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TAX-CUT SNAKE OIL

Two conservative theories contradict each other and the facts

BY JEFFREY FRANKEL

Politicians have always faced the temptation to give their constituents tax cuts. But in recent decades conservative presidents have enacted large tax cuts that have been anything but conservative fiscally, and have justified them by appealing to theory. In particular, they have appealed to two theories: the Laffer Proposition, which says that cuts in tax rates will pay for themselves via higher economic activity, and the “Starve the Beast” hypothesis, which says that tax cuts will increase the budget deficit and put downward pressure on federal spending. It is insufficiently remarked that the two propositions are inconsistent with each other: reductions in tax rates cannot both increase tax revenues and reduce them at the same time. Being mutually exclusive, however, does not prevent them both from being wrong.

The Laffer Proposition, while theoretically possible under certain conditions, does not apply to U.S. income tax rates: a cut in those rates reduces revenue, precisely as common sense would indicate. As detailed in this paper, this was the outcome of the two big experiments of recent decades: the Reagan tax cuts of 1981-83 and the Bush tax cuts of 2001-03, both of which contributed to record U.S. budget deficits. It is also the conclusion of more systematic scholarly studies based on more extensive data. Finally, it is the view of almost all professional economists, including the illustrious economic advisers to Presidents Reagan and Bush. So thorough is the discrediting of the Laffer Hypothesis, that many deny that these two presidents or their top officials could have ever believed such a thing. But abundant quotes suggest that they did.

The Starve the Beast hypothesis claims that politicians cannot spend money that they do not have. In theory, Congressmen are supposedly inhibited from increasing spending by constituents’ fears that the resulting deficits will mean higher taxes for their grandchildren. The theory fails both on conceptual grounds and on empirical grounds. Conceptually, one should begin by asking: what is the alternative fiscal regime to which Starve the Beast is being compared? The natural alternative is the regime that was in place during the 1990s, which this paper calls “Shared

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Sacrifice.” During that time, any Congressman wishing to increase spending had to show how he or she would raise taxes to pay for it. Logically, a Congressman contemplating a new spending program to benefit some favored supporters will be more inhibited by fears of constituents complaining about an immediate tax increase (under the regime of Shared Sacrifice) than by fears of constituents complaining that budget deficits might mean higher taxes many years into the future. Sure enough, the Shared Sacrifice approach of the 1990s succeeded in eliminating budget deficits, and did so to a substantial degree by cutting the growth of spending. Compare this outcome to the sharp increases in spending that took place when President Reagan took office, when the first President Bush took office, and when the second President Bush took office. As with the Laffer Hypothesis, more systematic econometric analysis confirms the rejection that these episodes suggest.

These matters are not solely of interest to historians or economists. As of this writing, the presidential campaign of Senator John McCain appears set to drive its wagon down the same road in which Reagan and Bush have already worn deep ruts. The candidate is apparently selling the same snake oil: he says he believes that tax cuts increase revenues. His principle policy director disavows the Laffer Principle, just as the economists who advised Presidents Reagan and Bush did. But the views of the economic advisers become irrelevant when the candidate takes office.

The Queen in *Alice in Wonderland* said that, with practice, she was able to believe as many as six impossible things before breakfast. Most of us are more limited in our capacity for credulity. If John McCain believes both the Laffer Proposition (tax cuts raise revenues) and Starve the Beast (higher revenues lead to higher spending, anathema to conservatives), then as a good conservative, his duty is clear: He ought to run on a truly novel platform of higher tax rates. Why? Higher tax rates would reduce revenues (this is what Laffer says would happen) and thereby reduce spending (this is what Starve the Beast says would happen).

If McCain continues to propose extending the Bush tax cuts, he should at least be forced to choose between the Lafferite defense and the “Starve the Beast” defense. Only then can the rest of us know which of the two mutually inconsistent propositions to refute.

Introduction

For years, the Republican approach to economic policy has mostly boiled down to this message: The right response to all problems is cutting taxes. To bolster this message, they rely heavily on two arguments. On the one hand, they say cutting taxes will increase tax revenues by generating economic growth, thus raising tax revenue and building a surplus (this is known as the Laffer Hypothesis). On the other hand, Republicans claim that tax cuts are good because they create deficits and force the government to shrink itself (often referred to by the colloquialism “starving the beast”).

The arguments are not only mutually exclusive—the weight of the economic evidence also shows that they are both wrong. The habit of Republican policy makers to invoke each of them at different points in time (or before different audiences) is politically convenient but logically dishonest. It smacks of a desperate defense attorney arguing both that “my client didn’t have a gun” (Laffer) and “he shot in self-defense” (Starve the Beast).

Neither proposition accurately describes U.S. economic history, nor provides a sound basis for future economic policy. That is, choosing *either* proposition would harm the long-term health of the U.S. economy.

In past presidential campaigns, candidates have not been adequately pressed before the election to clarify and defend their beliefs about how fiscal policy works. As this paper is being written (during the 2008 presidential campaign), some familiar contradictions have become evident in the campaign of Republican candidate John McCain.

Candidate McCain has himself embraced the logic of the Laffer hypothesis on several occasions. However, the economist who is his policy director, Douglas Holtz-Eakin, explicitly disavows the Laffer Proposition. He claims today that his boss does not really mean to say what it sounds like he is saying regarding the Laffer Proposition.

Identifying the contradictions between what the candidate says and what his chief economic adviser says is more than playing a game of “gotcha.” Previous presidents, including Ronald Reagan and George W. Bush, have ignored their chosen top economic advisors in favor of political advisers, launching the country onto paths of fiscal irresponsibility.

If McCain is elected and the pattern repeats itself, we will once again be able to play “gotcha” by pointing out the contradictions. But by then it will then be too late for the country. It is not too much to ask now, in the Fall of 2008, that campaigns spell out forthrightly just how they think the most important lever the government has to impact the overall U.S. economy *actually works*.

The rest of this paper provides the theory and evidence underpinning the Laffer and Starve the Beast propositions. It notes their contradictions with each other, and with the economic evidence from the real world. It calls for the candidates in this election to reject peddling tax-cut snake oil as a political strategy and to state what they actually believe about tax cuts. Lastly, it sketches out an alternative long-term vision for responsible fiscal U.S. policy—the approach of “Shared Sacrifice.” Shared Sacrifice is less attractive to ideologues of all types, but it is the policy that characterized the 1990s budget policy and helped spur a 1990s economic boom that saw job growth run *four times faster* than in the 2000s.

The Laffer Hypothesis: theory and evidence

The public sometimes assumes that supply-side economics must be a school of thought within academic economics. As Milton Friedman would say, nothing could be further from the truth.¹

Incentives

A very loose definition of supply-side economics might be the principle that incentives are important, and if you tax more of something you will probably get less of it. But if this were the definition, virtually all economists would be supply sid-ers. Virtually all textbooks—particularly in the relevant courses of introductory economics, microeconomics, and public finance—emphasize responsiveness of supply (and demand) to tax rates and to other determinants of prices. Some supply sid-ers in the world of journalism or policy entrepreneurship hold forth on how these effects are missing from the text-books, which is amusing because it tends to reveal that the speaker did not study economics textbooks when in school.

The proposition that truly distinguishes those who call themselves supply sid-ers is the Laffer Proposition. The Laffer Proposition claims that if the government cuts, say, the income tax *rate*, not only do people respond by working harder and earning more income, but that the increase in income is so great that it outweighs the reduction in the tax rate. The claimed result is that total tax *revenue*—the tax *rate* multiplied by income—actually increases when tax rates are cut. Is this even a possibility? The sidebar, “Can Revenue Increase When Taxes Are Cut?” illustrates some situations where this unusual phenomenon may actually hold. Almost all professional economists, however, agree that U.S. income tax rates are low enough that the Laffer Proposition does *not* hold.

After Bill Clinton raised the top marginal tax rate a few percentage points in 1993, tax collection soared.⁵ While some have argued that there was a fall in tax receipts from the upper bracket in 1993, Austan Goolsbee found evidence that this resulted only from a shift in timing of tax payments by the rich, not in total payments over time.⁶ In any case, what happens to tax receipts in the upper bracket is not the same as what happens to tax receipts overall.

This timing issue also sheds light on a particularly favorite claim of supply sid-ers: that when the government cuts the tax rate on capital gains, capital gains tax receipts go up, hence validating the Laffer Proposition. However, this revenue increase happens because investors know that capital gains tax rates fluctuate over time. When tax rates are unusually high, investors refrain from selling their stocks, for fear of paying high capital gains taxes. They wait until capital gains tax rates are low—a sort of tax holiday or moratorium—and take advantage of the opportunity to cash in, by unlocking long-term investment and re-allocating their portfolios, at low tax rates. This re-allocation of capital gains realizations through time, however, does *not* necessarily mean that a permanently low capital tax will permanently bring in more revenue than a permanently high capital tax rate.⁷

CAN REVENUE INCREASE WHEN TAXES ARE CUT?

- If the marginal tax rate approaches 100%, it undermines all economic incentive to work. In Britain, the top marginal tax rate was over 90% in the 1960s—even higher at times—until cut by Margaret Thatcher. Reportedly, this is why the Beatles and other British rock groups began working outside the country more often.² In reaction to Sweden’s unfriendly income tax system, Ingmar Bergman in 1976 legendarily stopped making movies in his home country and went into self-imposed exile. In other words, these high-tax European countries did not take in much tax revenue from their creative stars.³
- If a single city, or a small country or state, cuts taxes, it is more likely than a large country to experience a large supply response, because it is easy for households and firms to move across the borders. High taxes in New York have driven some to the suburbs, and low-tax jurisdictions like New Hampshire thrive as a haven for those seeking to escape high income taxes. The same principle applies to more specialized tax havens such as the Cayman Islands.
- Even in the United States at the federal level, marginal tax rates in the 1970s were so high that they did not bring in much revenue. It is not that the top-earners gave up working. Rather they hired expensive lawyers and accountants, who successfully sheltered their clients’ incomes. Thus when Ronald Reagan in 1981 cut the top marginal tax rate, it indeed may well have brought in more tax revenue subsequently within that tax bracket.⁴ In any case, it cut down on a lot of wasteful legal and accounting tax-avoidance activity.

Evidence on the Laffer curve and the U.S. economy today

The controversial proposition here is not that tax incentives affect behavior (they do), nor that reducing some particular tax rates under some unusual conditions might bring in more revenue (it might), but that cutting U.S. income tax rates today will in general bring in more revenue.

The research is clear on this empirical point, and it runs firmly against the Laffer Proposition. One could simply point out that in the aftermath of the large cuts in income tax rates enacted by President Bush in 2001, tax revenue and budget positions as a share of GDP went down rather than up, as had also been the case in the aftermath of the large cuts in income tax rates by President Reagan in 1981.⁸ But scientific studies rely on more than two data points and try to control for other factors that may be changing at the same time. Getting more major data points requires going further back in history, or including the experience of other countries, or both.

Going back in history, Goolsbee (1999) analyzes six different U.S. tax changes since 1922 for evidence in support of the high-income Laffer curve. He finds that the historical record suggests that it is unlikely that governments can raise more money by cutting rates at anything like today’s marginal tax rates.⁹

Uhlig and Trabandt (2006) use international evidence to examine the shape of the Laffer curve. They find that the United States and the EU-15 area are located on the left side of their labor and capital tax Laffer curves—in other words, in the range where cuts in tax rates lose revenue—but the EU-15 economy is much closer to the top of the curve than the United States.¹⁰

Heijman and van Ophem (2005) also consider international evidence, and even try to account for rising tax rates

driving economic activities “underground” and hence depriving governments of revenue. They conclude that, with one exception, raising the marginal tax rate in any major Organization for Economic Cooperation and Development (OECD) country would increase, not decrease, revenue.¹¹

Thus the Laffer hypothesis is dubious as a practical matter. For those more convinced by appeals to authority, especially those authorities on the other side of the political fence, the sidebar “**What Economists Say About the Laffer Proposition**” cites some of the outstanding members of the profession who have served as the top professional economists in the White House, chairing the President’s Council of Economic Advisers. As a group, they do not subscribe to the Laffer hypothesis and did not compromise their beliefs while in office. That their positions are at odds with the presidents they served is especially important in that the pattern would likely be repeated in a McCain administration.

Does “dynamic scoring” change the evidence?

Conservative commentators who have spent too much time in Washington are often obsessed by a supply-sider campaign to get official government agencies to use “dynamic scoring” when evaluating the economic outcomes of tax cuts. “Scores” offered by the Congressional Budget Office (CBO) or the Joint Committee on Taxation (JCT) on proposals for tax or spending legislation are just evaluations of their impact on the budget. “Dynamic scoring” refers to the estimation of budget effect while trying to take into account all effects on the rest of the economy. Supply siders often make two errors. First, they make blanket claims that scoring and CBO budget forecasts completely omit behavioral response to incentives. Second, they often claim that if the agencies were to use dynamic scoring, it would show that tax cuts pay for themselves.

WHAT ECONOMISTS SAY ABOUT THE LAFFER PROPOSITION

- *Martin Feldstein*: “I objected, therefore, to those supply-siders like Arthur Laffer who argued that a 30% across-the-board tax cut would also be self-financing because of the resulting increase in incentives to work.”¹²
- *Martin Feldstein*: “The ‘new’ supply siders projected rapid growth, dramatic increases in tax revenues, a sharp rise in saving, and a relatively painless reduction in inflation. The height of supply-side hyperbole was the ‘Laffer curve’ proposition that the tax cut would actually increase tax revenue because it would unleash an enormously depressed supply of effort....The experience since 1981 has not been kind to the claims of the Supply Side extremists that an across-the-board reduction in tax rates would spur unprecedented growth, reduce inflation painlessly, increase tax revenue and stimulate a spectacular rise in personal saving. Each of those predictions has proven to be wrong.”¹³
- *Glenn Hubbard*: “Although the economy grows in response to tax reductions... it is unlikely to grow so much that lost tax revenue is completely recovered by the higher level of economic activity.”¹⁴
- *Greg Mankiw*: “Subsequent history failed to confirm Laffer’s conjecture that lower tax rates would raise tax revenue. When Reagan cut taxes after he was elected, the result was less tax revenue, not more.”¹⁵

Some observers have inaccurately accused Feldstein, Hubbard, and Mankiw of selling out their beliefs while in office, just as other observers inaccurately claim that Reagan and Bush never subscribed to the Laffer hypothesis. So it may be useful to have gotten these quotes into the record.¹⁶

The claim that CBO and JCT omit all behavioral responses is inaccurate: Microeconomic quantity responses *are* in fact taken into account when scoring tax changes. These agencies, for example, take into account the upward effect on gasoline demanded by consumers if the gasoline tax were to be lowered. Furthermore, when it comes to CBO's annual budget projections, as opposed to scoring individual tax changes, they do take into account the estimated effects on national output and other macroeconomic quantities.

The question then comes down to the practice of holding national output constant when scoring proposals for individual tax changes. It is not in dispute that tax cuts, in themselves, are likely to raise national output, at least in the short run, if not offset by other policy changes.¹⁷ But this is beside the point. The fact is, dynamic scoring does not change the common-sense conclusion that tax cuts reduce federal revenue, rather than paying for themselves, as we shall see in a moment.

One reason for using such "static" forecasts, that is, forecasts that hold output constant, is that it is often impossible to evaluate whether other taxes, spending, or monetary policy will be changed in offsetting ways when changes to individual tax policy are made. Another reason for using static forecasts is that even if all other influences *could* be held unchanged when individual taxes are changed, estimates of the *magnitude* of the effect of taxes on behavior vary widely. The practice of leaving out output effects when scoring individual tax proposals may be particularly wise in that the uncertainty creates fertile ground for attempts at political manipulation by Congress. The temptation to offer one's constituents tax cuts while simultaneously claiming they will not hurt the budget is so strong that, without this rule, congressmen could seek to apply strong pressure on the CBO, which works for them, to come up with overly optimistic forecasts every time they wanted to cut some tax.

An illustration of this temptation came in an episode that started in March 2003, when Douglas Holtz-Eakin, who at the time was an economist in the Bush White House, was appointed director of the CBO by the Republican majority in Congress. Some supply-side-leaning congressmen hoped that the new CBO director would finally implement dynamic scoring. Some outside observers feared the worst, having observed both a general trend toward politicization of congressional institutions and attempts by the Bush administration to impose ideologically preconceived answers on technical questions of all sorts.

In response to requests for dynamic scoring, Holtz-Eakin and his staff prepared a study of the effect of tax cuts that did indeed include estimates of the effects on output. But the study also included estimates of the effects on inflation, interest rates, the national debt, and other economic variables. As a result it included the *positive* budgetary effects of higher output on tax receipts, but it also included the *negative* effects of higher interest payments that the federal government is obligated to pay to holders of the national debt when deficits rise.

To the surprise of the supply siders (although not professional economists), far from giving the answer that tax cuts would come close to paying for themselves, dynamic scoring gave answers that were closer to the answer given by the traditional static scoring. Although under some methodological variants the "dynamic" effects were indeed positive, under others they were actually negative, and in one case the net effect was essentially a wash.

This is, it should be noted, the same Douglas Holtz-Eakin who is now the policy director of the McCain campaign. He deserves credit for keeping CBO largely unpoliticized during his term there and giving an honest answer to the question of dynamic scoring. One hopes that his professional integrity can withstand the still-greater pressure of a presidential election campaign.

Do Republican presidents believe the Laffer curve?

It has historically often been the job of the White House to be more responsible than Congress. This applies to fiscal policy as well as areas such as foreign policy and trade policy. Have "conservative" Republican presidents traditionally been fiscally conservative enough to listen to their economists and reject the Laffer hypothesis? The answer is pretty clearly "no." (Evidence, in the form of their own words, is provided in Appendix A.)

More relevant today, perhaps, is what Senator John McCain believes, the Republican presidential candidate at the time this paper was written. He has himself been quoted on several occasions during the campaign as subscribing to the Laffer Proposition: “Tax cuts, starting with Kennedy, as we all know, increase revenues.”¹⁸ Moreover, the press has reported that Arthur Laffer is a special economic adviser to McCain,¹⁹ and that Jack Kemp, who has long been one of the most prominent Republican supply-sider politicians, also has his ear.

As already noted, Douglas Holtz-Eakin, McCain’s director on policy issues, rejects the Laffer Proposition. When a reporter pointed to discrepancies between what the candidate says and what he, Holtz-Eakin, claims is the official McCain policy position, Holtz-Eakin responded that the candidate says lots of things, and essentially that McCain does not speak for the campaign. In an appearance at the National Press Club in Washington he specifically rejected McCain’s statements regarding the Laffer Proposition.

However, until the name of Douglas Holtz-Eakin, and, not that of John McCain, appears on the ballot, one assumes that the best guide to what the candidate believes comes straight from his own mouth (especially one who prides himself on “straight talk”). Certainly listening to the words of Presidents Reagan and Bush and their officials (quoted in Appendix A) would have provided a far more accurate predictor of the actual fiscal policy actions of those two administrations, and so of their record budget deficits, than would listening to the words of their economist advisers (See “**What Economists Say About the Laffer Proposition**” on page 5).

The Starve the Beast Proposition: Theory and evidence

The Laffer Proposition is not, of course, the only rationale offered for tax cuts. When speaking to audiences likely to be hostile to the Laffer rationale (professional economists, say), or when large budget deficits materializing after tax cuts make continued adherence to the Laffer Proposition untenable (as happened in the Reagan and Bush administrations), conservatives often switch emphasis to the Starve the Beast hypothesis.²⁰ The Starve the Beast Proposition claims that budget deficits are worth the cost because they put powerful downward pressure on government spending.

The explanation for apparently irresponsible tax cuts as a Trojan horse to force future governments to cut spending and shrink the size of the government is sometimes given by liberals who think they are being sophisticated in their political analysis and their cynicism. Even Paul Krugman and Joe Stiglitz have expounded versions of this political theory at times. In fact, this view may not be sufficiently cynical (something rarely said about these two astute observers).

In the first place, it is far from clear that conservatives who wish to cut government spending are ashamed of this goal and wish to hide it. The slogan of shrinking government in the abstract still plays well with much of the electorate. Some conservative economists are quite proud of the argument that creating deficits is a strategy to cut spending (e.g., the opinion pieces by University of Chicago Nobel Prize winners Milton Friedman and Gary Becker). The argument is that “Congress can’t spend money it doesn’t have.”

In the second place, and more central to the Starve the Beast proposition, Congress *can* spend money it does not have, and does so regularly. The large tax cuts enacted at the beginning of the 1980s put the country onto a path of record deficits, and the same happened at the beginning of the 2000s.

The budgets proposed by the White House during eight years of rising Reagan budget deficits and another eight years of rising Bush budget deficits were hardly more austere than those passed by Congress. True, they proposed cuts in some small programs, especially those important to the lives of particularly vulnerable populations. But they increased other components of spending rapidly, and never touched the popular government programs that constitute the vast bulk of government spending. Hence they never proposed spending cuts anywhere near the scale necessary to improve the fiscal balances that they inherited.²¹ After this repeated historical pattern, why should anyone believe that the Republicans are serious about the messy task of getting spending under control, as opposed to merely giving feel-good speeches on the subject?

One great irony of the Starve the Beast strategy is that, if there is any episode that could possibly be credited to it, even in part, it would have to be when the Democratic administration of Bill Clinton bit the bullet in the 1990s,

and reduced the trajectory of spending in its efforts to balance the budget deficit it had inherited. One imagines that voters should beware of a strategy pushed by a political party that is predicated on their opposition remaining ever-more responsible than they are.

Logic and history clearly both show that Starve the Beast does not work. Let us start with logic. One must ask: what is the alternative regime of fiscal policy to which the tax cut strategy is being compared? Here is one suggestion: the regime that was in place during the 1990s, requiring that any new tax cuts or spending increases had to be paid for somewhere else in the budget (PAYGO, in the jargon).

Let's call the 1990s system the "Shared Sacrifice" strategy. "I will forego my tax cut if you forego your spending increase" is an offer that one politician might reasonably make to another. The sidebar "**Legislating Shared Sacrifice**" sketches out the specific legislative steps that implemented this strategy. The Shared Sacrifice strategy succeeded in eliminating the deficit and creating record surpluses over the course of the decade because a Congressperson would hesitate to propose an increase in spending for a favored interest group out of fear that the matching tax increase would provoke complaints from other constituents.

As Congressional politics, Starve the Beast lacks this coherence. "I will do what I want on taxes, *and* I expect you to forego your spending increase" is not an offer that any Congressperson is likely to accept.

To put it another way, how can it be that a Congressperson who is considering voting for a wasteful spending increase will be restrained by his constituents' complaints regarding budget deficits and their *grandchildren's* consequent implicit future tax liabilities *to a greater extent than* he or she would be restrained by the constituent complaints that would follow from *immediate hikes in taxes today* under the PAYGO approach?

So much for the logic of Starve the Beast. History also confirms that the Starve the Beast claim does not describe actual spending behavior. Spending as a share of GDP tends to be reduced under a budgetary discipline regime of Shared Sacrifice that simultaneously raises tax revenue, the regime in effect during the 1990s (see **Figure A**). Spending is not cut under a Starve the Beast regime that cuts taxes, as was done in the 1980s and the current decade. Indeed, spending goes up during times of budget deficits, not down. The correlation is a very high +0.86.

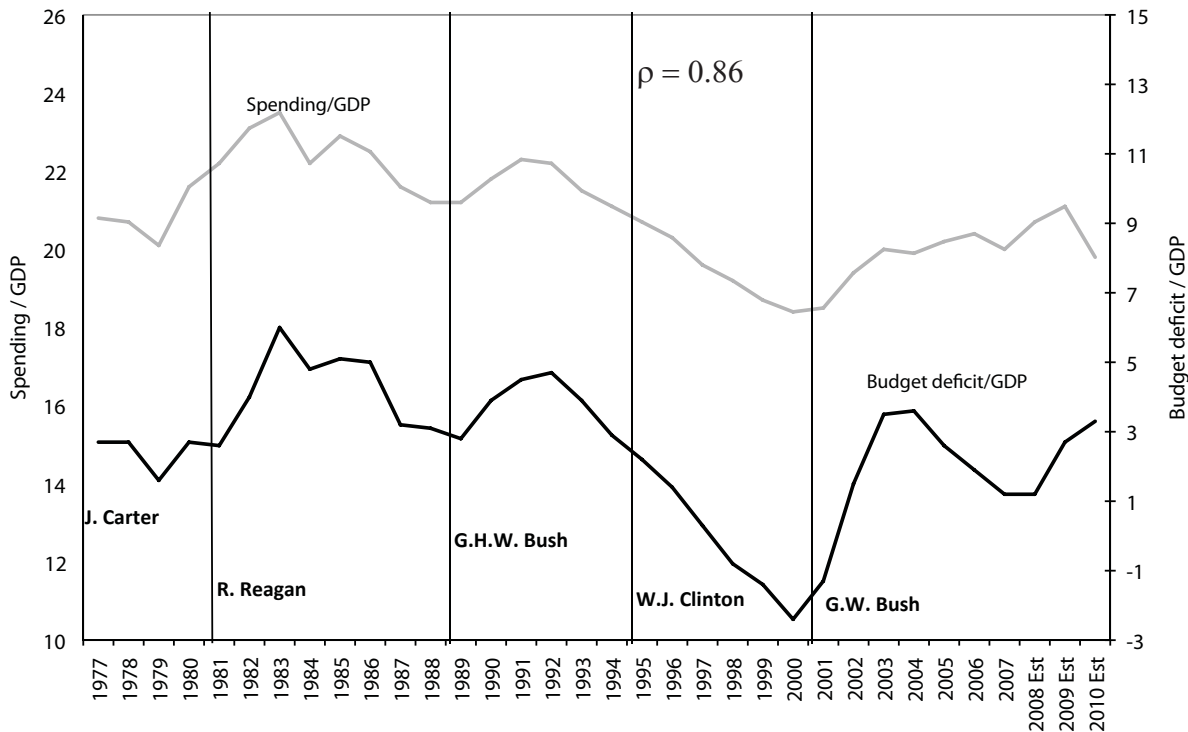
LEGISLATING SHARED SACRIFICE

The Shared Sacrifice strategy of the 1990s was implemented via three important measures.²²

1. In the Budget Enforcement Act of 1990, the first President Bush agreed with Congress to enact spending caps and PAYGO provisions.
2. The 1993 budget passed by President Clinton and a Democratic Congress (without a single Republican vote in support) extended these provisions.
3. In 1998, when surpluses started to emerge and along with them proposals for tax cuts (especially from congressional Republicans) and spending increases (especially from congressional Democrats), Clinton cleverly designed the "Save Social Security first" slogan that first appeared in the State of the Union message. There then followed a nationwide bipartisan consensus to preserve the Social Security surplus, and not to start spending the on-budget surpluses until future Social Security benefits were fully funded. This bipartisan consensus lasted until President Bush abandoned the promise in 2001.²³

FIGURE A

U.S. federal budget deficit and spending as shares of GDP (current U.S.\$)



SOURCE: Office of Management and Budget.

A number of other studies draw more systematically on a longer time series to reach the same conclusion: tax cuts put no downward pressure on government spending. This is the finding of unbiased researchers, whether they are true libertarians (traditional fiscal conservatives) who would prefer to shrink government spending, such as William Niskanen (President of the Cato Institute and former member of Ronald Reagan’s Council of Economic Advisers),²⁴ or others who might be characterized as of a more liberal bent politically.²⁵

Particularly notable is the way the budget deficit goes up when a Republican becomes president, as shown in Figure A. The budget worsened shortly after Reagan took office, after the first Bush took office, and after the second Bush took office.²⁶ One might think this was only because Republicans cut taxes and Democrats raise them.

Embarrassingly for the Republican presidents, however, national spending tends to go up when they take office, much as the budget deficit. Spending went up after Reagan took office,²⁷ up after the first Bush took office, and up after the second Bush took office.²⁸ And it is not just military spending; non-military spending follows the same pattern. The two largest components of the rise in spending seen during the second Bush administration have come in military spending and the addition of a prescription drug benefit to the Medicare program (Medicare Part D).²⁹ But there have been increases in many other programs as well, such as agricultural subsidies.

The voting record of no-tax-pledge Congresspersons

Perhaps the most fascinating piece of empirical evidence regarding the Starve the Beast hypothesis is a study by Kelly and Gale (2004).³⁰ They looked at the voting behavior of the 258 members of Congress who, along with George W. Bush, signed an unconditional pledge not to raise taxes. If the rationale for the 2001 tax cuts had been sincere, then those

who signed the pledge would have been Congresspersons who wanted to reduce federal spending and were keeping tax revenues low in an effort to force their more profligate brethren to fall into line. But Kelly and Gale found that those members who signed the pledge on average voted for *greater* increases in spending *than those who did not* sign the pledge. This seems pretty clear evidence of hypocrisy on the part of those selling tax-cut snake oil.

Why it is important to get the tax cut story correct

Soon after Ronald Reagan took office, he addressed the American people on the sorry state in which he had inherited the nation's finances. His predecessors had, cumulating all the budget deficits, run up a national debt of almost one trillion dollars (actually, \$0.9 trillion). He explained how much money this was. Fixing the national debt was to be one of the priorities of his administration:

Our national debt is approaching \$1 trillion. A few weeks ago I called such a figure, a trillion dollars, incomprehensible, and I've been trying ever since to think of a way to illustrate how big a trillion really is. And the best I could come up with is that if you had a stack of thousand-dollar bills in your hand only four inches high, you'd be a millionaire. A trillion dollars would be a stack of thousand-dollar bills 67 miles high.³¹

By the time Ronald Reagan completed his first term in office, his budget deficits had—in round numbers—added a second trillion to the national debt, as much as all 39 of his predecessors combined. By the time he left office at the end of 1988, his continued deficits had added yet a third trillion dollars. By the time his successor, George H.W. Bush, left office at the end of 1992, completing three Republican terms, the national debt stood at \$4 trillion.

During Bill Clinton's two terms, the inherited budget deficit was converted to a surplus and the country at long last began to pay down the national debt.

This progress was reversed by George W. Bush. During his two terms in office the surplus he inherited has been rapidly converted back into a deficit. In fact, the Bush administration has increased the national debt by approximately as much as had his father plus Ronald Reagan plus all 39 preceding presidents *combined* had increased it before him.³²

Looking forward

A naive look at the official government forecasts from the Office of Management and Budget (OMB) and the CBO provides some false comfort about the nation's fiscal stance. These forecasts show the federal budget returning to surplus by 2011. But these forecasts are predictably overly optimistic, just as they were in 2001, the year when Bush first took office. This systemic bias toward optimistic scenarios, by the way, is yet another reason to be cautious about endorsing any approach, like dynamic scoring of tax cuts, that further exacerbates the optimistic bent of official forecasts.

In January 2001 a surplus of \$5 trillion was forecasted, cumulatively over the coming 10 years. The White House claimed that its proposed tax cuts would not diminish these budget surpluses. But the official forecasts were repeatedly proven wrong. Reality has since become a 10-year *deficit* of \$5 trillion.

Already by 2004, record surpluses had been replaced by record deficits. But when running for a second term in 2004, President Bush repeated yet again the habit of promising more than was realistic: he claimed that he would cut the deficit in half by the end of that term. Even the White House itself, in the mid-2008 budget projections, finally admitted that President Bush will leave behind an estimated \$482 billion deficit for the coming fiscal year. This is a far cry from the frequently repeated promise to cut his budget deficit in half.

The sidebar “**Top 10 Reasons to be Skeptical of Bush's Budget Forecasts**” outlines why Bush budget forecasts were—and still are—too optimistic, illustrating how Republicans “game” this system shamelessly by making sure that current tax and spending legislation gives an illusion of conservatism (some of the tricks are explained below).

TOP 10 REASONS TO BE SKEPTICAL OF BUSH'S BUDGET FORECASTS

SPENDING

1. National security spending: *The costs of the wars in Iraq and Afghanistan are still not fully counted in the defense budget.* Meanwhile we continue to build expensive new weapons systems, many of which according to military professionals will not enhance our security. And September 11, 2001 provided an excuse to add pork to the national security budget, directed to politically favored states such as Wyoming, rather than to vulnerable states like New York.
2. Bush administration projections for *domestic discretionary spending* have assumed that it would rise only with inflation, which means falling as a share of GDP, and falling even in simple per capita terms. A more traditional assumption is that spending rises in line with GDP, and certainly in line with population. In fact, discretionary domestic spending rose at about 8% per year after Bush came to office, far higher than the rate of growth of GDP, and far higher than under Clinton.
3. Now that the congressional Democrats are in the majority, they may actually have some priorities to spend money on health, education, and the environment. In the 1990s, they were persuaded by President Clinton and the PAYGO rules to hold back, in order to get a budget surplus. They passed the 2003 budget act without a single Republican vote. But because Bush blew the surplus and paid little price for it, it may have made it difficult to put together the same Democratic support for budget discipline that was achieved in the 1990s.

FORECASTS (optimistic scenario)

4. In a number of ways, the forecasts have from the day Bush took office built in some *optimistic economic and technical assumptions*. For example, they assumed that there would be a relatively high growth rate year in and year out. OMB in January 2001 also artificially and unrealistically raised the estimated share of labor income, which is taxed more heavily than capital income.

TAX CUTS (pretense of sunseting)

5. *The Republicans have never stopped proposing that the tax cuts passed in 2001 and 2003 be made permanent, even though the lost revenue is not accounted for in OMB budget projections.* This is shameless gaming of the rules. They have deliberately passed legislation in which the tax cuts are sunsetted (i.e., written to expire a few years in the future), while the policy that they both announce to their supporters, and in fact carry out, is to extend the tax cuts when the year of expiration arrives.
6. The Republicans have never stopped proposing making that abolition of estate tax in 2010 permanent, even though the lost revenue is not accounted for in OMB budget projections.
7. *Everyone, not just the Republicans, recognizes the necessity of fixing or eliminating the Alternative Minimum Tax, even though the lost revenue is not accounted for in OMB budget projections.*³³ The cost of all three categories of tax cuts truly explode in 2010.

more >>

TOP 10 REASONS TO BE SKEPTICAL OF BUSH'S BUDGET FORECASTS (CONTINUED)

8. *The Republicans regularly propose privatizing Social Security, which would lose revenue especially outside the five-year budget window.* OMB under President Bush stopped reporting budget projections out farther than five years, presumably because that is where the biggest deficits have been pushed to.

ENTITLEMENTS

9. *Social Security.* Further, the much more serious deterioration will start after 2009. The very first baby boomers are starting to collect Social Security in 2008, which will contribute to the soaring costs of Social Security and, especially, Medicare. But the budgets usurp the current Social Security and Medicare surpluses to cover the rest of the budget, rather than saving them for when they will be needed.³⁴

10. *Medicare.* The coming Social Security deficits are actually manageable with minor changes (some combination of raising the cap on Social Security taxes that higher income workers pay, slowing the rate of growth of benefits of future retirees, and small increases in retirement age in line with lengthening life spans would do it). The coming Medicare deficits are far worse. The major reason for this is that medical science keeps coming up with many remarkable—but expensive—new techniques.

A better guide to the future policy choices available in this election comes from the Tax Policy Center (TPC). The first forecast (call it the Bush baseline) assumes that spending increases are in line with GDP, that expiring tax cuts will be extended, and that the Alternative Minimum Tax (AMT) will be fixed.³⁵

Under this baseline, the budget, far from returning to surplus after 2011, remains at around 2% of GDP, and then after 2012 deteriorates sharply (see **Figure B**). Even at current unusually low real interest rates, this may imply an explosive path for debt/GDP after 2012. In truth, real interest rates are likely to be higher than now, and thus the debt/GDP ratio is even more likely to be on an explosive path.

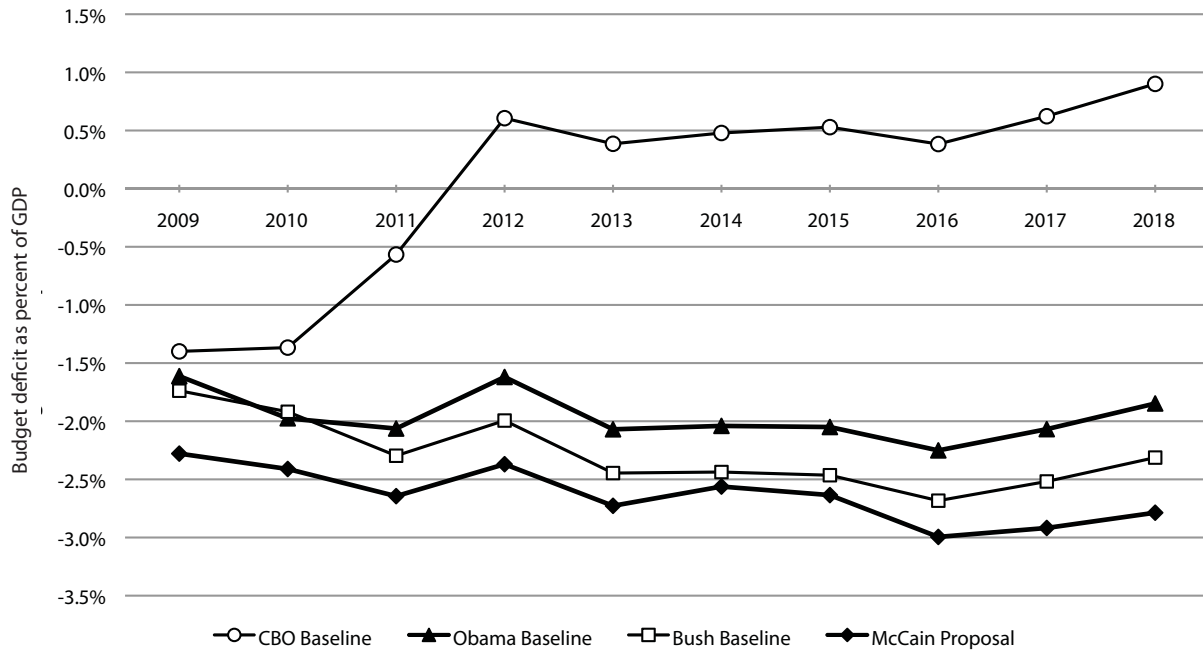
The second forecast (call it the McCain proposal) uses the TPC scoring of John McCain's tax proposals. These proposals are essentially the Bush baseline plus hundreds of billions of dollars in further tax cuts, mostly aimed at corporations. Given this, the budget outlook is even worse, with a deficit of 2.4% of GDP by the end of the first term of a hypothetical McCain administration and 3.0% of GDP by the end of a second term.

The last forecast (call it the Obama proposal) also uses the TPC projections. The Obama proposal allows the Bush tax cuts aimed at higher-income families to expire, but uses some of this money to provide tax cuts to low- and middle-income households. The Obama proposal results in a budget deficit of 1.6% of GDP by the end of the first term of a hypothetical Obama administration and 2.3% of GDP by the end of a second term.

What these various baselines show (besides the fact that neither of the candidates in the current election is promising aggressive moves to cut budget deficits) is that the official forecasts that may look comforting at first glance will certainly not come to pass. Nobody is arguing for the policies that would make them come to pass. The real future fiscal stance is certainly going to be much grimmer than they would suggest.

FIGURE B

Budget deficit options, 2009-18



SOURCE: Tax Policy Center.

Conclusion

As of this writing, the presidential and vice-presidential debates remain in the future, so it is not too late to hope for some straight talk on tax policy from today’s candidates. The stakes are high—tax and budget policy is perhaps the single largest lever the president and the new Congress will have to influence economic outcomes in the United States.

There are really three simple steps to enforcing an honest debate on taxes during this election season. Keeping these steps in mind while monitoring the tax debate during the election should not be too much to ask of the media.

1. Insist on consistency in candidates’ arguments. One cannot argue that tax cuts both (1) increase revenues and reduce budget deficits and (2) reduce revenues and increase budget deficits, thereby imposing discipline on government spending. Some consistent story has to be picked.
2. Insist that policies are not just consistent, but backed up by real-world evidence of effectiveness. Both the Laffer and Starve the Beast propositions roundly fail this test. The regime of Shared Sacrifice, which brought us reductions in the national debt and excellent macroeconomic performance during the 1990s, passes with flying colors.
3. If their economic advisers maintain views at odds with those of the candidates, hold the campaigns’ feet to the fire: ask them to explain the discrepancy.

The past is not encouraging regarding the prospects for an enlightened debate. The last three Republican presidents have embraced a totally discredited theory of taxes and deficits (the Laffer Proposition), and the only other alternative offered in the modern GOP is another discredited theory (Starve the Beast).

It should be noted that the wishful thinking does not apply *exclusively* to Republicans. During the 1992 presidential campaign, Bill Clinton proposed a “middle-class tax cut” and (under great pressure to woo the potential voters of Ross Perot) progress on reducing the deficit. The middle-class tax cut was abandoned upon taking office in January 1993, and deficit reduction became the overarching policy goal.

While many on the political left and right predicted that this aggressive deficit reduction (sometimes dubbed “Rubinomics” after eventual Treasury Secretary Robert Rubin) could throw the economy into recession or raise unemployment significantly, neither happened. Rather, the launching of a credible deficit reduction path helped plant the seeds of the 1990s boom. Given this, any Republican claims that moving more toward the Clinton/Rubin tax policy will somehow wreck the U.S. economy should be treated very skeptically.

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Appendix A: Do GOP presidents believe in the Laffer Curve?

Defenders of Presidents Reagan and Bush have sometimes claimed that, while they may have been on cordial terms personally with supply siders such as Arthur Laffer and Jack Kemp, neither the presidents themselves nor their key cabinet officials ever subscribed to the notion that income tax cuts would stimulate output so much as to pay for themselves. For example, Martin Anderson (1988): “As far as I knew, Ronald Reagan had not claimed that a reduction in tax rates would increase tax revenue, nor had any of his economic advisers.”³⁷ Let us now set this record straight as well.

What the Reagan administration believed

Judging by its own words, the Reagan administration did indeed subscribe to the Laffer hypothesis:

- Reagan himself: “...our kind of tax cut will so stimulate the economy that we will actually increase government revenues...” July 7, 1981 speech.³⁸
- His Secretary of the Treasury, Donald Regan, even after events had falsified the proposition to the satisfaction of most observers, wrote of his “very strong opinion that a tax cut would produce more revenue than a tax increase.”³⁹
- Regan further opined: “The increase in revenues should be financed not by new and higher taxes, but by lower tax rates that would produce more money for the government by stimulating higher earnings by corporations and workers.”⁴⁰

What the Bush administration believed

It appeared for a while in the 1990s that plenty of nails had been driven into the coffin of supply-side economics. Some of the nails, specifically, were: the failure of its predictions in the 1980s, George H.W. Bush’s 1990 recession and tax-reversal, the third-party campaign of Ross Perot in 1992 built on the deficit issue, Secretary Rubin’s conversion of President Clinton to budget discipline in January 1993, and the subsequent spectacular apparent success of that policy by all economic measures as the decade progressed.

As soon as George W. Bush assumed office in January 2001 he diverted the country sharply off a path of budget surpluses. Many different rationales were offered for the massive tax cuts that he proposed and passed in the Congress in 2001 and 2003. But supply-side ideology was clearly high on the list.

There are a lot of quotes from President Bush himself:

- “Well, we have a deficit because tax revenues are down. Make no mistake about it, the tax relief package that we passed—that should be permanent, by the way—has helped the economy, and that the deficit would have been bigger without the tax relief package.” —November 13, 2002
- “The best way to get more revenues in the Treasury is not raise taxes, slowing down the economy, it’s cut taxes to create more economic growth. That’s how you get more money into the U.S. Treasury.” —July 24, 2003.
- “The tax relief stimulated economic vitality and growth, and it has helped increase revenues to the Treasury. The increased revenues and our spending restraint have led to good progress in reducing the federal deficit.” —August 6, 2005
- “One of the interesting things that I hope you realize when it comes to cutting taxes is this tax relief not only has helped our economy, but it’s helped the federal budget. In 2004, tax revenues to the Treasury grew about 5.5%. That’s kind of counter-intuitive, isn’t it? At least it is for some in Washington. You cut taxes and the tax revenues increase. See, some people are going to say, well, you cut taxes, you’re going to have less revenue. No, that’s not what happened. What happened was we cut taxes and in 2004, revenues increased 5.5%. And last year those revenues increased 14.5%, or \$274 billion. And the reason why is cutting taxes caused the economy to grow, and as the economy grows there is more revenue generated in the private sector, which yields more tax revenues.” —August 22, 2006
- “Some in Washington say we had to choose between cutting taxes and cutting the deficit. You might remember those debates. You endured that rhetoric hour after hour on the floor of the Senate and the House. Today’s numbers show that that was a false choice. The economic growth fueled by tax relief has helped send our tax revenues soaring. That’s what’s happened.”—July 11, 2006. ⁴¹

Many other high officials in the Bush administration have also been quoted saying that tax cuts, via faster growth, lead to higher tax revenues:

- **Vice President Cheney:** “The President’s proposals will reduce the tax burden on the American people by \$670 billion over the next 10 years. By leaving more money in the hands of the people who earn it, people who will spend and invest and save and add momentum to our recovery, we’ll help create more jobs and ultimately increase tax revenues for the government.” —January 30, 2003.
- **Vice President Cheney:** The President’s tax policies have strengthened the economy, as we knew they would. And despite forecasts to the contrary, the tax cuts have translated into higher federal revenues... It’s time for everyone to admit that sensible tax cuts increase economic growth, and add to the federal treasury. —February 9, 2006
- **Treasury Secretary John Snow:** “Lower tax rates are good for the economy and a growing economy is good for Treasury receipts.” —Congressional testimony, February 7, 2006
- **Press Secretary Ari Fleischer:** “The entire [tax cut] package the president does believe will lead to growth, which will over time grow the economy, create additional revenues for the federal government, and pay for itself.” —January 8, 2003

The extensive statements made by the director of the Office of Management and Budget, Joshua Bolten, in July 2005, are worth quoting at greater length (press conference July 2003; and *Wall Street Journal*, Dec. 10, 2003). Director Bolton’s statements are of particular interest for several reasons. First, by 2005 it had become obvious to any objective observer that (1) the record budget surplus inherited by the Bush administration had been quickly converted into a record budget deficit, and that (2) the aggressive Bush tax cuts were a major cause of that swing (as was the sharp acceleration in federal spending, both domestic and international, relative to the 1990s). Second, while the utterings of President Bush

himself in general are sometimes dismissed as insufficiently articulate to be taken at face value, Bolten was the serious professional whose job was to be responsible for the integrity of the budget process.

Here is what the OMB director had to say about the Laffer Proposition:

- “And with all those economic gains, we are also seeing more revenues coming into the Federal Treasury. We have arrived at this point largely because of this President’s and this Congress’ pro-growth policies, especially tax relief. Those policies have strengthened the economy, which is now producing better-than-expected revenues.”
—Testimony of Joshua B. Bolten, Mid Session Review of the President’s FY 2006 Budget Request, Committee on the Budget, U.S. House of Representatives, page 1, para. 3.

And lots more:

- “The tax cuts proposed by the President and enacted by Congress are not the [budget] problem. They are, and will be, part of the solution....Had Congress not enacted the President’s three tax relief packages, moreover, the economy would be substantially weaker than it is....The most effective way to lower future deficits is to grow the economy. And the President’s tax packages have been well designed to do precisely that.”
- “...all economists, I think will agree very strongly that when you reduce taxes, put more money back into the economy, that has a feedback effect in the economy that causes growth and in turn increases receipts. And being able to measure those receipts, to see how much better the government’s fiscal situation is as a result of the tax cuts would be something I’d very much like to include in the numbers....We think we’ve done the right things by making the tax cuts to restore the economy to growth, because what got us into the difficult deficit situation in the first place is the flagging growth, flagging receipts in the economy. We think the best way back is to restore the economy to growth, and restore receipts that correspond to it....”
- A reporter asks “...you’ve got a substantial drop in the deficit [forecasted] in 2005...” and Director Bolton answers “...there are other factors involved, and one of them is the ’03 tax cut.”⁴³

Appendix B: Savings neutrality

The supply siders have a second line of defense for irresponsible tax cuts after the Laffer Proposition. If the Laffer line of defense is that they will not lose tax revenue, the second line is that even if they do, and thereby add to the federal budget deficit, this effect will be fully offset by an increase in private saving, so that national saving will not fall. This proposition sometimes appears on lists of Supply Sider claims, ranked only below the Laffer Proposition in importance.⁴⁴

Let’s start with some simple macroeconomic accounting: National saving is the sum of private saving and public saving (the budget surplus). National saving matters because it determines the funds available for financing investment—whether it is net investment in business plant and equipment and home or in the net acquisition of assets located overseas. This in turn determines whether future generations will have a higher or lower standard of living than we do.

There are two branches to the argument that national saving will be unaffected by tax cuts. The more academic argument is what Robert Barro first called “Ricardian equivalence.”⁴⁵ This theoretical proposition says that far-seeing households will react to budget deficits by, first, realizing that some day in the future the government will have to raise taxes to service the debt, and second, increasing their saving today by enough so that they have the funds ready when needed to pay taxes. Despite the huge influence of Barro’s argument in the ivory tower, Republican tax cutters in Washington rarely mention it, perhaps because it sounds implausible, at least on a superficial level.

The second argument is heard far more often in Washington and applies specifically to pro-capitalist tax cuts, such as the reductions in taxes on dividends, capital gains, and estates that were enacted in 2003. It is claimed that even if generic income tax cuts may not raise saving, these targeted tax cuts will do the trick by increasing the incentive to save. Although this argument has more intuitive appeal than the Ricardian equivalence, it too is not an open-and-shut case theoretically. Saving may not respond positively to the after-tax rate of return, for example if people are target savers, aiming to acquire a target amount for college or retirement. Furthermore, the rising field of behavioral economics has now established that saving decisions need not be the outcome of rational decisions at all. Again, it is an empirical matter.

Barro's Ricardian equivalence

As a theoretical matter, Ricardian equivalence could indeed hold if people were foresighted, chose their saving and consumption optimally, and lived forever. Even Professor Barro freely acknowledges that people do not in fact live forever.⁴⁶ But his argument is that the effect will be the same, provided people put equal value on their children's welfare as their own (at the margin), and that we can infer that this must be the case when we observe people leave bequests to their children.

Much ink has been spilled on both sides of this issue. Of the many critiques, some of the most prominent come from Douglas Bernheim of Stanford University (1998): "...the theoretical case for long run neutrality is extremely weak, in that it depends upon improbable assumptions that are either directly or indirectly falsified through empirical observation.... I find a complete lack of either evidence or coherent theoretical argument to dispute the view that sustained deficits significantly depress capital accumulation in the long run."⁴⁷ There are many other critiques as well, such as those that raise questions regarding the continuity of generations, rationality, or uncertainty.⁴⁸

While most people find the assumptions underlying Ricardian debt neutrality as implausible, one can always say that it is an empirical matter.

For most observers the most intuitively persuasive two pieces of empirical evidence against the proposition that tax cuts will not hurt national saving are the two grand experiments that were carried out at the beginning of the Ronald Reagan and George W. Bush administrations. Both presidents cut tax rates sharply during their first three years in office. Both saw the budget worsen rather than improve (by 2.6 percentage points of GDP in Reagan's first term and 3.6% of GDP in Bush's first term). Both were also followed, not by increases in private saving large enough to offset the tax cuts, nor any increases in private saving at all, but by embarrassing declines in private saving as a share of GDP, notwithstanding that the tax cuts were supposed to be pro-saving. U.S. household saving has in recent years been close to zero. Thus national saving went down by even more than the budget deficit went up.

While one does not want to reject a theory based on a single historical episode, or even two, regardless how important the episodes, there are by now numerous empirical studies and theoretical explanations elaborating on the failure of debt neutrality.

The econometric evidence

As a generalization, it is difficult to find statistically significant effects in macroeconomics. It is no coincidence that those looking to argue in favor of Ricardian equivalence more often look to see if exogenous tax cuts or other changes in budget deficits induce increases in interest rates, usually fail to find statistically significant effects, and conclude that Ricardian equivalence holds. Those looking to argue against Ricardian equivalence more often look to see if exogenous changes in budget deficits induce offsetting increases in private saving, usually fail to find a statistically significant effect, and conclude that Ricardian equivalence fails.

Effect on private saving

As Bosworth and Burtless (1992) discuss, private saving did not rise in the 1980s, in the aftermath of the Reagan tax cuts, but rather fell severely. This in spite of costly new saving incentives and an extraordinary rise in the real rate of return that, though regressive in their income distribution effects, were sold as promoting saving.⁴⁹ The aftermath of the Bush tax cuts in the 1990s was strikingly similar.

There are many parallels between Reagan's fiscal policies in the 1980s and Bush's in the current decade. In both cases, a major cause of the widening deficits was aggressive tax cuts, made against a background of (questionable) claims to long-run fiscal probity. In both cases, overly optimistic forecasts were part of the problem. Further, in both cases, some in the administration, including the president, subscribed to the Laffer hypothesis that a reduction in U.S. tax rates would stimulate growth so much that tax receipts would go up rather than down. In both cases, the optimistic forecasts were soon shattered, although the administration for a while continued to blame the deficits on recession and to repeat the claims that they would go away before long.

In both cases, private saving did not offset the new deficits—no Ricardian equivalence.⁵⁰

The predictable outcomes of lower national savings

Although the proposition that an increase in the budget deficit (i.e., a fall in public saving) should lead to a decline in total national saving (i.e., the sum of public saving and private saving) seems quite intuitive, many want to know what precisely is the mechanism, the channel of transmission. In most standard models, the intervening price signal is the interest rate (the long-term real interest rate). Those who wish to argue that budget deficits will not reduce national saving and crowd out investment often go after the interest rate effect, as the weakest point in the defenses of the forces of fiscal responsibility.

Effect on interest rates

Among the econometric studies finding effects of budget deficits on interest rates are Ardagna et al. (2004), Barnes (2008), and Cebula (2008).⁵¹ Many other reputable studies have, however, had a harder time finding contemporaneous effects of deficits or debt on interest rates.⁵²

Glenn Hubbard, who today is the Dean of Columbia University's business school, was the first Chairman of George W. Bush's Council of Economic Advisers, and an avid defender of the 2001 and 2003 tax cuts. As already noted in the sidebar *What Economists Say About the Laffer Proposition*, the accusation that he reversed position on the Laffer hypothesis while in office was unfair. But he did argue that the increase in the budget deficit would do little harmful in the way of pushing up interest rates. He devised a clever two-pronged strategy for loyally defending the tax cuts, while avoiding saying things that he as an economist did not believe to be true.

The claim that Hubbard crafted for the White House to use for media consumption was: "Interest rates do not move in lockstep with deficits." Presumably this sentence to the public would appear to support the White House claim that deficits would have no effect on interest rates and thus would not lead to crowding out of investment. In truth, the sentence says nothing more than that there are other influences on interest rates in addition to budget deficits (e.g., growth rates); thus deficits sometimes change when interest rates do not, and vice versa. This in no respect negates the conventional proposition that an exogenous increase in the budget deficit raises interest rates, other things equal.

At the same time Hubbard designed a different response for his professional peers. To them he argued on theoretical grounds that the quantitative effect of a budget deficit on the interest rate, though positive, is not big enough to worry about: "The effects of budget deficits on interest rates are small." The logic was that a small increase in interest rates is all it takes to crowd out the capital stock in a standard neoclassical economic framework: "the \$1.3 trillion in tax relief included in EGTRRA [the Economic Growth and Tax Relief and Reconciliation Act of 2001] would raise interest rates

by only about 19 basis points.” Cleverly hidden was the implication, within the theoretical framework that Hubbard employed in this calculation, that the budget deficit would fully crowd out private spending, specifically that it would crowd out additions to the private capital stock. But the reason economists worry about budget deficits in the first place is that they will crowd out private investment. Even if it were true that it only took a small increase in interest rates to accomplish the crowding out of the capital stock, this would be no consolation.

Other channels: Macroeconomic prices and expectations

The two sets of empirical evidence—studies of effects on saving and studies of effects on interest rates—are not, in truth, on equal footing. In the first place, the channel of transmission from a budget deficit to crowding out of national investment or the current account balance need not be limited to interest rates. The national saving identity says that if an exogenous increase in the budget deficit is not offset by an increase in private saving, it must as a matter of arithmetic reduce investment, the current account, or both. So it is not enough to fail to find significant effects on either private saving or the interest rate. If there is no evidence that private saving rises to offset budget deficits, then the presumption must be against the neutrality proposition, with the channel of transmission perhaps running in part through channels other than interest rates. Examples of other channels are upward pressure on a range of “macroeconomic prices”: prices of assets such as equity or land or the foreign exchange value of the nation’s currency (as in the Mundell-Fleming model).

In the second place, those who look to see whether *expectations of future budget deficits* have important effects on long-term interest rates, as the theory says they should, do more often find the statistical significance they are looking for. Gale and Orszag (2003) review the literature regarding effects of current and expected future budget deficits on interest rates, and conclude:⁵³

...studies that (properly) incorporate deficit expectations in addition to current deficits tend to find economically and statistically significant connections between anticipated deficits and current long-term interest rates.

Canzoneri, Cumby and Diba (2002) find that changes in the 5 year and 10 year ahead forecasted budget deficits result in a statistically significant increase in the spread between short-term and long-term interest rates.⁵⁴ Laubach (2003) finds robust evidence of a relationship between five-year- and 10-year-ahead projected deficits and debts and the level of long-term real interest rates in the United States.⁵⁵ More recent econometric findings that expected future deficits can affect current long-term real interest rates include Chinn and Frankel (2007), Hartman (2007), and Mertens and Ravn (2008).⁵⁶

Gale and Orszag (2003) make the point that “...declines in budget surpluses (or increases in deficits) reduce national saving and therefore reduce future national income, regardless of their effects on interest rates.” Similarly, the latest econometric study by Evans (2007) “resoundingly rejects Ricardian equivalence.”⁵⁷

Rubinomics: The opposite of supply side economics

If one end of the spectrum is represented by the supply side hypothesis that tax cuts have phenomenally expansionary effects on the economy, the opposite end of the spectrum is represented by “Rubinomics.” Rubinomics is the hypothesis that credible fiscal discipline can be expansionary—or, in caricature form, simply that tax increases are expansionary. The hypothesized effect of a credible program of budgetary discipline comes via expectations that deficits and debt will be lower in the future, which can put downward pressure on today’s long-term real interest rates, thereby stimulating business investment and other components of demand in the present. Secretary Robert Rubin believes that the attainment of credible fiscal discipline was a major contributor to the record U.S. expansion of 1992-2000.⁵⁸

Unfortunately, a necessary condition for announcements of future discipline to be credible is usually fiscal contraction in the present—which precludes tax cuts, and usually requires tax increases.⁵⁹ This is not to say that current tax increases in isolation are generally expansionary; they are not. But they can contribute to an overall path of fiscal discipline,

Table 1
Effects of fiscal policy on real growth over four presidential terms

Effects on growth	Clinton administration		Bush administration	
	1st term	2nd term & beyond	1st term	2nd term & beyond
As, over time, the numbers show the promises of fiscal responsibility		to be increasingly credible		to be less and less credible
(1) Effect of contemporaneous fiscal stance, via demand	Mild contraction	Mild contraction	Positive stimulus	Approx. neutral
(2) Effect of expected future fiscal path, via long-term interest rates	Mild expansion	Strong positive effect	Mild contraction	Strong negative effect
Equals overall impact of fiscal policy on growth	Approx. neutral	Positive	Weakly positive	Strongly negative

which may gain credibility as it goes along.

Table 1 is a conceptual schematic to show both kinds of tax channels, the effect that runs via expectations of future fiscal discipline, and the more direct short term-effect. On the one hand, the long-run effect of credible budget discipline in the Clinton administration apparently by the second term had come to outweigh the short-term contraction effect. On the other hand, the long-run *lack* of fiscal credibility in the Bush administration apparently by 2007 had come to outweigh the short-term expansionary effect.

Endnotes

- 1 It should be noted that Harvard Professor Martin Feldstein produced influential research showing that incentive effects can be larger than had been previously thought, and thereby started an important scholarly school of thought. But Feldstein himself disavowed the term supply-side economics and the more radical claims with which it became associated 30 years ago. The original entrepreneur behind supply-side economics was, rather, an associate editor for the *Wall Street Journal*, Jude Wanniski. (Wanniski, "Taxes and a Two-Santa Theory," *National Observer*, March 6, 1976; and "Taxes, Revenues, and the 'Laffer Curve,'" *The Public Interest*, Winter 1978.) Wanniski told the story of a curve that Arthur Laffer had drawn on a cocktail napkin belonging to Dick Cheney. (Donald Rumsfeld was the fourth at this historic dinner in December 1974.) The curve shows that tax revenue is zero if the tax rate is zero, but also if it is 100%, because of adverse effects on incentives, and is maximized at some intermediate tax rate. Krugman (1994) explained and critiqued the development of supply side economics in a book that depicted Reagan and Bush on the cover selling the snake oil of tax cuts (and, symmetrically, depicted Clinton selling the snake oil of strategic trade policy). Paul Krugman, 1994, *Peddling Prosperity* (W.W.Norton, NY). I have taken the phrase "snake oil" for the title of this paper. Other histories of the origins of supply side economics, from politically conservative vantage points, are offered by Martin Anderson, *Revolution: The Reagan Legacy*, (Hoover Press, Stanford) 1988; and Arthur Laffer, 2004, "The Laffer Curve: Past, Present and Future," *Background*, no. 1765, Heritage Foundation, June 4.
- 2 The lyrics to the Beatles' song Taxman: "Let me tell you how it will be. There's one for you, 19 for me. 'Cause I'm the Taxman.... And you're working for no one but me." [[Http://www.nationalreview.com/nrof_bartlett/bartlett120501.shtml](http://www.nationalreview.com/nrof_bartlett/bartlett120501.shtml)]
- 3 According to Heijman and van Ophem (2005), Sweden is still the major industrialized country that is most likely to find itself on the "wrong

side” of the Laffer curve.

- 4 Lindsey, Lawrence B., *The Growth Experiment: How the New Tax Policy is Transforming the U.S. Economy*. (New York: Basic Books) 1990. And Emmanuel Saez (2004), “Reported Incomes and Marginal Tax Rates, 1960-2000; Evidence and Policy Implications,” NBER Working Paper No. 10273, January.
- 5 Not only was the subsequent economic expansion unusually prolonged and strong, but tax receipts were unusually high even given that economic growth. Richard A. Kasten, David J. Weiner, G. Thomas Woodward, 1999, “What Made Receipts Boom and When Will They Go Bust?” *National Tax Journal*. [http://ntj.tax.org/wwtax%5Cnjrec.nsf/F77EA7EDE958744B85256AFC007F1143/\\$FILE/v52n3339.pdf](http://ntj.tax.org/wwtax%5Cnjrec.nsf/F77EA7EDE958744B85256AFC007F1143/$FILE/v52n3339.pdf). The 1994-97 increase in personal income tax liabilities relative to gross domestic product (GDP) resulted from taxable incomes growing faster than GDP and a significant increase in the effective tax rate on taxable income, each accounting for about half of the increase in liabilities relative to GDP.
- 6 “What Happens When You Tax the Rich? Evidence from Executive Compensation,” *Journal of Political Economy*, 2000, vol. 108, no. 2. As summarized in Austan Goolsbee, “Give Me Shelter: What Happens When You Tax the Rich?” *Capital Ideas*, Vol. 1, No. 3, Summer 1998, Graduate School of Business, University of Chicago, <http://www.gsb.uchicago.edu/capideas/sum98/goolsbee.htm> .
- 7 Burman, Leonard and Randolph, William, “Measuring Permanent Responses to Capital-Gains Tax Changes in Panel Data,” *American Economic Review*.84 (1994), no. 4 (September): 794-809; Alan Auerbach and Jonathan Siegel , 2000, “Capital-Gains Realizations of the Rich and Sophisticated,”*American Economic Review*, Vol. 90, No. 2, (May, 2000), pp. 276-82.
- 8 Precisely as predicted by most objective observers. For example, William Gale and Samara Potter, “An Economic Evaluation of the Economic Growth and Tax Relief Reconciliation Act of 2001,” LV, no. 1, March, 133-186, *National Tax Journal*, 2002; Gale and Laurence Kotlikoff, 2004, “Effects of Recent Fiscal Policies on Today’s Children and Future Generations,” Boston University; Alice Rivlin & Isabel Sawhill, eds., 2004, *Restoring Fiscal Sanity: How to Balance the Budget*, Brookings Institution Press, esp. the forecasts in their Chapter 1. Also the periodic forecasts of the non-partisan Concord Coalition.Or Rubin’s “Comment,” in Frankel and Peter Orszag, eds., *American Economic Policy in the 1990s* (MIT Press, Cambridge) 2002, p. 133.
- 9 Austan Goolsbee, 1999, “Evidence on the High-Income Laffer Curve from Six Decades of Tax Reform,” Brookings Papers on Economic Activity, no. 2.<http://www.jstor.org/stable/2534678>.Goolsbee, a respected professor at the University of Chicago, happens also to have been Senator Barack Obama’s top economic adviser during the period when he was competing for the Democratic nomination.
- 10 Uhlig, Harald and Trabandt, Mathias, 2006, “How Far Are We from the Slippery Slope? The Laffer Curve Revisited,” CEPR Discussion Paper No. 5657. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=895479
- 11 W.J.M. Heijman and J.A.C. van Ophem, 2005, “Willingness to pay tax: The curve revisited for 12 OECD countries,” *The Journal of Socio-Economics*, 2005, vol. 34, no. 5, pp. 714-23 (Elsevier, Inc.). http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6W5H-4GY874K-1&_user=10&_rdoc=1&_fmt=&_orig=search&_sort=d&view=c&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=1558cb0ea5da7504de9defab110f647c(The one exception is Sweden.)
- 12 Feldstein, Martin S. 1994. *American Economic Policy in the 1980s*. U. Chicago Press, Chicago. p.24.
- 13 “Supply Side Economics: Old Truths and New Claims,” Papers and Proceedings of the Annual Meeting of the American Economic Association, *American Economic Review*, 76, no. 2, March 1985. Pages 27 and 29, respectively.
- 14 *Economic Report of the President*. 2003. Government Printing Office, p.57-58.
- 15 Mankiw, N. Gregory. 1998. *Principles of Economics*. Dryden. 1998, p. 166. In an early edition of his textbook, Mankiw famously went so far as to label supply-siders “charlatans.”
- 16 Bush’s final CEA Chair, Ed Lazear, has been slightly more ambiguous. At a press conference February 12, 2007, he said “revenues have come in...higher than we predicted...because the economy has grown at a rate higher than we predicted...[T]he tax cuts...[were] at least in part responsible for making the economy grow.” But he may well have just meant that supply responses to tax cuts were positive, rather than fully offsetting. On several other occasions Chairman Lazear, a respected economist from Stanford, has come down on the same side of the Laffer question as his professional colleagues.
- 17 One does not even have to believe that supply-side incentives are important to believe this: it is a mainstay of simple Keynesian models that because tax cuts raise household disposable income, they will lead to increased consumer demand, and therefore will raise total output. The magnitude (as opposed to existence) of this effect is the subject of tremendous uncertainty. Researchers, whether they concentrate on demand effects or on supply effects, have come up with estimates of the effects of tax cuts on output that vary enormously—from zero to huge impacts.
- 18 “The Full McCain: An Interview” *National Review*, March 5, 2007. <http://article.nationalreview.com/?q=MTMxOWRkYjgyNDhjOTU5ZTY2OWU2ZTg2ZmUxMzQ1NjQ=&w=MQ=#more>
- 19 “A Political Comeback: Supply-Side Economics,” *The New York Times*, Louis Uchitelle, March 28, 2008. http://www.nytimes.com/2008/03/26/business/26supply.html?_r=1&tex=1364270400&en=b5f2e4a4722eae&ei=5088&partner=rssnyt&emc=rss&oref=slogin
- 20 This rationale had already been developed in *Wall Street Journal* op-eds: by Milton Friedman at the start of the Reagan era; and G. Becker, E. Lazear and & K. Murphy at the start of the Bush era. A history of the concept is offered by Bruce Bartlett, a former staff economist to Jack Kemp and Reagan Treasury official, in “Starve the Beast: Origins and Development of a Budgetary Metaphor,” *The Independent Review*, vol. XII, no. 1, Summer 2007, p. 5-26. Conservative op-ed writers continue to assert the Starve the Beast logic: Firestone 2003; Kudlow 1996; Jenkins 2003; Will 2003; and Novak 2005. Firestone, David. 2003. “Conservatives Now See Deficits as a Tool to Fight Spending,” *New York*

Times, February 11. Jenkins, Holman W. 2003 “Republicans Learn to Love (Well, Like) the Deficit.” *Wall Street Journal*, November 5. Kudlow, Lawrence. 1996. “Cut Taxes, Starve the Beast.” *Wall Street Journal*, September 30. Novak, Robert D. 2005. “The GOP’s Pain-Free Path.” *Washington Post*, July 18. Will, George F. 2003. “Campaign by Tax Cut.” *Washington Post*, June 1.

- 21 Candidate McCain continues what is by now a Republican tradition. His budget speeches claim he will cut spending by \$150 billion a year, but he has apparently specified only about \$2 billion of the cuts.
- 22 These shared sacrifice mechanisms have in common the notion of budget neutrality as a criterion for future changes relative to baseline. In this they faintly resemble some more rigid institutional mechanisms: the Gramm-Rudman legislation in the 1980s, the proposed Balanced Budget Amendment, Europe’s Stability and Growth Pact, and proposals for an independent fiscal authority. These more rigid mechanisms have been far less successful, however, because they are insufficiently flexible to deal with changing circumstances.
- 23 Another contributing factor was gridlock: Democrats could block tax cut proposals from Congressional Republicans, while Republicans could block spending proposals from Congressional Democrats. For a good comprehensive review, see Douglas Elmendorf, Jeffrey Liebman, and David Wilcox, “Fiscal Policy and Social Security Policy During the 1990s,” in J. Frankel and Peter Orszag, editors, *American Economic Policy in the 1990s*, MIT Press, 2002.
- 24 William Niskanen, 2002, “Comment” in *American Economic Policy in the 1990s*, edited by Jeffrey Frankel and Peter Orszag, MIT Press, pp.184-7. Niskanen, 2004, “Starve the Beast Does Not Work,” *Cato Policy Report* 26, no.2, March-April: 2. And Niskanen, 2006, “Limiting Government: The Failure of ‘Starve the Beast,’” *Cato Journal*, Fall.
- 25 Two examples: William Gale and Peter Orszag, 2004, “Bush Administration Tax Policy: Revenue and Budget Effects,” Tax analysts find that neither the Starve the Beast theory nor other arguments made by the Bush administration in 2001 for tax cuts are valid today and hence they cannot be used to justify making the tax cuts permanent. (<http://www.brookings.edu/views/articles/20041004orszagale.pdf>). Subsequently, Orszag became director of OMB, replacing Holtz-Eakin. Christina and David Romer examine the behavior of government expenditures following legislated tax changes that narrative sources suggest are largely uncorrelated with other factors affecting spending. They describe their results as providing no support for the hypothesis that tax cuts restrain government spending; indeed, they suggest that tax cuts may actually increase spending. (“Do Tax Cuts Starve the Beast: The Effect of Tax Changes on Government Spending,” NBER WP no. 13548, 2007).
- 26 Especially as a share of GDP. The recessions of 1981-82, 1990-91, and 2001 exacerbated the remarkable pattern whereby new Republican presidents have presided over sharp deteriorations in the federal budget. If one believes in Keynesian demand factors, then one should also adjust the budget cyclically. The Republicans might wish to avoid the awkward subject of how the economy seems to go into recession soon after one of their party takes office. In any case, the general pattern remains: cyclically adjusted, the budget tends to worsen when a Republican takes office rather than improving.
- 27 Reagan’s first CEA Chairman, Murray Weidenbaum, was so frustrated with the gap between the President’s rhetoric and the absence of spending-cutting backbone, that he resigned before the end of his term. (Weidenbaum, Murray. 1988. *Rendezvous with Reality*. New York: Basic Books; and Frankel, “What an Economic Adviser Can Do When He Disagrees with the President,” *Challenge*, May/June 2003, 29-52.)
- 28 As Hassett (2005) observes, “spending growth under George W. Bush has been almost four times as high as it was during the same period of Bill Clinton’s presidency.” Bartlett (2005) agrees: “In light of Bush’s big-spending ways, Bill Clinton now looks almost like another Calvin Coolidge.” Hassett, Kevin, 2005, “Bring Back Clinton—Just His Spending Habits,” *Bloomberg*, July 18. Bartlett, Bruce, 2005, “How Bush Bankrupted America,” *Cato Policy Report*, Nov./ Dec. Hassett has advised John McCain. Bartlett worked in the Treasury Department for Ronald Reagan.
- 29 To add insult to injury, even those liberals supporting the creation of a prescription drug benefit for Medicare (Ted Kennedy voted for Part D, for example) recognize that by barring the government from negotiating with pharmaceutical companies over drug prices, and, by enacting large subsidies to private insurers to take on Medicare patients, the benefits of part D could have been attained with less spending.
- 30 Brennan Kelly and William Gale, 2004, “The ‘No New Taxes’ Pledge,” *Tax Notes*, July 12, pp. 197-209.
- 31 Address Before a Joint Session of the Congress on the Program for Economic Recovery, February 18, 1981. President Reagan repeated these points even after he had enacted fiscal policies that were sharply worsening the deficit and debt (as recognized by this time by his own budget officials): Remarks in Denver, Colorado, at the Biennial Convention of the National Federation of Republican Women, September 18, 1981, <http://www.reagan.utexas.edu/resource/speeches/1981/91881b.htm>; and remarks at a Louisiana Republican Fundraising Reception in New Orleans, Louisiana, September 28, 1981.
- 32 To do such comparisons properly, in terms of economics, one should probably express the numbers as shares of GDP, or at least in real terms. The rationale for leaving the numbers in dollar terms is to pursue the logic of Reagan’s original rhetorical framing.
- 33 The estimated cost is about a trillion dollars (Gale and Orszag, op.cit.).
- 34 The government budget projections include over \$2 trillion in future payroll tax revenues that are in fact supposed to go to Social Security; even though it is not enough to pay for the future Social Security benefits that have been promised to retirees. Counting the revenues but not the future liabilities in an accounting trick that undermines overall fiscal discipline: Sita Nataraj and John Shoven, 2004, “Has the Unified Budget Undermined the Federal Government Trust Funds?” NBER Working Paper No. 10953.
- 35 See also Alan Auerbach, Jason Furman, and William Gale, “Facing the Music: The Fiscal Outlook at the End of the Bush Administration,” May 8, 2008, esp. Fig.3. http://www.econ.berkeley.edu/~auerbach/facing_the_music.pdf. Also the non-partisan Concord Coalition.
- 36 The “Bush Baseline” is Economic Policy Institute’s adjusted baseline, which uses the CBO baseline but includes a permanent extension of the Bush tax cuts (which are set to expire in 2010), the AMT patch, and other expiring tax provisions. It also assumes a drawdown in Iraq

war funding. The McCain and Obama Proposal projections used TPC revenue scoring against a current policy baseline to calculate projected deficit paths.

- 37 Martin Anderson, op. cit, p. 153. Also pp. 151-152: "...the myth persisted, the myth that Reagan and his key economic advisers believed that large tax cuts would produce more revenue... And even though neither [fine economists], nor Reagan, nor any of Reagan's senior aides ever made any such outlandish claim, the myth continued, year after year." Anderson, Reagan's domestic policy adviser, continued to make similar claims in subsequent newspaper articles according to Feldstein in *American Economic Policy in the 1980s* (U. Chicago Press) 1994, p.25. Anderson also questions the veracity of Wanniski's cocktail napkin story (p.147).
- 38 In Feldstein, *American Economic Policy in the 1980s* (U. Chicago Press) 1994, p.21.
- 39 Regan, *For the Record* (St. Martin's Press: New York) 1988, page 214.
- 40 Regan, *ibid.*, page 173.
- 41 Quotes from http://www.brendan-nyhan.com/blog/2006/10/bush_vs_his_eco.html .
- 42 Quotes from *ibid.*
- 43 [Press Briefing](#) by OMB Director Josh Bolton, The White House, July 15, 2003.
- 44 For example: "Another remarkable [supply side] proposition was the claim that even if the tax cuts did lead to an increased budget deficit, that would not reduce the funds available for investment in plant and equipment because tax changes would raise the saving rate by enough to finance the increased deficit."Feldstein, "Supply Side Economics: Old Truths and New Claims," *American Economic Review*, 76, no. 2, March 1985. Pages 27 and 29, respectively.
- 45 The classic article is "Are Government Bonds Net Wealth?"*Journal of Political Economy*, 1974, which will no doubt one day help win Barro a Nobel Prize.In Barro, 1989, "The Ricardian Approach to Budget Deficit," *NBER Working Paper No. W2685*, the author responded to those who criticize the theory on the ground that lifetimes are finite, capital markets imperfect, and future taxes uncertain. Another defense against the critical majority is Kent Smetters, "Ricardian equivalence: long-run Leviathan."*Journal of Public Economics*, 73, Issue 3, September 1999, pages 395-421.
- 46 A common modeling approach to deal with mortality is to assume a certain probability of death (and birth) every year: Blanchard (1985), *Journal of Political Economy* 82, 1095-1117.
- 47 "Ricardian Equivalence: An Evaluation of Theory and Evidence," March 1988, *NBER Working Paper No. 2330*.
- 48 One of the many references focusing on whether the bequest condition establishes generational continuity is James Andreoni, 1989, "Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence," *Journal of Public Economics*, 97, no. 6. p. 1447 ff.
- 49 Barry Bosworth and Gary Burtless, 1992, "Effectsof Tax Reform on Labor Supply, Investment, and Saving" *American Economic Association*. <http://www.jstor.org.ezp-prod1.hul.harvard.edu/stable/pdfplus/2138370.pdf>
- 50 In both cases, the fall in national saving was also soon reflected as a fall in the current account. When an exogenousrise in the budget deficit leads to a rise in the trade deficit, they are known as the twin deficits.
- 51 Ardagna, Silvia, Francesco Caselli, and Timothy Lane, 2004, "Fiscal Discipline and the Cost of Public Debt Service: Some Estimates for OECD Countries," *NBER Working Paper No. 10788* (September) examined the effects of public debt and deficits on long term interest rates in a panel of 16 OECD countries. They found that a 1 percentage-point increase in the primary deficit leads to a 10 basis point increase in the long term rate, while an increase in public debt has a positive effect on interest rates only when public debt is already high. Bob Barnes, 2008, "A Cointegrating Approach to Budget Deficits and Long-Term Interest Rates" *Journal Applied Economics*. <http://www.informaworld.com/smpp/content-db=all?content=10.1080/00036840600749722>found cointegration between budget deficits and long-term interest rates for the United States and nine European countries.Richard J Cebula, "Federal Government Budget Deficits and Interest Rates: A Brief Note," *Southern Economic Journal*, 55, no. 1, July, 206-210; and 2008, "Determinants of Long-Term Real Interest Rate Yields: The Case of the U.S." *The Icfai Journal of Applied Economics*. <http://ideas.repec.org/a/icf/icfjae/v07y2008i3p37-49.html> finds that the primary deficit positively causes the real yield on long-term tax-free issues (and vice versa).
- 52 E.g., Paul Evans, "Do Large Deficits Produce High Interest Rates?" *American Economic Review*, 75, no. 1, March 1985, p. 68-87.
- 53 Gale, William G. and Peter R. Orszag, 2003, "The Economic Effects of Long-Term Fiscal Discipline," *Urban-Brookings Tax Policy Center Discussion Paper No. 8* (Washington, D.C.: Brookings, April). p. 20. They also make the separate point that "...declines in budget surpluses (or increases in deficits) reduce national saving and therefore reduce future national income, regardless of their effects on interest rates."
- 54 Canzoneri, Matthew B., Robert E. Cumby and Behzad Diba, 2002, "Should the European Central Bank and the Federal Reserve be concerned about fiscal policy?" in *Rethinking Stabilization Policy* (Kansas City: Federal Reserve Bank).The authors interpret their results in light of the fiscal theory of the price level.
- 55 Laubach, Thomas, 2003, "New evidence on the interest rate effects of budget deficits and debt," *Finance and Economics Discussion Paper No. 2003-12* (Washington: Board of Governors of the Federal Reserve System, `March).
- 56 M.Chinn and J.Frankel, 2007, "Debt and Interest Rates: The U.S. and the Euro Area." Harrison Hartman, 2007, "Deficit-related explanations for the U.S. interest rate conundrum." *Applied Economics Letters*, <http://www.informaworld.com/smpp/content-db=all?content=10.1080/13504850500447422> ;Mertens, Karel; and Ravn, Morten. 2008, "The Aggregate Effects of Anticipated and Unanticipated U.S. Tax Policy Shocks: Theoryand Empirical Evidence,"C.E.P.R. Discussion Papershttp://csaweb105v.csa.com.ezp-prod1.hul.harvard.edu/ids70/view_record.php?id=10&recnum=5&log=from_res&SID=a88b3cb099a0cf5ba1ef80bb5c68da36

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- 57 Paul Evans, “Consumers are not Ricardian: Evidence from Nineteen Countries,” *Economic Inquiry*, Vol. 31, No. 4, pp. 534-48.
- 58 Page 132 of Rubin’s “Comment,” in Frankel and Peter Orszag, eds., *American Economic Policy in the 1990s* (MIT Press, Cambridge) 2002. Growth was slower in the aftermath of Bush’s 2001 departure on a path of tax cuts and declining budget balance than it was in the aftermath of Clinton’s 1993 decision to give priority to budget balance. For example, Price, Lee. 2006 “The Boom That Wasn’t: The Economy Has Little to Show for \$860 Billion in Tax Cuts.” Economic Policy Institute: Washington D.C. Link: <http://www.epi.org/briefingpapers/168/bp168.pdf>
- 59 Romer and Romer, op.cit., find that tax increases designed as part of a longer-term program to bring down the budget deficit have much less of a negative effect on output—presumably due to much less crowding out, for example, via expectations and long-term interest rates—than tax changes enacted for countercyclical or stimulus purposes.