) as tax rates increase is for income to decline (in percentage terms; i.e., it is a matter of the tax rate elasticity of income) at the same (a faster) rate than that at which the tax rates increase.

Given that \( Y \) reaches its maximum at \( T = T_{\text{max}} \) (which is necessarily less than \( T_{\text{bmax}} \), the \( T \) at which \( L \) reaches its maximum), we have drawn \( Y \) in figure 2 so as to indicate that this point occurs where the tax rate is approximately 10%. What is the justification for this? This is based on the classical liberal contention that a government limited to its natural law functions of armies, courts and police18 would require about this proportion of the GDP to properly acquit its responsibilities.

It is obvious that in region \( A1 \) the government prefers a higher \( T \) as both \( dY/dT \) and \( dR/dT > 0 \). It is also obvious that it prefers a lower \( T \) in region \( B \), as both \( dY/dT \) and \( dR/dT < 0 \). Moreover, it is most reasonable to assume that, unless the movement to higher national income from a position in either region \( A \) or \( B \) consequent on the appropriate tax rate change were to so alter the distribution of income that the majority of taxpayers ended up with lower after tax incomes, that the taxpayers as a whole, although not necessarily all of them, would prefer the same adjustments in tax rates favored by the government. It is in region \( A2 \) that the conflict between the rules and the ruled seems most likely to exist and to be maximized. In that region, \( dY/dT < 0 \) and \( dR/dT > 0 \). The state wants higher rates, because even though such rates will entail disincentives to production and the concomitant lower total income, the decrease in the tax base is more than offset by the increase in rates. Consequently, the

\[ 17 \text{ That is, } R_{\text{max}} \Rightarrow dR/dT = Y + T \cdot dY/dT = 0 \text{ and, } Y > 0 \Rightarrow dY/dT < 0 \text{ at } T_{\text{max}} \Rightarrow Y \text{ at } T_{\text{max}} > Y \text{ at } T_{\text{max}}. \text{ And, } Y + T \cdot dY/dT = 0 \Rightarrow dY/dT = -dY/T. (\text{It is true that } dR/dT = 0 \text{ at } Y = 0, \text{ and also at } Y = dY/dT = 0, \text{ but these are trivial cases.)} \]

\[ 18 \text{ See Gwartney – Stroup [1993], Machan [1990], Murray [1997], Nozick [1974], Read [1964].} \]

\[ 19 \text{ It must be stressed that although this figure, } 10\%, \text{ is only an approximation, whatever the true figure would be, it most assuredly would be much lower than the current rate. Moreover, it is an average – it would rise above that level during times of war, and fall below it in times of peace.} \]

\[ 20 \text{ We assume that government has no objection to a higher national income if it is attendant upon an increase in governmental revenues. However, one could conceive of circumstances where that might not be the case. For example, it is possible that a less than maximal income might be distributed in a way that favored the reelection of incumbents, whereas the distribution of the maximal income might not.} \]

government will have more of the taxpayers'21 wealth to spend. And, mutatis mutandis, in region \( A2 \) the majority of the taxpayers would oppose the tax policy changes favored by the government. Alternatively put, at the tax rate that maximizes the state's income, the aggregate income of the members of society is not maximized, and at the tax rate at which the aggregate income of society's individuals is maximized, the state's income is not maximized.

In region \( A2 \), the uses to which the increased revenue resulting from an increase in tax rates are put is irrelevant to \( Y \); it decreases regardless. Consider three possibilities; the increased \( R \) is used to: 1) finance the purchase of goods and/or services, assumed to be necessary for the provision of public goods22; 2) finance transfer payments; i.e., to redistribute income; and, 3) reduce a budgetary deficit or pay off existing debt.

In the first case, because the provision of additional public goods comes at the expense of national income, ceteris paribus, the gains to national income is suboptimal, for all that is involved is the method of financing governmental expenditures. If one method causes a reduction in national income ceteris paribus compared to another it must be inferior, and a fortiori, a decline greater than the average decline in national income.

Finally, any reduction in the deficit or debt at the expense of reduced national income is suboptimal, for all that is involved is the method of financing governmental expenditures. If one method causes a reduction in national income ceteris paribus compared to another it must be inferior, and a fortiori if it involves a redistribution of income.

Note the implication of this analysis for Ricardian equivalence. In region \( A1 \), a tax rate increase that is used to finance a reduction in the deficit or debt is desirable because it increases national income, whereas in regions \( A2 \) and \( B \), a tax rate increase that is used for this purpose is undesirable because it decreases national income. Moreover, so long as a change in the tax rate affects national income, Ricardian equivalence cannot exist.

This provides a concise explanation as to why the state is virtually always
government will have more of the taxpayers' wealth to spend. And, mutatis mutandis, in region $A_2$ the majority of the taxpayers would oppose the tax policy changes favored by the government. Alternatively put, at the tax rate that maximizes the state's income, the aggregate income of the members of society is not maximized, and at the tax rate at which the aggregate income of society's individuals is maximized, the state's income is not maximized.

In region $A_2$, the use to which the increased revenue resulting from an increase in tax rates are put is irrelevant to $Y$; it decreases regardless. Consider three possibilities; the increased $R$ is used to: 1) finance the purchase of goods and/or services, assumed to be necessary for the provision of public goods; 2) finance transfer payments; i.e., to redistribute income; and, 3) reduce a budgetary deficit or pay off existing debt.

In the first case, because the provision of additional public goods comes at the expense of national income, ceteris paribus, the gains to national income from the additional public goods must be more than offset by the losses in incomes arising from sources other than public goods, i.e., private goods.

In the second case, the redistribution of income comes at the expense of a lower average income for the entire population. Because the lower average income results despite the fact that the average income of the recipients/beneficiaries of the redistributed income increases, those from whom the redistributed funds come not only see a decline in their average incomes, but, a fortiori, a decline greater than the average decline in national income.

Finally, any reduction in the deficit or debt at the expense of reduced national income is suboptimal, for all that is involved is the method of financing governmental expenditures. If one method causes a reduction in national income ceteris paribus compared to another it must be inferior, and a fortiori if it involves a redistribution of income.

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This provides a concise explanation as to why the state is virtually always
trying to raise tax rates and a large majority of taxpayers are virtually always attempting to resist such increases.

5. Fiscal effects

In this section we attempt to correct the record concerning the empirical effects of lowering tax rates on tax revenues collected. In this regard, consider the following:

1) "Laffer's argument had considerable weight in President Reagan's decision to change the tax structure. In 1981, Congress passed the Kemp-Roth tax cut, which lowered tax rates. The highest marginal tax rate was cut from 70 to 50 percent. In 1986, the Tax Reform Act followed Kemp-Roth's lead, [...] cutting the top marginal rate to 31 percent [...]. The result? Not very positive. Tax revenues did not increase, contributing to the exceptionally large budget deficits of the 1980s" [GOTTHEIL, 2002, p. 318].

2) "The evidence following the tax cuts did, however contribute to a larger budget deficit, implying that the U.S. was not on the backward bending portion of the Laffer curve" [BOYES - MELVIN, 2002, p. 279].

3) "If [...] the reference was to the federal income tax and the time period was the immediate short run (i.e., the year following the tax cut), most economists felt that the economy would be on the upward-sloping part of the Laffer Curve and lower income tax rates would decrease tax revenues and increase the deficit. And that is what happened in the 1980s - tax revenues fell and the budget deficit increased when tax rates were lowered from a minimum rate of about 70 percent to a maximum rate of about 36 percent" [COLANDER, 1998, p. 450].

4) Gordon [1993, p. 399] claims that in the 1980s we were on the positively sloped section of the Laffer curve based on "the fact that the U.S. entered an era of persistent deficits after the Reagan tax cuts [...]"

5) "In practice, the effect of the Reagan tax cuts in 1981 was to cause an increase in the deficit [...] This [...] does throw doubt on the idea of the supply-siders that the economy was on the wrong side of the Laffer curve" [FARMER, 2002, p. 96].

6) "If the economy is at any point below m on the curve, then tax reductions will reduce tax revenues and possibly create budget deficits. That, say critics, is exactly what happened when the Reagan administration cut Federal income tax rates by about 25 percent over a 3-year period in the early 1980s" [MCCONNELL-BRUE, 2002, p. 320].

Despite the foregoing, which can reasonably be characterized as constituting the consensus of the profession, it is by no means true that the lowering of tax rates in the 1980s was the cause of budget deficits. These ensued, to be sure. But they came about not because of decreased tax revenues; rather, they were due to increased expenditures.

It is obvious from the data in table 1 that the statement, "Tax revenues did not increase, contributing to the exceptionally large budget deficits of the 1980s" is factually incorrect. It is bad enough that such error is a common occurrence in the various news media; in an economics textbook written by a professional economist it is inexcusable.

Had real outlays remained at their 1981 level (column 9) from 1981 through 1990, instead of accumulating a deficit of $3,712 billion during that decade; i.e., an average of $171 billion per year, the debt would 'only' have increased by $470 billion; i.e., an average of 'only' $47 billion per year. Moreover, instead of seeing the annual deficit rise to $208 billion in 1983 and then remain above $150 billion every year for the rest of that decade, including a

<p>| Table 1 |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|</p>
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5+6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employ. taxes and &quot;contrib.&quot;</td>
<td>Corp. income tax</td>
<td>Ind. income tax</td>
<td>+3</td>
<td>+3</td>
<td>Receipts from all sources</td>
<td>Total outlays</td>
<td>Actual deficit (−)</td>
<td>Total outlays adjusted for inflation</td>
</tr>
<tr>
<td>1981</td>
<td>163</td>
<td>61</td>
<td>286</td>
<td>347</td>
<td>510</td>
<td>509</td>
<td>679</td>
<td>−79</td>
</tr>
<tr>
<td>1982</td>
<td>181</td>
<td>49</td>
<td>298</td>
<td>347</td>
<td>528</td>
<td>618</td>
<td>746</td>
<td>−128</td>
</tr>
<tr>
<td>1983</td>
<td>186</td>
<td>37</td>
<td>289</td>
<td>326</td>
<td>512</td>
<td>601</td>
<td>808</td>
<td>−208</td>
</tr>
<tr>
<td>1984</td>
<td>210</td>
<td>37</td>
<td>289</td>
<td>355</td>
<td>565</td>
<td>667</td>
<td>852</td>
<td>−186</td>
</tr>
<tr>
<td>1985</td>
<td>233</td>
<td>61</td>
<td>335</td>
<td>396</td>
<td>631</td>
<td>734</td>
<td>946</td>
<td>−212</td>
</tr>
<tr>
<td>1986</td>
<td>255</td>
<td>63</td>
<td>349</td>
<td>412</td>
<td>667</td>
<td>769</td>
<td>990</td>
<td>−221</td>
</tr>
<tr>
<td>1987</td>
<td>273</td>
<td>84</td>
<td>393</td>
<td>477</td>
<td>750</td>
<td>854</td>
<td>1,004</td>
<td>−150</td>
</tr>
<tr>
<td>1988</td>
<td>305</td>
<td>95</td>
<td>401</td>
<td>496</td>
<td>801</td>
<td>909</td>
<td>1,064</td>
<td>−155</td>
</tr>
<tr>
<td>1989</td>
<td>333</td>
<td>103</td>
<td>446</td>
<td>549</td>
<td>882</td>
<td>991</td>
<td>1,144</td>
<td>−152</td>
</tr>
<tr>
<td>1990</td>
<td>354</td>
<td>94</td>
<td>467</td>
<td>561</td>
<td>915</td>
<td>1,031</td>
<td>1,252</td>
<td>−221</td>
</tr>
<tr>
<td>1981−1990</td>
<td>2,495</td>
<td>704</td>
<td>3,562</td>
<td>4,266</td>
<td>6,761</td>
<td>7,773</td>
<td>9,485</td>
<td>−1,712</td>
</tr>
</tbody>
</table>

Source: Statistical Abstract of the United States, various years.

State Dornbusch - Fischer [1987, p. 601]: "Quite another motive than supply-side arguments also led the Reagan administration to cut tax rates, despite the high deficits that would probably result over the next few years. That was the argument that the only way to get Congress to cut government spending is to reduce the revenue it receives. The administration believed that unless tax rates were cut, and tax revenues reduced, the Congress would continue to spend. One of the major aims of the Reagan administration was to cut government spending, and so it was willing to have deficits for some time to put pressure on the Congress to reduce spending. But this claim, too, is difficult to reconcile with the facts. As can readily be seen from a perusal of table 1, the very opposite occurred: spending increased from $679B to $1,252B, almost a doubling."
trying to raise tax rates and a large majority of taxpayers are virtually always attempting to resist such increases.

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deficit of $221 in 1990, that matched the all time high that had been reached earlier in the decade (1986), the annual deficit would have risen to a high of ‘only’ $149 billion. Thereafter the deficit would have declined every year until it was virtually eliminated in 1987, and then turned into a surplus of $15 billion in 1988, that would have then risen to $57 billion in both 1989 and 1990. It is true that, had real outlays remained constant, the deficit would have risen for two (2) years before starting to decline; however, there is nothing startling about the fact that people do not adjust their behavior instantly to changes in governmental policies, even tax policies.

Therefore, it is obvious that the cause of the huge and increasing deficits of the 1980s was not a decrease in tax revenues, but rather voracious federal expenditures that grew even faster than did the revenues; expenditures in 1990 were 84% higher than they had been in 1981, whereas revenues were ‘only’ 72% higher, and this in spite of the fact that the that the outlays began from a base some 13.3% higher than revenues in 1981.

We end this section on a positive note: an honorable mention should be given to Miller – Van Hoose [2001, pp. 240-241] who state: «The difficult problem, naturally, is determining the location of the top point of the Laffer curve. The evidence on this issue is mixed. Shortly after significant reductions in average tax rates were enacted in the early 1980s, tax revenues declined, and the deficit increased sharply. At first glance, these events seem to support the static view. The difficulty with this off-the-cuff judgment, however, is that the U.S. economy went into a sharp recession in the early 1980s even as tax rates were cut, because autonomous investment and consumption declined sharply. Even though government spending also increased in the early 1980s […] these declines in private spending led to a net reduction in equilibrium real income. Consequently, the true result of the 1980s experiment with the Laffer curve is difficult to judge.»

This was the only analysis we encountered in our textbook survey which acknowledged that ceteris might not have been paribus while tax rates were declining in the 1980s; and that emphasized the importance of the fact that government outlays might have had anything to do with resulting deficits.

6. – Summary and conclusions

This paper has demonstrated the universal shortcoming of Laffer curve analysis: the failure to include the curve that depicts the tax base as a function of the tax rate. Such oversight focuses attention on determining the rate that would maximize tax revenues rather than on the one that would maximize aggregate income; surely, both issues are important. As a consequence, such analysis fails to point out the inherent conflict that arises between the taxpayers and the recipients of the tax payments. And, it has shown that those who claim: 1) that Laffer curve analysis applied to the U.S. economy led to incorrect predictions of tax revenue increases as a result of the tax rate decreases of the 1980s; and, 2) that the deficits of the 1980s were the consequence of decreased tax rates, were factually incorrect on both counts.

REFERENCES


FARMER, R. E., 2002, Macroeconomics, Cincinnati, South-Western College Publishing.


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