The Costs of Tax Policy Uncertainty And the Need for Tax Reform

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The report examines tax policy uncertainty, noting that academic literature on tax uncertainty has failed to address so-called rent seeking. The authors build on the work of Baumol (1990), who contends that it is not just the degree of entrepreneurship that is central to economic growth but also the allocation of entrepreneurship between constructive activities and unproductive or destructive ones. The authors conclude that fundamental tax reform is an important step in reducing tax policy uncertainty. However, unless reform is specifically designed to be enduring it will be undone through rent seeking.

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I. Introduction

The American Taxpayer Relief Act of 2012 (ATRA, P.L. 112-240) may be more significant for what it does not do than for what it does. Hopes for a "grand bargain" were not realized. In fact, ATRA does (almost) nothing to address the major fiscal problems that the United States continues to face.

No one seems pleased with ATRA. Noticeably absent were the self-congratulations among members of Congress that usually accompany the passage of significant legislation[1] — and for good reason. Even the bill's title leaves something to be desired. The "Act of 2012" was not passed by Congress until 2013.

The primary focus here is not on the broader merits or demerits of ATRA, but rather on the issue of tax policy uncertainty. The fiscal cliff represented an extreme case of (manufactured) policy uncertainty. A growing body of research suggests that policy uncertainty imposes substantial economic costs in and of itself. ATRA substantially lessened U.S. tax policy uncertainty over the very short term by, for the most part, making permanent the Bush tax cuts.

However, all is not well. Policy uncertainty remains high. Under ATRA, added revenue will come from taxpayers at the top of the income distribution, but that will barely make a dent in the deficits that the United States has been running. Based on projections from the Congressional Budget Office, the Joint Committee on Taxation and the Office of Management and Budget, Veronique de Rugy

[1]Instead of enjoying a signing ceremony, the bill was signed into law via autopen in President Obama's absence. *See* "Obama's Staff Uses Autopen to Sign 'Fiscal Cliff' Legislation," *The Weekly Standard*, blog post (Jan. 3, 2013).

shows that (over the next 10 years) ATRA is expected to add $332 billion in spending and $620 billion in added revenues. By contrast, projected deficit spending over the same 10 years is order of magnitudes larger than the projected deficit reductions from ATRA.[2] A strong recovery from the Great Recession would be a big help, but major structural problems would still remain.

Post ATRA, the problem of sequestration remains front and center. ATRA extended the start date for sequestration called for in the Budget Control Act of 2011 from January 1 to March 1. Even those wanting to cut the budget do not want to do so in the Procrustean manner laid out in current law. Thus, those cuts are unlikely to materialize, but what will take their place is anyone's guess.

The Affordable Care Act (ACA) also remains a source of some tax policy uncertainty. As enacted, the individual mandate is set to start at the beginning of 2014. However, the tax is so low that it will be advantageous for many uninsured individuals to pay the tax and forgo insurance until they need it.[3] For the health insurance exchanges to function well and keep costs down, it will likely be necessary to substantially raise taxes from the individual mandate.[4] The only thing that is certain is that any debate over the tax issue will be contentious and heated.

Over the longer term, uncertainty looms. In the coming decades, the U.S. federal tax system is expected to bring in far less revenue than Congress is projected to spend. Major changes are needed to rein in programs such as Medicare, Medicaid, and Social Security, or major tax increases are needed — or a combination of the two approaches. Longtime budget expert Robert Reischauer (who served as director of the CBO and president of the Urban Institute) has said, ''The path we're on can't go on for fifteen years. Whether it can go on for two, three, or four years, I have no idea.''[5]

That near- and longer-term uncertainty is not good for the economy. Research is finding that uncertainty in and of itself has negative implications for the economy, slowing economic growth and possibly prolonging a weak recovery. Policy uncertainty has been shown to reduce investment and to cause companies and individuals to misallocate resources. All those things impose costs on society.[6]

A recent paper found that policy uncertainty could explain the United States' poor economic performance in recent years.[7] The authors predict that policy uncertainty similar to what their measures show the United States has faced in recent years will result in a reduction in real GDP by 2.2 percent and a loss of 2.5 million jobs. The costs of uncertainty should be distinguished from the fact that uncertainty may arise from increased prospects for harmful policies. In recent years, those two factors (that is, uncertainty itself and the increased likelihood of inferior economic policy) have often been positively correlated. While policy uncertainty imposes economic costs, so too does a shift toward a bad policy environment.[8]

II. ATRA and Tax Policy Uncertainty

A host of tax and spending changes were nominally ushered in on January 1, a day before ATRA became law, retroactively averting the fiscal cliff. The act permanently extends the Bush-era individual income tax rates for more than 99 percent of taxpayers, while allowing rates for single filers with taxable incomes exceeding $400,000 ($425,000 for heads of household and $450,000 for joint filers) to return to their pre-2001 levels. The statutory marginal tax rate for that top income group increased from 35 to 39.6 percent for ordinary income. The effective marginal tax rate increase is larger because that group also faces the reintroduction of Pease and PEP (that is, phaseouts for up to 80 percent of itemized deductions and 100 percent of personal exemptions). Those phaseouts affect taxpayers other than those in the highest bracket, because they are based on adjusted gross income instead of

[2]*See* Veronique de Rugy, ''What Congress Gave Us in the Fiscal Cliff Deal,'' Mercatus Center, Jan. 7, 2013, *available at* http://mercatus.org/publication/what-congress-gave-us-fiscal-cliff-deal.

[3]Martin Feldstein, ''Obamacare's Nasty Surprise,'' *The Washington Post*, Nov. 6, 2009.

[4]Some taxes from the ACA, such as surtaxes on some high-income taxpayers, take effect in 2013, with others to take effect later. Those tax increases have been a source of uncertainty. However, the Supreme Court's 5-4 decision preserving most of the ACA, along with Obama's reelection, has lifted most of that uncertainty.

[5]David Wessel, *Red Ink: Inside the High-Stakes Politics of the Federal Budget* 29 (2012).

[6]On the related issue of the costs of budget uncertainty resulting from late appropriations and continuing resolutions, see Philip G. Joyce, ''The Costs of Budget Uncertainty: Analyzing the Impact of Late Appropriations,'' IBM Center for the Business of Government, 2012: Washington, *available at* http://www.businessofgovernment.org/report/costs-budget-uncertainty-analyzing-impact-late-appropriations.

[7]Scott R. Baker, Nicholas Bloom, and Steven J. Davis, ''Measuring Economic Policy Uncertainty,'' working paper, Jan. 2013, *available at* http://www.policyuncertainty.com/media/BakerBloomDavis.pdf.

[8]For example, if it were decided some time ago that the United States would go over the fiscal cliff with certainty, the costs to the economy would likely have been substantial.

taxable income and kick in at $250,000 for single filers ($300,000 for joint filers).[9]

Marginal tax rates for most dividends and (long-term) capital gains for those in this new top bracket rose from 15 to 20 percent. That is a return to the pre-2001 level for capital gains but treats dividends much more favorably than pre-2001 law, which taxed them as ordinary income.[10] ATRA made important changes to other areas, including the estate tax; the alternative minimum tax; and many credits, deductions, and phaseouts.[11]

At the center of the fiscal cliff debate that resulted in ATRA were the Bush (or Bush-era) tax cuts passed in 2001, 2003, and 2004.[12] Those tax cuts were mostly extended for two years through 2012 by the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 (Job Creation Act). Other legislation, such as the American Recovery and Reinvestment Act of 2009, included important tax provisions that often carried the same expiration date as the Bush tax cuts. The CBO projected that federal revenues would have increased by $5.4 trillion over the next 10 years had all the tax provisions expired (with the bulk of that hypothetical increase in revenues resulting from not indexing the AMT for inflation).[13]

A. The Budget Process and Policy Uncertainty

While the fiscal cliff debate and the ongoing debt ceiling and sequestration debacle reflect a deep divide between the political parties and possibly greater acrimony among members of Congress, part of the problem emanates from a budget process run amok. The 1974 Congressional Budget Act (Budget Act) created the CBO and the process for assessing the budget implications of proposed legislation. Lawmakers often game those budget rules, which were intended to impose more prudent fiscal policy. As a result, the rules sometimes yield policy uncertainty and policies that are less desirable than had they not been in place.[14] As former CBO Director Rudy Penner testified in 1990:

> We have a [budget] process that looks very elegant on paper, but is leading to very dishonest and disorderly results. . . . It has done an enormous amount of harm in spawning a large number of gimmicks that make it very difficult to analyze the budget anymore. These gimmicks make investors and other outsiders lose confidence in the government.[15]

More than two decades later, Penner's critique still has merit.

The history of the Bush tax cuts is a case in point. Because the Bush tax cuts (at least those in 2001 and 2003) were passed via Congress's reconciliation process (which stems from the Budget Act), they were subject to the Byrd Rule, which requires that any tax or spending bill passed via reconciliation not adversely affect the federal deficit outside the 10-year budget window.[16] As a result, instead of pushing permanent legislation that would offset the reduction in revenues with cuts in spending growth, Congress proposed temporary legislation in the hope that it would be made permanent later.[17] The Bush tax cuts used the common practice of phasing in the cuts over several years so that the negative impact on the deficit would be reduced in the early years, making projections over the 10-year budget window more appealing than they would be for fully phased-in legislation. Thus, as the Bush tax cuts suggest, it is possible that the Budget Act has yielded diminished fiscal responsibility and greater policy uncertainty. The CBO and the Joint Committee on Taxation produce cost estimates for proposed legislation, but because Congress sets the rules and then manipulates legislation accordingly, the Budget Act may provide a false sense of due diligence. Thus, while it is possible that the Budget Act has had a positive impact on the budget process and policy outcomes, such a statement is at least debatable.[18]

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[9]Those phaseouts are a backdoor way to raise tax rates. Pease lowers itemized deductions by 3 percent of the difference between AGI and the income threshold until itemized deductions are reduced by 80 percent. Personal exemptions are reduced by 2 percent for every $2,500 that AGI exceeds the threshold.

[10]In some cases, tax rates will be somewhat higher than pre-2001 law because of ACA taxes targeted at the top of the income distribution. ACA taxes were not affected by ATRA.

[11]ATRA, section 126.

[12]The Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA); the Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA); and the Working Families Tax Relief Act of 2004.

[13]CBO, ''The Budget and Economic Outlook: Fiscal Years 2012 to 2022'' (Jan. 2012), *Doc 2012-1855*, *2012 TNT 21-26*.

[14]*See* Allen Schick and Felix Lostracco, *The Federal Budget: Politics, Policy, Process* (2000).

[15]Louis Fisher, *Congressional Abdication on War and Spending* 24 (2000).

[16]Because there was not enough support for the Bush tax cuts to overcome a filibuster in the Senate, reconciliation was the only viable option.

[17]*See* the Tax Foundation, ''Why Are the Bush Tax Cuts Expiring?'' (May 26, 2010).

[18]For a critical view of the budget process, see Fisher's testimony before the Senate Budget Committee, ''Improving the Congressional Budget Process'' (Oct. 12, 2011).

Table 1. Major Tax Components of the Fiscal Cliff[a]

Tax Provision	Year Originally Enacted	Length of Prior Extension	10-Year Revenue Estimate
EGTRRA and JGTRRA (the Bush tax cuts)	2001 and 2003	Two years	$2.84 trillion[b]
AMT patch	2006	No patch for 2012	$804 billion
Payroll tax cut	2010	One year	$114 billion (2012 only)
Other tax extenders	2008	One year	$839 billion

Source: Congressional Research Service, Congressional Budget Office.
[a]Information in the table is based on the scenario under which no cliff deal was reached.
[b]Debt service associated with the Bush tax cuts and AMT patch is an additional $790 billion between 2013 and 2022.

B. ATRA and the Expiring Tax Legislation

For more than a decade, Congress has relied on temporary or short-term fiscal policy, resulting in numerous tax provisions that were set to expire at the end of 2012.[19] The expiration of those policies would have amounted to a sharp tax increase for all income taxpayers and (assuming that the AMT is indexed for inflation) was projected to increase tax revenues by $2.84 trillion over 10 years (Table 1).

The Bush tax cuts phased out the estate tax over 10 years; by 2010 the tax had been completely phased out.[20] It was set to return to pre-2001 levels in 2011, which would have meant a 55 percent tax rate with a $1 million exemption (not indexed for inflation). Instead, ATRA set the estate tax rate at 35 percent (compared with 40 percent in 2012), with a $5 million exemption (indexed for inflation).

ATRA makes the AMT more palatable by permanently adjusting it for inflation and makes planning for both taxpayers and the IRS easier. Before ATRA, Congress regularly passed patches that would adjust the AMT thresholds for inflation, but often only for one year — and often retroactively applying to the year just ending. The most recent AMT patch expired before 2012. According to the CBO, if the AMT patch had not been reintroduced, revenues would have increased by $952 billion over 10 years (Table 1); for 2012, the number of taxpayers subject to the tax would have increased from 4 million to more than 30 million.[21]

Had an inflation adjustment not been applied retroactively to 2012, the IRS would have had to delay processing tax returns for as many as 100 million filers until March 2013 or later.[22] The IRS's computers were programmed in anticipation of a patch, as in previous years. Had a patch (or permanent indexation) not been passed, the complications of the AMT and its interactions with the regular tax code would have required a major overhaul of the IRS's computer programs.

When the current AMT was created in 1982,[23] only 155 high-income households faced the tax. Because the AMT was not automatically indexed for inflation (unlike brackets for the regular income tax, which are indexed), it hit taxpayers with lower and lower real incomes each year. AMT liability equals the person's tax liability calculated under the AMT minus their liability calculated under the regular federal income tax, if positive. By lowering tax liabilities under the regular federal income tax, the Bush tax cuts increased tax liabilities under the AMT. To offset that, the Bush tax cuts included an AMT patch, but only for four years.

Congress's persistent failure to address the AMT was another artifact of the Budget Act and related rules for assessing bills. One- or two-year patches require the government to forgo revenue in only one or two years of the 10-year budget window. If Congress passes a one-year patch for 10 straight years, the effect (over the 10-year period) would be the same as a change that permanently indexed the AMT. However, because the CBO and the JCT are required to assume a current-law baseline when

[19]For an in-depth review of expiring tax provisions, see Margot L. Crandall-Hollick, "An Overview of Tax Provisions Expiring in 2012," *CRS Report for Congress*, Apr. 2012 (Washington: Congressional Research Service). With respect to agriculture policy, temporary or continually renewed policy has been the norm for much longer than a decade. For example, the congressional stalemate brought to light the so-called "milk cliff" in which federal price supports were set to more than double prices for milk and other milk-based products beginning in 2013. The expiration of the most recent (five-year) farm bill means that price supports would have reverted to a 1949 formula, which would have committed the U.S. government to purchase milk until the market price was more than double current market prices. The milk cliff was also averted as a result of ATRA. *See* Bill Tomson, "Congress Averts 'Dairy Cliff,'" *The Wall Street Journal*, Jan. 1, 2013.

[20]The situation was actually considerably more complicated. The 2010 tax extension, which extended most of the Bush tax cuts for two additional years, set special rules for the estate tax. Estates of those dying in 2010 could opt for either no estate tax, but heirs would not receive the full step-up in basis normally afforded to inheritances; or for an estate tax with a $5 million exemption and a 35 percent rate (which applied to estates for years 2011 and 2012). Most estates would be taxed more heavily with no estate tax if no step-up in basis were allowed.

[21]*See supra* note 13.

[22]Jeanne Sahad, "Lack of AMT Fix Could Delay 100 Million Tax Returns," Dec. 19, 2012, *available at* http://www.cnn.com.

[23]A different AMT was created in 1969.

assessing legislation, continual ad hoc changes will always look better on paper.[24] Thus, ATRA's permanent indexation for inflation (as well as making permanent other provisions) is welcome in that it not only reduces policy uncertainty but also is a step toward more honest and transparent budget practices.[25]

Another source of tax policy uncertainty heading into 2013 was the 2 percentage point payroll tax cut enacted as part of the Job Creation Act. The payroll tax cut was advertised as a replacement for the Making Work Pay credit. The payroll tax cut reduced the employee share of Social Security payroll taxes in 2011 from 6.2 to 4.2 percent. Originally, the payroll tax cut was presented as a one-year fiscal stimulus, but it was extended for part of 2012 on a last-minute vote in December 2011. In 2012 it was extended for the remainder of the year. It was unknown whether it would be extended for 2013 as well. That it was not included in ATRA signals that it was in fact temporary and is unlikely to reappear soon. For 2011 and 2012, the CBO estimated that forgone revenue from that tax cut totaled $225.7 billion.[26]

ATRA extended other tax provisions, generally through 2013. The term ''tax extenders'' has no single definition — for example, some considered the Bush tax cut extensions and the AMT patches to be tax extenders, while others include only miscellaneous tax provisions. We define tax extenders as regularly recurring tax extensions that have not already been addressed; more specifically, we use the term to refer to a group of 80 or so temporary tax provisions slated to expire within 10 years.[27] The JCT breaks down[28] expiring provisions by the year in which they are set to expire.[29] The CBO (relying on analysis from the JCT) has projected that a 10-year extension of those provisions would lower revenues by $839 billion and add $173 billion to the debt service — that is, additional interest payments resulting from increased government borrowing.[30]

Alas, Congress was not about to waste the crisis by failing to throw in pork to reward political supporters and favored interests. According to one report, the Family and Business Tax Cut Certainty Act of 2012 ''was copied and pasted into the fiscal cliff legislation, yielding a victory for biotech companies, wind-turbine-makers, biodiesel producers, film studios — and their lobbyists.''[31] That legislation stalled in Congress last summer and was presumed dead. Those provisions are expected to cost taxpayers $76 billion over 10 years.[32]

C. Long-Term Policy Uncertainty

While the United States faces tremendous short-term policy uncertainty, the long-term outlook is no better. ATRA does not address the nation's long-term fiscal problems, so it seemed clear as 2013 began that policy uncertainty would continue to be a major issue.

For many years (and predating the Great Recession), economists and other policy analysts have warned that the government's taxing and spending policies are unsustainable.[33] Long-run spending commitments are out of line with long-run revenue projections, given anything resembling current tax policy (or historical measures of tax revenue as a share of GDP). For more than a decade, special bipartisan commissions have proposed reforms for areas such as Social Security, tax policy, and the nation's overall fiscal position,[34] but Congress has not acted on any of their recommendations. To the extent that Congress and the president do act, it is

[24]The baseline is the scenario that is used for reference when measuring the revenue or expenditure implications of legislation. For their official revenue estimates, CBO and JCT are not permitted to make predictions concerning future actions by Congress. Rather, they are to assume that the laws on the books will not change. For example, they are not to assume that Congress will extend the AMT patch, even though it has done so for many consecutive years.

[25]Other provisions made permanent by ATRA include the expansion of the earned income tax credit and the child tax credit that were part of the 2009 stimulus package.

[26]For government accounting purposes, general revenues are credited to Social Security to make up for revenue losses from the payroll tax cut.

[27]*See, e.g.*, Table 2 in Margot L. Crandall-Hollick, ''An Overview of Tax Provisions Expiring in 2012,'' CRS R42485 (Apr. 17, 2012), *Doc 2012-8221*, *2012 TNT 76-17*.

[28]JCT, ''List of Expiring Federal Tax Provisions 2011-2022,'' JCX-1-12 (Jan. 13, 2012), *Doc 2012-356*, *2012 TNT 5-52*.

[29]For revenue estimates, see CBO, ''Expiring Tax Provisions — January 2012 Baseline'' (Jan. 31, 2012). JCT provided CBO with many of the numbers presented.

[30]*See supra* note 13, at 21.

[31]Timothy P. Carney, ''How Corporate Tax Credits Got in the 'Cliff' Deal,'' *The Washington Examiner*, Jan. 2, 2013.

[32]JCT, ''Estimated Revenue Effects of the Revenue Provisions Contained in an Amendment in the Nature of a Substitute to H.R. 8, 'the American Taxpayer Relief Act of 2012,''' JCX-1-13 (Jan. 1, 2013), *Doc 2013-5*, *2013 TNT 2-13*.

[33]In a 2005 interview with C-SPAN's Brian Lamb, then-CBO Director Douglas Holtz-Eakin said, ''I often say to people, you know, these are good old days, enjoy it.''

Holtz-Eakin was not the first CBO director to warn of the nation's long-term fiscal problems. Those warnings became then-Government Accountability Office Director David Walker's primary mission. Dating back to at least 1993, Peter G. Peterson has warned of the unsustainability of U.S. entitlement programs. *See* Peterson, *Facing Up: How to Rescue the Economy From Crushing Debt and Restore the American Dream* (1993).

[34]President Bush established the Commission to Strengthen Social Security as well as the President's Advisory Panel on Federal Tax Reform. Obama established the National Commission on Fiscal Responsibility and Reform (also known as the Bowles-Simpson Commission).

often to worsen the long-term fiscal outlook. For example, consider the Medicare Prescription Drug, Improvement, and Modernization Act, which expanded prescription drug coverage to Medicare in 2003. Other scholars make similar arguments regarding Obama's healthcare legislation.[35]

Richard Evans, Laurence Kotlikoff, and Kerk Phillips[36] have estimated the fiscal gap (that is, the difference between spending obligations and expected revenues) at a staggering $211 trillion in present value terms.[37] By comparison, annual U.S. GDP is about $15 trillion. To address that imbalance, taxes would have to be permanently increased by 64 percent or spending would need to be cut by 40 percent. If the gap is filled solely by raising taxes, tax revenues would rise to 26.7 percent of GDP, or roughly 50 percent above the post-World War II average of 17.7 percent.[38] The key driver of the fiscal gap is entitlement spending, and particularly government spending on healthcare (for example, Medicare).

The United States spent (from government and private sources) about 18 percent of GDP on healthcare in 2011. For years, spending on healthcare has grown more rapidly than the overall economy. Because government plays a large (and growing) role in financing healthcare, that trend has strained government budgets.[39] Depending on the fiscal constraints used by the federal government, the CBO estimates that Medicare spending will grow to 6.7 percent of GDP by 2037 while Medicaid, the Children's Health Insurance Program, and ACA's subsidized exchanges will reach 3.7 percent of GDP.[40] Those estimates do not include tax expenditures that are used to subsidize healthcare and health insurance, which totaled $187 billion for 2011.[41] Similarly, Social Security outlays are expected to increase from 5 to 6.2 percent of GDP by 2037.[42] The trajectory for those programs poses serious problems, further exacerbated by the fact that the federal government continued to run substantial deficits, even before the Great Recession. If the fiscal imbalances continue to go unaddressed, payments on debt obligations will grow rapidly. The CBO's 10-year outlook estimates that debt servicing as a percentage of GDP will rise a full percentage point by 2022, with further increases projected.[43]

III. The Economic Costs of Policy Uncertainty

There is no consensus on how best to measure policy uncertainty or the magnitude of the associated costs, but it is well established that policy uncertainty adversely affects the economy. We categorize the three main avenues of harm addressed in the literature as decision paralysis, resource misallocation, and capital flight (or hibernation) from fear of regime change. We add a fourth avenue: increased rent seeking. We contend that added rent seeking, triggered by uncertainty, represents an additional drag on the economy, and we believe it is a contributing factor to the overall economic costs of policy uncertainty.

A. Uncertainty and Economic Performance

In a working paper, Scott Baker, Nicholas Bloom, and Stephen Davis provided several indices measuring uncertainty, most of which date back to 1985.[44] They included indices for policy-related economic uncertainty and financial uncertainty, as well as an overall uncertainty index and an index measuring tax policy uncertainty (based on expiring tax legislation).

The authors argued that policy uncertainty has become a larger component of overall economic uncertainty in the last 10 years. Figure 1 suggests that some of the rise in overall policy uncertainty may be attributed to heightened tax policy uncertainty. The authors based their annual measure of tax policy uncertainty on the number of expiring tax provisions.[45] However, that number might not accurately reflect the economic importance of those provisions, because the dollar value of expiring provisions varies.

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[35]The ACA remains a highly partisan issue, and respected economists disagree on its net fiscal impact. *See, e.g.*, Charles Blahous, "The Fiscal Consequences of the Affordable Care Act," Mercatus Center (Apr. 10, 2012); Holtz-Eakin and James C. Capretta, "Resetting the 'Obamacare' Baseline," *Politico.com*, Dec. 16, 2010.

[36]Richard W. Evans et al., "Game Over: Simulating Unsustainable Fiscal Policy," National Bureau of Economic Research working paper (2012).

[37]National Public Radio, "A National Debt of $14 Trillion? Try $211 Trillion," Aug. 6, 2011.

[38]Authors' calculations are based on CBO data, *supra* note 13, and on Office of Management and Budget 2012 Historical Tables, "Table 1.2 — Summary of Receipts, Outlays, and Surpluses or Deficits as Percentages of GDP: 1930-2017." Because of chronic deficits, post-WWII federal spending as a share of the economy is more than 2 percentage points higher than tax revenues.

[39]Some argue that the causation is reversed and that government involvement is a major driver in healthcare spending.

[40]CBO, "The 2012 Long-Term Budget Outlook" (June 1, 2012), at 49, *Doc 2012-12113*, *2012 TNT 109-23*.

[41]Authors' calculations are from OMB, "Fiscal Year 2013 Analytical Perspectives, Budget of the U.S. Government" (Feb. 2012), *Doc 2012-2944*, *2012 TNT 30-43*.

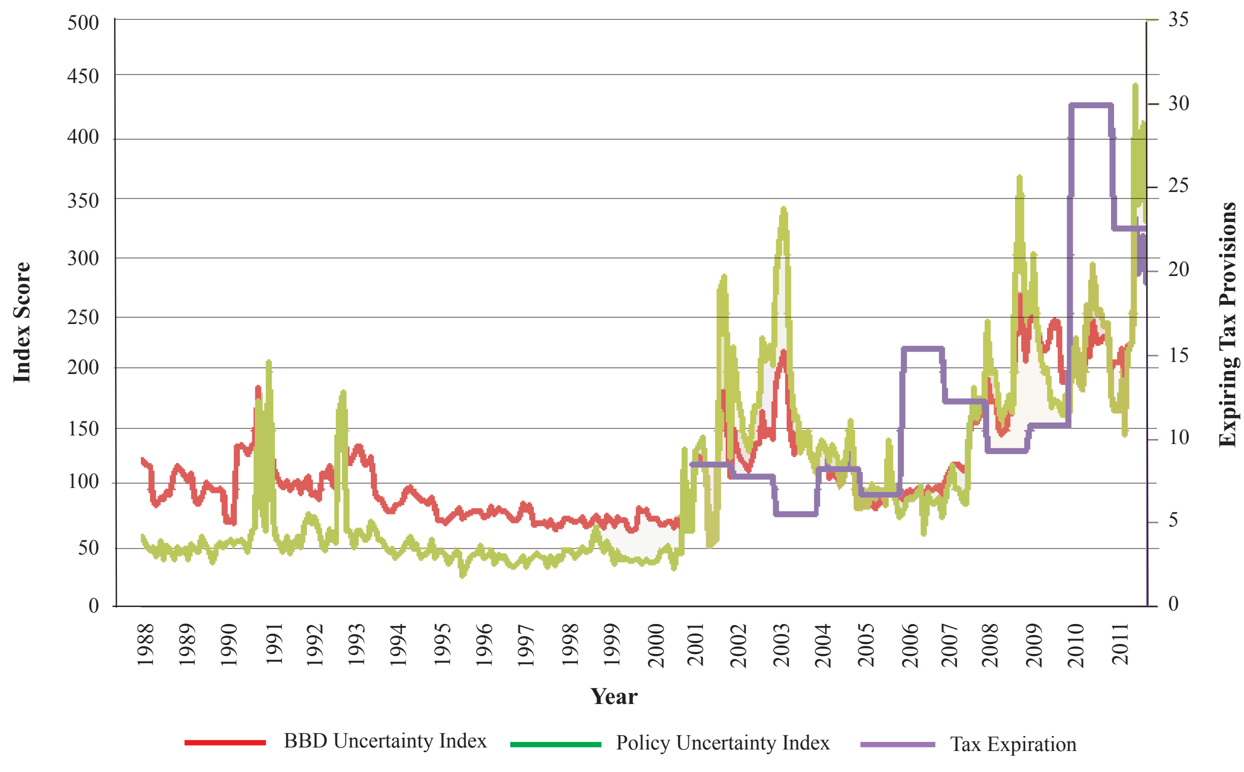
[42]*Supra* note 40, at 71.

[43]*See supra* note 13, at 50.

[44]Baker et al., *supra* note 7.

[45]This measure is discounted to allow for the time to expiration and also to reflect that many expiring tax provisions are routinely renewed.

Uncertainty Indices and Tax Expiration



Sources: BBD; JCT.

The authors found that policy uncertainty can impose negative effects on investment, consumption (and GDP, of which investment and consumption are primary components), and employment. According to estimates from the authors' model, "an increase in policy uncertainty equivalent to the actual increase from 2006 to 2011 is followed by a decline of about 2.2 percent in real GDP and 13 percent in private sector investment and an employment drop of around 2.5 million persons."[46] They found that policy uncertainty accounted for a relatively small share of economic uncertainty in the 1990s and for a larger portion after 9/11. The authors concluded that most movements in overall economic uncertainty in recent years could be attributed to policy uncertainty.

The authors do not examine the process by which uncertainty harms the economy but rather report strong negative correlations between uncertainty measures and economic activity. They note various avenues (addressed in the literature) by which uncertainty imposes economic costs and argue that their findings are consistent with those underlying processes.

B. Decision Paralysis

Consider a stylized world in which a venture capitalist is considering investing in either ethanol production or solar energy investment alternatives, each of which require substantial sunken (or irreversible) costs. In the presidential race, one candidate, in an effort to appeal to farm states, promises increased tax subsidies for ethanol. Another candidate, in an effort to appeal to environmentalists, promises a new tax subsidy for solar energy.[47] A venture capitalist, deciding where to invest, produces the following matrix:

Table 2. Policy Alternatives

Investment	Ethanol Subsidy	Solar Subsidy
Ethanol	profit: *x*, *y*	loss: *z*
Solar	loss: *z*	profit: *x*, *y*

The first number in each cell is the net return from an investment made ex ante (to the policy

[46]Baker et al., *supra* note 7, note that ascribing a causal relationship to their results requires strong assumptions.

[47]This example highlights the effect of uncertainty on investment decisions and does not consider the merits of either policy.

decision), whereas the second number is the net return from an investment made ex post. No ex post investment would ever be made in non-favored sectors because they would be sure losers. If z were 0, then a rational investor would choose to invest ex ante only if that return were greater than the ex post return divided by the probability that the policy that favors the investment is enacted — that is, if $x \geq y/\Pr(win)$. Thus, if each policy is likely to occur with equal probability, then x must be at least equal to twice the expected ex post return (that is, y). If z were greater than 0, then x would need to be even larger. While this is a very simple and highly stylized example, it demonstrates how policy uncertainty can lead to decision paralysis.

The example is consistent with findings by Federal Reserve Chair Ben Bernanke, who showed that under an "irreversibility" assumption, uncertainty may lead to cyclical investment patterns in which purchasing durable investments is delayed in favor of holding liquid assets.[48] Similarly, Dani Rodrik found that policy uncertainty acts as a tax on investment, retarding development in poorer nations.[49] Coupled with irreversibility, even positive economic reform is of only limited success if it is not certain to remain in place long term.[50]

C. Resource Misallocation

Policy uncertainty also can alter the allocation of resources. That effect extends to companies making investment or hiring decisions, as well as to people making savings and labor market decisions. For risk-averse individuals, uncertainty is likely to alter behavior: People engage in precautionary measures in response to uncertainty. Those precautionary measures can be costly and increase the burden on the economy.[51]

Francisco Gomes, Kotlikoff, and Luis Viceira examined the impact of resource misallocations resulting from uncertainty.[52] They employed an overlapping generations model and produced excess-burden calculations to measure the costs of misallocating resources. They focused on the effects of uncertainty (on Social Security and income tax rates) on measures such as wealth, income, consumption, and portfolio allocation over one's life cycle.[53] Under their baseline assumption, they reported that uncertainty regarding future tax rates results in a loss of 0.03 percent of annual income, when effectively 9 percent of income is subject to uncertainty. That number is sensitive to both the magnitude of the uncertainty (that is, of potential tax changes) and the level of risk aversion. The authors concluded, "That households experience sizable welfare gains from learning early about future changes in benefits and tax rates regardless of their attitudes toward risk or the uncertainty they face about their own labor earnings."

In a 2012 paper, Ellen McGrattan found evidence that tax policy uncertainty retards investment.[54] She found that uncertainty regarding taxes on individual income, including corporate dividends and undistributed profits, decreased investment significantly during the 1930s. She wrote that tax policy uncertainty, while not the cause or primary driver of the Great Depression, played a larger role than most believed, and likely both prolonged the Depression and increased its severity. However, McGrattan wrote that it is not just uncertainty per se that influences investment, but also whether the uncertainty involves a potential shift toward a tax policy that is less favorable to investment.

Also, responses to uncertainty might decrease government revenues. Kevin Hassett and Gilbert Metcalf found that uncertainty regarding U.S. investment tax credits may not have lowered investment but did lower federal revenues.[55] Expectations regarding investment tax incentives may increase aggregate investment or simply alter the timing of investment without affecting its overall level. McGrattan also reported evidence of inter-temporal shifting of investment during the 1930s as a result of

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[48]Ben Bernanke, "Irreversibility, Uncertainty and Cyclical Investment," 98 *Q. J. Econ.* 85 (1983).

[49]Dani Rodrik, "Policy Uncertainty and Private Investment in Developing Countries," 36 *J. Dev. Econ.* 229 (1991).

[50]In conjunction with uncertainty, irreversibility tends to reduce new investment; there is substantial literature on the topic. However, investments that passed a cost-benefit test in an earlier economic or political environment often cannot be undone later, even if they no longer appear prudent. That is, it is possible for irreversibility, while reducing investment at the margin, to raise the overall capital stock because of the "hangover" effect that prevents companies from reducing capital. *See* Andrew B. Abel and Janice C. Eberly, "The Effects of Irreversibility and Uncertainty on Capital Accumulation," 44 *J. Monetary Econ.* 339 (1999).

[51]Excess burden — also known as deadweight loss or welfare loss — is the net loss to society from the misallocation of resources. It is effectively money left on the table and generally results from government distortion of market prices or from external costs or benefits associated with some goods or services.

[52]Francisco Gomes et al., "The Excess Burden of Government Indecision," in *Tax Policy and the Economy* 125-163 (2011).

[53]Labor income data are taken from Joao Cocco et al., "Consumption and Portfolio Choice Cover the Life-Cycle," 18 *Rev. Fin. Stud.* 491.

[54]Ellen R. McGrattan, "Capital Taxation During the U.S. Great Depression," 127 *Q. J. Econ.* 1515 (2012).

[55]Kevin A. Hassett and Gilbert E. Metcalf, "Investment With Uncertain Tax Policy: Does Random Tax Policy Discourage Investment?" 109 *Econ. J.* 372 (1999).

uncertainty. Again, the effect of uncertainty is related to the direction in which tax changes might occur. Depending on the interrelationship, uncertainty could even be associated with increased economic activity; however, in general, that would likely be the result of intertemporal shifting and not persistent economic gains.

D. Capital Flight or Hibernation

Robert Higgs has argued that regime uncertainty played a major role in the length and severity of the Great Depression[56] and explains the dearth of investment during that time. Higgs noted that it was not until after World War II that those fears were allayed and private investment returned to 1920s levels. While acknowledging that arguments about the pending end of the U.S. private-enterprise system seem hyperbolic in retrospect, Higgs chronicles political and legal events and includes data from public opinion surveys to suggest that cataclysmic views were real at the time. Herman Krooss exemplified Higgs's point, concluding that ''business leaders sincerely believed that the government was in evil hands . . . and preparing the way for socialism, communism, or some other variety of anti-Americanism.''[57]

Investment (and other economic activity) falters because of fears that property rights are threatened. That is not a cost of uncertainty per se, but a reflection of the fact that uncertainty increases when policies that would hamper economic growth become more likely. Had the feared policy changes actually occurred (with no uncertainty), the economic implications would have been even more serious. Some argue that regime uncertainty underlies the poor economic performance of the U.S. economy since the Great Recession.[58]

Many fear the implications of unprecedented (at least post-WWII) short-term budget deficits coupled with severe long-term fiscal imbalances driven primarily by entitlement programs such as Medicare, Medicaid, and Social Security. Many would agree that the United States is approaching a crossroads: Drastic and painful reforms are needed just to constrain the federal government to its size since the end of World War II. A not-implausible scenario is that the United States will become more like Western Europe, with the size of the federal government possibly increasing (as a share of GDP) by more than 50 percent over the next two generations.[59]

A *Wall Street Journal* op-ed by prominent economists (all of whom have served important roles in government) chronicled the magnitude of the federal debt, increased regulations, and actions of the Federal Reserve:

> The problems are close to being unmanageable now. If we stay on the current path, they will wind up being completely unmanageable, culminating in an unwelcome explosion and crisis.[60]

That suggests that fears of regime uncertainty may not be unwarranted — although the scenarios are not nearly as extreme as the ones feared during the 1930s, as described by Higgs (for example, fascism or communism). To date, attempts to address America's problems have been met with political stalemates, which contributed to the downgrading of U.S. debt.

E. Tax Uncertainty, Destructive Entrepreneurship

William Baumol's seminal work on rent seeking and entrepreneurship built on the classic work of Joseph Schumpeter. Baumol argued that entrepreneurship can be divided into productive, unproductive, and destructive activities.[61] He chronicled great innovations made over wide swaths of history, but he noted that in many cases those innovations did little to improve the lots of most individuals and that little effort was made to disseminate them to the masses or to use them to increase productivity.

Baumol argued that political and cultural institutions play a key role in whether innovations improve productivity and economic growth. In many preindustrial societies, the path to wealth was through rulers, not the marketplace. That fostered entrepreneurial rent seeking, which does not increase the size of the economic pie. Neither did

[56]Robert Higgs, ''Regime Uncertainty: Why the Great Depression Lasted So Long and Why Prosperity Resumed After the War,'' 1 *Indep. Rev.* 561 (1997).

[57]As quoted by Higgs.

[58]Mahmoud Haddad has suggested that business owners were waiting for election results before opening or expanding businesses. *See* Ned B. Hunter, ''Businesses Waiting on November Results,'' *The Jackson Sun*, Aug. 25, 2012.

[59]*See supra* note 40, at 146.

[60]George P. Shultz et al., ''The Magnitude of the Mess We're In,'' *The Wall Street Journal*, Sept. 16, 2012.

[61]William J. Baumol, ''Entrepreneurship: Productive, Unproductive, and Destructive,'' 98 *J. Pol. Econ.* 893 (Oct. 1990). Baumol places little emphasis on the distinction between unproductive and destructive entrepreneurship. Unproductive activities would include simple rent seeking, in which resources are wasted. Although Baumol is unclear on this, destructive entrepreneurship could likely include rent seeking that successfully results in destructive economic policies — such as trade restrictions, or even war.

Destructive and unproductive entrepreneurship are not restricted to rent seeking. For example, governments could offer contracts or rewards for wasteful or harmful entrepreneurial activity.

military innovations, which were often remunerative for individuals but not for society at large. Governments rewarded military innovations, but the wars in which those innovations were employed often slowed economic development. An important insight from Baumol is that it is not just the degree of entrepreneurship that is central to economic growth, but also the allocation of entrepreneurship between constructive activities and unproductive or destructive ones.

Although Baumol did not address politically induced economic uncertainty, our hypothesis is that policy uncertainty is a signal that government is open for business: Policies are going to change, and politicians are receptive to policy changes. With little policy uncertainty, higher returns might be sought from investing in productive activities. However, when government is receptive to policy changes, the returns from rent seeking (through lobbying, political action committees, etc.) may be more appealing.[62]

There is evidence that those rent-seeking strategies are not irrational.[63] Jonathan Forman found that corporations that made more PAC contributions in 1985 and 1986 (during intense tax reform debates) were rewarded with relatively more favorable tax treatment following the Tax Reform Act of 1986. A similar relationship was not found when comparing PAC contributions and future tax treatment over years that did not span a reform and over which tax uncertainty was presumably lower.

When policy uncertainty does not otherwise exist, lawmakers can manufacture it. For example, they sometimes propose ''milker'' bills not intended to actually become law, but rather to extort or ''milk'' rents from interested parties in exchange for killing the proposal.[64] Thus, even a period with stable policies may contain substantial policy uncertainty and concomitant losses to the economy from rent seeking and unproductive entrepreneurship.

In a 1991 study, Kevin Murphy, Andrei Shleifer, and Robert Vishny found evidence supporting Baumol's conception of unproductive or destructive entrepreneurship.[65] They looked at career decisions across different countries and found that occupational choice is influenced by the relative returns in different economic sectors. They argued that more people will be drawn to law if rent seeking is a dominant path to wealth; if the dominant path to wealth is through the marketplace, fields like engineering will be more attractive. Indeed, they found that nations with more law students grow more slowly than nations with more engineering students. They suggested that the slowdown in U.S. economic growth over the past 40 years could be due in part to a shift in human capital toward disciplines that are more likely to be involved in rent seeking and other nonproductive activities.

Russell Sobel examined relationships between the characteristics of political and economic institutions for U.S. states and both productive and unproductive entrepreneurial activity.[66] His findings were consistent with Baumol's: Sound institutions are associated with shifts in entrepreneurial activity from unproductive or destructive areas to constructive ones. However, Sobel did not relate Baumol's work to the question of policy uncertainty.

To our knowledge, Rodrik is the only one who has made a connection between uncertainty and rent seeking. Focusing on poorer nations, Rodrik argued that positive policy changes may yield increased investment. However, that new investment also creates vested interests in the new policy, and groups will expend resources to extend or enact policies that favor their industry. While rent seeking may promote stable policies, it is a drag on the economy. It would be better to have an institutional arrangement that made further policy changes more difficult while signaling policy commitment by the government. That would foster stable policy without wasting resources through rent seeking.

IV. Conclusion and Implications for Tax Reform

The economic literature finds that policy uncertainty is harmful to the economy in many ways. It discourages investment, results in the misallocation of resources, and can help explain the lackluster U.S. economic performance in recent years. We argue that uncertainty also fosters rent seeking and unproductive entrepreneurship.

What can lessen tax policy uncertainty? ATRA was at best a baby step. Enduring fundamental tax reform certainly would help. Aside from policy

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[62]Our empirical examinations have been consistent with that hypothesis. *See* Seth H. Giertz and Jacob Feldman, ''The Economic Costs of Tax Policy Uncertainty: Implications for Fundamental Tax Reform,'' Mercatus Research (Nov. 2012), at 1-31.

[63]*See* Jonathan Forman, ''PAC Contributions and Effective Corporate Tax Rates: An Empirical Study,'' 5 *Akron Tax J.* 65 (1988); Forman, ''PAC Contributions and Effective Corporate Tax Rates,'' *Tax Notes*, Dec. 11, 1989, p. 1363.

[64]*See* Fred S. McChesney, ''Rent Extraction and Rent Creation in the Economic Theory of Regulation,'' 16 *J. Legal Stud.* 101 (Jan. 1987).

[65]Kevin M. Murphy et al., ''The Allocation of Talent: Implications for Growth,'' 106 *Q. J. Econ.* 503 (May 1991).

[66]Russell S. Sobel, ''Testing Baumol: Institutional Quality and the Productivity of Entrepreneurship,'' 23 *J. Bus. Venturing* 641 (2008).

uncertainty, there are many reasons to support tax reform. Although recent years have been marked by great political discord, few would dispute that the U.S. federal income tax is unfair, inefficient, and needlessly complex and that it raises far less revenue than Congress spends. Those are reasons enough for reform. Broad principles for fundamental tax reform are beyond the scope of this report. Instead, we consider proposals that may promote a more stable and certain tax system in which opportunities for rent seeking are diminished.

TRA 1986, while far from perfect, closed loopholes, broadened the tax base, and lowered rates. Studies have shown that it greatly reduced economic inefficiencies, and some argue that it laid the foundation for a strong U.S. economy during the late 1980s and the 1990s. For example, Anil Kumar found that TRA 1986 substantially reduced overall deadweight loss in the economy.[67] And, James Poterba found that it substantially lowered inefficiencies in the housing market.[68]

However, a major shortcoming of TRA 1986 was that the new tax system remained malleable. As soon as many of the loopholes were closed, Congress (with help from lobbyists) reopened them. As the 20th anniversary of TRA 1986 approached, the President's Advisory Panel on Federal Tax Reform reported that Congress had amended the tax code approximately 15,000 times since the act's passage[69] (that is more than twice a day, including weekends!). In their review of the effects of TRA 1986, Alan Auerbach and Joel Slemrod concluded that "even the simplification potential of radical tax reform depends on how enduring a simple, broad-based tax can be, in the face of constant political pressure to reintroduce special 'encouragements' or to redistribute the tax burden."[70]

The problem of maintaining a reformed tax code stems from the fact that economic efficiency lacks a well-organized or focused interest group to represent it. Economic efficiency produces great but widely dispersed benefits, putting it at a political disadvantage. By contrast, carveouts and other special provisions that make the tax system more inefficient, complex, and unfair often confer concentrated benefits on a relatively small group. While the costs of those measures generally far outweigh the benefits, the beneficiaries are more concentrated, the benefit per beneficiary is often much larger,[71] and the measures lend themselves to more effective lobbying.[72]

A tax code under constant revision can have harmful effects on the economy. Even a simple, fair, and efficient tax system fails to instill confidence if it is in perpetual motion; a system that is amended twice a day on average is inherently uncertain.

Constantly amending the tax system often undoes the benefits from reform by opening or widening loopholes and by reducing the tax base. By some measures, tax expenditures totaled more than \$1.2 trillion for 2011[73] — that is, the array of special provisions, including credits and deductions, resulted in forgone revenue equal to more than 50 percent of the \$2.3 trillion in federal revenue actually collected.[74] Those loopholes result in greater inefficiencies and higher tax rates — or, in recent years, greater borrowing and greater debt.

The constant changes to the tax code are the result of rent seeking. As Fred McChesney emphasized, rents are extracted to maintain, not amend, tax code provisions.[75] Rent seeking is a further loss to the economy, shifting resources from productive activities to unproductive or destructive ones. As Baumol argued, societies that rely heavily on institutions that reward rent seeking tend to stagnate; societies that rely on institutions whose wealth is achieved through private competitive markets tend to prosper.

A. Making Tax Reform Enduring

Nobel laureate Milton Friedman was a longtime proponent of a flat tax with no deductions other than a personal exemption and for legitimate business expenses.[76] He favored a flat tax for many

[67]Anil Kumar, "Labor Supply, Deadweight Loss and Tax Reform Act of 1986: A Nonparametric Evaluation Using Panel Data," 92 *J. Pub. Econ.* 236 (2008).

[68]James M. Poterba, "Taxation and Housing: Old Questions, New Answers," 82 *Am. Econ. Rev.* 237 (May 1992).

[69]President's Advisory Panel on Federal Tax Reform, "Simple, Fair, and Pro-Growth: Proposals to Fix America's Tax System" (Nov. 1, 2005), *Doc 2005-22112*, *2005 TNT 211-14*.

[70]Alan J. Auerbach and Joel Slemrod, "The Economic Effects of the Tax Reform Act of 1986," 35 *J. Econ. Lit.* 589 (June 1997).

[71]A classic example is the U.S. sugar industry, which reaps huge benefits from U.S. tariffs on imported sugar. In some cases, however, the groups benefiting from special tax treatment are large.

[72]Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (1965).

[73]Donald B. Marron, "How Large Are Tax Expenditures? A 2012 Update," *Tax Notes*, Apr. 9, 2012, p. 235, *Doc 2012-7072*, *2012 TNT 68-11*.

[74]Tax expenditures are a static measure. Thus, eliminating all tax expenditures would raise less revenue than the full value of the tax expenditures. Also, tax expenditures are not prima facie bad. Reasonable arguments could be made to defend many of the provisions on grounds of either equity or efficiency. Examples include the EITC and the charitable deduction.

[75]McChesney, "Rent Extraction and Rent Creation in the Economic Theory of Regulation," 16 *J. Legal Stud.* 101 (Jan. 1987).

[76]The flat tax, as proposed by Robert Hall and Alvin Rabushka, has consumption as its base, but could be applied to an income tax base. A flat tax is not a proportional tax (relative

(Footnote continued on next page.)

reasons, but partly because he thought it would be more resistant to tinkering. *The Mirrlees Review* recently supported Friedman's sentiment:

> Uniform taxation also simplifies the politics of decision-making and makes tax policy less vulnerable to lobbying pressure and short-term political considerations. A system with differentiated rates invites interest groups to lobby for lower rates for their own products, or at least rates as low as those on other preferentially treated commodities.[77]

Friedman, however, was not sanguine about the prospects of a flat tax. He wrote in 1982 that such a system ''arouses intense opposition from powerful special interests created by the existing tax system: recipients of so-called charitable contributions, home-owners, the housing industry, institutions financing housing construction, the myriad of other producers and beneficiaries from tax shelters, tax lawyers and accountants, and last but not least, politicians who raise campaign funds from special-interest groups seeking to retain existing loopholes or create new ones.''[78] McChesney echoed and expounded on Friedman's cynicism regarding the political process.[79]

Friedman concluded that the only way to achieve an enduring flat tax is by amending the Constitution. Randall Holcombe also championed a ''fiscal constitution'' to combat welfare losses from rent seeking.[80] Even tax reform that is not nearly as simple and transparent as Friedman's could be made more enduring through constitutional changes. For example, a constitutional amendment that requires supermajorities to pass laws on tax expenditures could make tax reform more successful. Amending the Constitution is a tall order, however; other measures, while not as effective as a constitutional provision, may be more attainable.

One avenue to more enduring tax reform could come from changing the budget process, which has undergone numerous revisions in recent decades with limited success. One reason tax policy is uncertain is that the U.S. tax system does not cover current and projected spending. That has as much to do with the spending side of the budget as it does with the tax side. Congress regularly games the system by producing bills designed to receive unrealistically favorable CBO and JCT analyses. That contributes to long-term deficits, even when legislation appears to meet requirements that it not adversely affect the deficit. A reform to address that would require CBO and JCT to score proposed legislation over the next 10 years both as written and as fully phased in, with the score that is less favorable being operative. Such a rule could reduce the chicanery in the budget process.

Other reform options would limit the use of tax deductions. Martin Feldstein, Daniel Feenberg, and Maya MacGuineas have proposed limiting the use of deductions by setting an itemized deduction ceiling of 2 percent of total income.[81] They claim their proposal would decrease itemized filers by 75 percent from 48 million to 13 million. Len Burman has suggested a ''three strikes and you're out'' rule for tax deductions and credits: His proposal would give Congress the option of renewing tax provisions three times and then making it permanent or eliminating it. Burman's proposal is not fundamental tax reform, but it might reduce the uncertainty created by the growing number of expiring tax expenditures.[82]

B. Appendix

Suppose a venture capitalist has the option to invest in either ethanol or solar energy. The net return on investment depends on the outcome of the election: If candidate *A* wins, tax subsidies for ethanol will be expanded, but if candidate *B* wins, tax subsidies for solar energy will be expanded. The combined probability of winning and losing is equal to one. The net return on investing in the winning subsidy ex ante and ex post is the following:

(1) $\textit{Ex ante} = \Pr(\textit{win}) * x - \Pr(\textit{lose}) z = \Pr(\textit{win}) * x - (1 - \Pr(\textit{win})) * z$

(2) $\textit{Ex post} = y$

Pr(*win*) signifies the probability that the tax subsidy of interest is expanded while Pr(*lose*) signifies the probability that the tax subsidy is not expanded. Note that *x* signifies the payoff value of investing in the increased tax subsidy of interest before its enactment; *y* signifies the payoff value of investing in the increased tax subsidy of interest after its

to its base), but is progressive because of a zero bracket, or personal exemptions. With an income base, for example, taxes as a share of income rise with income.

[77]James Mirrlees et al., *Tax by Design: The Mirrlees Review* 154 (2011).

[78]Milton Friedman, ''How Flat Is Flat?'' *Newsweek*, Aug. 2, 1982, at 52.

[79]McChesney, ''What's Mine Is Theirs: The Ever-Shimmering Mirage of Lasting Tax Reform,'' *Library of Economics & Liberty*, Apr. 4, 2005.

[80]*See* Randall G. Holcombe, ''Tax Policy From a Public Choice Perspective,'' 51 *Nat'l Tax J.* 359 (June 1998). Holcombe suggests that a broad-based retail sales tax or VAT may be more resistant to rent seeking.

[81]Martin Feldstein et al., ''Capping Individual Tax Expenditure Benefits,'' NBER working paper 16291 (Apr. 2011).

[82]Len Burman, ''Three Strikes and You're Out for Tax Extenders,'' *Tax Vox* (Feb. 1, 2012).

enactment; and z signifies the payoff loss of investing in the increased tax subsidy of interest that is not enacted. Thus, a risk-neutral investor will choose to invest ex ante if:

(3) $$\Pr(win) * x - (1 - \Pr(win)) * z \geq y$$
$$\Pr(win) * (x + y) - z \geq y$$
$$x \geq (y/\Pr(win)) - (z - z/\Pr(win))$$

Equation 3 provides the payoff necessary for a venture capitalist to invest in ethanol or solar energy before the election. When there are no losses from selecting the losing investment, then the decision to investment will be selected by the following equation:

(4) if $z = 0$, then $x \geq y/\Pr(win)$ and if $\Pr(win) = 0.5$, then $x \geq 2y$

However, if investments are to some degree irreversible, as many economists assert, thereby rendering positive losses to malinvestment, then the payoff to invest must increase, *ceteris paribus*.

(5) If $z \geq 0$, then $x \geq 2y + z$

This stylized example shows how the problem of irreversibility on investments coupled with policy uncertainty may lead investors to delay decision-making until payoffs are more certain.