LAFFER ASSOCIATES
Supply-Side Investment Research
November 11, 2003

10-yr T-Note: 4.44%	DJIA: 9,756.53	NASDAQ: 1,941.64	S&P 500: 1,047.11	S&P 500 Undervalued: 50.4%

SUPPLY-SIDE ECONOMICS:

"VOODOO ECONOMICS" OR LASTING CONTRIBUTION?

By Bruce Bartlett[1]

Introduction

In the mid-1970s, a new term began to appear in discussions of economic policy: supply-side economics.[2] It was controversial from the very beginning. Indeed, even Republicans like George H.W. Bush referred to it as "voodoo economics" (Cannon 1982: 325). Nevertheless, it was embraced by Ronald Reagan and formed the basis for the 1981 tax cut and many of Mr. Reagan's other policies.

Not much is heard about supply-side economics these days. Many economists view the prosperity of the 1990s as refutation of it. Whereas supply-side economics was based on tax cuts that led to large budget deficits, it is often said, growth in the 1990s was triggered by the 1993 tax increase, which led to lower deficits and eventual surpluses (Stevenson 2000).

Indeed, in certain quarters, supply-side economics is viewed as nothing but an elaborate trick played on the American people. Like the alchemists of old, who said they could make gold from lead, the supply-siders promised increased revenues from lower tax rates, knowing full well that this is impossible. Former Senator Daniel Patrick Moynihan (D-NY) has argued forcefully that supply-siders never expected higher revenues and simply made the whole thing up (Moynihan 1985). David Stockman, Director of the Office of Management and Budget under President Reagan, said more or less the same thing (Greider 1981).

The Moynihan/Stockman charge is a serious one, implying intellectual dishonesty on the part of many prominent economists, including myself. I was a part of the supply-side movement starting in 1977, when I joined the staff of Congressman Jack Kemp (R-NY), one the earliest and most vocal advocates of supply-side economics. As the most junior member of the group, I had the opportunity to observe all of the key players at close hand during the formative period of the development of supply-side economics.

The basics of supply-side theory had already been formulated when I came on the scene. Much of the early work had been done by economists Paul Craig Roberts, who preceded me on Kemp's staff, and Norman Ture, a private economist long affiliated with the National Bureau of Economic Research.[3] Another key player was Jude Wanniski, an editorial writer for the *Wall Street Journal*, who came to supply-side economics through the work of economists Robert Mundell and Arthur Laffer.

I believe that an examination of what these and other supply-siders said and wrote during the critical period of 1974 to 1981 shows that there was a much firmer foundation to their work than is commonly believed. A lot of serious research underlay supply-side economics, much done by economists who would have rejected the supply-side label.

Although it is only one aspect of supply-side economics, the Laffer Curve has come to represent what it was all about, in the minds of most people. It simply makes the indisputably true point that neither a zero percent tax rate nor a 100 percent tax rate collect any revenue; the former because there is no tax and the latter because no one will earn taxable income, knowing that the government will confiscate all of it.

The Laffer Curve implies that there is some point between zero and 100 percent that will maximize revenue. If rates are above this point—in the prohibitive range—then a tax rate reduction could theoretically raise revenue. A more important lesson of the Laffer Curve is that there are always two tax rates that will collect the same revenue—a high rate on a small base and a low rate on a large base.

---

[1]Bruce Bartlett is a senior fellow with the National Center for Policy Analysis.

[2]The late Herb Stein coined the term "supply side fiscalists" in 1976 (Stein 1984: 241).

[3]Roberts (1984: 30-33). Roberts later was Assistant Secretary of the Treasury for Economic Policy in the Reagan Administration. Ture was named Under Secretary of the Treasury for Tax and Economic Policy. For biographical details, see Committee on Finance (1981a, 1981b).

Obviously, there are massive problems with translating a pedagogic device like the Laffer Curve into something that will predict the actual impact on revenues of any particular tax change. Whether something like the 1981 Reagan tax cut would raise revenue and over what period of time could only be answered by careful empirical analysis.

No such analysis was ever done. Every official document and statement ever released by the Reagan Administration made clear that the 1981 tax cut would lose large revenues. Moreover, its estimates were comparable to those of independent analysts such as the Congressional Budget Office.

In the words of Bill Niskanen, a member of the Council of Economic Advisers under President Reagan, "Supply-side economics.... does not conclude that a general reduction in tax rates would increase tax revenues, nor did any government economist or budget projection by the Reagan Administration ever make that claim."[4]

Nevertheless, the charge continues to be made that the American people were deluded into thinking that the 1981 tax cut would not increase the federal deficit. The rest of this paper tries to answer the question of what the supply-siders really thought about the effect of tax changes on revenues, what were their sources of information and inspiration, and whether their work was based on serious analysis or built on the quicksand of wishful thinking. I pay special attention to what was said during the period leading up to passage of the 1981 tax cut.

Intellectual Roots

It will come as a surprise to many people that the intellectual origins of supply-side economics can be traced to a 14th century Muslim philosopher named Ibn Khaldun. In his masterwork, *The Muqaddimah*, he wrote about the rise and fall of empires. He argued that high taxes were often a factor in causing empires to collapse, with the result that lower revenue was collected from high rates.[5] As Khaldun wrote:

> *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 (Khaldun 1958: 2: 89).*

It may seem implausible that this ancient philosopher could have exercised any direct influence on 1970s American policymakers. However, there is a paper trail. In 1971, the *Journal of Political Economy* published an article about Khaldun by Jean David Boulakia, which quoted the passage above.[6] Robert Mundell had been editor of the JPE until just before this article appeared and was responsible for accepting it for publication.[7] On September 29, 1978, the *Wall Street Journal* published a long passage from *The Muqaddimah*. It was probably this excerpt that caught Ronald Reagan's eye. He referred to Khaldun by name during an October 1, 1981, press conference (Reagan 1982b: 871).

Another unlikely influence was Jonathan Swift, the famous satirist and author of *Gulliver's Travels*. In a 1728 article, he noted the negative effect of high tariff rates on government revenue (Swift 1964). His catchy phrase, "in the business of heavy impositions, two and two never make more than one," influenced many 18th century thinkers regarding the deleterious effect of tax rates on revenue, including David Hume, Adam Smith and Alexander Hamilton (Bartlett 1992).

These 18th century thinkers unquestionably were influential in the development of supply-side economics. Supply-siders often drew parallels between their views on tax cutting and those of the Founding Fathers.[8]

Smith's work, in particular, was well known to all supply-siders, as well as to the Founding Fathers. The following quote from *The Wealth of Nations* is especially apt: "High taxes, sometimes by diminishing the consumption of the taxed commodities, and sometimes by encouraging smuggling, frequently afford a smaller revenue to the government than what might be drawn from more moderate taxes" (Smith 1937: 835).

The Founding Fathers also found inspiration in the work of political philosopher Montesquieu, who wrote in *The Spirit of the Laws* (1748): "Liberty produces excessive taxes; the effect of excessive taxes is slavery; and slavery produces a diminution of tribute" (Montesquieu 1949: 216).

---

[4] Niskanen (1988: 19). See also Anderson (1988: 140-63), Muris (2000) and Roberts (1992). Congressional Budget Office (1981: 47) shows revenue loss estimates virtually identical to the Reagan Administration's.

[5] For example, the fall of Rome is often blamed on excessive taxes. See Bartlett (1994a), Bernardi (1970), and Jones (1959). Wilson (1939, 1969) argued that high taxes were a key factor in the economic decline of The Netherlands.

[6] Other articles referring to Khaldun's tax theories include Roy Adams (1981), Andic and Andic (1985), Andic (1965), Haddad (1977), Nagarajan (1982), Oweiss (1988), and Spengler (1964).

[7] In private correspondence, Mundell tells me that he was familiar with Khaldun before seeing the Boulakia manuscript because he and Khaldun were born exactly 600 years apart.

[8] James Adams (1981, 1984), and Keleher (1979, 1982a, 1982b).

Another influence on supply-siders was 19th century economist Jean-Baptiste Say. In my 1981 book, *Reaganomics*, the first chapter begins, "In many respects, supply-side economics is nothing more than.... Say's law of markets rediscovered," a view echoed by George Gilder (1981: 40). By this I meant that Say had placed supply above demand in importance to the economy. Aggregate demand can be stimulated easily by printing money. Calling forth additional work and production is much harder. Hence, economic policy should be more concerned with the production of goods and services than with the stimulation of demand. As Say put it:

> *The encouragement of mere consumption is no benefit to commerce; for the difficulty lies in supplying the means, not in stimulating the desire of consumption.... It is the aim of good government to stimulate production, of bad government to encourage consumption (Say 1834: 143).*

John Stuart Mill made much the same point (Mill 1874: 49). In *Reaganomics*, I quoted both Say and Mill, and cited Thomas Sowell's 1972 book as well. But I was also aware of W.H. Hutt's 1974 book and other works rehabilitating Say's Law.[9] Needless to say, Say's concern with incentives for production led him easily into the idea that high taxes can reduce revenue by stifling output. As he wrote:

> *Taxation, pushed to the extreme, has the lamentable effect of impoverishing the individual, without enriching the state.... The diminution of demand must be followed by diminution of the supply of production; and, consequently, of the articles liable to taxation. Thus, the taxpayer is abridged of his enjoyments, the producer of his profits, and the public exchequer of its receipts.... This is the reason why a tax is not productive to the public exchequer, in proportion to its ratio; and why it has become a sort of apophthegm, that two and two do not make four in the arithmetic of finance. Excessive taxation...extinguishes both production and consumption, and the taxpayer into the bargain (Say 1834: 453-54).*

Interestingly, one of the clearest statements of the Laffer Curve ever made was from the famous American statesman John C. Calhoun. While serving in the U.S. Senate in 1842, he made the following observation about the revenue effects of tariffs:

> *On all articles on which duties can be imposed, there is a point in the rate of duties which may be called the maximum point of revenue—that is, a point at which the greatest amount of revenue would be raised. If it be elevated above that, the importation of the article would fall off more rapidly than the duty would be raised; and, if depressed below it, the reverse effect would follow: that is, the duty would decrease more rapidly than the importation would increase. If the duty be raised above that point, it is manifest that all the intermediate space between the maximum point and that to which it may be raised, would be purely protective, and not at all for revenue….[A]ny given amount of duty, other than the maximum, may be collected on any article, by two distinct rates of duty—the one above the maximum point, and the other below it (Calhoun 1842: 772).*[10]

In the 20th century, a number of economists wrote about the limits of taxation from the point of view of revenues. An early contribution was by Edwin Cannan, who posited a version of the Laffer Curve by pointing out that a 100 percent tax rate would raise zero revenue (Cannan 1901). In the 1930s, no less a personage than John Maynard Keynes argued that lower tax rates can sometimes increase government revenue. As he wrote in *The Means to Prosperity* (1933):

> *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 price when you were already making a loss (Keynes 1972: 338).*

During World War II, there was much discussion of the limits of taxation, focusing mainly on labor supply.[11] In the postwar era, Colin Clark (1945) argued that excessive taxes become inflationary above 25 percent of GNP.[12] In *Human Action* (1949), Austrian economist Ludwig von Mises pointed out that high taxes can be self-defeating in terms of revenue:

> *The true crux of the taxation issue is to be seen in the paradox that the more taxes increase, the more they undermine the market economy and concomitantly the system of taxation itself.... Every specific tax, as well as a nation's whole tax system, becomes self-defeating above a certain height of rates (Mises 1949: 734).*

---

[9] See Baumol (1977), Clower & Leijonhufvud (1973), and Skinner (1967).

[10] I am indebted to Kurt Schuler for calling this quote to my attention.

[11] See, for example, Bronfenbrenner (1942), Kuznets (1942), Paish (1941), and Shoup (1943).

[12] Keynes agreed that "25 percent taxation is about the limit of what is easily borne" (Clark 1977: 23).

In 1960, political scientist C. Northcote Parkinson, famous for his "law" about work expanding to fill the time for its completion, put forth a second law about expenditures rising to meet income. In *The Law and the Profits,* he suggested that there were diminishing returns once taxes reached 20 percent of national income (Parkinson 1960: 95).

Contemporary academic economists also noted the disincentive effects of high tax rates on government revenue. For example, in a 1973 article, Richard B. McKenzie wrote:

> *The main purpose of this paper is to demonstrate that not only may statutory and effective rates differ, but that it is distinctly possible on theoretical grounds that statutory rate increases may result in lower tax collections for some groups (i.e., lower effective rates). Furthermore, I submit that this perverse effect is most likely to occur among the rich, and it may even occur when work incentives are unaffected (McKenzie 1973: 20).*

In short, the ground was well plowed long before the first supply-sider showed up, making the case that excessive tax rates can lose government revenue and that, conversely, lower rates can, under certain conditions, raise revenue.

<u>Historical Roots</u>

It was not just theoretical discussions about lower tax rates raising revenues that influenced supply-side thinking. We were also aware of actual experience, most especially in the U.S. during the 1920s and 1960s (Wanniski 1976a, 1976b). Herb Stein's *Fiscal Revolution in America* (1969) was an invaluable resource on the history of these episodes. Indeed, Wanniski has said that Stein's discussion on pp. 9-10, regarding the belief by politicians in the 1920s that lower tax rates might raise revenue, was the first he ever heard of this idea. We were also aware of evidence at the state and local level and in foreign countries.

The federal income tax came into being permanently in 1913 with a top statutory rate of just 7 percent. However, due to the extraordinary revenue demands of World War I, tax rates were sharply increased. By war's end, the top rate had risen to 77 percent.

Although Republican presidents of the 1920s got most of the credit for reducing wartime tax rates, the initiative actually began in Democrat Woodrow Wilson's Administration (Murray 1978). Indeed, in his 1919 State of the Union Address, President Wilson used supply-side arguments to urge tax rate reduction. As he said:

> *The Congress might well consider whether the higher rates of income and profits taxes can in peace times be effectively productive of revenue, and whether they may not, on the contrary, be destructive of business activity and productive of waste and inefficiency. There is a point at which in peace times high rates of income and profits taxes discourage energy, remove the incentive to new enterprise, encourage extravagant expenditures and produce industrial stagnation with consequent unemployment and other attendant evils (Wilson 1919: 53).*

Treasury Secretary Andrew Mellon, who served continuously through the administrations of Warren G. Harding, Calvin Coolidge and most of Herbert Hoover, spearheaded the tax reduction effort.[13] By 1929, he managed to get the top statutory rate down to just 24 percent. In his book, *Taxation: The People's Business* (1924), Mellon made plain his belief that high tax rates on the wealthy lowered government revenue and that lower rates would raise revenue. As he put it:

> *The history of taxation shows that taxes which are inherently excessive are not paid. The high rates inevitably put pressure upon the taxpayer to withdraw his capital from productive business and invest it in tax-exempt securities or to find other lawful methods of avoiding the realization of taxable income. The result is that the sources of taxation are drying up; wealth is failing to carry its share of the tax burden; and capital is being diverted into channels which yield neither revenue to the Government nor profit to the people (Mellon 1924: 13).*

The evidence strongly indicates that the tax cuts of the 1920s did indeed raise revenue among those most affected by the rate reductions. Historian Benjamin Rader concluded, "Despite sharply reduced tax rates for upper income groups...the wealthy paid a larger share of the federal tax burden at the end of the decade than at the beginning" (Rader 1971: 434).[14] The latest study confirms this conclusion:

> *Though the marginal tax rates were cut much more for the highest income taxpayers, the effective burden of taxation shifted away from the lower-income taxpayers toward the higher-income taxpayers. The resulting decline in tax avoidance, in conjunction with economic growth, led to some increase in personal income tax receipts despite the huge tax cuts from 1921 through 1926. Thus, the tax rate cuts worked much as Mellon and other early "supply-side" supporters had argued that they would (Smiley & Keehn 1995: 302).*

[13]The Treasury Secretary's annual reports throughout this period strongly stressed supply-side arguments for tax reduction.

[14]See also Ekelund & Thornton (1986), Gwartney & Stroup (1982), and Rudney (1976). For a contrary view, see Keller (1982, 1984).

Of greater relevance to the supply-siders was the experience of the Kennedy tax cut. Jack Kemp was already drawing parallels to his early tax proposals, such as the business-oriented Jobs Creation Act, and Kennedy's when I joined his staff. Norman Ture was an important link to the Kennedy experience because he worked for Wilbur Mills, chairman of the House Ways and Means Committee, during the time of the Kennedy tax cut.[15]

In August 1976, Kemp received data from the Congressional Research Service on the estimated revenue loss from the Kennedy tax cut.[16] By comparing these revenue loss figures with actual revenue increases from the 1960s, Kemp concluded that the Kennedy tax cut increased federal revenue.

Kemp's point was more of an assertion than hard evidence, since he had no data on what aggregate revenues were expected to be in the absence of the Kennedy tax cut. Interestingly, however, Walter Heller, chairman of the Council of Economic Advisers under Kennedy, soon made the case for him. In testimony before the Joint Economic Committee on February 7, 1977, he was asked by Senator Jacob Javits (R-NY) to comment on Kemp's analysis of the CRS memo. I was in the hearing room when Heller gave this response:

> *What happened to the tax cut in 1965 is difficult to pin down, but insofar as we are able to isolate it, it did seem to have a tremendously stimulative effect, a multiplied effect on the economy. It was the major factor that led to our running a $3 billion surplus by the middle of 1965, before escalation in Vietnam struck us. It was a $12 billion tax cut, which would be about $33 or $34 billion in today's terms. And within 1 year the revenues into the Federal Treasury were already above what they had been before the tax cut.... Did it pay for itself in increased revenues? I think the evidence is very strong that it did (Heller 1977: 161).*

Heller was later embarrassed to have provided the supply-siders with the proof they lacked and tried to take it back (Heller 1980). But as a witness to the event, there is no reason to think he was not stating a sincere belief. Indeed, a review of statements by Kennedy, his advisers and supporters at the time clearly indicates their expectation that the tax cut would in fact raise federal revenue.[17] Kennedy said in his Economic Club of New York speech on December 14, 1962:

> *It is a paradoxical truth that tax rates are too high today and revenues are too low, and the soundest way to raise the revenues in the long run is to cut the rates now (Kennedy 1963: 869).*

During floor debate on September 24, 1963, Wilbur Mills, manager of the Kennedy tax cut in the House of Representatives, said, "There is no doubt in my mind that this tax reduction bill, in and of itself, can bring about an increase in the gross national product of approximately $50 billion in the next few years. If it does, these lower rates of taxation will bring in at least $12 billion in additional revenue" (Mills 1963: 17907).[18] Contemporary analyses by the Council of Economic Advisers (1965: 65-66), Lawrence Klein (1969), and Arthur Okun (1968) suggest that Mills was definitely in the ballpark with his estimate.

Once the impact of the Kennedy tax cut became a political issue in the late 1970s, further analyses were undertaken. Data Resources, Inc. (DRI) and Wharton Econometric Forecasting Associates were contracted to study the impact of the Kennedy tax cut (House Budget Committee and Joint Economic Committee 1978). After reviewing these studies, the Congressional Budget Office drew the following conclusion:

> *The effect of the 1964 tax cut on the federal deficit has been a matter of controversy.... The direct effect of the tax cut was to reduce revenues by some $12 billion (annual rate) after the initial buildup. The increase in output and later in prices produced by the tax cut, according to the models, recaptured $3 to $9 billion of this revenue at the end of two years. The result was a net increase in the federal deficit of only about 25 to 75 percent of the full $12 billion (Congressional Budget Office 1978b: 25).*

Thus, while the Kennedy tax cut may not have paid for itself immediately, there is overwhelming evidence that the federal government did not lose nearly as much revenue as it expected, owing to the expansionary effect of the tax cut on the economy.[19] Consequently, Ronald Reagan was really not too far off when he asserted that the Kennedy tax cut paid for itself (Reagan 1982b: 871).

---

[15] Ture worked on the Joint Economic Committee, of which Mills was also a member, and functioned as Mills' staff economist.

[16] The memo is reprinted in Bartlett (1982b: 226-227).

[17] Some liberal supporters of the Kennedy tax cut even used Mellon's arguments to tease Republican opponents (Swanson 1963). On the other hand, some liberals, like John Kenneth Galbraith, opposed the Kennedy tax cut precisely because it was too Republican for their taste (Galbraith 1965).

[18] It should be noted that Kennedy's official revenue estimates, like Reagan's, all showed significant revenue losses (Fowler 1967).

[19] Canto, Joines & Webb (1983) come closest to proving that the Kennedy tax cut paid for itself by including higher revenues that accrued to state and local governments with those obtained by the federal government.

The real importance of the feedback argument has to do with how much additional federal borrowing is necessitated by tax cuts. If it leads to higher real interest rates, it is plausible to argue that they could offset much of the beneficial impact of tax cuts on growth. However, in this respect, it is also important to know whether a tax cut increased private saving. If saving expands, it is reasonable to include this in revenue feedback estimates.

In a 1981 article, Paul Evans argued that the Kennedy tax cut raised saving by more than the total amount of the tax cut. That is, households saved more than 100 percent of the tax cut. Therefore, one can conclude that the Kennedy tax cut did not put any upward pressure on interest rates due to an increase the federal budget deficit. Supply-siders often made this point with regard to the Reagan tax cut when questions were raised about its impact on federal borrowing and interest rates (Roberts 1981, Michael Evans 1981).[20]

The experience with taxes at the federal level was confirmed by that at the state and local level, where relatively easy opportunities for moving to other jurisdictions magnified the economic impact of tax changes. Grieson (1980), for example, concluded that Philadelphia's income tax was so high that it was reducing city revenues below what lower rates would have brought in.[21]

It should be noted that supply-siders were well aware of the effects of tax reduction efforts in other countries, especially Germany and Japan, as well as the negative effects of high taxes in countries like Britain and Sweden (Bartlett 1982b: 182-203; Reynolds 1985). There is strong evidence that multiple tax reductions played a key role in the rapid recovery of Germany and Japan after the war, and that tax revenues rose steadily in both countries.[22] There is also evidence that high taxes hampered growth in Britain and Sweden.[23] Interestingly, when Britain cut tax rates after the election of Margaret Thatcher in 1979, there was a sharp increase in the share of taxes paid by the wealthy.[24]

Keynesian Breakdown

The rise of supply-side economics cannot be understood outside the intellectual climate of the time in which it originated. A critical factor was the breakdown of the Keynesian consensus. Since World War II, the economics profession and economic policymaking in Washington had been dominated by Keynesian theories, which viewed federal budget deficits as stimulative and monetary policy as largely irrelevant. Inflation was not considered a serious problem in the Keynesian model, because it could not arise as long as there was significant unused capacity.

Thus, the 1974-75 recession presented something of a crisis for the Keynesians. The federal budget deficit was huge, but appeared to have no stimulative effect. Inflation was shooting through the roof, but so was unemployment (i.e., unused capacity). Increasing the deficit to lower unemployment was not viable, nor was cutting the deficit to lower inflation. The Keynesians were, so to speak, "between a rock and a hard place." The result was that economic policy effectively was impotent.

By the late 1970s, it was common to hear policymakers complain that the Keynesian model offered them no way out of the problem of rising inflation and unemployment. For years, they had been led to believe that there was a conceptually simple trade-off between the two—more of one would cure the other. All politicians had to do was figure out which way the political winds were blowing; tightening monetary and fiscal policy when inflation was the bigger political/economic problem, and loosening when unemployment rose to politically intolerable levels. This relationship was codified in the Phillips Curve.[25]

Although there are no references to anything like the Phillips Curve in Keynes' writings, since he was primarily concerned with deflation rather than inflation, it gradually became a central feature of Keynesian economics in the postwar era.[26] Thus the obvious failure of the Phillips Curve became a deathblow to Keynesian economics. By 1976, even a Labour government in the land of his birth explicitly rejected Keynes as a useful guide to current economic problems. That year, British Prime Minister James Callaghan had this to say to his fellow Labourites:

[20] Boskin (1978) had suggested that the saving elasticity was high.

[21] See also Gruenstein (1980), and Inman (1992).

[22] On Germany, see Hauser (1966), Reuss (1963), and Wertheimer (1957). On Japan, see Pechman & Kaizuka (1976).

[23] On Britain, see Bacon & Eltis (1978), Beenstock (1979) and Smith (1975). On Sweden, see Blomquist & Hansson-Brusewitz (1990), Hansson & Stuart (1985), Strand (1999), and Stuart (1981).

[24] According to Adam & Kaplan (2002), the top 1 percent of income taxpayers increased their share of total income taxes from 11 percent in 1978 to 23 percent in 2002. The top 10 percent of taxpayers increased their share from 35 percent to 52 percent over the same period.

[25] Phillips (1958) is credited with identifying the relationship empirically, although Fisher (1926) had anticipated it.

[26] See Hicks (1955), Phelps (1967), and Samuelson & Solow (1960).

> *We used to think that you could just spend your way out of a recession and increase employment by cutting taxes and raising government spending. I tell you, in all candor, that that option no longer exists and that it only worked on each occasion since the war by injecting bigger doses of inflation into the economy, followed by higher levels of unemployment, as the next step.*[27]

In terms of economic theory, the monetarists, led by Milton Friedman, did the heavy lifting in discrediting the Keynesian model (Johnson 1971). When the 1976 Nobel Prize in economics was awarded to Friedman, in large part for his work attacking some of the central tenets of Keynesian economics, it was widely interpreted as a repudiation of Keynesian economics by the economics profession (Malabre 1977, Ruby 1977). Friedman used the opportunity of his Nobel lecture to pound nails into the coffin of the Phillips Curve (Friedman 1977).

The burgeoning Public Choice school also had a role in burying Keynes. In *Democracy in Deficit: The Political Legacy of Lord Keynes* (1977), James Buchanan and Richard Wagner accused Keynesians of responsibility for the vast postwar growth of government, by removing the stigma of budget deficits. Deficits, they argued, created a fiscal illusion, fooling voters into thinking they could get more from government at no additional cost in terms of taxes. In a review of their book, however, Roberts (1978b) noted that in the long-run deficits usually lead to higher taxes, which often erode the tax base and result in still larger deficits.[28]

The Rational Expectations school played a part as well in undermining the foundations of Keynesian economics. From the point of view of supply-siders, a key element of their critique related to econometric models (Lucas 1976; Lucas & Sargent 1979). These models were often used to evaluate public policies and almost universally had Keynesian underpinnings. This tended to bias public policy in favor of Keynesian policies, even after they were generally discredited (Evans 1980a, 1980b).

The most important area in which this mattered was for revenue estimating. This issue was especially a problem after enactment of the Budget Act of 1974, because no tax bill could even be considered in Congress unless there was provision for it in the annual budget resolution. This meant that Congress needed to know in advance the precise revenue loss expected from a tax cut before it could be voted upon. Although revenue estimates had been done for many years previously, they had never been an essential requirement for consideration of tax legislation.

Historically, revenue estimates for Congress have been done by the Joint Committee on Taxation, which has existed since the 1920s, although Treasury estimates were often used. These estimates were usually done by accountants for perhaps one or two years out. But by the 1970s, economists had replaced the accountants, and computers started to be used in lieu of adding machines. Moreover, the Budget Act required 5-year revenue estimates, which increased the need for economic forecasts upon which to base such estimates. The Congressional Budget Office was created to provide the macroeconomic forecasts upon which the JCT based its revenue estimates.

Thus CBO's estimate of the macroeconomic effect of tax changes became critically important in determining their net revenue impact. Such estimates were based upon commercial econometric models, such as those of DRI, Wharton and Chase Econometrics. However, as noted, these models were largely based on Keynesian assumptions. This tended to make the budgetary cost of tax cuts high relative to equivalent government spending programs, and biased the legislative process in favor of temporary tax cuts designed to stimulate consumption against supply-side tax cuts, such as marginal tax rate reductions.

An example of how this worked in practice can be seen in one of the CBO's earliest studies, which looked at various fiscal options for reducing unemployment (Congressional Budget Office 1975: 69). Because of the Keynesian underpinnings of the models used to evaluate these alternatives—spending drives growth in the Keynesian model, while saving is a drag on it—increased government spending appeared preferable to tax cuts. Direct spending created more jobs per $1 billion increase in the deficit than tax cuts, because all of the former was assumed to be spent while some of the latter was saved. In political terms, therefore, supply-side tax cuts were at a disadvantage compared with Keynesian-style public service jobs programs. Permanent tax rate reductions were also deemed more costly and less effective than temporary tax rebates.[29]

Paul Craig Roberts (1978a) was among the first supply-siders to recognize that the breakdown of the Keynesian system and the creation of a new congressional budget process created an opportunity to promote the supply-side approach to fiscal policy. Given the constraints of the econometric models and the budget process, it suddenly became very important to be able to show that certain types of tax cuts did not increase the deficit as much as direct spending programs.

---

[27] Callaghan (1976). Shortly thereafter, German Chancellor Helmut Schmidt of the liberal Social Democratic Party, also rejected Keynes, saying, "The time for Keynesian ideas is past, because the problem of the world today is inflation" (Silk 1977).

[28] Roberts posited a version of the Laffer Curve on page 611 of this review, showing that an increase of government rules, by which he meant the size of government, lowered GNP and, presumably, government revenue. A similar figure appeared in Roberts (1971: 54). In a personal note to me about the latter, he explicitly drew a parallel to the Laffer Curve.

[29] The Tax Reduction Act of 1975 gave taxpayers up to a $200 rebate to stimulate demand. Subsequent research, however, found that almost all of it was saved in the short run, and thus provided no stimulus to demand, exactly as Friedman (1957) predicted. See Blinder (1981), and Modigliani & Steindel (1977).

Traditional tax-writers, such as Senator Russell Long (D-LA), chairman of the Senate Finance Committee, now found themselves at a disadvantage relative to the appropriators. The CBO gave spending programs the benefit of a Keynesian multiplier in calculating their economic effects. But tax cuts were calculated by the JCT on a static basis, as if they had no macroeconomic impact whatsoever. Long was no supply-sider, but he had been around a long time and seen a lot of tax changes and their effects at close hand. His experience told him that there was something to the supply-side argument that tax cuts would not lose as much revenue as static forecasts said they would. During a 1977 hearing, he had this to say:

> *Revenue estimates have a way of being very, very far off base because of the failure to anticipate everything that happens.... Now, when we put the investment tax credit on, we estimated that we were going to lose about $5 billion.... Instead of losing money, revenues went up in corporate income tax collections. Then we thought it was overheating the economy. We repealed it. We thought that the government would take in more money. But instead of making $5 billion, we lost $5 billion. Then, after a while, we thought we made a mistake, so we put it back on again. Instead of losing us money, it made us money. Then, after a while, we repealed it again and it did just exactly the opposite from what it was estimated to do again by about the same amount. It seems to me, if we take all factors into account, we wind up with the conclusion that taking the investment tax credit alone and looking at it by itself, it is not costing us any money. Because the impression I gain from it is that it stimulates the economy to the extent, and brings about additional investment to the extent, that it makes us money rather than loses us money.*[30]

Long responded by commissioning Michael K. Evans, an experienced econometric modeler, to build a supply-side model for the Senate Finance Committee (Cameron 1978, Cowan 1980). However, by the time Evans finished his work, control of the committee had shifted to the Republicans, and Senator Bob Dole (R-KS) was now chairman. Bob Lighthizer, his chief of staff, told me personally that he had no interest in the project, because it originated on the Democrats' watch. When I asked Evans himself what happened to the model, he wrote to say that he made one copy, sent it to the Finance Committee in fulfillment of his contract, and had no other copies.[31]

Another failed effort to build a supply-side model, financed by the American Council for Capital Formation in 1978, appears to have been the victim of a business dispute between the economists hired to do the work, Arthur Laffer and David Ranson. Norman Ture's model was sold to the accounting firm of Coopers & Lybrand when he joined the Treasury Department in 1981. Unfortunately, Ture was dogged by ethical questions about the sale after Treasury gave the company a contract to revise and update the model (Gerth 1981a, 1981b). By the time the revisions were completed, Ture had left the Treasury and it appears that neither it nor Coopers & Lybrand made any use of it (Pierson 1983).

Capital Gains and the Tax Revolt

In the midst of these developments, an important legislative fight took place that highlighted both the weakness of the Keynesian approach to fiscal policy and the failure of standard revenue-estimating methods to account for the supply-side effects of tax changes. It involved a cut in the long-term capital gains tax rate. Almost simultaneously, a huge political battle arose in California over Proposition 13, a voter initiative to cut property taxes. Its successful enactment on June 6, 1978, overwhelmingly demonstrated the potency of the so-called tax revolt, which dramatically altered the political dynamics for tax legislation in Washington.

The roots of the capital gains controversy dated back to 1969, when the maximum long-term tax rate was increased from 25 percent to 35 percent. On April 13, 1978, Congressman William Steiger (R-WI) introduced legislation to reduce the top rate back to 25 percent. The ensuing debate was extremely important to the development of supply-side economics for two reasons. First, a number of respected economists, such as Martin Feldstein, argued vigorously that a cut in the capital gains tax rate would almost immediately recoup the static revenue loss through a combination of unlocking and increased investment.

Second, the obvious expansionary potential of a capital gains tax cut clearly illustrated the supply-side argument that tax rate cuts could be stimulative, by increasing incentives, without any Keynesian impact on disposable income. Thus the 1978 capital gains debate was seminal in the development and acceptance of supply-side theories by mainstream economists (Feldstein 1994a: 14).

Of course, the idea that cutting the capital gains tax might not reduce federal revenue was not a new one. Hinrichs (1963: 228) had concluded that "investors' elasticity to capital gains rate changes may exceed unity, thus allowing rate cuts without impairing Treasury revenues." Also, it had been long recognized that capital gains are a unique form of income, because taxpayers have the freedom to decide when and whether to realize gains for tax purposes. When rates are high they encourage a lock-in effect

[30] Long (1977: 242). Interestingly, Judd (1987) later confirmed Long's casual observation that the Investment Tax Credit probably paid for itself.

[31] Michael K. Evans to Bruce R. Bartlett, 21 May 1981, in possession of the author. Of course, Evans was being totally disingenuous. He knew perfectly well that because the Finance Committee had no further interest in his work, he was free to do what he wanted with it, and had no intention of giving it away for free. Much of the research, however, ended up in Evans (1983).

that reduces revenues, as investors hold on to potentially taxable gains (Holt & Shelton 1962). Therefore, a rate reduction may result in a rapid unlocking effect that could cause revenue to rise quickly.

Feldstein was outspoken in his conviction that the Steiger bill would actually increase federal revenue almost immediately, and testified before Congress to that effect (Feldstein 1978a, 1978b). The basis of his testimony was a paper that circulated on Capitol Hill as a National Bureau of Economic Research working paper in June 1978 (Feldstein, Slemrod & Yitzhaki 1980).

Other prominent economists also forecasting higher revenues from the Steiger bill included Gary Ciminero of Merrill Lynch Economics (Ciminero 1978), and Michael Evans, then head of Chase Econometrics (Evans 1978b). Although the Joint Committee on Taxation officially continued to estimate the Steiger bill as a revenue-loser, after it was enacted into law in 1978 the JCT conceded that it probably would raise revenue (Joint Committee on Taxation 1979: 252). Subsequent analysis confirms this judgment.[32]

In the midst of the capital gains debate, an equally important political debate was taking place in California that also had important implications for supply-side economics. It showed there was real political power behind the idea of cutting taxes, and that it was not just an "inside the beltway" issue. Proposition 13 also helped unite the supply-siders with more traditional elements of the Republican Party on fiscal policy.

In the 1950s and 1960s, the roles of the major parties switched on taxes. Under Dwight Eisenhower, the Republican Party, which had been the tax cutting party from the 1920s through the 1940s, became the party of "fiscal responsibility." The balanced budget became the sine qua non of Republican fiscal policy. At the same time, under John F. Kennedy, the Democratic Party, which had been the party of high taxes, became the spearhead for tax rate reductions.

Republicans in Congress mostly opposed the Kennedy tax cut. Republican President Richard Nixon raised taxes to balance the budget in 1969, and Republican President Gerald Ford torpedoed every effort to cut tax rates on his watch because it would increase the deficit. Even Ronald Reagan raised taxes as Governor of California in order to balance the budget (Adams 1977). It was only due to the defeat of Ford in 1976 and massive Republican losses in Congress in 1974 and 1976 that the party once again became receptive to tax cutting.

Still, there was resistance among both Republican politicians and conservative economists to cutting taxes without simultaneously cutting spending.[33] It was often said that the "true" burden of government is what it spends, not what it taxes. Hence, tax cuts without spending cuts do nothing to reduce the burden of government and thus cannot be expected to have any stimulative effect, in the view of conservatives.[34] Supply-siders also saw spending as burdensome, but believed that the excess burden of taxation–the output that is discouraged over and above the tax take–was greatly underestimated in the conservative fiscal model.

Geoffrey Brennan and James Buchanan (1977, 1979, 1980) addressed the spending problem by arguing that the political dynamics in a democracy make it extremely difficult, if not impossible, to cut spending without tax cuts. Tax increases simply fueled additional spending, while tax cuts put pressure on legislatures to cut spending. Therefore, the best way to limit the size of government is by denying it revenue to spend.[35]

Proposition 13 showed dramatically that voters instinctively believed that cutting taxes unilaterally was an effective way of cutting government waste (Clymer 1978). Subsequent analysis shows that they were largely correct. Proposition 13 led to no significant reduction in vital government services, contrary to predictions of its opponents, but did limit spending growth.[36] Indeed, Proposition 13 did almost nothing to reduce the size of government in California (Shapiro & Sonstelie 1982).

After Proposition 13, there was a noticeable change in tone among previous Republican critics of big federal tax cuts. They began trying to rationalize tax cuts within a traditional fiscal responsibility framework. Herb Stein, for example, explicitly rejected any significant growth effects from tax rate reductions, but supported them anyway because taxes were too high and politicians were unresponsive to voter concerns about continually rising taxes and spending (Stein 1978). Conservative columnist George Will (1978), citing Alan Greenspan, made much the same point. Irving Kristol explained the changing attitude among conservatives this way:

[32] See Lindsey (1987a), and U.S. Treasury Department (1985). Indeed, the Treasury eventually changed its revenue-scoring methodology to show that capital gains tax cuts can raise revenue (Gideon 1990).

[33] Libertarians also opposed tax rate reductions, but because they feared that it really would lead to an increase in revenue, and were opposed to any increase in federal tax collections even if they resulted from lower tax rates. See Bartlett (1982a).

[34] A forceful statement of this view can be found in Federal Reserve Bank of Minneapolis (1980). See also Christ & Walters (1981).

[35] See also Marlow & Orzechowski (1988).

[36] Franchetti (1983), Lipson (1980), and Rabushka & Ryan (1982).

> *They have learned the lesson of Proposition 13, which is that tax cuts are a prerequisite for cuts in government spending. The politics of the budgetary process is such that a cut in any particular program will provoke intense opposition from a minority, and only indifference from the majority. In such a case, it is unreasonable to expect politicians to pay the high political costs involved. They can only cut when they are seen to have no alternative (Kristol 1978).*

Milton Friedman made the point succinctly in one of his *Newsweek* columns. "I have concluded that the only effective way to restrain government spending is by limiting government's explicit tax revenue—just as a limited income is the only effective restraint on any individual's or family's spending" (Friedman 1978a).

The point is that the supply-siders were not just counting on revenue reflows to avoid the growth of budget deficits if their proposed tax cuts were enacted into law. They were well aware that tax cuts would set in motion political forces leading to spending cuts. They did not set forth their own proposals for such cuts because they understood that their critics would focus on them to the exclusion of all else. Instead, they adopted the Proposition 13 model of putting the burden on those who were concerned about deficits to find ways of reducing expenditures.

In short, contrary to the Moynihan/Stockman view, the idea that supply-siders thought spending cuts were unnecessary for budget balance is untrue. They just thought balancing the budget was not an especially important goal, although limiting the size of government was.[37] However, spending would only be cut if taxes were cut first. Ronald Reagan made the point explicitly in a nationally televised address early in his presidency:

> *There were always those who told us that taxes couldn't be cut until spending was reduced. Well, you know, we can lecture our children about extravagance until we run out of voice and breath. Or we can cure their extravagance by simply reducing their allowance (Reagan 1982a: 81).*

Academic research suggests that the Reagan approach was the right one. Alesina and Perotti (1995: 228) report that direct taxes are often cut during successful fiscal adjustment programs. Becker, Lazear and Murphy (2003) argue that to the extent tax cuts force spending cuts, their positive economic impact is multiplied. Moreover, tax increases seldom improve fiscal balances. This is consistent with research showing that higher taxes generally lead to higher spending, rather than deficit reduction.[38]

Mundell, Laffer and the JEC

Certainly the two best-known academic economists involved in the origins of supply-side economics were Robert Mundell, winner of the 1999 Nobel Prize in economics for his work on international economics, and Arthur Laffer, famed as originator of the "Laffer Curve." In the critical developmental stage of supply-side economics, the Joint Economic Committee of Congress became a powerful institutional supporter.

Both Laffer and Mundell came to supply-side economics primarily through their interest in international monetary policy. They, like all economists from the 1970s, were deeply concerned about the problem of "stagflation"—rising inflation and slow growth. Laffer and Mundell, however, saw the roots of stagflation as arising from final abandonment of the gold standard in 1971. In their view, once the gold link to the dollar was broken, there was no longer any effective brake on government's ability to inflate at will.

Inflation then interacted with the tax system to sharply raise marginal tax rates. Workers receiving pay increases were pushed up into higher tax brackets, even though they might not have received any real increase in purchasing power; corporations found that depreciation allowances based on historical cost were inadequate to replace old equipment, while taxes were assessed on illusory inventory profits; and investors found that much of their capital gains simply represented inflation, but were taxed as if they were real.[39]

Therefore, a two-prong strategy was needed to end stagflation, Laffer and Mundell said. First, money growth needed to be sharply tightened, preferably by targeting the price of gold and reestablishing a de facto gold standard. Second, tax rates needed to be cut in order to restore incentives and increase the demand for money. Mundell first spelled out this tight-money-and-tax-cuts policy mix in a 1971 paper published by Princeton's International Finance Section:

---

[37]Bartlett (1979), Ture (1980, 1982). Milton Friedman emphasized this point often. See Friedman (1978a, 1978b, 1981, 2003).

[38]Ahiakpor & Amirkhalkhali (1989), Blackley (1986), Joulfaian & Mookerjee (1990), and Manage & Marlow (1986).

[39]On inflation and the individual income tax, see Aaron (1976); Advisory Commission on Intergovernmental Relations (1980); Congressional Budget Office (1980); Fellner, Clarkson & Moore (1975); and Furstenberg (1975). On capital gains, see Eisner (1980) and Feldstein & Slemrod (1978). On corporations, see Fabricant (1978), Gonedes (1980), and Shoven & Bulow (1975, 1976).

> *Monetary expansion stimulates nominal money demand for goods, but, without rigidities or illusions to bite on, it does not lead to real expansion. But growth of real output raises real money demand and thus abets the absorption of real monetary expansion into the economy without inflation. Tax reduction increases employment and growth and this raises the demand for money and hence enables the Federal Reserve to supply additional real money balances to the economy without causing sagging interest rates associated with conditions of loose money. Monetary acceleration is inflationary, but tax reduction is expansionary when there is unemployment (Mundell 1971: 24-25).*

At this time, Mundell was at the University of Chicago, where Laffer was teaching in the business school. Their mutual interest in international monetary issues brought them together and Laffer absorbed Mundell's ideas.[40] In 1974, Laffer organized a conference sponsored by the American Enterprise Institute on the problem of worldwide inflation (Meiselman & Laffer 1975). This was the first opportunity many Washington policymakers had to hear about what came to be called supply-side economics.

Although most of the AEI conference dealt with monetary issues, Mundell reiterated the point made in his 1971 paper about the vital role of tax cuts in the fight against inflation (Mundell 1975: 143). This was important because the Keynesian view that fiscal deficits caused inflation was widespread. Indeed, it is not now remembered, but when Reagan, Kemp and others first began pushing for big tax cuts in the late 1970s, the principal attack against them was that such a policy would be massively inflationary.[41]

Among those in attendance at the AEI conference was Jude Wanniski, then an editorial writer for the *Wall Street Journal*. He was fascinated by the discussion and immediately wrote an article for the *Journal* explaining the Laffer-Mundell worldview (Wanniski 1974). He later expanded the analysis in an article for *The Public Interest*. Interestingly, his discussion of the tax side of their work only appeared in a footnote, which was the first place Laffer explained his famous curve in print. As Wanniski wrote:

> *Taxes should be cut and government spending maintained through deficit financing only when a special condition exists, a condition Mundell and Laffer say exists now. "There are always two tax rates that produce the same dollar revenues," says Laffer. "For example, when taxes are zero, revenues are zero. When taxes are 100 percent, there is no production, and revenues are also zero. In between these extremes there is one rate that maximizes government revenues." Any higher tax rate reduces total output and the tax base, and becomes counterproductive even for producing revenues. U.S. marginal tax rates are now, they argue, in this unproductive range and the economy is being "choked, asphyxiated by taxes," says Mundell. Tax rates have been put up inadvertently by the impact of inflation on all the progressivity of the tax structure. If the tax rate were below the rate that maximizes revenues, tax cuts would reduce tax revenues at full employment. But a multiplier effect operates if the economy is at less than full employment, and the tax cut then raises output and the tax base, besides making the economy more efficient. Even if a bigger deficit emerges, sufficient tax revenues will be recovered to pay the interest on the government bonds issued to finance the deficit. Thus, future taxes would not have to be raised and there would be no subtraction from future output. Tax cuts, therefore, actually can provide a means for servicing the public debt (Wanniski 1975: 49-50).*

Wanniski later went on to write the first book about supply-side economics***,*** *The Way the World Works* (1978). He also wrote many unsigned editorials for the *Wall Street Journal* spelling out various aspects of supply-side theory. And he helped many supply-siders, such as Arthur Laffer and Paul Craig Roberts, get published in the *Journal*, thereby raising their visibility and stature as economic commentators.[42] Indeed, when Wanniski left the *Journal* in 1978 to found a private consulting firm, Roberts was hired by the *Journal* to replace him on the editorial page staff.

Adding important institutional support to the growth of supply-side economics at this time was the Joint Economic Committee of Congress, under the leadership of its chairman, Senator Lloyd Bentsen (D-TX). The JEC was created by the Employment Act of 1946 as the congressional counterpart to the Council of Economic Advisers. The great economist Paul Douglas, famous for the Cobb-Douglas production function, was among the committee's previous chairmen.[43] Other well-known economists, such as DRI founder Otto Eckstein, had served on its staff.

In the 1960s, the JEC had been known as a hotbed of Keynesian economics. So the intellectual collapse of that school hit the committee hard. This led to much soul-searching on the part of both its members and staff. By the late 1970s, the JEC was ready to make a complete break. In a number of hearings and staff studies, the JEC began placing increasing emphasis on the

---

[40]Laffer (1999) discusses his work with Mundell.

[41]See, for example, the statements by Alan Blinder, John Brittain, Edward Denison, Otto Eckstein, Martin Feldstein, John Kenneth Galbraith, Edward Gramlich, and Joseph A. Pechman in Committee on Ways & Means (1978). Note that Beck (1979) showed how tax cuts could reduce inflation in a standard IS-LM model.

[42]See, for example, Laffer (1976), and Roberts (1978c).

[43]Douglas was a Democratic senator from Illinois from 1948 to 1966. He chaired the JEC during the 84th, 86th and 88th Congresses.

role of supply in the economy, concluding that inadequate incentives for saving and investment lay behind the national economic malaise.

By 1980, the JEC was a full-blown advocate of supply-side economics, despite having a majority of liberal Democrats, such as Senators Edward Kennedy (D-MA) and George McGovern (D-SD). Its annual report that year was entitled, "Plugging in the Supply Side." Chairman Bentsen summarized the committee's new view in his introduction:

> *The 1980 annual report signals the start of a new era of economic thinking. The past has been dominated by economists who focused almost exclusively on the demand side of the economy and who, as a result, were trapped into believing that there is an inevitable trade-off between unemployment and inflation.... The Committee's 1980 report says that steady economic growth, created by productivity gains and accompanied by a stable fiscal policy and a gradual reduction in the growth of the money supply over a period of years, can reduce inflation significantly during the 1980's without increasing unemployment. To achieve this goal, the Committee recommends a comprehensive set of policies designed to enhance the productive side, the supply side of the economy (Joint Economic Committee 1980a: 1).*

The JEC also injected itself into the debate over econometric modeling. A May 21, 1980, hearing strongly supported the idea that existing models were too heavily based on Keynesian assumptions and gave short shrift to the economy's supply-side (Joint Economic Committee 1980b). Partly as a consequence of the JEC's prodding, DRI changed its model to incorporate more supply-side features (Eckstein 1983: 55-76).

The JEC's conversion to supply-side economics was extremely important in adding respectability and bipartisanship to the idea. For example, it led Leonard Silk, economics columnist for the *New York Times*, to write sympathetically about the new philosophy:

> *A major change is on the way in economic theory and policy; that change will involve a deeper integration of supply-side and demand-side economics, and an integration of thinking about both the long and short run. The change is long overdue (Silk 1980).*

Even after Ronald Reagan had taken office and liberal Congressman Henry Reuss (D-WI) replaced the more conservative Bentsen as chairman of the JEC, it remained skeptical of old-fashioned Keynesianism. Said Reuss in 1981, "We have learned from our mistakes in the past. We've given up blind pursuit of Keynesian demand acceleration." Supply-side economics was important in depriving demand-side economics of "an undeserved primacy," he added (Rattner 1981).

Kemp-Roth

It was in this atmosphere that Congressman Kemp and Senator William Roth (R-DE) introduced the legislation that defined supply-side economics. It grew out of a desire by Kemp to duplicate the Kennedy tax cut by having a pure, across the board individual income tax rate reduction, without the many corporate provisions that had been the central features of his earlier tax efforts.

Work on the legislation began in early 1977. It was my job to figure out exactly what it meant to "duplicate" the Kennedy tax cut, given that the rate structure had changed dramatically in the years since 1964, when the Kennedy tax cut was rammed through Congress by Lyndon Johnson. Working together with Bruce Thompson from Roth's office, Pete Davis of the Joint Committee on Taxation and the rest of the group, we eventually decided to reduce the top statutory rate from 70 percent to 50 percent and the bottom rate from 14 percent to 10 percent. We felt that this was roughly comparable to Kennedy's reduction in the top rate from 91 percent to 70 percent and the bottom rate from 20 percent to 14 percent.

It took about a year before the Kemp-Roth proposal began to get widespread attention. Interestingly, the idea that it would stimulate growth enough to pay back some of the static revenue loss was not especially controversial at first. Indeed, Bert Lance, Jimmy Carter's Office of Management and Budget Director, had testified shortly before Kemp-Roth was introduced to that effect:

> *My personal observation is that as you go through the process of permanent tax reduction, that there is an awfully good argument to be made for the fact that the revenues of the Government actually increase at a given time. I think it has been proven in previous circumstances. I have no problem in following that sort of thing (Lance 1977: 478).*

When the Congressional Budget Office reviewed the Kemp-Roth legislation, it estimated that feedback effects would recoup between 14 percent and 19 percent of the static revenue loss the first year, rising to between 26 percent and 38 percent in the fourth (Congressional Budget Office 1978a: 43).

This is consistent with what the supply-siders themselves thought would happen. Contrary to popular belief, none of them ever said that there would be no revenue loss at all. Clearly, there would be large revenue losses in the short-run. But they thought the net revenue loss would be much less than the static estimates predicted.

Although supply-siders certainly thought there would be increases in economic growth, increased investment and labor supply from marginal tax rate cuts, this was not by any means the only way they expected revenues to be recouped. They anticipated many changes in behavior that would have the effect of increasing taxable income.

Among the most important areas where expansion of the tax base was anticipated was from a shrinkage of the so-called underground economy. I vividly remember reading Gutmann's pathbreaking 1977 article, which estimated that the underground economy equaled about 10 percent of recorded GNP.[44] Although not motivated solely by tax evasion, high tax rates unquestionably contributed heavily to its growth. Hence, tax rate reduction would cause some underground economic activity to move above ground, so to speak, and become taxable.[45]

Supply-siders further anticipated that workers would alter their compensation so as to increase the taxable portion of their wages. In particular, tax-free fringe benefits would be somewhat less attractive relative to cash wages. There is considerable evidence that rising tax rates in the 1970s were behind much of the growth in fringe benefits such as health insurance.[46]

Investors were also expected to alter their portfolios in ways that would raise taxable income. For example, with lower rates, the value of tax losses and other deductions, such as for Individual Retirement Accounts, would no longer be as valuable. Home ownership, with its many tax advantages, would no longer be as appealing relative to renting. And taxable dividends and interest would become more attractive compared with more lightly taxed capital gains and tax-free municipal bonds. All of these factors were expected to have a powerful effect on raising taxable income even in the absence of any growth effects from lower tax rates.[47]

Finally, supply-siders believed that spending would fall automatically to some extent if expansionary tax cuts were enacted. They saw much government spending for such things as unemployment compensation and welfare as costs of slow growth that would be much smaller as employment rose.[48] Hence, the impact on the deficit from something like Kemp-Roth would include both the revenue reflows and the automatic reduction in spending for cyclical spending programs. That is why Laffer always emphasized the impact of Kemp-Roth on the deficit and not just on revenues. In his first formal statement on Kemp-Roth in 1978, he said:

> *Kemp-Roth would partially redress the counterproductive structure of current tax rates leading to a substantial increase in output, and may well, in the course of a very few years, reduce the size of total government deficits from what they otherwise would have been (Committee on Ways & Means 1978: 64).*

Laffer also always talked about the effect of revenue reflows on all levels of government, including state and local governments.[49] This was a valid point because state and local governments tend to run budget surpluses in the aggregate. Hence, higher revenues in that sector would add to national saving. In 1978 testimony, Laffer had this to say along these lines:

> *As I look at the Roth-Kemp bill, it cuts tax rates across the board over 3 years by approximately 30 percent.... On the Federal level, there is quite a reasonable chance that within a very short period of time, a year or two or three, that not only will the cut in taxes cause more work, output and employment, but the incomes, profits, and taxes, because of the expansion of the tax base, would actually increase. It is very clear to me that a cut in these tax rates, along the lines you suggested, sir, would increase State and local revenues substantially. There is no ambiguity there. Any increase in incomes, productivity and production will increase state and local revenues substantially. If you take the Government as a whole, it is likely that revenues will increase (Laffer 1978: 129).*

[44]Gutmann's work was well known on Capitol Hill and the subject of 3 congressional hearings. See Committee on Government Operations (1979), Committee on Ways & Means (1980), and Joint Economic Committee (1980c).

[45]Gutmann's work spawned a vast literature, well summarized in Schneider & Enste (2000). Among articles showing that tax rate reductions can significantly reduce tax evasion are Alm (1988); Clotfelter (1983a); Neck, Schneider & Hofreither (1989); and Waud (1986).

[46]See Farber (1978), Hirsch & Rufolo (1986), Long & Scott (1982, 1984), Sloan & Adamache (1986), Vroman & Anderson (1984), and Woodbury & Hammermesh (1992).

[47]See Canto & Miles (1981), Clotfelter (1983b), Gwartney & Long (1984, 1986), and Long (1982a, 1982b, 1984, 1990). Note that lowering the top rate at this time automatically lowered the capital gains rate, because 60 percent of gains were excluded from taxation, with the balance taxed at ordinary income tax rates.

[48]Johnson (1981), and Office of Income Security Policy (1975).

[49]Baye & Parker (1981) also emphasize this point.

Laffer pulled these various points together in a 1979 academic paper, in which he included higher federal revenues, higher state and local government revenues, lower government spending, and higher private saving in the reflows expected from tax rate reductions. As he wrote:

> *The relevant question is not whether revenues actually rise or not but whether a change in tax rates is "self-financing." Therefore, one should focus not only on the specific receipts for which the rates have been changed but also on other receipts, on spending, and on savings. Other receipts must rise if a rate is reduced. The expansion of activity will elicit a greater base upon which all other unchanged rates will obtain greater revenue. Government spending at all levels will fall because of lowered unemployment, reduced poverty, and thus less welfare. Likewise, government employees will require less in real wages because with lower tax rates the same real wages will yield greater after tax wages, and so on. Finally, a cut in tax rates will yield greater savings in order to finance any deficit. Using a broader interpretation these tax rates and revenue positions should refer basically to the self-financing nature of tax rate changes (Laffer 1979: 54-55).*[50]

Laffer never made a precise estimate of the economic or revenue impact of the Kemp-Roth bill or the Reagan tax cut in 1981. The closest he ever came to saying that the Reagan tax cut would be self-financing was in a 1981 academic paper, where he said:

> *It is reasonable to conclude that each of the proposed 10 percent reductions in tax rates would, in terms of overall revenues, be self-financing in less than two years. Thereafter, each installment would provide a positive contribution to overall tax receipts. By the third year of the tax reduction program, it is likely that net revenue gains from the plan's first installment would offset completely the revenue reductions attributable to the final 10 percent tax rate cut. It should be noted that a significant portion of these revenues would accrue to state and local governments, relieving much if not all of the fiscal stress evident in these governmental units as well.*[51]

These vague statements about relatively fast reflows from across the board tax rate reductions, however, contrast with more detailed estimates done by Norman Ture and Michael Evans that explicitly included supply-side effects. Ture's estimate of Kemp-Roth in 1978 saw substantial revenues losses, net of feedback, even 10 years after enactment, when revenues would still be $53 billion (in 1977 dollars) below baseline (Committee on Ways & Means 1978: 96). Evans' figures were very similar, showing a current dollar increase in the deficit in 1987 of $61 billion (Evans 1978a: 76).

Interestingly, among the strongest supporters of Kemp-Roth in Congress was then-Congressman David Stockman (R-MI). Later, after serving as Director of the Office of Management and Budget, he broke with the supply-siders and became obsessed with budget deficits. But in the 1970s, he would often speak on the House floor and in committee in favor of passing an across-the-board tax rate reduction and against tax increases for the purpose of reducing budget deficits. For example, on March 1, 1978, he said:

> *A tax increase to achieve budget balance would be even less appropriate. Such a move would "crowd-out" output just as surely as more pump priming will "crowd-out" investment. Mr. Speaker, these considerations make clear that the time is ripe for implementing the only new fiscal policy idea that has been proposed in decades: A deliberate across-the-board reduction in marginal tax rates for the purpose of reducing the burden of Government on the productive sectors of the economy (Stockman 1978a).*

In testimony before the Senate Finance Committee on July 14, 1978, Congressman Stockman explicitly refuted the charge that Kemp-Roth would lead to large deficits and inflation:

> *These charges are based on a total misunderstanding of what Kemp-Roth is all about. We are not merely advocating a simple tax cut, an election-year gimmick. Instead, we view this measure as just one policy step in a whole, new fiscal policy program based on the supply side of the economy; based on the idea of getting more labor, capital, innovation, risk-taking and productivity into the economy by removing Government barriers and deterrents, the most important of which, I would suggest to the committee today, is the rapidly rising marginal tax rates that Congressman Kemp has just discussed.... I would like to suggest to the committee that if this proposal that we are making is properly looked at, that these scare stories about these horrendous fiscal results, the deficits, cannot be validated at all. If you understand that we are substituting tax cuts and an incentive, supply-side approach for pump priming and demand stimulus, it can clearly be done with a large surplus produced within less than four years (Stockman 1978b).*

---

[50] The original text is in error. It says "increased poverty," but Laffer meant it to read, "reduced poverty." In addition, "exchanged rates" in the original text should have read "unchanged rates." These quotes have been corrected.

[51] Laffer (1981a: 21). Feldstein (1994a: 25) cites this quotation in refutation of the statement by Anderson (1988) that the Reagan Administration never predicted higher revenues from its tax cut. Of course, Laffer was not an administration official, although he was a member of President Reagan's Economic Policy Advisory Board, a group of private economists who met with him occasionally to give informal advice. As noted above, all the official revenue estimates of the Reagan Administration showed no feedback effects at all and were consistent with those of the CBO.

There were many other occasions as well where Stockman defended unilateral tax cuts (Stockman 1978c, 1980a, 1980b). Having worked with him closely at the time, I never heard the slightest concern from him that the basic supply-side message was not sound. And this was long before there was even the remotest prospect of Ronald Reagan being elected, or of Stockman becoming his OMB Director. In fact, it is worth remembering that Stockman actually supported John Connally during the primaries, endorsing Reagan only after Connally dropped out of the presidential race. Therefore, one can conclude that he was not merely posturing about tax cuts in hopes of getting a cabinet appointment.

Reagan and After

In 1980, Ronald Reagan essentially adopted the Kemp-Roth bill as his principal campaign economic issue. After taking office, one of his first actions was to send a proposal to Congress on February 17, 1981, requesting passage of a tax cut closely modeled on Kemp-Roth. It showed a loss in revenue of $53.9 billion the first year, rising to $221.7 billion by 1986. No revenue feedback was assumed (White House 1981: 16).

Interestingly, old-time Keynesian economists were more optimistic about the potential revenue reflows of the Reagan tax cut than was the White House. For example, Richard Musgrave of Harvard, dean of America's public finance economists, testified before the Joint Economic Committee in early 1981 that the Reagan plan would likely recoup 18 percent of the static revenue loss through increased demand and another 30 percent to 35 percent through increased supply (Musgrave 1981). Gardner Ackley, chairman of the CEA under Lyndon Johnson, compared Reagan's plan favorably to Kennedy's:

> *I think the response to the proposed Reagan tax cuts would be similar to that of the Kennedy tax cuts. I think, yes, in a general way, taking the tax cut part by itself, independently of everything else. I think we would find a response of aggregate demand very substantially to a tax cut, and this would tend, as it did following 1963, to stimulate additional production and employment and investment. It would do so again today. The results of that would be beneficial (Ackley 1981: 449).*

Laffer testified that he thought it would take 10 years before the Reagan tax cut would pay for itself, a view he said was consistent with what he had said about Kemp-Roth (Laffer 1981b: 469). Interestingly, Joseph A. Pechman of the Brookings Institution was largely in agreement with Laffer's assessment. Speaking at the same congressional hearing, he said:

> *I was pleased to hear that Arthur Laffer did not exaggerate some of the things that have been attributed to the supply-side economists. What he told us was that, if you reduce taxes or increase the net return to saving and to labor, there will be an increase in the incentives to work and to save. I think every economist, regardless of his persuasion, would agree with that (Pechman 1981: 430).*

Again, David Stockman spoke forcefully about the need for tax rate reduction to accompany budget control. Because of bracket creep and still-high inflation rates, future revenue projections always tended to show budget balance within reach a few years out. But spending always increased by a greater amount. Hence tax reduction was essential to holding down the growth of spending, which was the Reagan Administration's goal, not budget balance. As Stockman told the Senate Finance Committee at his confirmation hearing:

> *Mr. Chairman, it is my very strongly held belief that if we fail to cut taxes then we have no hope, over the next 3 or 4 years of bringing the budget into balance, and of closing this enormous deficit that we face again this year. Of course, there are those who will show you a paper projection, a computer run, and will try to demonstrate that if we can keep the rate of inflation high and allow the tax rates on businesses and individuals to continue to creep up, we will then automatically, by fiscal year 1983 or 1984, have a balanced budget. But that is pure mythology. That is only a computer projection. That is only a paper exercise that would never come true in the real world. We have had those forecasts made every year for the last 4 or 5, but as we have moved down the path toward the target year, these balanced budgets have seemed to disappear like the morning haze. There are reasons for that. The primary reason is that the tax burden today is so debilitating that it prevents the economy from growing, and without a growing economy we simply cannot hope to achieve a balanced budget (Stockman 1981: 24-25).*

Even long after he had broken with the Reagan Administration over the problem of budget deficits, Stockman conceded that the tax cut was not really the cause of deficits, because all it did was offset tax increases that would have resulted automatically from inflation. In his 1986 book, *The Triumph of Politics*, Stockman wrote:

> *The Carter revenue estimates assumed the greatest sustained period of income tax bracket creep in U.S. history. But when you started with an inflation- and bracket-creep-swollen revenue level and trotted it out four or five years into the future, fiscal miracles were easy (p. 67).*
>
> *With high inflation, the Reagan program amounted to little more than indexing the fiscal status quo; the Kemp-Roth tax cut simply offset bracket creep (pp. 94-95).*

In fact, a number of analysts pointed out that the Reagan tax cut was not big enough to fully offset bracket-creep (McKenzie 1982a, 1982b; Meyer & Rossana 1981). The *New York Times* even attacked it for this very reason (New York Times 1981a, 1981b). Subsequent analysis confirms that the Reagan tax cut did little more than effectively index the tax system, keeping aggregate revenues from rising as a share of income.[52]

With the emergence of large budget deficits after passage of the Reagan tax cut in 1981, the issue of its supply-side effects was answered in the minds of many. The simple cause-and-effect relationship seemed obvious: a tax cut is enacted and deficits emerge. Therefore, the tax cut caused the deficits.

Lawrence Lindsey was the first to calculate the effect of the Reagan tax cut on revenues after the fact, taking into account the economy's actual performance, as opposed to projections based on forecasts and assumptions. His initial effort (Lindsey 1987b) concluded that on net the tax cut induced reflows of about 25 percent of the static revenue loss through behavioral effects. An estimate by some CBO economists came to similar conclusions (Neilsen, Sammartino & Toder 1987). Lindsey's final calculation was that reflows paid for about a third of the direct cost of the tax cut, including both Keynesian demand-side effects and supply-side effects. In his words:

> *So who was right about the effect of tax changes on the economy, the Keynesians or the supply-siders? The answer is both, at least in part. The Keynesians were right in claiming that such a substantial reduction in rates would powerfully boost demand, a point the supply-siders never denied but perhaps underestimated. The demand-side revenue feedbacks and the combined behavioral feedbacks (supply-side and pecuniary) turned out to be roughly equal. On the other hand, the revenue results vindicate the supply-siders' most important claim: The tax cut produced quite large changes in taxpayer behavior. That claim, strongly confirmed by results, ran directly counter to Keynesian theory and most Keynesian predictions. The combined supply-side and pecuniary effects recouped well over one-third of ERTA's estimated direct cost, a very powerful response (Lindsey 1990: 76).*

Feldstein (1986: 29) came to a similar conclusion: "The evidence suggests that the reduction in tax rates did have a favorable effect on work incentives and on real GNP, and that the resulting loss of tax revenue was significantly less than the traditional revenue estimates would imply."

So if the tax cut was too small to fully offset bracket creep and feedback effects recouped much of the static revenue loss, then where did the huge budget deficits come from? Obviously, a lot came from higher spending on defense and other programs. But Roberts (1987, 2000) argues that most of it came, ironically, from the enormously greater success against inflation than anyone thought was possible.

Remember, the conventional wisdom said that even without additional demand stimulus in the form of a tax cut, it would take many years to get inflation down from its double-digit level in 1980 to the low single digits. Indeed, a simple Okun's Law calculation would have suggested the need for something like another Great Depression to bring inflation down to tolerable levels.[53]

Since taxes are assessed on nominal incomes, not real incomes, the fall of inflation from 12.5 percent in 1980 to about 4 percent in 1982 and throughout the 1980s simply collapsed the expected tax base. In essence, the Reagan Administration was counting on inflation coming down fairly slowly—even though it was frequently attacked for being far too optimistic on this score—which would increase revenues from bracket creep even as tax rates were cut.[54] When inflation came down far faster than anyone inside or outside the administration thought possible, revenues inevitably came in far lower than expected as well.

To put this effect into perspective, the Carter Administration's last budget forecast 12.6 percent inflation in 1981 and 9.6 percent in 1982. It further estimated that each one-percentage point decline of inflation below forecast would reduce revenues by $11 billion (Office of Management and Budget 1981: 3, 59). With actual inflation (CPI) coming in at 8.9 percent in 1981 and 3.8 percent in 1982, this suggests that lower than expected inflation alone added $41 billion to the deficit in 1981 and $64 billion in 1982. That is equal to half the deficit in those years.

It has been argued that budget deficits offset all of the stimulative effect of the 1981 tax cut (Akhtar & Harris 1992). This extreme view, however, isn't shared by most economists. Even many of Ronald Reagan's political opponents concede that bringing down inflation so rapidly, at far less economic cost than was previously imaginable, was a remarkable accomplishment. Moreover, the rebound of growth and productivity in the 1980s, after the malaise of the 1970s, was at least in part due to the stimulative effect of the tax cut.

[52] Andrianacos & Akarca (1998), Clotfelter (1984), Meyer (1983), and Tatom (1984).

[53] Okun (1978) said that to bring the basic inflation rate down by one percent would cost 10 percent of a year's GNP.

[54] White House (1981: 25) anticipated an increase in the GNP deflator of 36 percent between 1981 and 1986. It actually came in at 21 percent.

In 1989, Paul Samuelson admitted, "The latter half of the 1980s, historians will recognize, has been an economic success story." Even Bill Clinton's Council of Economic Advisers conceded that the 1981 tax cut had been a major factor in stimulating growth. "It is undeniable that the sharp reduction in taxes in the early 1980s was a strong impetus to economic growth," it said in the 1994 Economic Report of the President (p. 88).

Conclusion

One of the main reasons why so little is heard about supply-side economics anymore is because so much of what the supply-siders were trying to accomplish was achieved. That is, many of the supply-side propositions that were highly controversial when first made in the 1970s, are now accepted as conventional wisdom among professional economists.[55] For example:

- A vast number of studies now conclusively show that taxes and the size of government are critical determinants of economic growth. Although elasticities vary, almost all studies show that higher taxes and bigger government reduce growth.[56]
- The welfare cost of the U.S. tax system is now generally considered to be very high.[57] In the 1970s, this simply was not a matter economists gave much thought to.
- The economic cost of tax progressivity is now considered to be far higher than previously thought, encouraging efforts to institute a flat rate income tax system.[58]
- The Laffer Curve is a frequent topic of discussion in academic journals.[59] Although most articles are critical, the fact that the idea is taken seriously shows a significant change in the intellectual climate over the last 25 years.
- It used to be said commonly that labor supply was insensitive to changes in tax rates.[60] Today, it is generally conceded that labor supply is much more responsive than previously believed.[61]
- International organizations, such as the World Bank and International Monetary Fund, now often find tariff rates in developing countries to be in the prohibitive range. That is, tariff rate reductions are estimated to raise revenue.[62] Similar views are expressed with regard to taxes as well.[63]
- Even critics of supply-side economics concede that tax cuts may produce substantial revenue reflows, lowering their net cost, and that tax increases may produce negative reflows, increasing their net cost.[64] Some liberals now label their own policies as "supply-side."[65]

Perhaps the best evidence that supply-side economics has entered the mainstream is Robert Mundell's Nobel Prize. Although his Nobel citation does not mention any of his relevant work in this area, it would be naive to think that the Nobel Committee was

[55] A view shared by Henderson (1989). As F.A. Hayek once noted, a school of economic thought "has its greatest success when it ceases as such to exist because its leading ideals have become part of the general dominant teaching" (Hayek 1992: 52).

[56] Barro (1991), Carlstrom & Gokhale (1991), Engen & Skinner (1996), Grier & Tullock (1989), Heitger (1993), Karras (1993), King & Rebelo (1990), Koester & Kormendi (1989), Landau (1983, 1985), Marlow (1986), Martin & Fardmanesh (1990), Peden (1991), Peden & Bradley (1989), and Scully (1992).

[57] Ballard, Shoven & Whalley (1985a, 1985b), Browning (1987), Jorgenson & Yun (1991), and Stuart (1984).

[58] Auerbach, Kotlikoff & Skinner (1983); Cassou & Lansing (2000); Caucutt, Imrohoroglu & Kumar (2000); Feldstein (1999); Gruber & Saez (2002); Hakkio & Rush (1989); Hunter & Scott (1987); Li & Sarte (2001); Marchon (1979); Padovano & Galli (2001); and Widmalm (2001).

[59] Becsi (2000); Bender (1984); Buchanan & Lee (1982); Fullerton (1982); Goolsbee (1999); Hemming & Kay (1980); Malcomson (1986); McGuire & Van Cott (2002); Peacock (1989); Sanyal, Gang & Goswami (2000); Shaller (1983); and Yunker (1986).

[60] Reference was often made to a series of studies done at the Harvard Business School in the early 1950s showing virtually no impact on business executives of even extremely high wartime tax rates. See Sanders (1951). For a summary of mid-1970s knowledge on taxes and labor supply, see Godfrey (1975).

[61] See Aaronson & French (2002); Bianchi, Gudmundsson & Zoega (2001); Congressional Budget Office (1996); Gwartney & Stroup (1983); Hausman (1981, 1985); Lindbeck (1982); Prescott (2002, 2003); Showalter & Thurston (1997); Triest (1990); and Ziliak, Kniesner & Holtz-Eakin (2003).

[62] The summary of a recent IMF seminar concluded, "A number of countries maintain tariff rates that exceed revenue maximizing levels. These countries could liberalize, at least initially, without significantly adverse consequences for revenues from trade taxes" (International Monetary Fund 1999). A recent World Bank study came to similar conclusions: "Above a certain level of the official tariff rate, further increases in the official tariff rate produces no increase (and there is some evidence of a decrease) in the collected rate" (Pritchett & Sethi 1993).

[63] "The simulation results…. point to the presence of 'self financing,' whereby reductions in various tax rates lead to lower budget deficits in the long run, as the result of an expanding tax base and lower unemployment insurance outlays" (Rijckeghem 1997). See also Dabla-Norris & Feltenstein (2003), Gandhi (1987), and Marsden (1983).

[64] "Credible evidence overwhelmingly indicates that revenue feedback from tax cuts is 35 cents per dollar" (Chimerine 1996). See also Auerbach (1996, 2002), Auten & Carroll (1999), Bartlett (1994b, 1996, 1997), Congressional Budget Office (1982), Feldstein (1994b), Goolsbee (2000), Krugman (1995), Lindsey (1986), Lyon (1996), and Sammartino & Weiner (1997).

[65] In 1996, CEA Chairman Joseph Stiglitz claimed that the Clinton Administration was practicing supply-side economics. "Our growth policies are supply side," he said (Uchitelle 1996).

unaware of it, since Mundell was often referred to as a supply-side "guru" in the popular press (Bennett 1986). It is also well known that the committee thoroughly researches all aspects of a candidate's life and work before making an award. Therefore, it is reasonable to assume that the committee was well aware that giving Mundell the Nobel Prize would recognize his work in supply-side economics.[66]

Supply-siders can also claim a piece of 1995 Nobel Prize winner Robert Lucas. In a neglected 1990 paper, he virtually declared himself to be a born-again supply-sider:

> *I have called this paper an analytical review of "supply-side economics," a term associated in the United States with extravagant claims about the effects of changes in the tax structure on capital accumulation. In a sense, the analysis I have reviewed here supports these claims: Under what I view as conservative assumptions, I estimated that eliminating capital income taxation would increase capital stock by about 35 percent.... The supply-side economists, if that is the right term for those whose research I have been discussing, have delivered the largest genuinely free lunch I have seen in 25 years in this business, and I believe we would have a better society if we followed their advice.*[67]

For myself, I have always found Joseph A. Pechman's presidential address to the American Economic Association in 1989 to be a profound admission of how far supply-side economics had joined the mainstream. Pechman virtually defined the mainstream on the economics of taxation for a generation of economists. In innumerable books and papers, he argued forcefully for a highly progressive tax system on a Haig-Simons income base. So it must have been painful for him to make the following concession:

> *The federal income tax has been under attack by the economics profession for more than a decade. The attack comes from two directions: supply-siders who believe that progressive income taxation impairs economic incentives, and more traditional economists who would substitute a progressive expenditure tax for the income tax.... Today, it is fair to say that many, if not most, economists favor the expenditure tax or a flat rate income tax. This group has joined the opponents of progressive taxation in the attack on the income tax (Pechman 1990).*

Of course, supply-side economics still has its critics. Gerard Baker, economics columnist for London's *Financial Times*, recently referred to "quack theories about supply-side tax cuts" (Baker 2001). However Floyd Norris, a columnist for the *New York Times*, was more sympathetic:

> *Two decades ago, the supply-siders performed a valuable service. They persuaded a popular new president, who had been elected as a fiscal conservative, to slash taxes and claim that no budget deficit would result. Lower tax rates, they said, would miraculously bring higher tax revenues. That proved to be wrong. But it was a good idea nonetheless. The United States was going through painful economic times, and the tax cut provided real relief for the majority who were not to be victims of the cutbacks that were needed to make American businesses more competitive. The economic stimulus helped to end a severe recession (Norris 2001).*

In closing, I will quote from Congressman Richard Gephardt (D-MO), former Minority Leader of the U.S. House of Representatives and someone not given to praising Republican economic policies. So it is revealing that even he now believes that cutting taxes may actually raise government revenue. In an interview on "Meet the Press" on Sunday, January 27, 2002, Gephardt had this to say about tax cuts:

> *The purpose of tax cuts is not just to have a tax cut for a particular time. It is to get the economy to grow. If you can get the economy to grow, you will start having more money coming into the government. It's a synergistic process that moves both the budget forward and the economy forward.*[68]

In politics, that's called an endorsement.

[66] The popular press certainly saw it that way. See, for example, Egan (1999), and Phillips (1999).

[67] Lucas (1990: 314). See also Lucas (2003).

[68] Downloaded at www.msnbc.com.

REFERENCES

Aaron, Henry. 1976. *Inflation and the Income Tax*. Washington: Brookings Institution.

Aaronson, Daniel, and Eric French. 2002. "The Effects of Progressive Taxation on Labor Supply when Hours and Wages are Jointly Determined." Working Paper 2002-22, Federal Reserve Bank of Chicago.

Ackley, Gardner. 1981. Statement, in *Tax Aspects of the President's Economic Program*. Committee on Ways and Means, U.S. House of Representatives, 97th Congress, 1st session, Serial 97-10. Washington: U.S. Government Printing Office.

Adam, Stuart, and Greg Kaplan. 2002. *A Survey of the UK Tax System*. London: Institute for Fiscal Studies.

Adams, James Ring. 1977. "Jerry Brown Plays the Numbers." *Wall Street Journal*. March 31.

Adams, James Ring. 1981. "Supply-Side Roots of the Founding Fathers." *Wall Street Journal*. November 17.

Adams, James Ring. 1984. *Secrets of the Tax Revolt*. New York: Harcourt Brace Jovanovich.

Adams, Roy D. 1981. “Tax Rates and Tax Collections: The Basic Analytics of Khaldun-Laffer Curves.” *Public Finance Quarterly*. October, 9:4, pp. 415-430.

Advisory Commission on Intergovernmental Relations. 1980. *The Inflation Tax: The Case for Indexing Federal and State Income Taxes*. Washington: U.S. Government Printing Office. January.

Ahiakpor, James C.W., and Saleh Amirkhalkhali. 1989. "On the Difficulty of Eliminating Deficits with Higher Taxes: Some Canadian Evidence." *Southern Economic Journal*. July, 56:1, pp. 24-31.

Akhtar, M.A., and Ethan S. Harris. 1992. "The Supply-Side Consequences of U.S. Fiscal Policy in the 1980s." *Quarterly Review*, Federal Reserve Bank of New York. Spring, pp. 1-20.

Alesina, Alberto, and Roberto Perotti. 1995. "Fiscal Expansions and Adjustments in OECD Countries." *Economic Policy*. October, pp. 207-248.

Alm, James. 1988. "Compliance Costs and the Tax Avoidance-Tax Evasion Decision." *Public Finance Quarterly*. January, 16:1, pp. 31-66.

Anderson, Martin. 1988. Revolution. New York: Harcourt Brace Jovanovich.

Andic, Fuat M., and Suphan Andic. 1985. "An Exploration into Fiscal Sociology: Ibn Khaldun, Schumpeter, and Public Choice." *Finanzarchiv*. 43:3, pp. 454-469.

Andic, Suphan. 1965. "A Fourteenth Century Sociology of Public Finance." *Public Finance*. 20:1-2, pp. 22-44.

Andrianacos, Dimitri, and Ali T. Akarca. 1998. "Long-Run Impact of Tax Rate Changes on Government Receipts." *Public Finance Quarterly*. January, 26:1, pp. 80-94.

Auerbach, Alan J. 1996. "Dynamic Revenue Estimation." *Journal of Economic Perspectives*. Winter, 10:1, pp. 141-157.

Auerbach, Alan J. 2002. “The Bush Tax Cut and National Saving.” *National Tax Journal*. September, 55:3, pp. 387-407.

Auerbach, Alan J., Laurence J. Kotlikoff, and Jonathan Skinner. 1983. "The Efficiency Gains from Dynamic Tax Reform." *International Economic Review*. February, 24:1, pp. 81-100.

Auten, Gerald, and Robert Carroll. 1999. “The Effect of Income Taxes on Household Income.” *Review of Economics and Statistics*. November, 81:4, pp. 681-693.

Bacon, Robert, and Walter Eltis. 1978. *Britain's Economic Problem: Too Few Producers*. 2nd ed. London: Macmillan.

Baker, Gerard. 2001. "The White House Fights the Last Economic War." *Financial Times*. December 13.

Ballard, Charles L., John B. Shoven, and John Whalley. 1985a. "General Equilibrium Computations of the Marginal Welfare Costs of Taxes in the United States." *American Economic Review*. March, 75:1, pp. 128-138.

Ballard, Charles L., John B. Shoven, and John Whalley. 1985b. "The Total Welfare Cost of the United States Tax System: A General Equilibrium Approach." *National Tax Journal*. June, 38:2, pp. 125-140.

Barro, Robert J. 1991. "Economic Growth in a Cross Section of Countries." *Quarterly Journal of Economics*. May, 106:2, pp. 407-443.

Bartlett, Bruce. 1979. “Budget Balancing.” *New York Times*. January 24.

Bartlett, Bruce. 1982a. "The Conservative Critics of Reaganomics." *Intercollegiate Review*. Fall-Winter, 18:1, pp. 39-47.

Bartlett, Bruce. 1982b. *Reaganomics: Supply-Side Economics in Action*. 2nd ed. New York: Morrow/Quill.

Bartlett, Bruce. 1992. "Jonathan Swift: Father of Supply-Side Economics?" *History of Political Economy*. Fall, 24:3, pp. 745-748.

Bartlett, Bruce, 1994a. "How Excessive Government Killed Ancient Rome." *Cato Journal*. Fall, 14:2, pp. 287-303.

Bartlett, Bruce. 1994b. "Static Scoring Gets It Wrong." *Wall Street Journal*. December 14.

Bartlett, Bruce. 1996. "The Case for Dynamic Scoring." *Wall Street Journal*. July 30.

Bartlett, Bruce. 1997. "A Victory for Supply-Siders." *Wall Street Journal*. January 23.

Baumol, William J. 1977. "Say's (at Least) Eight Laws, or What Say and James Mill May Have Really Meant." *Economica*. May, 44, pp. 145-161.

Baye, Michael R., and Darrell F. Parker. 1981. "The Consumption Tax and Supply Side Economics: Some Short-Term Revenue Effects." *Cato Journal*. Fall, 1:2, pp. 629-632.

Beck, John H. 1979. "An Analysis of the Supply-Side Effects of Tax Cuts in an IS-LM Model." *National Tax Journal*. December, 32:4, pp. 493-499.

Becker, Gary S., Edward P. Lazear, and Kevin Murphy. 2003. "The Double Benefit of Tax Cuts." *Wall Street Journal*. October 7.

Becsi, Zsolt. 2000. “The Shifty Laffer Curve.” *Economic Review*, Federal Reserve Bank of Atlanta. 3rd quarter, pp. 53-64.

Beenstock, Michael. 1979. "Taxation and Incentives in the UK." *Lloyds Bank Review*. October, pp. 1-15.

Bender, Bruce. 1984. “An Analysis of the Laffer Curve.” *Economic Inquiry*. July, 22:3, pp. 414-420.

Bennett, Robert A. 1986. "Supply-Side's Intellectual Guru." *New York Times*. January 12.

Bernardi, Aurelio. 1970. "The Economic Problems of the Roman Empire at the Time of Its Decline," in *The Economic Decline of Empires*. Carlo M. Cipolla, ed. London: Methuen, pp. 16-83.

Bianchi, Marco, Björn R. Gudmundsson, and Gylfi Zoega. 2001. "Iceland's Natural Experiment in Supply-Side Economics." *American Economic Review*. December, 91:5, pp. 1564-1579.

Blackley, Paul R. 1986. "Causality Between Revenue and Expenditures and the Size of the Federal Budget." *Public Finance Quarterly*. April, 14:2, pp. 139-156.

Blinder, Alan. 1981. "Temporary Income Taxes and Consumer Spending." *Journal of Political Economy*. February, 89:1, pp. 26-53.

Blomquist, N.S., and U. Hansson-Brusewitz. 1990. "The Effect of Taxes on Male and Female Labor Supply in Sweden." *Journal of Human Resources*. Summer, 25:3, pp. 317-57.

Boskin, Michael. 1978. "Taxation, Saving, and the Rate of Interest." *Journal of Political Economy*. April, 86:2, pt. 2, pp. S3-S27.

Boulakia, Jean David. 1971. "Ibn Khaldun: A Fourteenth-Century Economist." *Journal of Political Economy*. September-October, 79:5, pp. 1105-1118.

Brennan, Geoffrey, and James M. Buchanan. 1977. "Towards a Tax Constitution for Leviathan." *Journal of Public Economics*. December, 8:3, pp. 255-273.

Brennan, Geoffrey, and James M. Buchanan. 1979. "The Logic of Tax Limits: Alternative Constitutional Constraints on the Power to Tax." *National Tax Journal*. June, 32:2, pp. 11-22.

Brennan, Geoffrey, and James M. Buchanan. 1980. *The Power To Tax*. New York: Cambridge University Press.

Bronfenbrenner, Martin. 1942. "Diminishing Returns in Federal Taxation?" *Journal of Political Economy*. October, 50, pp. 699-715.

Browning, Edgar K. 1987. "On the Marginal Welfare Cost of Taxation." *American Economic Review*. March, 77:1, pp. 11-23.

Buchanan, James M., and Dwight R. Lee. 1982. "Politics, Time, and the Laffer Curve." *Journal of Political Economy*. August, 90:4, pp. 816-819.

Buchanan, James M., and Richard E. Wagner. 1977. *Democracy in Deficit: The Political Legacy of Lord Keynes*. New York: Academic Press.

Calhoun, John C. 1842. Statement. *Congressional Globe*. Appendix, 27th Congress, 2nd session, August 5.

Callaghan, James. 1976. "Mr. Callaghan Talks Business." *New York Times*. October 10.

Cameron, Juan. 1978. "The Economic Modelers Vie for Washington's Ear." *Fortune*. November 20, pp. 102-105.

Cannan, Edwin. 1901. "Equity and Economy in Taxation." *Economic Journal*. December, 11, pp. 469-479.

Cannon, Lou. 1982. *Reagan*. New York: G.P. Putnam's.

Canto, Victor A., Douglas H. Joines, and Robert I. Webb. 1983. "The Revenue Effects of the Kennedy Tax Cuts," in *Foundations of Supply-Side Economics: Theory and Evidence*. Victor A. Canto, Douglas H. Joines, and Arthur B. Laffer, eds. New York: Academic Press, pp. 72-103.

Canto, Victor A., and Marc A. Miles. 1981. "The Missing Equation: The Wedge Model Alternative." *Journal of Macroeconomics*. Spring, 3:2, pp. 247-289.

Carlstrom, Charles T., and Jagadeesh Gokhale. 1991. "Government Consumption, Taxation, and Economic Activity." *Economic Review*, Federal Reserve Bank of Cleveland. 3rd quarter, pp. 18-29.

Cassou, Steven P., and Kevin J. Lansing. 2000. "Growth Effects of a Flat Tax." Working Paper No. 2000-15, Federal Reserve Bank of San Francisco. December 7.

Caucutt, Elizabeth M., Selahattin Imrohoroglu, and Krishna B. Kumar. 2000. "Does the Progressivity of Taxes Matter for Economic Growth?" Discussion Paper No. 138, Federal Reserve Bank of Minneapolis. December.

Chimerine, Lawrence. 1996. "Return of the Supply-Siders." *Washington Post*. July 23.

Christ, Carl F., and Alan A. Walters. 1981. "The Mythology of Tax Cuts." *Policy Review*. Spring, pp. 71-86.

Ciminero, Gary L. 1978. *Economic Impact Analysis of a Capital Gains Tax Reduction*. New York: Merrill Lynch Economics. May 4.

Clark, Colin. 1945. "Public Finance and Changes in the Value of Money." *Economic Journal*. December, 55, pp. 371-389.

Clark, Colin. 1977. "The Scope for, and Limits of, Taxation," in *The State of Taxation*. London: Institute of Economic Affairs, pp. 19-28.

Clotfelter, Charles T. 1983a. "Tax Evasion and Tax Rates: An Analysis of Individual Returns." *Review of Economics and Statistics*. August, 65:3, pp. 363-373.

Clotfelter, Charles T. 1983b. "Tax-Induced Distortions and the Business-Pleasure Borderline: The Case of Travel and Entertainment." *American Economic Review*. December, 73:5, pp. 1053-1065.

Clotfelter, Charles T. 1984. "Tax Cut Meets Bracket Creep: The Rise and Fall of Marginal Tax Rates." *Public Finance Quarterly*. April, 12:2, pp. 131-152.

Clower, Robert, and Axel Leijonhufvud. 1973. "Say's Principle, What it Means and Doesn't Mean: Part I." *Intermountain Economic Review*. Fall, 4:3, pp. 1-16.

Clymer, Adam. 1978. "Poll Discloses Property Tax Cuts are Widely Backed Around Nation." *New York Times*. June 28.

Committee on Finance. 1981a. *Nominations of John E. Chapoton, Roscoe L. Egger, Jr., and Paul C. Roberts*. U.S. Senate, 97th Congress, 1st session. Washington: U.S. Government Printing Office.

Committee on Finance. 1981b. *Nominations of Norman B. Ture and Beryl Wayne Sprinkel*. U.S. Senate, 97th Congress, 1st session. Washington: U.S. Government Printing Office.

Committee on Government Operations. 1979. *Subterranean or Underground Economy*. U.S. House of Representatives, 96th Congress, 1st session. Washington: U.S. Government Printing Office.

Committee on Ways and Means. 1978. *Tax Reductions: Economists' Comments on H.R. 8333 and S. 1860 (The Kemp-Roth Bills)*. U.S. House of Representatives, Committee Print, 95th Congress, 2nd session. Washington: U.S. Government Printing Office.

Committee on Ways and Means. 1980. *Underground Economy*. U.S. House of Representatives, 96th Congress, 1st session, Serial 96-70. Washington: U.S. Government Printing Office.

Congressional Budget Office. 1975. *Temporary Measures to Stimulate Employment: An Evaluation of Some Alternatives*. Washington: U.S. Government Printing Office. September.

Congressional Budget Office. 1978a. *An Analysis of the Roth-Kemp Tax Cut Proposal*. Washington: U.S. Government Printing Office. October.

Congressional Budget Office. 1978b. *Understanding Fiscal Policy*. Washington: U.S. Government Printing Office. April.

Congressional Budget Office. 1980. *Indexing the Individual Income Tax for Inflation*. Washington: U.S. Government Printing Office. September.

Congressional Budget Office. 1981. *Economic Policy and the Outlook for the Economy*. Washington: U.S. Government Printing Office. March.

Congressional Budget Office. 1982. *How Changes in Fiscal Policy Affect the Budget: The Feedback Issue*. Washington: U.S. Government Printing Office. June.

Congressional Budget Office. 1996. *Labor Supply and Taxes*. Washington: Congressional Budget Office. January.

Council of Economic Advisers. 1965. *Economic Report of the President*. Washington: U.S. Government Printing Office.

Council of Economic Advisers. 1994. *Economic Report of the President*. Washington: U.S. Government Printing Office.

Cowan, Edward. 1980. "Model Is Due in Senate on Benefits of Tax Cuts." *New York Times*. February 18.

Dabla-Norris, Era, and Andrew Feltenstein. 2003. "An Analysis of the Underground Economy and Its Macroeconomic Consequences." Working Paper 03/23, International Monetary Fund. January.

Eckstein, Otto. 1983. *The DRI Model of the U.S. Economy*. New York: McGraw-Hill.

Egan, Jack. 1999. "Supply-Side Godfather." *U.S. News & World Report*. October 25, p. 49.

Eisner, Robert. 1980. "Capital Gains and Income: Real Changes in the Value of Capital in the United States, 1946-77," in *The Measurement of Capital*. Dan Usher, ed. Chicago: University of Chicago Press, pp. 175-342.

Ekelund, Robert B., Jr., and Mark Thornton. 1986. "Schumpeterian Analysis, Supply-Side Economics and Macroeconomic Policy in the 1920s." *Review of Social Economy*. December, 44:3, pp. 221-237.

Engen, Eric, and Jonathan Skinner. 1996. "Taxation and Economic Growth." *National Tax Journal*. December, 49:4, pp. 617-642.

Evans, Michael K. 1978a. Statement, in *Leading Economist's Views of Kemp-Roth*. Committee on the Budget, U.S. House of Representatives, and Committee on the Budget, U.S. Senate, Joint Committee Print, 95th Congress, 2nd session. Washington: U.S. Government Printing Office.

Evans, Michael K. 1978b. *The Economic Effects of Reducing Capital Gains Taxes*. Bala Cynwyd, PA: Chase Econometric Associates. April 17.

Evans, Michael K. 1980a. "The Bankruptcy of Keynesian Econometric Models." *Challenge*. January/February, 22, pp. 13-19.

Evans, Michael K. 1980b. "Confessions of an Economic Forecaster." *New York Times*. February 17.

Evans, Michael K. 1981. "The Source of Personal Saving in the U.S." *Wall Street Journal*. March 23.

Evans, Michael K. 1983. *The Truth About Supply-Side Economics*. New York: Basic Books.

Evans, Paul. 1981. "Kemp-Roth and Saving." *Weekly Letter*, Federal Reserve Bank of San Francisco. May 8.

Fabricant, Solomon. 1978. "Accounting for Business Income Under Inflation: Current Issues and Views in the United States." *Review of Income and Wealth*. March, 24:1, pp. 1-24.

Farber, Henry S. 1978. "Individual Preferences and Union Wage Determination: The Case of the United Mine Workers." *Journal of Political Economy*. October, 86:5, pp. 923-942.

Federal Reserve Bank of Minneapolis. 1980. *The Tax-Cut Illusion: Federal Reserve Bank of Minneapolis 1979 Annual Report*. Minneapolis: Federal Reserve Bank of Minneapolis.

Feldstein, Martin. 1978a. Statement, in *The President's 1978 Tax Reduction and Reform Proposals*. Committee on Ways and Means, U.S. House of Representatives, 95th Congress, 2nd session, Serial 95-78. Washington: U.S. Government Printing Office.

Feldstein, Martin. 1978b. Statement, in *Revenue Act of 1978*. Committee on Finance, U.S. Senate, 95th Congress, 2nd session. Washington: U.S. Government Printing Office.

Feldstein, Martin. 1986. "Supply-Side Economics: Old Truths and New Claims." *American Economic Review*. May, 76:2, pp. 26-30.

Feldstein, Martin. 1994a. "American Economic Policy in the 1980s: A Personal View," in *American Economic Policy in the 1980s*. Martin Feldstein, ed. Chicago: University of Chicago Press, pp. 1-79.

Feldstein, Martin. 1994b. "The Case for Dynamic Analysis." *Wall Street Journal*. December 14.

Feldstein, Martin. 1999. "Tax Avoidance and the Deadweight Loss of the Income Tax." *Review of Economics and Statistics*. November, 81:4, pp. 674-680.

Feldstein, Martin, and Joel Slemrod. 1978. "Inflation and the Excess Taxation of Capital Gains on Corporate Stock." *National Tax Journal*. June, 31:2, pp. 107-118.

Feldstein, Martin, Joel Slemrod, and Shlomo Yitzhaki. 1980. "The Effects of Taxation on the Selling of Corporate Stock and the Realization of Capital Gains." *Quarterly Journal of Economics*. June, 94:4, pp. 777-791.

Fellner, William, Kenneth W. Clarkson, and John H. Moore. 1975. *Correcting Taxes for Inflation*. Washington: American Enterprise Institute.

Fisher, Irving. 1926. "A Statistical Relation between Unemployment and Price Changes." *International Labor Review*. June, 13:6, pp. 785-792.

Fowler, Henry. 1967. Statement, in *Meetings With Department and Agency Officials*. Committee on Banking and Currency, U.S. House of Representatives, 90th Congress, 1st session. Washington: U.S. Government Printing Office.

Franchetti, Michael. 1983. "California Learns to Live Within Taxpayers' Means." *Wall Street Journal*. November 4.

Friedman, Milton. 1957. *A Theory of the Consumption Function*. Princeton: Princeton University Press.

Friedman, Milton. 1977. "Nobel Lecture: Inflation and Unemployment." *Journal of Political Economy*. June, 85:3, pp. 451-472.

Friedman, Milton. 1978a. "The Kemp-Roth Free Lunch." *Newsweek*. August 7.

Friedman, Milton. 1978b. "The Limitations of Tax Limitation." *Policy Review*. Summer, pp. 7-14.

Friedman, Milton. 1981. "Closet Keynesianism." *Newsweek*. July 27.

Friedman, Milton. 2003. "What Every American Wants." *Wall Street Journal*. January 15.

Fullerton, Don. 1982. "On the Possibility of an Inverse Relationship Between Tax Rates and Government Revenues." *Journal of Public Economics*. October, 19:1, pp. 3-22.

Furstenberg, George von. 1975. "Individual Income Taxation and Inflation." *National Tax Journal*. March, 28:1, pp. 117-125.

Galbraith, John Kenneth. 1965. Statement, in *January 1965 Economic Report of the President*. Joint Economic Committee, U.S. Congress, 89th Congress, 1st session. Washington: U.S. Government Printing Office.

Gandhi, Ved P. 1987. *Supply-Side Tax Policy: Its Relevance to Developing Countries*. Washington: International Monetary Fund.

Gerth, Jeff. 1981a. "Treasury Reopening Inquiry on Official." *New York Times*. June 19.

Gerth, Jeff. 1981b. "Treasury Says Official Asked 2d Contract Inquiry." *New York Times*. June 21.

Gideon, Kenneth. 1990. Statement, in *Tax Incentives for Increasing Savings and Investments*. Committee on Finance, U.S. Senate, 101st Congress, 2nd session, Senate hearing 101-918. Washington: U.S. Government Printing Office.

Gilder, George. 1981. *Wealth and Poverty*. New York: Basic Books.

Godfrey, L. 1975. *Theoretical and Empirical Aspects of the Effects of Taxation on the Supply of Labour*. Paris: Organization for Economic Cooperation and Development.

Gonedes, Nicholas J. 1981. "Evidence on the 'Tax Effects' of Inflation under Historical Cost Accounting Methods." *Journal of Business*. April, 54:2, pp. 227-270.

Goolsbee, Austan. 1999. "Evidence on the High-Income Laffer Curve from Six Decades of Tax Reform." *Brookings Papers on Economic Activity*. No. 2, pp. 1-64.

Goolsbee, Austan. 2000. "What Happens When You Tax the Rich? Evidence from Executive Compensation." *Journal of Political Economy*. April, 108:2, pp. 352-378.

Greider, William. 1981. "The Education of David Stockman." *The Atlantic Monthly*. December, pp. 27-54.

Grier, Kevin B., and Gordon Tullock. 1989. "An Empirical Analysis of Cross-National Economic Growth, 1951-80." *Journal of Monetary Economics*. September, 24:2, pp. 259-276.

Grieson, Ronald E. 1980. "Theoretical Analysis and Empirical Measurements of the Effects of the Philadelphia Income Tax." *Journal of Urban Economics*. July, 8:1, pp. 123-137.

Gruber, Jon, and Emmanuel Saez. 2002. "The Elasticity of Taxable Income: Evidence and Implications." *Journal of Public Economics*. April, 84:1, pp. 1-32.

Gruenstein, John. 1980. "Jobs in the City: Can Philadelphia Afford to Raise Taxes?" *Business Review*, Federal Reserve Bank of Philadelphia. May-June, pp. 3-11.

Gutmann, Peter M. 1977. "The Subterranean Economy." *Financial Analysts Journal*. November-December, 33:6, pp. 26-27, 34.

Gwartney, James, and James Long. 1984. "Income Tax Avoidance and an Empirical Estimation of the Laffer Curve." Office of the Assistant Secretary for Economic Policy, U.S. Treasury Department. July.

Gwartney, James, and James Long. 1986. "Tax Rates, Tax Shelters, and the Efficiency of Capital Formation," in *Taxation and the Deficit Economy*. Dwight R. Lee, ed. San Francisco: Pacific Research Institute, pp. 107-139.

Gwartney, James, and Richard Stroup. 1982. "Tax Cuts: Who Shoulders the Burden?" *Economic Review*, Federal Reserve Bank of Atlanta. March, pp. 19-27.

Gwartney, James, and Richard Stroup. 1983. "Labor Supply and Tax Rates: A Correction of the Record." *American Economic Review*. June, 73:3, pp. 446-451.

Haddad, L. 1977. "A Fourteenth-Century Theory of Economic Growth and Development." *Kyklos*. 30:2, pp. 195-213.

Hakkio, Craig S., and Mark Rush. 1989. "Marginal Income Tax Rates and Real Economic Growth." Research Working Paper 89-09, Federal Reserve Bank of Kansas City.

Hansson, Ingemar, and Charles Stuart. 1985. "Tax Revenue and the Marginal Cost of Public Funds in Sweden." *Journal of Public Economics*. August, 27:3, pp. 331-353.

Hauser, Karl. 1966. "West Germany," in *Foreign Tax Policies and Economic Growth*. New York: National Bureau of Economic Research, pp. 97-152.

Hausman, Jerry A. 1981. "Labor Supply," in *How Taxes Affect Economic Behavior*. Henry Aaron and Joseph A. Pechman, eds. Washington: Brookings Institution, pp. 27-64.

Hausman, Jerry A. 1985. "Taxes and Labor Supply," in *Handbook of Public Economics*. Alan J. Auerbach and Martin Feldstein, eds. New York: North-Holland, vol. 1, pp. 213-263.

Hayek, F.A. 1992. "The Austrian School of Economics," in *The Collected Works of F.A. Hayek*. Chicago: University of Chicago Press, vol. 4, pp. 42-60.

Heitger, Bernhard. 1993. "Convergence, the 'Tax-State' and Economic Dynamics." *Weltwirtschaftliches Archiv*. 129:2, pp. 254-273.

Heller, Walter W. 1977. Statement, in *The 1977 Economic Report of the President*. Joint Economic Committee, U.S. Congress, 95th Congress, 1st session. Washington: U.S. Government Printing Office.

Heller, Walter W. 1980. "'Supply-Side' Tax Reductions." *New York Times*. December 17.

Hemming, R., and J.A. Kay. 1980. "The Laffer Curve." *Fiscal Studies*. March, 1:2, pp. 83-90.

Henderson David. 1989. "Are We All Supply-Siders Now?" *Contemporary Policy Issues*. October, 7:4, pp. 116-128.

Hicks, John. 1955. "Economic Foundations of Wage Policy." *Economic Journal*. September, 65, pp. 389-404.

Hinrichs, Harley H. 1963. "An Empirical Measure of Investors' Responsiveness to Differentials in Capital Gains Tax Rates Among Income Groups." *National Tax Journal*. September, 16:3, pp. 224-229.

Hirsch, Werner Z., and Anthony M. Rufolo. 1986. "Effects of State Income Taxes on Fringe Benefit Demand of Policemen and Firemen." *National Tax Journal*. June, 39:2, pp. 211-219.

Holt, Charles C., and John P. Shelton. 1962. "The Lock-In Effect of the Capital Gains Tax." *National Tax Journal*. December, 15:2, pp. 337-352.

House Budget Committee and Joint Economic Committee. 1978. *Economic Stabilization Policies: The Historical Record, 1962-76*. U.S. Congress, Joint Committee Print, 95th Congress, 2nd session. Washington: U.S. Government Printing Office.

Hunter, William J., and Charles E. Scott. 1987. "The Impact of Income Tax Progressivity on Tax Revenue." *Public Finance Quarterly*. April, 15:2, pp. 188-198.

Hutt, W.H. 1974. *A Rehabilitation of Say's Law*. Athens: Ohio University Press.

Inman, Robert P. 1992. "Can Philadelphia Escape Its Fiscal Crisis With Another Tax Increase?" *Business Review*, Federal Reserve Bank of Philadelphia. September-October, pp. 5-20.

International Monetary Fund. 1999. "IMF Seminar Discusses Revenue Implications of Trade Liberalization." News Brief No. 99/8. February 25.

Johnson, Darwin G. 1981. "Sensitivity of Federal Expenditures to Unemployment." *Public Finance Quarterly*. January, 9:1, pp. 3-21.

Johnson, Harry G. 1971. "The Keynesian Revolution and the Monetarist Counter-Revolution." *American Economic Review*. May, 61:2, pp. 1-14.

Joint Committee on Taxation. 1979. *General Explanation of the Revenue Act of 1978*. U.S. Congress, Joint Committee Print, 96th Congress, 1st session. Washington: U.S. Government Printing Office.

Joint Economic Committee. 1980a. *1980 Joint Economic Report*. U.S. Congress, 96th Congress, 1st session, Senate Report 96-618. Washington: U.S. Government Printing Office.

Joint Economic Committee. 1980b. *Forecasting the Supply Side of the Economy*. U.S. Congress, 96th Congress, 2nd session. Washington: U.S. Government Printing Office.

Joint Economic Committee. 1980c. *The Underground Economy*. U.S. Congress, 96th Congress, 1st session. Washington: U.S. Government Printing Office.

Jones, A.H.M. 1959. "Over-Taxation and the Decline of the Roman Empire." *Antiquity*. March, 33, pp. 39-43.

Jorgenson, Dale W., and Kun-Young Yun. 1991. "The Excess Burden of Taxation in the United States." *Journal of Accounting, Auditing and Finance*. Fall, 6:4, pp. 487-508.

Joulfaian, David, and Rajen Mookerjee. 1990. "The Government Revenue-Expenditure Nexus: Evidence from a State." *Public Finance Quarterly*. January, 18:1, pp. 92-103.

Judd, Kenneth L. 1987. "The Welfare Cost of Factor Taxation in a Perfect-Foresight Model." *Journal of Political Economy*. August, 95:4, pp. 675-709.

Karras, Georgios. 1993. "Employment and Output Effects of Government Spending: Is Government Size Important?" *Economic Inquiry*. July, 31:3, pp. 354-369.

Keleher, Robert. 1979. "Supply-Side Effects of Fiscal Policy: Some Preliminary Hypotheses." Research Paper No. 9, Federal Reserve Bank of Atlanta. June.

Keleher, Robert. 1982a. "Historical Origins of Supply-Side Economics." *Economic Review*, Federal Reserve Bank of Atlanta. January, pp. 12-19.

Keleher, Robert. 1982b. "Supply-Side Economics: Guiding Principles for the Founding Fathers." *Economic Review*, Federal Reserve Bank of Atlanta. September, pp. 42-54.

Keller, Robert R. 1982. "Supply-Side Economic Policies During the Coolidge-Mellon Era." *Journal of Economic Issues*. September, 16:3, pp. 773-790.

Keller, Robert R. 1984. "A Macroeconomic History of Supply-Side Fiscal Policies in the 1920s." *Review of Social Economy*. October, 42:2, pp. 130-142.

Kennedy, John F. 1963. "Address and Question and Answer Period at the Economic Club of New York, December 14, 1962," in *Public Papers of the Presidents of the United States: John F. Kennedy, 1962*. Washington: U.S. Government Printing Office.

Keynes, John Maynard. 1972 (1933). "The Means to Prosperity," in *The Collected Writings of John Maynard Keynes*. London: Macmillan, vol. 9, pp. 335-366.

Khaldun, Ibn. 1958. *The Muqaddimah*. 3 vols. Franz Rosenthal, trans. New York: Pantheon.

King, Robert G., Sergio Rebelo. 1990. "Public Policy and Economic Growth: Developing Neoclassical Implications." *Journal of Political Economy*. October, 98:5, pt. 2, pp. S126-S150.

Klein, Lawrence B. 1969. "Econometric Analysis of the Tax Cut of 1964," in *The Brookings Model: Some Further Results*. James Duesenberry et al., eds. Chicago: Rand McNally, pp. 459-472.

Koester, Reinhard B., and Roger C. Kormendi. 1989. "Taxation, Aggregate Activity and Economic Growth: Cross-Country Evidence on Some Supply-Side Hypotheses." *Economic Inquiry*. July, 27:3, pp. 367-386.

Kristol, Irving. 1978. "Populist Remedy for Populist Abuses." *Wall Street Journal*. August 10.

Krugman, Paul. 1995. "The Danger of New Tax Cuts." *Fortune*. February 6, p. 45.

Kuznets, Simon. 1942. "National Income and Taxable Capacity." *American Economic Review*. March, 32:1, pp. 37-76.

Laffer, Arthur B. 1976. "The Iniquitous 'Wedge.'" *Wall Street Journal*. July 28.

Laffer, Arthur B. 1978. Statement, in *The 1978 Midyear Review of the Economy*. Joint Economic Committee, U.S. Congress, 95th Congress, 2nd session. Washington: U.S. Government Printing Office.

Laffer, Arthur B. 1979. "An Equilibrium Rational Macroeconomic Framework," in *Economic Issues of the Eighties*. Nake M. Kamrany and Richard H. Day, eds. Baltimore: Johns Hopkins University Press, pp. 44-57.

Laffer, Arthur B. 1981a. "Government Exactions and Revenue Deficiencies." *Cato Journal*. Spring, 1:1, pp. 1-21.

Laffer, Arthur B. 1981b. Statement, in *Tax Aspects of the President's Economic Program*. Committee on Ways and Means, U.S. House of Representatives, 97th Congress, 1st session, Serial 97-10. Washington: U.S. Government Printing Office.

Laffer, Arthur B. 1999. "Economist of the Century." *Wall Street Journal*. October 15.

Lance, Bert. 1977. Statement, in *The 1977 Economic Report of the President*. Joint Economic Committee, U.S. Congress, 95th Congress, 1st session. Washington: U.S. Government Printing Office.

Landau, Daniel. 1983. "Government Expenditure and Economic Growth: A Cross-Country Study." *Southern Economic Journal*. January, 49:3, pp. 783-792.

Landau, Daniel. 1985. "Government Expenditures and Economic Growth in the Developed Countries: 1952-76." *Public Choice*. 47:3, pp. 459-477.

Li, Wenli, and Pierre-Daniel Sarte. 2001. "Growth Effects of Progressive Taxes." Finance and Economics Discussion Series 2002-3, Federal Reserve Board.

Lindbeck, Assar. 1982. "Tax Effects Versus Budget Effects on Labor Supply." *Economic Inquiry*. October, 20:4, pp. 473-489.

Lindsey, Lawrence B. 1986. "Lessons of the 1981 Tax Cut." *Wall Street Journal*. May 6.

Lindsey, Lawrence B. 1987a. "Capital Gains Rates, Realizations, and Revenues," in *The Effects of Taxation on Capital Accumulation*. Martin Feldstein, ed. Chicago: University of Chicago Press, pp. 69-100.

Lindsey, Lawrence B. 1987b. "Individual Taxpayer Response to Tax Cuts: 1982-1984." *Journal of Public Economics*. July, 33:2, pp. 173-206.

Lindsey, Lawrence B. 1990. *The Growth Experiment: How the New Tax Policy Is Transforming the U.S. Economy*. New York: Basic Books.

Lipson, Albert J. 1980. *Political and Legal Responses to Proposition 13 in California*. Santa Monica: Rand.

Long, James E. 1982a. "The Income Tax and Self-Employment." *National Tax Journal*. March 35:1, pp. 31-42.

Long, James E. 1982b. "Income Taxation and the Allocation of Market Labor." *Journal of Labor Research*. Summer, 3:3, pp. 259-276.

Long, James E. 1984. "Tax Rates and Tax Losses: A Preliminary Analysis Using Aggregate Data." *Public Finance Quarterly*. October, 12:4, pp. 457-472.

Long, James E. 1990. "Marginal Tax Rates and IRA Contributions." *National Tax Journal*. June, 43:2, pp. 143-153.

Long, James E., and Frank A. Scott. 1982. "The Income Tax and Nonwage Compensation." *Review of Economics and Statistics*. May, 64:2, pp. 211-219.

Long, James E., and Frank A. Scott. 1984. "The Impact of the 1981 Tax Act on Fringe Benefits and Federal Tax Revenues." *National Tax Journal*. June, 37:2, pp. 185-194.

Long, Russell. 1977. Statement, in *Incentives for Economic Growth*. Committee on Finance, U.S. Senate, 95th Congress, 1st session. Washington: U.S. Government Printing Office.

Lucas, Robert E. 1976. "Econometric Policy Evaluation: A Critique," in *The Phillips Curve and Labor Markets*. Karl Brunner and Allan Meltzer, eds. New York: North-Holland, pp. 19-46.

Lucas, Robert E. 1990. "Supply-Side Economics: An Analytical Review." *Oxford Economic Papers*. April, 42:2, pp. 293-316.

Lucas, Robert E. 2003. "Macroeconomic Priorities." *American Economic Review*. March, 93:1, pp. 1-14.

Lucas, Robert E., and Thomas J. Sargent. 1979. "After Keynesian Macroeconomics." *Quarterly Review*, Federal Reserve Bank of Minneapolis. Spring, 3:2, pp. 1-16.

Lyon, Andrew B. 1996. "Should We Be Afraid of Dynamic Revenue Estimates?" *1995 Proceedings of the National Tax Association*, pp. 207-213.

Malabre, Alfred L. 1977. "May His Ideas Rest in Peace." *Wall Street Journal*. November 17.

Malcomson, James M. 1986. "Some Analytics of the Laffer Curve." *Journal of Public Economics*. April, 29:3, pp. 263-279.

Manage, Neela, and Michael Marlow. 1986. "The Causal Relation between Federal Expenditures and Receipts." *Southern Economic Journal*. January, 52:3, pp. 617-629.

Marchon, Maurice N. 1979. "Tax Avoidance, Progressivity, and Work Effort." *Public Finance*. 34:3, pp. 452-460.

Marlow, Michael L. 1986. "Private Sector Shrinkage and the Growth of Industrialized Economies." *Public Choice*. 49:2, pp. 143-154.

Marlow, Michael, and William Orzechowski. 1988. "Controlling Leviathan Through Tax Reduction." *Public Choice*. September, 58:3, pp. 237-245.

Marsden, Keith. 1983. "Links Between Taxes and Economic Growth." Staff Working Paper 605, World Bank. August.

Martin, Ricardo, and Mohsen Fardmanesh. 1990. "Fiscal Variables and Growth: A Cross-Sectional Analysis." *Public Choice*. March, 64:3, pp. 239-251.

McGuire, Robert A., and T. Norman Van Cott. 2002. "The Confederate Constitution, Tariffs, and the Laffer Relationship." *Economic Inquiry*. July, 40:3, pp. 428-438.

McKenzie, Richard B. 1973. "The Micro and Macro Economic Effects of Changes in the Statutory Tax Rates." *Review of Social Economy*. April, 31:1, pp. 20-30.

McKenzie, Richard B. 1982a. "An Introduction to the Personal Tax 'Cuts.'" *Wall Street Journal*. January 8.

McKenzie, Richard B. 1982b. "Supply-Side Economics and the Vanishing Tax Cut." *Economic Review*, Federal Reserve Bank of Atlanta. May, pp. 20-24.

Meiselman, David, and Arthur B. Laffer. 1975. *The Phenomenon of Worldwide Inflation*. Washington: American Enterprise Institute.

Mellon, Andrew. 1924. *Taxation: The People's Business*. New York: Macmillan.

Meyer, Stephen A. 1983. "Tax Cuts: Reality or Illusion?" *Business Review*, Federal Reserve Bank of Philadelphia. July-August, pp. 3-15.

Meyer, Stephen A., and Robert J. Rossana. 1981. "Did the Tax Cut Really Cut Taxes?" *Business Review*, Federal Reserve Bank of Philadelphia. November-December, pp. 3-12.

Mill, John Stuart. 1874. *Essays on Some Unsettled Questions of Political Economy*. 2nd ed. London: Longmans, Green, Reader & Dyer.

Mills, Wilbur. 1963. Statement. *Congressional Record*. September 24.

Mises, Ludwig von. 1949. *Human Action: A Treatise on Economics*. New Haven: Yale University Press.

Modigliani, Franco, and Charles Steindel. 1977. "Is a Tax Rebate an Effective Tool for Stabilization Policy?" *Brookings Papers on Economic Activity*. No. 1, pp. 175-203.

Montesquieu, Baron de. 1949 (1748). *The Spirit of the Laws*. New York: Hafner Publishing Co.

Moynihan, Daniel Patrick. 1985. "Reagan's Inflate-the-Deficit Game." *New York Times*. July 21.

Mundell, Robert. 1971. “The Dollar and the Policy Mix: 1971.” International Finance Section, Department of Economics, Princeton University.

Mundell, Robert. 1975. “Inflation from an International Point of View,” in *The Phenomenon of Worldwide Inflation*. David I. Meiselman and Arthur B. Laffer, eds. Washington: American Enterprise Institute, pp. 141-151.

Muris, Timothy J. 2000. "Ronald Reagan and the Rise of Large Deficits: What Really Happened in 1981." *Independent Review*. Winter, 4:3, pp. 365-376.

Murray, Lawrence L. 1978. "Bureaucracy and Bi-partisanship in Taxation: The Mellon Plan Revisited." *Business History Review*. Summer, 52:2, pp. 200-225.

Musgrave, Richard A. 1981. Statement, in *The 1981 Economic Report of the President*. Joint Economic Committee, U.S. Congress, 97th Congress, 1st session. Washington: U.S. Government Printing Office.

Nagarajan, K.V. 1982. "Ibn Khaldun and 'Supply-Side Economics': A Note." *Journal of Post-Keynesian Economics*. Fall, 5:1, pp. 117-119.

Neck, Reinhard, Friedrich Schneider, and Markus F. Hofreither. 1989. “The Consequences of Progressive Income Taxation for the Shadow Economy: Some Theoretical Considerations,” in *The Political Economy of Progressive Taxation*. Dieter Bös and Bernhard Felderer, eds. New York: Springer-Verlag, pp. 149-176.

Neilsen, Rosemarie M., Frank J. Sammartino, and Eric Toder. 1987. "CBO Replies to Lindsey." *Tax Notes*. May 4, 35:5, pp. 496-501.

New York Times. 1981a. "Why Only a Popgun Tax Cut?" *New York Times*. February 26.

New York Times. 1981b. "Kemp-Roth: Too Large and Too Small." *New York Times*. April 27.

Niskanen, William A. 1988. *Reaganomics: An Insider's Account of the Policies and the People*. New York: Oxford University Press.

Norris, Floyd. 2001. "Japan's Budget Deficit Has Soared. It's Time for a Tax Cut." *New York Times*. August 17.

Office of Income Security Policy. 1975. "The Cyclical Behavior of Income Transfer Programs: A Case Study of the Current Recession." Technical Analysis Paper No. 7, Office of the Assistant Secretary for Planning and Evaluation; Department of Health, Education and Welfare. October.

Office of Management and Budget. 1981. *Budget of the United States Government: Fiscal Year 1982*. Washington: U.S. Government Printing Office.

Okun, Arthur M. 1968. "Measuring the Impact of the 1964 Tax Reduction," in *Perspectives on Economic Growth*. Walter W. Heller, ed. New York: Random House, pp. 25-49.

Okun, Arthur M. 1978. "Efficient Disinflationary Policies." *American Economic Review*. May, 68:2, pp. 348-352.

Oweiss, Ibrahim M. 1988. "Ibn Khaldun, the Father of Economics," in *Arab Civilization: Challenges and Responses*. George N. Atiyeh and Ibrahim M. Oweiss, eds. Albany: State University of New York Press, pp. 112-127.

Padovano, Fabio, and Emma Galli. 2001. "Tax Rates and Economic Growth in the OECD Countries (1950-1990)." *Economic Inquiry*. January, 39:1, pp. 44-57.

Paish, F.W. 1941. "Economic Incentive in Wartime." *Economica*. August, 8, pp. 239-248.

Parkinson, C. Northcote. 1960. *The Law and the Profits*. Boston: Houghton Mifflin.

Peacock, Alan. 1989. “The Rise and Fall of the Laffer Curve,” in *The Political Economy of Progressive Taxation*. Dieter Bös and Bernhard Felderer, eds. New York: Springer-Verlag, pp. 25-40.

Pechman, Joseph A. 1981. Statement, in *Tax Aspects of the President's Economic Program*. Committee on Ways and Means, U.S. House of Representatives, 97th Congress, 1st session, Serial 97-10. Washington: U.S. Government Printing Office.

Pechman, Joseph A. 1990. "The Future of the Income Tax." *American Economic Review*. March, 80:1, pp. 1-20.

Pechman, Joseph A., and Keimei Kaizuka. 1976. "Taxation," in *Asia's New Giant: How the Japanese Economy Works*. Hugh Patrick and Henry Rosovsky, eds. Washington: Brookings Institution, pp. 317-382.

Peden, Edgar A. 1991. "Productivity in the United States and Its Relationship to Government Activity: An Analysis of 57 Years, 1929-1986." *Public Choice*. February, 69:2, pp. 153-173.

Peden, Edgar A., and Michael D. Bradley. 1989. "Government Size, Productivity, and Economic Growth: The Post-War Experience." *Public Choice*. June, 61:3, pp. 229-245.

Phelps, Edmund S. 1967. "Phillips Curves, Expectations of Inflation and Optimal Unemployment Over Time." *Economica*. August, 34, pp. 254-281.

Phillips, A.W. 1958. "The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861-1957." *Economica*. November, 25, pp. 283-299.

Phillips, Michael M. 1999. "Mundell Wins Nobel Prize in Economics: Columbia University Figure Is a Father of the Euro and Supply-Side School." *Wall Street Journal*. October 14.

Pierson, John. 1983. "Supply-Side Models Disappoint Policymakers." *Tax Notes*. May 30, 19:9, pp. 771-774.

Prescott, Edward C. 2002. "Prosperity and Depression." *American Economic Review*. May, 92:2, pp. 1-15.

Prescott, Edward C. 2003. "Why Do Americans Work So Much More Than Europeans?" Staff Report 321, Federal Reserve Bank of Minneapolis. September.

Pritchett, Lant, and Geeta Sethi. 1993. "Tariff Rates, Tariff Revenue, and Tariff Reform: Some New Facts." Policy Research Working Paper 1143, World Bank. May.

Rabushka, Alvin, and Pauline Ryan. 1982. *The Tax Revolt*. Stanford: Hoover Press.

Rader, Benjamin G. 1971. "Federal Taxation in the 1920s: A Re-examination." *The Historian*. May, 33:3, pp. 415-435.

Rattner, Steven. 1981. "Economic Panel Splits on Policy." *New York Times*. February 27.

Reagan, Ronald. 1982a. "Address to the Nation on the Economy, February 5, 1981," in *Public Papers of the Presidents of the United States: Ronald Reagan, 1981*. Washington: U.S. Government Printing Office.

Reagan, Ronald. 1982b. "The President's News Conference, October 1, 1981," in *Public Papers of the Presidents of the United States: Ronald Reagan, 1981*. Washington: U.S. Government Printing Office.

Reuss, Frederick G. 1963. *Fiscal Policy for Growth Without Inflation: The German Experiment*. Baltimore: Johns Hopkins Press.

Reynolds, Alan. 1985. "Some International Comparisons of Supply-Side Tax Policy." *Cato Journal*. Fall, 5:2, pp. 543-569.

Rijckeghem, Caroline Van. 1997. "Social Security Tax Reform and Unemployment: A General Equilibrium Analysis for France." Working Paper 97/59, International Monetary Fund. May.

Roberts, Paul Craig, 1971. *Alienation and the Soviet Economy*. Albuquerque: University of New Mexico Press.

Roberts, Paul Craig. 1978a. "The Breakdown of the Keynesian Model." *The Public Interest*. Summer, pp. 20-33.

Roberts, Paul Craig. 1978b. "Idealism in Public Choice Theory." *Journal of Monetary Economics*. August, 4:3, pp. 603-615.

Roberts, Paul Craig. 1978c. "The Economic Case for Kemp-Roth." *Wall Street Journal*. August 1.

Roberts, Paul Craig. 1981. "The Tax Cut Will Help Savings." *Fortune*. August 24, pp. 44-45.

Roberts, Paul Craig. 1984. *The Supply-Side Revolution*. Cambridge: Harvard University Press.

Roberts, Paul Craig. 1987. "How the Defeat of Inflation Wrecked the U.S. Budget." *Los Angeles Times*. January 27.

Roberts, Paul Craig. 1992. "My Experience With Government Forecasting." *Cato Journal*. Spring-Summer, 12:1, pp. 125-128.

Roberts, Paul Craig. 2000. "What Really Happened in 1981." *Independent Review*. Fall, 5:2, pp. 279-281.

Ruby, Michael. 1977. "Is Keynes Dead?" *Business Week*. June 20, pp. 74-75.

Rudney, Gabriel G. 1976. "Income Under Low and High Tax Rate Systems: 1929 vs. 1973." Paper 17, Office of Tax Analysis, U.S. Treasury Department. September.

Sammartino, Frank, and David Weiner. 1997. "Recent Evidence on Taxpayers' Response to the Rate Increases of the 1990's." *National Tax Journal*. September, 50:3, pp. 683-705.

Samuelson, Paul A. 1989. "The '80s Are an Economic Success Story." *Christian Science Monitor*. October 4.

Samuelson, Paul A., and Robert M. Solow. 1960. "Analytical Aspects of Anti-Inflation Policy." *American Economic Review*. May, 50:2, pp. 177-194.

Sanders, Thomas H. 1951. *Effects of Taxation on Executives*. Cambridge: Harvard Business School.

Sanyal, Amal, Ira N. Gang, and Omkar Goswami. 2000. "Corruption, Tax Evasion and the Laffer Curve." *Public Choice*. October, 105:1-2, pp. 61-78.

Say, Jean-Baptiste. 1834. *A Treatise on Political Economy*. 6th American edition. C.R. Prinsep and Clement C. Biddle, trans. Philadelphia: Grigg & Elliott.

Schneider, Friedrich, and Dominik H. Enste. 2000. "Shadow Economies: Size, Causes, and Consequences." *Journal of Economic Literature*. March, 38:1, pp. 77-114.

Scully, Gerald W. 1992. *Constitutional Environments and Economic Growth*. Princeton: Princeton University Press.

Shaller, Douglas R. 1983. "The Tax-Cut-But-Revenue-Will-Not-Decline Hypothesis and the Classical Macromodel." *Southern Economic Journal*. April, 49:4, pp. 1147-1154.

Shapiro, Perry, and Jon Sonstelie. 1982. "Did Proposition 13 Slay Leviathan?" *American Economic Review*. May, 72:2, pp. 184-190.

Shoup, Carl. 1943. "Problems in War Finance." *American Economic Review*. March, 33:1, pp. 74-97.

Shoven, John B., and Jeremy I. Bulow. 1975. "Inflation Accounting and Nonfinancial Corporate Profits: Physical Assets." *Brookings Papers on Economic Activity*. No. 3, pp. 557-598.

Shoven, John B., and Jeremy I. Bulow. 1976. "Inflation Accounting and Nonfinancial Corporate Profits: Financial Assets and Liabilities." *Brookings Papers on Economic Activity*. No. 1, pp. 15-57.

Showalter, Mark H., and Norman K. Thurston. 1997. "Taxes and Labor Supply of High-Income Physicians." *Journal of Public Economics*. October, 66:1, pp. 73-97.

Silk, Leonard. 1977. "Germany Intends to Keep Economy 'in Good Shape.'" *New York Times*. January 24.

Silk, Leonard. 1980. "Major Change in Theory Seen." *New York Times*. March 5.

Skinner, A.S. 1967. "Say's Law: Origins and Content." *Economica*. May, 34, pp. 153-166.

Sloan, Frank A., and Killard W. Adamache. 1986. "Taxation and the Growth of Nonwage Compensation." *Public Finance Quarterly*. April, 14:2, pp. 115-137.

Smiley, Gene, and Richard H. Keehn. 1995. "Federal Personal Income Tax Policy in the 1920s." *Journal of Economic History*. June, 55:2, pp. 285-303.

Smith, Adam. 1937 (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. New York: Modern Library.

Smith, David. 1975. "Public Consumption and Economic Performance." *National Westminster Bank Quarterly Review*. November, pp. 17-30.

Sowell, Thomas. 1972. *Say's Law: An Historical Analysis*. Princeton: Princeton University Press.

Spengler, Joseph J. 1964. "Economic Thought of Islam: Ibn Khaldun." *Comparative Studies in Society and History*. April, 6:3, pp. 268-305.

Stein, Herbert. 1969. *The Fiscal Revolution in America*. Chicago: University of Chicago Press.

Stein, Herbert. 1978. "The Real Reasons for a Tax Cut." *Wall Street Journal*. July 18.

Stein, Herbert. 1984. *Presidential Economics*. New York: Simon and Schuster.

Stevenson, Richard. 2000. "The Battle of the Decades: Reaganomics vs. Clintonomics Is a Central Issue in 2000." *New York Times*. February 8.

Stockman, David A. 1978a. Statement. *Congressional Record*. March 1.

Stockman, David A. 1978b. Statement, in *Individual and Business Tax Reduction Proposals*. Committee on Finance, U.S. Senate, 95th Congress, 2nd session. Washington: U.S. Government Printing Office.

Stockman, David A. 1978c. Statement. *Congressional Record*. August 10.

Stockman, David A. 1980a. "Why the Economic Doctors Failed." *Washington Post*. March 2.

Stockman, David A. 1980b. "Our Grand New Platform." *Washington Post*. July 15.

Stockman, David A. 1981. Statement, in *Nomination of David A. Stockman*. Committee on Finance, U.S. Senate, 97th Congress, 1st session. Washington: U.S. Government Printing Office.

Stockman, David A. 1986. *The Triumph of Politics*. New York: Harper & Row.

Strand, Henning. 1999. "Some Issues Related to the Equity-Efficiency Trade-Off in the Swedish Tax and Transfer System." Economics Department Working Paper No. 225, Organization for Economic Cooperation and Development. November.

Stuart, Charles E. 1981. "Swedish Tax Rates, Labor Supply, and Tax Revenues." *Journal of Political Economy*. October, 89:5, pp. 1020-1038.

Stuart, Charles E. 1984. "Welfare Costs per Dollar of Additional Tax Revenue in the United States." *American Economic Review*. June, 74:3, pp. 352-362.

Swanson, Donald F. 1963. "Andrew Mellon on Tax Cuts." *The New Republic*. March 23, p. 22.

Swift, Jonathan. 1964 (1728). "An Answer to a Paper Called A Memorial of the Poor Inhabitants, Tradesmen, and Laborers of the Kingdom of Ireland," in *Jonathan Swift: Irish Tracts*. Herbert Davis, ed. Oxford: Basil Blackwell, pp. 17-25.

Tatom, John A. 1984. "The 1981 Personal Income Tax Cuts: A Retrospective Look at Their Effects on the Federal Tax Burden." *Review*, Federal Reserve Bank of St. Louis. December, 66:10, pp. 5-17.

Triest, Robert K. 1990. "The Effect of Income Taxation on Labor Supply in the United States." *Journal of Human Resources*. Summer, 25:3, pp. 491-516.

Ture, Norman B. 1980. “The Economic Effects of Tax Changes: A Neoclassical Analysis,” in *Stagflation: The Causes, Effects, and Solutions*. Joint Economic Committee, U.S. Congress, 96th Congress, 2nd session. Washington: U.S. Government Printing Office, pp. 316-347.

Ture, Norman B. 1982. “Supply Side Analysis and Public Policy,” in *Essays in Supply Side Economics*. David G. Raboy, ed. Washington: Institute for Research on the Economics of Taxation, pp. 7-28.

Uchitelle, Louis. 1996. "How Both Sides Joined the Supply Side." *New York Times*. August 25.

U.S. Treasury Department. 1985. *Report to Congress on the Capital Gains Tax Reductions of 1978*. Washington: U.S. Government Printing Office.

Vroman, Susan, and Gerard Anderson. 1984. "The Effect of Income Taxation on the Demand for Employer-Provided Health Insurance." *Applied Economics*. February, 16:1, pp. 33-43.

Wanniski, Jude. 1974. "It's Time to Cut Taxes." *Wall Street Journal*. December 11.

Wanniski, Jude. 1975. "The Mundell-Laffer Hypothesis—A New View of the World Economy." *The Public Interest*. Spring, pp. 31-52.

Wanniski, Jude. 1976a. "Taxes and a Two-Santa Theory." *National Observer*. March 6.

Wanniski, Jude. 1976b. "Taxes and the Kennedy Gamble." *Wall Street Journal*. September 23.

Wanniski, Jude. 1978. *The Way the World Works*. New York: Basic Books.

Waud, Roger N. 1986. "Tax Aversion and the Laffer Curve." *Scottish Journal of Political Economy*. August, 33:3, pp. 213-227.

Wertheimer, Robert G. 1957. "Tax Incentives in Germany." *National Tax Journal*. December, 10:4, pp. 325-338.

White House. 1981. *A Program for Economic Recovery*. Washington: U.S. Government Printing Office.

Widmalm, Frida. 2001. "Tax Structure and Growth: Are Some Taxes Better Than Others?" *Public Choice*. June, 107:3-4, pp. 199-219.

Will, George. 1978. "Reining In the Federal Spending Urge." *Washington Post*. July 27.

Wilson, Charles H. 1939. "The Economic Decline of the Netherlands." *Economic History Review*. May, 9:2, pp. 11-127.

Wilson, Charles H. 1969. "Taxation and the Decline of Empires, an Unfashionable Theme," in *Economic History and the Historian: Collected Essays*. New York: Praeger, pp. 114-127.

Wilson, Woodrow. 1919. "Annual Message of the President." *Congressional Record*. December 2.

Woodbury, Stephen A., and Daniel S. Hammermesh. 1992. "Taxes, Fringe Benefits and Faculty." *Review of Economics and Statistics*. May, 74:2, pp. 287-296.

Yunker, James A. 1986. “A Supply-Side Analysis of the Laffer Hypothesis.” *Public Finance*. 41:3, pp. 372-391.

Ziliak, James P., Thomas J. Kniesner, and Douglas Holtz-Eakin. 2003. "The Effect of Income Taxation on Consumption and Labor Supply." Working Paper No. 54, Center for Policy Research, Syracuse University. April.