

WHEN YOU'RE RIGHT,
WELL, YOU'RE RIGHT

THE LAFFER CURVE

By Dr. Arthur B. Laffer

Thinking Economically

Lesson 9

Thinking Economically

Key economic concepts at the foundation of our market-based economy, such as value, entrepreneurship, and competition, often get lost in today's complex policy debates. Too often this results in unforeseen consequences that no one involved intended to bring about.

Thinking Economically is a project of the Texas Public Policy Foundation designed to provide a basic economic education for policymakers, the media, and the general public. In this way, the Foundation hopes to highlight the intersection of economics and public policy, and the importance of "thinking economically" when making policy decisions. We are grateful to be able to undertake this project with the assistance of Dr. Arthur Laffer, who has throughout his distinguished career shaped the thinking of many world leaders by bringing sound economic thought into policy debates and the public's awareness.

Thinking Economically

For good or ill, many people reduce the entire pro-growth world view of supply-side economics down to the “Laffer Curve,” which graphically depicts the tradeoff between tax rates versus the total tax revenues actually collected by the government. Indeed, you could probably learn a lot about someone’s economic views if you simply asked, “Do you believe in the Laffer Curve?” In this paper, I’ll explain the history behind the Curve and quickly make the case for its potency. Finally, I’ll turn to the Texas Tax Code and compare it favorably to other state codes, from a supply-side perspective.

THE LEGEND OF THE LAFFER CURVE

The story of how the Laffer Curve got its name isn’t one of the Just So Stories by Rudyard Kipling. It began with a 1978 article published by Jude Wanniski in *The Public Interest* entitled, “Taxes, Revenues, and the ‘Laffer Curve.’” As recounted by Wanniski (then-associate editor of *The Wall Street Journal*), in December of 1974 he had been invited to have dinner with me (then professor at The University of Chicago), Don Rumsfeld (chief of staff to President Gerald Ford), and Dick Cheney (Rumsfeld’s deputy and my former classmate at Yale) at the Two Continents Restaurant at the Washington Hotel in Washington, D.C. According to Wanniski, while discussing President Ford’s “WIN” (Whip Inflation Now) proposal for tax increases, I supposedly grabbed my napkin and a pen and sketched a curve on the napkin illustrating the tradeoff between tax rates and tax revenues. Wanniski named the tradeoff the “Laffer Curve.”

I personally don’t remember the details of that evening we all spent together, but Wanniski’s version could well be true. I used the so-called Laffer Curve all the time in my classes and to anyone else who would listen, to illustrate the tradeoff between tax rates and tax revenues. My only question on Wanniski’s version of the story concerns the fact that the restaurant used cloth napkins and my mother had raised me not to desecrate nice things. Oh well, that’s my story and I’m sticking to it.

This pattern isn’t just a coincidence. There are straightforward reasons for the tendency of government interventions in the market to mess things up. In this lesson I’ll briefly lay out the theory of government failure, and then follow up with several different examples of government in action.

THE HISTORICAL ORIGINS OF THE LAFFER CURVE

Contrary to some of my harshest critics, the Laffer Curve was not invented by me. It is so straightforward that it shouldn’t surprise us that people knew all about it hundreds of years ago. For example, the Muslim philosopher, Ibn Khaldun, wrote in his 14th century work *The Muqaddimah*:

It should be known that at the beginning of the dynasty, taxation yields a large revenue from small assessments. At the end of the dynasty, taxation yields a small revenue from large assessments.

A more recent version of incredible clarity was written by none other than John Maynard Keynes:

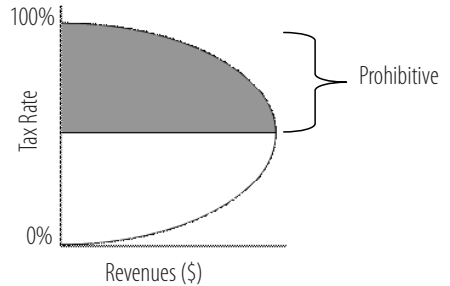
*Nor should the argument seem strange that taxation may be so high as to defeat its object, and that, given sufficient time to gather the fruits, a reduction of taxation will run a better chance than an increase of balancing the budget. For to take the opposite view today is to resemble a manufacturer who, running at a loss, decides to raise his price, and when his declining sales increase the loss, wrapping himself in the rectitude of plain arithmetic, decides that prudence requires him to raise the price still more—and who, when at last his account is balanced with nought on both sides, is still found righteously declaring that it would have been the act of a gambler to reduce the price when you were already making a loss.**

BASIC CURVE THEORY

The basic idea behind the relationship between tax rates and tax revenues is that changes in tax rates have two effects on revenues: the arithmetic effect and the economic effect. The arithmetic effect is the static effect, and is what everyone thinks of when considering a change in tax rates: if rates are lowered, tax revenues per dollar of tax base will be lowered by the amount of the decrease in the rate. And the reverse is true for an increase in tax rates. The economic effect, however, is the less obvious dynamic effect; it recognizes the positive impact that lower tax rates have on work, output, and employment and thereby the tax base by

* John Maynard Keynes, "The Collected Writings of John Maynard Keynes," London: Macmillan Cambridge University Press, 1972.

Figure 1: The Laffer Curve



providing incentives to increase these activities. Raising tax rates has the opposite economic effect, by penalizing participation in the taxed activities. The arithmetic effect always works in the opposite direction from the economic effect. Therefore, when the economic and the arithmetic effects of tax rate changes are combined, the consequences of the change in tax rates on total tax revenues are no longer quite so obvious.

Figure 1 is a graphic illustration of the concept of the Laffer Curve. Of course this picture is just a mental aid; in the real world the curve might look different. At a tax rate of 0%, the government would collect no tax revenues, no matter how large the tax base. Likewise, at a tax rate of 100%, the government would also collect no tax revenues because no one would be willing to work for an after-tax wage of zero—there would be no tax base.

Now this is important, because my critics—and even my fans—sometimes botch this point: The Laffer Curve by itself doesn't say whether a tax cut will raise or lower revenues. Revenue responses to a tax rate change will depend upon the tax system in place, the

time period being considered, the ease of moving into underground activities, the level of tax rates already in place, the prevalence of legal and accounting-driven tax loopholes, and the proclivities of the productive factors. If the existing tax rate is too high—in the “prohibitive range” shown by the shaded area in the diagram above—then a tax-rate cut would result in increased tax revenues. The economic effect of the tax cut would outweigh the arithmetic effect of the tax cut.

To summarize, I never predicted that any and all tax rate reductions would necessarily bring in more total revenues in the following period. What I do say is that tax rate reductions will always yield a smaller loss in revenues than one would have expected, merely relying on static estimates of the previous tax base. Now it is true that the higher the tax rates we start with, the more potent the supply-side stimulus will be from slashing those rates. It is entirely possible that this economic effect will swamp the arithmetic effect, so that tax revenues actually increase. But even if they don't, this doesn't “disprove” the Laffer Curve, and it also doesn't render the tax cut a bad idea. After all, there is more to fiscal policy than simply maximizing government revenue. Tax rate cuts will always lead to more growth, employment, and income for citizens.

LESSONS FROM HISTORY: THREE TESTS OF THE LAFFER CURVE

During the 20th century, the U.S. had three major periods of tax-rate cuts: the Harding/Coolidge cuts of the mid-1920s, the Kennedy cuts of the mid-1960s, and the Reagan cuts of the early 1980s. Each of these periods of tax cuts was remarkably successful in terms of virtually any public policy metric.

Prior to discussing and measuring these three major periods of U.S. tax cuts, three critical points have to be made: one regarding the size of tax cuts, another regarding their timing, and, lastly, one regarding their location.

i) Size of Tax Cuts

People don't work, consume, or invest to pay taxes. They work and invest to earn after-tax income and they consume to get the best buys—after tax. Therefore, people are not concerned per se with taxes, but instead their concern is focused on after-tax results. Taxes and after-tax results are very similar but have crucial differences.

Using the Kennedy tax cuts of the mid-1960s as our example, it is easy to show that identical percentage tax cuts, when (and where) tax rates are high, are far larger than when (and where) tax rates are low. When Kennedy took office in 1961, the highest federal marginal tax rate was 91%, and the lowest rate was 20%. By earning a dollar pre-tax, the highest-bracket income earner would receive nine cents after-tax (the incentive), while the lowest-bracket income earner would receive 80 cents after-tax. These after-tax earnings were the relative after-tax incentives to earn the same pre-tax amount (one dollar).

By 1965, after Kennedy's tax cuts were fully effective, the highest federal marginal tax rate had been lowered to 70% (a drop of 23% or 21 percentage points from a base of 91%), and the lowest tax rate was dropped to 14% (a 30% drop from a base of 20%). Now by earning a dollar pre-tax, the person in the highest tax bracket would receive 30 cents after-tax, or a 233% increase from the 9 cents after-tax earned when the tax rate was 91%, and the person in

the lowest tax bracket would receive 86 cents after-tax, or a 7.5% increase from the 80 cents earned when the tax rate was 20%.

Putting this all together, the increase in incentives in the highest tax bracket was a whopping 233% for a 23% cut in tax rates—a ten-to-one benefit/cost ratio—while the increase in incentives in the lowest tax bracket was a mere 7.5% for a 30% cut in rates—a one-to-four benefit/cost ratio. The lessons here are simple: The higher tax rates are, the greater the economic (supply-side) impact of a given percentage reduction in tax rates. Likewise, under a progressive tax structure, an equal across-the-board percentage reduction in tax rates should have its greatest impact in the highest tax bracket and its least impact in the lowest tax bracket.

ii) Timing of Tax Cuts

The second and equally important concept of tax cuts concerns the timing of those cuts. In their quest to earn what they can after-tax, people not only can change how much they work but also when they work, when they invest, and when they spend. Lower expected tax rates in the future will reduce taxable economic activity in the present, as people try to shift activity out of the relatively-higher-taxed present period into the relatively lower taxed future period. People tend not to shop at a store a week before that store has its well-advertised discount sale. Likewise, in the periods before legislated tax cuts actually take effect, people will defer income and then realize that income when tax rates have fallen to their fullest extent. It has always amazed me how tax cuts don't work until they actually take effect. When assessing the impact of tax legislation, it is imperative to start the measurement of the tax cut period after all the tax cuts have been put into effect.

iii) Location of Tax Cuts

As a final point, people can also choose where they earn their after-tax income, where they invest their money, and where they spend their money. Regional and country differences in various tax rates matter.

THE HARDING/COOLIDGE TAX CUTS

In 1913, the federal progressive income tax was put into place, with a top marginal rate of 7%. Thanks in part to World War I, this tax rate increased significantly very quickly, peaking at 77% in 1918. Then, through a series of tax-rate reductions, the Harding/Coolidge tax cuts dropped the top personal marginal income tax rate to 25% in 1925.

While tax collection data for the National Income and Product Accounts (from the U.S. Bureau of Economic Analysis) don't exist for the 1920s, we do have total federal receipts from the U.S. budget tables. During the four years prior to 1925 (the year the tax cut was fully enacted), inflation-adjusted revenues declined by an average of 9.2% per year. Over the four years following the tax-rate cuts, revenues remained volatile but averaged an inflation-adjusted gain of 0.1% per year. The economy responded strongly to the tax cuts, with output nearly doubling and unemployment falling sharply.

THE KENNEDY TAX CUTS

During the Depression and World War II, the top marginal income tax rate rose steadily, peaking at an incredible 94% in 1944 and 1945. The rate remained above 90% well into President John F. Kennedy's term in office, which began in 1961. Kennedy's fiscal policy stance

made it clear he was a believer in pro-growth, supply-side tax measures. Kennedy said it all in January of 1963 in the *Economic Report of the President*:

Tax reduction thus sets off a process that can bring gains for everyone, gains won by marshalling resources that would otherwise stand idle—workers without jobs and farm and factory capacity without markets. Yet many taxpayers seemed prepared to deny the nation the fruits of tax reduction because they question the financial soundness of reducing taxes when the federal budget is already in deficit. Let me make clear why, in today's economy, fiscal prudence and responsibility call for tax reduction even if it temporarily enlarged the federal deficit—why reducing taxes is the best way open to us to increase revenues.

President Kennedy proposed massive tax-rate reductions that passed Congress and went into law after he was assassinated. The 1964 tax cut reduced the top marginal personal income tax rate from 91% to 70% by 1965. The cut reduced lower-bracket rates as well. In the four years prior to the 1965 tax rate cuts, federal government income tax revenue, adjusted for inflation, had increased at an average annual rate of 2.1%, while total government income tax revenue (federal plus state and local) had increased 2.6% per year. In the four years following the tax cut, these two measures of revenue growth rose to 8.6% and 9.0%, respectively. Government income tax revenue not only increased in the years following the tax cut, it increased at a much faster rate in spite of the tax cuts.

The Kennedy tax cut set the example that Reagan would follow some 17 years later. By increasing incentives to work, produce, and

President John F. Kennedy's fiscal policy stance made it clear he was a believer in pro-growth, supply-side tax measures.



invest, real GDP growth increased in the years following the tax cuts, more people worked, and the tax base expanded. Additionally, the expenditure side of the budget benefited, too, because the unemployment rate was significantly reduced.

THE REAGAN TAX CUTS

In August of 1981, Ronald Reagan signed into law the Economic Recovery Tax Act (ERTA, also known as Kemp-Roth). ERTA slashed marginal earned income tax rates by 25% across-the-board over a three-year period. The highest marginal tax rate on unearned income dropped from 70% to 50% immediately (the Broadhead Amendment), and the tax rate on capital gains fell immediately from 28% to 20%. Five percentage points of the 25% cut went into effect on October 1, 1981. An additional 10 percentage points of the cut then went into effect on July 1, 1982, and the final 10 percentage points of the cut began on July 1, 1983.

These across-the-board, marginal-tax-rate cuts resulted in higher incentives to work, produce, and invest, and the economy responded. Between 1978 and 1982, the economy grew at a 0.9% rate in real terms, but from 1983 to 1986 this growth rate increased to 4.8%.

Prior to the tax cut, the economy was choking on high inflation, high interest rates, and high unemployment. All three of these economic bellwethers dropped sharply after the tax cuts. The unemployment rate, which had peaked at 9.7% in 1982, began a steady decline, reaching 7.0% by 1986 and 5.3% when Reagan left office in January 1989.

Inflation-adjusted revenue growth dramatically improved. Over the four years prior to 1983, federal income tax revenue declined at an average rate of 2.8% per year, and total government income tax revenue declined at an annual rate of 2.6%. Between 1983 and 1986, these figures were a positive 2.7% and 3.5%, respectively.

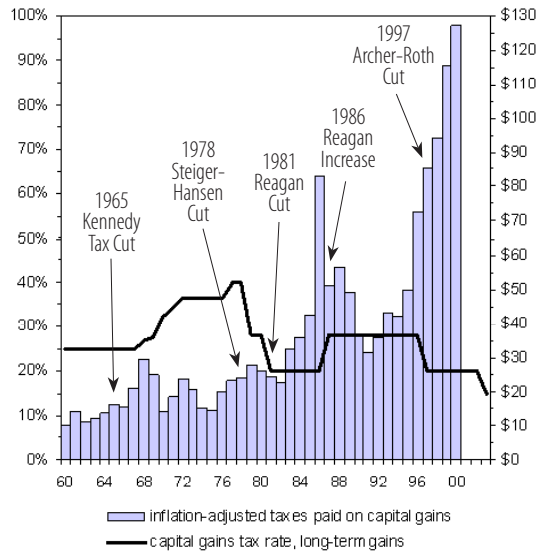
THE LAFFER CURVE AND THE CAPITAL GAINS TAX

Although studying the effects of cuts in income tax rates is useful, the Laffer Curve really shines when it comes to the capital gains tax. This is because people have much more control over the timing of the realization of capital gains, and so the economic effects are particularly pronounced.

The historical data on changes in the capital gains tax rate show an incredibly consistent pattern. Just after a capital gains tax rate cut, there is a surge in revenues; just after a capital gains tax rate increase, revenues take a dive. Also, as would be expected, just before a capital gains tax rate cut, there is a sharp decline in revenues, and just before a tax rate increase, there is an increase in revenues. Timing really does matter.

This all makes complete sense. If you could choose when to realize capital gains for tax purposes, you would clearly realize your gains

Figure 2: Top Capital Gains Tax Rate and Inflation-Adjusted Revenue (1960-2000, federal, in billions of 2000\$)



before tax rates are raised (Figure 2). No one wants to pay higher taxes.

In the 1960s and 1970s, capital gains tax receipts averaged around 0.4% of GDP, with a nice surge in the mid-1960s following President Kennedy’s tax cuts and another surge in 1978-79 after the Steiger-Hansen capital gains tax-cut legislation went into effect.

Following the 1981 capital gains cut from 28% to 20%, nominal capital gains tax revenues leapt from \$12.5 billion in 1980 to \$18.7 billion by 1983—a 50% increase. During this period, capital gains revenues rose to approximately 0.6% of GDP.

As expected, the increase in the capital gains tax rate from 20% to 28% in 1986 led to

a surge in nominal tax revenues prior to the increase (\$52.9 billion in 1986) and a collapse in revenues after the increase took effect (\$24.9 billion in 1991). (Note that Figure 2 displays inflation-adjusted revenue.)

The return of the capital gains tax rate from 28% back to 20% in 1997 was an unqualified success, and every claim made by the critics was wrong. The tax cut, which went into effect in May of 1997, increased asset values and contributed to the largest gain in productivity and private sector capital investment in a decade. Also, the capital gains tax cut was not a revenue loser for the federal Treasury.

In 1996, the year before the tax rate cut and the last year with the 28% rate, taxes paid on assets sold totaled \$66.4 billion (Table 1). A year later, tax receipts jumped to \$79.3 billion, and they jumped again to \$89.1 billion in 1998. The capital gains tax rate reduction played a big part in the 91% increase in tax receipts collected from capital gains between 1996 and 2000—a percentage far greater than the most ardent supply-siders expected.

Seldom in economics does real life so closely conform to theory as this capital gains

example does to the Laffer Curve. Lower tax rates change people's economic behavior and stimulate economic growth, which can create more, not less, tax revenue.

RANKING TEXAS FROM A SUPPLY-SIDE PERSPECTIVE

Above, we have shown the tremendous impact that pro-growth policies can have on a given region over time. But another illustration of the power of supply-side legislation is to look at different regions at the same time. To this end, I have literally spent decades studying the various states of the Union, ranking them in terms of their fiscal policies and regulatory burdens. I am happy to report that Texas has done very well in our most recent ranking.

As Figure 3 (excerpted from our State Competitive Environment Guidebook—which itself will be the focus of the next paper) makes clear, Texas compares very favorably with other states in our most recent ranking. Texas' lack of personal income and estate taxes, its lack of a state minimum wage, and its right-to-work status all contribute—with 13 other factors—to make Texas 10th best in our "Economic Outlook" rank, while Texas' past economic

Table 1: 1997 Capital Gains Tax Rate Cut: Actual Revenue vs. Government Forecast (in \$billions)

	1996	1997	1998	1999	2000
Long-Term Capital Gains Tax Rate	28%	20%	20%	20%	20%
Net Capital Gains:					
Pre-Tax Cut Estimate (Jan-97)	--	\$205	\$215	\$228	n/a
Actual	\$261	\$365	\$455	\$553	\$644
Capital Gains Tax Revenue:					
Pre-Tax Cut Estimate (Jan-97)	--	\$55	\$65	\$75	n/a
Actual	\$66	\$79	\$89	\$112	\$127

Figure 3: Texas Ranking from Laffer State Competitive Environment Guidebook (2007)

Texas		Economic Performance Rank: 1st <small>Best</small>	Economic Outlook Rank: 10th <small>Best</small>
Economic Performance Rank (1=Best, 50=Worst): A backward looking measure based on the state's performance (equal-weighted average) in the three important performance variables shown below. These variables are highly influenced by state policy.		Economic Outlook Rank (1=Best, 50=Worst): A forward looking forecast based on the state's standing (equal-weighted average) in the 16 important state policy variables shown below. Data reflect state + local rates and revenues and any effect of federal deductibility.	
1) Personal Income Per Capita Cumulative Growth, 1996-2006: 55% Rank: 12th			
2) Absolute Domestic Migration, Cumulative, 1997-2006: 667,810 Rank: 3rd			
3) Non-farm Payroll Employment Cumulative Growth, 1996-2006: 21.7% Rank: 7th			
1) Top Marginal Personal Income Tax Rate: 0.00% Rank: 1st	2) Top Marginal Corporate Income Tax Rate: 4.50% Rank: 6th		3) Personal Income Tax Progressivity: (change in tax liability per \$1,000 income) \$0.00 Rank: 2nd
4) Property Tax Burden: (per \$1,000 of personal income) \$42.13 Rank: 42nd	5) Sales Tax Burden: (per \$1,000 of personal income) \$28.64 Rank: 34th		6) Remaining Tax Burden: (per \$1,000 of personal income) \$20.36 Rank: 31st
7) Estate/Inheritance Tax Levied?: No Rank: 1st	8) Recent Legislated Tax Changes: (2005 and 2006, per \$1,000 of personal income) -\$4.13 Rank: 3rd		9) Debt Service as a % of Total Tax Revenue: 10.7% Rank: 41st
10) Public Employees Per 10,000 of Population (full-time equivalent) 559.4 Rank: 27th	11) State Liability System Survey: (tort litigation treatment, judicial impartiality, etc.) 54.3 Rank: 44th		12) State Minimum Wage: (Federal Floor is \$5.85) \$5.85 Rank: 1st
13) Ave. Workers' Compensation Costs: (per \$100 of payroll) \$2.84 Rank: 35th	14) Right-To-Work State: (optional joining or supporting of a union) Yes Rank: 1st		15) Number of Tax Expenditure Limits: (0=least/worst, 3=most/best) 1 Rank: 13th
16) Education Freedom Index Score: (vouchers, ease of private/home schooling) 2.32 Rank: 7th			

performance earns our top rank in the country. To those who would argue that Texas is “undertaxed” or “underregulated” vis-à-vis other states, we respond: just look at the relatively poor economic performance of those states that *are* overtaxed and overregulated!

Finally, a word about HB 3, which revamped business taxes in Texas in 2006. I generally endorse the spirit of this measure, which I consider a net tax cut that lowered marginal

tax rates and expanded the tax base. Indeed, this is the whole motivation of my calls for a flat tax at both the state and federal levels. An ideal tax system is light in its burden, so as not to discourage the activity in question, and it is distributed as widely as possible, so as not to artificially induce people into uneconomic behavior. There are various ways to suck tax revenues out of the public, and a low-rate, broad-based approach is the least painful. ♦

Thinking Economically

ABOUT THE AUTHOR



Arthur B. Laffer is the founder and chairman of Laffer Associates, an economic research and consulting firm that provides global investment-research services to institutional asset managers, pension funds, financial institutions, and corporations. Since its inception in 1979, the firm's research has focused on the interconnecting macroeconomic, political, and demographic changes affecting global financial markets.

Dr. Laffer has been widely acknowledged for his economic achievements. His economic acumen and influence in triggering a world-wide tax-cutting movement in the 1980s have earned him the distinction as the “Father of Supply-Side Economics.” He was also noted in *TIME*'s 1999 cover story on the “Century's Greatest Minds” for inventing the Laffer Curve, which it deemed one of “a few of the advances that powered this extraordinary century.” His creation of the Laffer Curve was deemed a “memorable event” in financial history by the *Institutional Investor* in its July 1992 Silver Anniversary issue, “The Heroes, Villains, Triumphs, Failures and Other Memorable Events.”

Dr. Laffer was a member of President Reagan's Economic Policy Advisory Board for both of his two terms (1981-1989).



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The public is demanding a different direction for their government, and the Texas Public Policy Foundation is providing the ideas that enable policymakers to chart that new course.

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