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Optimal Budget Deficits

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I. INTRODUCTION

Within Washington D.C. and throughout the United States there is a pervasive zero-budget norm, such that many government actors, political commentators, and ordinary citizens assume that a balanced budget is (or ought to be) the goal of federal budget policy. Indeed, Vice President Cheney was roundly criticized for allegedly suggesting that “deficits don’t matter,” and President Bush has pledged to cut the federal deficit in half by 2009.¹ During the 2000 presidential campaign, Vice-President Gore went so far as to promise to “pay down the national debt” year by year, with the goal of setting it on a course for complete elimination by 2012.²

Despite this widespread aversion to fiscal imbalance and government indebtedness, economists differ as to the potential costs and benefits of debt finance. Moreover, there is little agreement as to the proper measure of government deficits and debt. A prominent group of scholars has noted: “The goal of setting the deficit to zero seems quite strange in light of our uncertainty about how the deficit should be measured. If we are not sure what the deficit is, how can we be sure it should be zero?”³

Conceptually, large fiscal deficits are associated with two separate but related concerns: (1) generational inequity as excessive current consumption burdens future taxpayers and (2) public borrowing “crowding out” private investment, diminishing long-term economic growth.⁴ Distributional analysis of who benefits from (or is burdened by) deficits therefore must involve examination of the impact of deficits on various economic conditions and effects. For example,

¹ See White House Fact Sheet, “President Bush's Second Term Accomplishments and Agenda,” August 3, 2005, available at <http://www.whitehouse.gov.edgesuite.net/news/releases/2005/08/20050803-1.html>.

² Commission on Presidential Debates, “The First Gore-Bush Presidential Debate Transcript” (October 3, 2000), available at <http://www.debates.org/pages/trans2000a.html>.

³ Alan J Auerbach, Jagadeesh Gokhale, & Laurence J. Kotlikoff, *Generational Accounting: A Meaningful Way To Evaluate Fiscal Policy* 1, NBER Working Paper #3589 (1991), available at <http://www.nber.org/papers/W3589>.

⁴ See Michael J. Boskin, *Perspectives on Federal Deficits and Debt*, The Conference on Fiscal Challenges: An Interdisciplinary Approach to Budget Policy, Feb. 10-11, 2006, available at <http://lawweb.usc.edu/csfp/documents/FEDERALDEFICITSandDEBT.FEB8.pdf>, at 2.

deficits financing productive public investment or certain targeted tax cuts may make future generations better off by increasing capital stock and lifting future living standards.

Part II of this Briefing Paper seeks to provide background information necessary to analyze the issue of optimal deficits in four ways. Section A reviews the economic literature discussing generational burdens of government debt. While some have advanced arguments that public debt does not represent a transfer from one generation to another, most economists agree that since government borrowing is not fully offset by private action, deficits clearly matter in terms of intergenerational burden. Section B deals with the question of whether the federal unified budget deficit is the best measure of this impact on future generations. The absence of capital accounting and a failure to recognize important implicit obligations are among the reasons which suggest that the official federal budget deficit fails to provide the most relevant picture of how much of a burden we are leaving to future generations. Although most commentators in the United States have resisted setting specific deficit targets beyond a generalized balanced budget norm, Section C seeks to describe some of the factors economists look to in assessing the desirability of deficits in various circumstances. Finally, Section D suggests that even if there is no consistent, or uncontested, optimal deficit level, a general norm with regard to government borrowing may prove advantageous.

Part III of this briefing paper explores how various elements of the political and budget processes can affect a government's ability to implement an optimal budget deficit, to the extent one can be determined. In particular, Section A examines whether the method by which a budget deficit is measured can affect what size deficit the government chooses to run. Section B discusses the use of fiscal constraints, such as balanced budget amendments, and examines what effect those restraints have on a government's fiscal policy, and, indirectly, the economy as a

whole. Section C explores the effectiveness of budget windows as a means of controlling budget deficits. Finally, Sections D and E examine how certain structural characteristics of the government can affect its ability to implement an optimal budget deficit. Part IV concludes.

II. AN OPTIMAL DEFICIT?

A. THE GENERATIONAL BURDENS OF GOVERNMENT DEBT

A conceptual issue associated with deficits and debt is the intergenerational distribution of welfare, particularly how much different generations pay to finance government consumption and to subsidize each other.⁵ Since future generations must either retire or refinance government debt, accumulating deficits seems to indicate a transfer from future taxpayers to bond holders such that future generations bear the burden of debt.

In the late 1940's, however, A.P. Lerner argued that internal or domestically-held debt – where the government borrows from its own citizens – creates no burden on future generations.⁶ Debt repayment under such conditions, according to Lerner, simply involves a transfer of income from one group of citizens (non-bondholders) to another (bondholders), such that the future generation as a whole is no worse off in terms of its aggregate consumption level.⁷ In essence, domestically-held debt imposes no burden on future generations because the payment of interest and the taxes required to finance such payments are self-balancing transfer payments.⁸

A more complex framework of overlapping generations, often called *generational accounting*, suggests that calculating the burden of government debt on future generations is

⁵ See Auerbach et. al., *supra* note 3, at 1-2.

⁶ A.P. Lerner, *The Burden of the National Debt*, in INCOME, EMPLOYMENT, AND PUBLIC POLICY: ESSAYS IN HONOR OF ALVIN H. HANSEN (L.A. Meltzer ed., 1948).

⁷ *Id.* The same argument would not hold when a country borrows from abroad to finance current consumption, as discussed below.

⁸ See Michael Posner, *A Survey of the Debate*, in PRIVATE SAVING AND PUBLIC DEBT 395, 403 (Michael Boskin, John Flemming & Stefano Gorini eds., 1987).

considerably more complicated and produces a less favorable picture. Calculating the difference between the present value of all taxes paid by a representative individual from each relevant generation (assuming generations are, for example, 20 years long) and the present value of all transfers received from the government (including Social Security, Medicare, etc), scholars can compute the “net tax” paid by members of various generations. Most calculations using this framework suggest that current generations benefit at the expense of future generations.⁹ For example, a 1994 study found a 17 to 24 percent larger fiscal burden, adjusted for growth, on future generations than the burden to be imposed on 1989 newborns under then-current policy.¹⁰ A 1999 study suggested an even greater generational imbalance in U.S. fiscal policy, implying lifetime net tax rates on future generations that are 72 percent higher than those on newborns in 1995.¹¹

Overlapping generations models with differing assumptions produce vastly different results. According to a theory often referred to as “Ricardian Equivalence,” voluntary generational transfers negate the effects of debt policy. Robert Barro has argued that “so long as current generations are connected to future generations by a chain of operative intergenerational transfers,” government borrowing causes members of older generations, desirous not to diminish their descendants’ consumption levels, to increase their bequests by an amount sufficient to cover the additional taxes due in the future.¹² Full Ricardian equivalence would suggest that deficits don’t matter because individuals undo the intergenerational effects of government debt

⁹ It is important to note that such calculations rest on assumptions about future tax rates, interest rates, and other factors as well as a judgment that individuals in a given generation will not behave altruistically towards their descendants. See HARVEY S. ROSEN, PUBLIC FINANCE 429, 431-32 (6th ed. 2002).

¹⁰ Alan J Auerbach, Jagadeesh Gokhale, & Laurence J. Kotlikoff, *Generational Accounting: A Meaningful Way To Evaluate Fiscal Policy*, 8 J. ECON. PERSP. 73-94 (1994), early draft version available at <http://www.nber.org/papers/W3589>.

¹¹ Jagadeesh Gokhale; Benjamin Page, and John Sturrock, *Generational Accounting for the United States: An Update*, 33 ECON. REV. 2-12 (1997), 1999 updated version available at <http://www.cbo.gov/ftpdocs/31xx/doc3112/20001.pdf>.

¹² Robert J. Barro, *Are Government Bonds Net Wealth?* 82 J. POL. ECON. 1095-1117 (Nov. – Dec. 1974).

and adjust private savings such that each generation consumes at a level irrespective of public borrowing.

While the empirical literature is inconclusive,¹³ economists generally reject this idea as based on assumptions that run counter to the recent experience of ballooning deficits accompanied by declining private savings.¹⁴ Although most economists deny the reality of a full Ricardian equivalence, many believe the theory has partial validity and is one reason that the “crowding out” of investment (discussed below) is less than dollar-for-dollar.¹⁵ For example, Michael Boskin suggests that every dollar of deficit is matched by around 25 cents of increased private saving, estimating that a 1.3% of GDP deficit reduces national saving by roughly 1% of GDP relative to a balanced budget.¹⁶ Given that government borrowing is not fully offset by private action, deficits clearly matter in terms of intergenerational burden.¹⁷

Intergenerational models do not typically reflect the fact that government debt policy affects economic decision-making with important consequences for those encumbered by the debt. The burden of debt depends, in large part, on whether and when debt financing “crowds

¹³ It is notoriously difficult to isolate a systematic and stable impact of deficits in savings and investment. See Charles I. Plosser, *Government Spending, Deficits and Optimal Financial Policy*, Nov. 2003, available at <http://www.somc.rochester.edu/Nov03/plosserII1103.pdf>, at 11.

¹⁴ See Kent Smetters, *Ricardian Equivalence: Long-Run Leviathan*, 73 J. PUB. ECON. 395-421 (1999); Roberto Ricciuti, *Assessing Ricardian Equivalence*, Italian Society of Public Economics Working Paper (2003), available at <http://www.unipv.it/websiep/wp/048.pdf>; Posner, *supra* note 8, at 400. Moreover, exact Ricardian equivalence would require lump-sum taxes, rather than real-world distortionary taxation which influence how much and when individual choose to work. Plosser, *supra* note 13, at 10.

¹⁵ A survey of the evidence on Ricardian equivalence suggests that the theoretical case for long-run neutrality depends on improbable assumptions that have been indirectly or directly contradicted by empirical observation, and that behavioral evidence weighs against the Ricardian view. B. Douglas Berheim, *Ricardian Equivalence: An Evaluation of Theory and Evidence*, NBER Working Paper No. 2330, July 1987, available at <http://www.nber.org/papers/w2330>.

¹⁶ Boskin, *supra* note 4, at 17, 44.

¹⁷ Many economists do, however, believe that the effect of deficits on interest rates (as well as other factors) will lead to increased saving, though neither large enough nor rapid enough to offset the direct dissaving induced by the deficit. See Michael J. Boskin, *Deficits, Public Debt, Interest Rates and Private Saving: Perspectives and Reflections on Recent Analyses and on US Experience*, in PRIVATE SAVING AND PUBLIC DEBT 255, 256 (Michael Boskin, John Flemming & Stefano Gorini eds., 1987).

out” private investment.¹⁸ Public borrowing increases total demand for available credit, leading to a rise in interest rates (and therefore the cost of capital).¹⁹ A higher interest rate dissuades firms from undertaking some investment projects, resulting in a decline in net investment.²⁰ This reduction in investment leads to a smaller capital stock, diminished productivity, and lower real incomes for future generations, *ceteris paribus*.²¹

One reason that claims regarding the extent and effect of such “crowding out” are inconclusive is the role of foreign creditors and investors. Since capital is internationally mobile, a debt-induced increase in the interest rate generally leads to an inflow of funds from abroad, contributing to upward pressure on the dollar, making imports more attractive and exports more difficult – in this sense crowding out net exports rather than domestic investment.²² Rubin, Orszag, and Sinai cite estimates suggesting that perhaps one-third of the reduction in U.S. national saving is financed by increased borrowing from abroad, while in 2000 approximately 40 percent of the privately-held federal debt was held by foreign investors.²³ Since budget deficits

¹⁸ To the extent that the government undertakes productive investment with the resources it borrows from the private sector, the effects of such “crowding out” are diminished. See ROSEN, *supra* note 9, at 432-33.

¹⁹ See Plosser, *supra* note 13, at 8.

²⁰ Robert E. Rubin, Peter R. Orszag, and Allen Sinai, *Sustained Budget Deficits: Longer-Run U.S. Economic Performance and the Risk of Financial and Fiscal Disarray*, Brookings Paper, Jan. 4, 2004, available at <http://www.brookings.org/views/papers/orszag/20040105.htm>, at 9.

²¹ While econometric evidence on the effects of such capital displacement is murky, one analysis indicates that U.S. national income is significantly lower as a consequence of past deficits. If overnight a “debt fairy” replaced every government bond with a piece of U.S. capital, calculations suggest that GDP would increase by about 6 percent. Laurence Ball & N. Gregory Mankiw, *What Do Budget Deficits Do?* in BUDGET DEFICITS AND DEBT: ISSUES AND OPINIONS 95-119 (1995); See G. Mankiw and D. Elmendorf, *Government Debt* in HANDBOOK OF MACROECONOMICS (J. Taylor & M. Woodford, eds., 1999).

²² Higher interest rates make dollar-denominated financial assets more attractive to overseas investors. Increased demand for dollars drives the currency’s value above what it otherwise would have been, making imported goods cheaper and making goods and services produced in the United States more expensive abroad. The relative shift in prices tends to increase demand for U.S. imports and reduce demand abroad for U.S. exports, raising the trade, or current account, deficit. Brian W. Cashell, *The Economics of the Federal Budget Deficit*, Congressional Research Service Report, Jan. 28, 2005, available at <http://www.house.gov/spratt/crs/RL31235.pdf>.

²³ Rubin, Orszag, & Sinai, *supra* note 20, at 9; *Economic Report of the President, 2000*, 408.

reduce national savings, and part of the reduction in national savings manifests itself as increased borrowing from abroad, budget deficits and current account deficits are interrelated.

While such “external” debt does not entail the direct substitution of government bonds for private capital investment, the inflow of funds from abroad increases foreign ownership of U.S. assets and lower capital income for domestic residents.²⁴ Access to international capital is highly beneficial in the short run, but it involves mortgaging future returns from domestic capital stock (which will accrue, at least in part, to foreign creditors rather than domestic lenders), such that the reduction in national savings will still reduce future national income.²⁵ The “burden” on future generations includes the returns on that investment that go to foreigners rather than to U.S. citizens. Indeed, the consumption level of future generations will be reduced by an amount equal to the loan plus the accrued interest that must be sent to foreign lenders (or at least the interest cost of refinancing the loan).²⁶

B. MEASURING GOVERNMENT DEFICITS AND PUBLIC DEBT

Given that government borrowing – domestic and foreign – involves important intergenerational consequences, one might wonder whether the federal unified deficit is the best measure of this impact on future generations. As a group of scholars has noted, from the perspective of economic theory, “the deficit is an arbitrary accounting construct whose value has no necessary relation to the question of generational burdens.”²⁷ Calculations of fiscal imbalance and government indebtedness vary depending on which assets, revenues and liabilities

²⁴ See Boskin, *supra* note 4, at 16.

²⁵ Rubin, Orszag, & Sinai, *supra* note 20, at 9.

²⁶ See ROSEN, *supra* note 9, at 429-40.

²⁷ Auerbach et. al., *supra* note 3, at 1-2.

are included, and how they are valued.²⁸ Official figures regarding the size of federal government deficits (or surpluses) and cumulative debts are limited in their usefulness for the reasons discussed below.

i. Current vs. Capital Accounting

Rather than distinguishing between capital investments and current expenditures, as is standard accounting practice in private business and for many state and local governments, the federal government lumps together all expenditures that are legally required to be included in the budget. While current spending reflects expenditures for goods and services consumed within the fiscal year, significant capital expenditures for durable items yield services over a much longer period of time and may significantly benefit future generations.²⁹ Some observers argue that capital budgeting would provide a more accurate picture of government financial status, since durable investments do not represent immediate “loss,” but instead reflect an exchange of assets – money for durables – subject to annual depreciation.³⁰ Moreover, a separate capital budget serves as a reminder that, just like a prudent household, governments may reasonably borrow in order to finance the purchase of long-lived assets.³¹ The absence of capital budgeting

²⁸ It is important at the outset to distinguish between the traditional concepts of deficit and debt. Debt is a “stock variable,” measured at a point in time and generally represents the sum of all past deficits (and surpluses) plus interest – essentially the cumulative excess of past spending over past receipts. Deficits and surpluses are “flow variables,” typically measured during a period of time as the difference between government revenue and spending. ROSEN, *supra* note 9, at 424.

²⁹ In 2000 the Office of Management and Budget estimated the stock of federally financed physical capital at about \$2 trillion, with \$658 billion related to national defense. Analytical Perspectives: Budget of the United States Government, Fiscal Year 2001, OMB (2000) at 167.

³⁰ Boskin, *supra* note 16, at 257. Deficits as traditionally measured (without distinguishing between consumption and investment) are therefore a very poor guide to government saving or dissaving – the difference between tax revenue and government consumption. *Id.* Indeed, if government consumption falls short of total government spending by a sufficient amount, government saving could be positive despite a deficit – there could be substantial government investment. *Id.* at 259.

³¹ In addition, the federal government has vast tangible assets – including things like land, buildings, equipment, and mineral rights. While public discussion had focused on the government’s financial liabilities, some have argued that the omission of such assets leads to a misleading picture of the government’s financial position. See ROSEN, *supra* note 9, at 427; Boskin, *supra* note 16, at 268.

sometimes leads to governmental “yard sale” transactions, like the 1997 deficit reduction effort including sale of rights to airwaves and some strategic oil reserves.³² If discerning the burden left to future generations is a primary purpose in analyzing the deficit, it may make sense to account for net public investment in tangible capital since such investment will produce dividends beyond the current fiscal year.

Designing a capital budget for the federal government, however, presents significant conceptual and political problems. It is unclear, for example, how to account for such expenditures as research and development, and education and job training programs, among others. Do these represent a current expense, or should they be considered an investment in human capital yielding future returns.³³ Such judgments are contested and often controversial, particularly since advocates of many transfer programs such as food stamps promote such spending as “investments” in the poor that will make them more productive in the future.³⁴ Despite these problems, both the Bureau of Economic Analysis and the Office of Management and Budget annually measure capital, investment, and depreciation – although these measures are not used in calculating the fiscal deficit and play no formal role in the federal budget process.

ii. Implicit Obligations

The federal government promises to make certain future payments not only in the form of bonds, which contribute to recorded debt, but also through legislation for programs like Social

³² See Peter Cramton, “Money Out of Thin Air: The Nationwide Narrowband PCS Auction,” 4 J. ECON & MGMT. STRATEGY 267-343 (1995); *but see* John McMillian, “Selling Spectrum Rights,” 8 J. ECON PERSP. 145-162 (1994) (arguing that the auction design demonstrated that “revenue was not its overriding objective”). While there may be good reason for transferring certain assets to private individuals, such transactions do not meaningfully reflect a reduction in the true budget deficit, but amount to the government trading one asset for another. Under the current account system, however, the proceeds of such sales are treated as equivalent to tax revenues and count towards reducing the deficit.

³³ See Posner, *supra* note 8, at 399 (suggesting investment in “health service expenditure which materially improves the resistance of British wage earners to respiratory disorders” and that “public expenditure on improving the environment” is an investment “to raise psychic incomes”).

³⁴ Indeed, classifying transfer payments as investments would seem to render meaningless the distinction between capital and current spending.

Security. While such promised benefits to future retirees are not legally binding³⁵ and can, at least in principle, be altered by future legislative action, political support for entitlement programs is strong and it seems unlikely that benefits will be substantially curtailed. Some scholars suggest that the unfunded financing of Social Security is now a well understood, if subtle, debt policy burdening future generations.³⁶ The fact that very significant intergenerational redistribution can occur without any explicit indication in the official budget suggests that reported deficits are a poor indicator of underlying economic debt policy.³⁷ As a result, it may make sense to include the present value of promised Social Security benefits and other entitlements in government debt calculations.³⁸ Not only are many items excluded by law from the federal budget, some scholars highlight the fact that various other federal government accounting procedures “are not consistent with the general notion of accrual accounting.”³⁹

iii. Inflation and the Real Value of Government Debt

Standard calculations of the deficit do not account for the fact that inflation erodes the real value (and therefore burden) of government debt. For example, at the beginning of fiscal year 2000, the federal government’s outstanding debt was about \$3.6 trillion and the rate of inflation was about 2.1 percent – inflation therefore reduced the real value of the federal debt by \$76 billion. Although standard government accounting procedures do not allow the inclusion of gains due to inflationary erosion of the debt, some scholars suggest that this represents as much a

³⁵ See *Helvering v. Davis*, 301 U.S. 619 (1937); *Flemming v. Nestor*, 363 U.S. 603 (1960).

³⁶ See Martin Feldstein, *Social security, induced retirement, and aggregate capital accumulation*, 82 J. POL. ECON. 905-26 (1974).

³⁷ See Boskin, *supra* note 16, at 267.

³⁸ See Alan J. Auerbach and William G. Gale, *Perspectives on the Budget Surplus*, Brookings Economic Papers, July 17, 2000, available at <http://www.brookings.edu/views/papers/gale/20000717.htm>.

³⁹ Boskin, *supra* note 16, at 258; see generally, Boskin, *Federal government deficits: some myths and realities*, 72 AM. ECON. REV. 296-303 (1982). Boskin draws particular attention to contingent debt, such as for deposit insurance, loan guarantees, and the Pension Benefit Guarantee Corporation (PBCG), in addition to the massive potential unfunded future liabilities of social insurance programs like Social Security and Medicare.

government receipt as any conventional tax and its exclusion from budget calculations therefore works to overestimate the size of the real deficit.⁴⁰ Others, however, emphasize that such an approach to the problem of a large national debt obscures that fact that inflation is not a *solution* but rather the central *consequence* of the problem.⁴¹

In light of these and other shortcomings, it makes little sense to evaluate the economic operation of government solely on the basis of the official deficit or surplus. Moreover, many economists suggest that deficits are natural in recessions and early recoveries, when receipts decline, automatic stabilizers increase spending to mitigate the decline in economic activity, and fiscal stimulus is desirable.⁴² The lack of separate capital account and operating budgets, the absence of forward-looking information on significant long-term imbalances in entitlement programs, and inflation eroding the real value of pre-existing debt – as well as cyclical conditions affecting revenues and mandated spending – render the headline nominal unified budget deficit a highly incomplete snapshot of the full fiscal picture.⁴³

As a result, economists often employ a *standardized* or cyclically-adjusted budget deficit or surplus which corrects for the business cycle effect on revenue and outlays (and some other transitory items); a *primary* deficit which nets out interest costs of servicing accumulated debt; and an *operating* budget which separates out public capital investment, net of depreciation (and, in some models, national security buildup or drawdown).⁴⁴ The following Table⁴⁵ illustrates the differential outcomes of each budget measure, and suggests that the official unified federal

⁴⁰ See ROSEN, *supra* note 9, at 426.

⁴¹ Posner, *supra* note 8, at 401-2.

⁴² See Boskin, *supra* note 4, at 5.

⁴³ *Id.*, at 43.

⁴⁴ See *id.*, at 4, 6, 63, 67.

⁴⁵ *Id.* at 63.

deficit fails to account for the fact that recent additions to the debt burden were primarily for investment purposes rather than for current consumption.

Table 2
Alternative Budget Measures
Billions of current dollars
(% of GDP)

Year	(1) Surplus/deficit(-)	(2) Standardized surplus/deficit(-)	(3) Standardized primary surplus/deficit(-)	(4) Standardized primary operating surplus/deficit(-)	(5) Standardized primary operating surplus/deficit(-) net of security investment
2005	-318 (-2.6)	-258 (-2.1)	-169 (-1.4)	-93 (-0.8)	+42 (0.3)
1999	126 (1.4)	13 (0.1)	188 (2.0)	210 (2.2)	142 (1.6)
1992	-290 (-4.5)	-189 (-3.0)	-48 (-0.5)	-22 (-0.3)	-4.1 (-0.6)
1984	-185 (-4.7)	-141 (-3.6)	-74 (-1.9)	-40 (-1.1)	-6 (-0.2)

Source: Michael J. Boskin (calculations from CBO, *The Cyclically Adjusted and Standardized Budgets Measures: Updated Estimates, September 2005*; CBO *The Budget and Economic Outlook, 2007-2016*; OMB, *The Budget of the United States, 2006, Historical Tables*; OMB, *The Budget of the United States, FY 2006: Analytical Perspectives*).

It may therefore be the case that while future generations will have a modestly larger debt, they will also enjoy a larger public capital stock and safer world, *ceteris paribus*. If nothing else, however, it is clear that a traditionally-measured deficit is neither good nor bad in and of itself, and that the economic effects of deficits must be viewed in a broader context than as stated in the nominal unified budget. A number of additional considerations discussed below are relevant to an assessment of the desirability of a deficit in particular circumstances.

C. FACTORS IN ASSESSING THE DESIRABILITY OF DEFICITS

The European Union has adopted specific targets – set at 3% of GDP for “planned or actual” government deficits and 60% of GDP for total accumulated government debt – designed to ensure that member states “avoid excessive government deficits.”⁴⁶ While Larry Lindsey, President Bush's former White House economic advisor, suggested in a recent client advisory bulletin that “the projected 2006 budget deficit of 3.0 percent of GDP is reasonable if the economy continues to grow,”⁴⁷ few American observers speak in term of specific deficit targets. In seeking to identify what might be an optimal deficit, most scholars follow the adage that it invariably “depends on where you sit – and on which type of deficit you're talking about.”⁴⁸

Although there is not complete agreement concerning precise effects, it is clear that deficits do matter for various economic outcomes and are more or less attractive in differing economic circumstances. Deficits can prove economically helpful or harmful depending upon the state of the business cycle, the need for temporary spending swings, the extent to which government expenditures take the form of public capital investment, and the reaction of foreign capital flows and private saving.⁴⁹ When the economy is at less than full employment, a deficit-financed tax cut or spending increase can produce some stimulus in aggregate demand and income.⁵⁰ While a number of commentators point to deficits during the current Bush

⁴⁶ The text of the protocol can be found at <http://europa.eu.int/eur-lex/en/treaties/selected/livre335.html>. For an informative discussion of the Maastricht Treaty and the Stability and Growth Pact, see M. Umemura & C. Craig, *Spending caps and debt limits in the EU and Japan*, Briefing Paper, Harvard Law School Federal Budget Policy Seminar (2006).

⁴⁷ Quoted in Irwin M. Stelzer, *Do Deficits Matter?*, THE WEEKLY STANDARD, Feb. 15, 2005, available at <http://www.weeklystandard.com/Content/Public/Articles/000/000/005/245esggv.asp>.

⁴⁸ Stelzer, *supra* note 47. As another commentator has noted, “strictly speaking, economics generally has little to say whether a budget deficit is a good thing or not.” Brian W. Cashell, *The Economics of the Federal Budget Deficit*, Congressional Research Service Report, Jan. 28, 2005, available at <http://www.house.gov/spratt/crs/RL31235.pdf>.

⁴⁹ See Boskin, *supra* note 4, at 42.

⁵⁰ Boskin, *supra* note 16, at 256. The stimulant effect is diminished in an economy open to both trade and capital flows since a deficit may produce a slight rise in interest rates, attract foreign capital, appreciate the dollar, curtail exports, and stimulate imports. *Id.* Nevertheless, even economists generally averse to government debt concede that

administration as “a force for economic good” and as having had “the beneficial effect of righting the economy,” others are quick to note that an economy growing at an annual rate of more than 3.5 percent “is hardly in need of further fiscal stimulus” requiring the sort of deficit-financing that might have been legitimate during recession.⁵¹

Since the deficit is officially measured as the difference between spending and taxes, differing policies – increased spending (for either current consumption or public investment) or tax cuts – could lead to the same fiscal imbalance, but very different economic outcomes. The effect, and therefore desirability, of a deficit depends on the nature of the spending and taxes. Some economists suggest that in addition to a preference for investment over current consumption, experience demonstrates that the use of deficit-financed public expenditure as a *counter-cyclical* device is imprecise and problematic given the lengthy time lags between spending decisions and economic outcomes.⁵²

Concerned with high and fluctuating marginal tax rates, however, economists often point to efficiency gains from keeping taxes stable over time by debt financing temporary spending swings (like natural disasters, defense buildups, or war-time finance).⁵³ Since the work of Frank Ramsey in the 1920’s, many economists have come to believe that optimal taxation implies relatively constant tax rates, avoiding distortions and arbitrary variations in the incentives to

temporary budget deficits can be beneficial in providing a jump start to a weak economy. *See* Peter Orszag, The Budget Deficit: Does it Matter?, Brookings Research, July 16, 2004, *available at* <http://www.brookings.edu/views/speeches/20040716orszag.htm>.

⁵¹ Stelzer, *supra* note 47.

⁵² Posner, *supra* note 8, at 398-99.

⁵³ *See* Boskin, *supra* note 4, at 4. Boskin also notes the inverse correlation, among OECD countries, between the size of government as a share of GDP (and therefore the level of taxation) and average GDP growth rate. *Id.* at 59. In the context of efforts to keep the size of government small, some analyses even suggest that deficits eventually exert some restraint on subsequent government spending, perhaps 20 cents on the dollar. *Id.* at 8, 40.

work and consume that accompany frequent changes in tax rates.⁵⁴ Such “tax smoothing” – where the tax share of GDP is sufficient to fund the *average level* of spending – implies borrowing when spending is high and retiring debt when spending is lower.⁵⁵

In a growing economy – where the rate of growth of GNP exceeds the rate of growth in the national debt – even recurrent deficits may be consistent with a decline in the national debt measured against national income.⁵⁶ Any action taken today which will result in a larger debt to income ratio in the future, however, imposes some burden on future generations.⁵⁷ An intergenerational equity analysis, however, must account for economic growth and be understood in the context of generally rising standards of living. The nature of a tax cut or the composition of additional government spending matters for the economy, not the mere fact of a nominal budget deficit.⁵⁸ As a result, there is no abstract answer to the question ‘What is the impact of the deficit?’ or ‘Is the deficit desirable?’ without specific reference to the composition of spending and taxes, as well as existing economic conditions.

Some economists, concerned with long-term consequences, question whether the United States can reasonably expect foreigners to continue to finance our deficits *ad infinitum*. As foreigners acquire a progressively higher fraction of their wealth in U.S. treasury bonds, their willingness to make further investments in U.S. government debt may decline, leading to greater difficulty in financing U.S. government debt. There is presumably an upper bound to the amount of government bonds that the private sector and the rest of the world is willing to hold.⁵⁹ Once

⁵⁴ See Frank P. Ramsey, *A Contribution to the Theory of Taxation*, 37 *ECON. J.* 47-61 (1927); Plosser, *supra* note 13, at 11.

⁵⁵ *Id.* at 10.

⁵⁶ See Plosser, *supra* note 13, at 3; Boskin, *supra* note 16, at 257, 273.

⁵⁷ Posner, *supra* note 8, at 404.

⁵⁸ See Plosser, *supra* note 13, at 11.

⁵⁹ Boskin, *supra* note 16, at 256.

such a saturation point is near, absent a significant increase in domestic private saving, the Federal Reserve must purchase bonds as the lender of last resort, thereby increasing inflationary pressure.⁶⁰ One cannot assess the optimal level of federal deficits without considering the total level of national debt. Indeed, several prominent economists warn of the potentially devastating long-term consequences of large, continuing budget deficits.⁶¹

In general, most economists agree that short-term deficits are acceptable and even desirable as counter-cyclical measures during times of recession, for financing public investments where the future stream of benefits clearly exceeds the cost, and for tax smoothing of large, temporary spending swings, such as in times of war.⁶² In contrast, deficits are harmful and undesirable when they crowd out needed private, productive investment or cause the Federal Reserve to monetize the shortfall, leading to pressure on inflation.⁶³

The exact consequences governmental deficits are difficult to measure with precision. Even with a perfect knowledge of the relevant effects, however, the implications for the conduct of debt policy involve normative views concerning the intergenerational distribution of income. A “benefits-received principle” suggests the wisdom of funding projects (using deficit financing) that provide a significant advantage to future generations.⁶⁴ It therefore seems appropriate to finance certain long-term investments by government borrowing, since the benefits will accrue for many years and future taxpayers should bear part of the burden.⁶⁵ Assuming economic growth rates similar to those over the past century, future generations will be economically better

⁶⁰*Id.* at 262. This result would require substantial deficits to run over many years, and there is no necessary short-term relationship between deficits and inflation. *Id.* at 256.

⁶¹ See Orszag, *supra* note 50; Rubin, Orszag, & Sinai, *supra* note 20.

⁶² Boskin, *supra* note 4, at 9.

⁶³ *Id.*

⁶⁴ ROSEN, *supra* note 9, at 434.

⁶⁵ See Boskin, *supra* note 4, at 4.

off than the present generation. This is worth taking into account in considering what financing burdens are passed from one generation to another. For example, one might argue that the enormous extension of entitlement programs in the post-WWII period, greatly expanding benefits for the elderly, represents in part compensation for higher lifetime income taxes and greater wartime sacrifice.⁶⁶ In all cases, one's view of the legitimacy of a deficit will involve normative views concerning fairness and equitable distribution.

D. A TARGET FISCAL DEFICIT?

Even if there is no consistent, or uncontested, optimal deficit level, a general norm with regard to government borrowing may prove advantageous. Michael Posner suggests that it may be “more important to stick to a numerical target for the fiscal balance than to argue endlessly which target is the right one.”⁶⁷ The modern mixed economy involves a host of decisions made each day by individuals and corporations as well as governments. Those decisions are made more wisely and prudently when they are taken in a stable environment – when people can make reasonably accurate predictions about the future. As a result, the most important reason for consistent targets, according to Posner, is the “psychological effect on myriads of decision makers elsewhere in the economy.”⁶⁸ Over the long-term successful monetary policy requires prudent fiscal policy, and keeping deficits under control helps to produce this stability.

The restraint imposed by a target fiscal deficit also helps force elected officials to act within constraints. Blank checks are rarely wise to issue to enthusiastic shoppers. In the absence of such a target, economic managers – often political officers – cannot be judged by objective

⁶⁶ Boskin, *supra* note 16, at 269.

⁶⁷ Posner, *supra* note 8, at 411.

⁶⁸ *Id.* at 413.

tests and may be more likely to deviate from prudent fiscal management.⁶⁹ We cannot maximize all good things simultaneously; we must choose. And making those choices involves forcing policy makers to confront comparisons as they prioritize and decide. A target fiscal deficit can help in insuring that such comparisons are made rigorously and wisely.

III. OPTIMAL DEFICITS AND THE POLITICAL PROCESS

While economic theory has shed some light on the economic and generational effects of budget deficits, many economists have focused their research on how the political and budget processes can inhibit a government's ability to achieve an optimal deficit and fiscal policy. In other words, some things are easier said than done. This section reviews research investigating how the following procedural and structural considerations can affect a government's ability to operate an optimal fiscal policy: (i) the means by which the budget deficit is measured, (ii) the use of fiscal restraints, (iii) budget windows, (iv) political corruption, and (v) legislative structure.

A. THE UNIFIED BUDGET AND ITS EFFECT ON THE FEDERAL BUDGET DEFICIT

Conceivably, the way in which a budget deficit is measured could affect the government's ability to implement an optimal deficit. Research by Sita Nataraj and John Shoven suggests that such an effect does exist. They explore how the presence of a unified budget can affect a government's ability to save money through trust funds.⁷⁰ Specifically, they demonstrate that since the United States adopted the unified budget in 1970, the accumulation of surpluses in federal trust funds has been offset by increased deficits in other areas of the budget.

⁶⁹ *Id.* at 412.

⁷⁰ Sita Nataraj & John B. Shoven, *Has the Unified Budget Undermined the Federal Government Trust Funds?*, (Dec. 2004), available at <http://www.nber.org/papers/w10953>.

This suggests that the presence of a unified budget undermines the government's efforts to save using trust funds, and, more fundamentally, that the form in which budget numbers are presented may affect budgetary outcomes.

By way of background, prior to 1983, Social Security operated on a pay-as-you-go financing mechanism, where benefits were paid directly from tax receipts. Several other retirement programs operated in this way as well, including the military and civil service retirement programs. In the early 1980s, however, the system faced a funding crisis as tax receipts were set to fall short of benefit payments. Under the Greenspan Commission reforms, Congress addressed this problem by setting payroll taxes to a rate that was higher than what was necessary to pay current benefits, with the excess tax receipts to accumulate in the Social Security trust funds. The motivation for this change was to partially prefund the retirement benefits of the baby boomer generation, thereby alleviating the burden that would have to be borne by future generations. Similar changes were made to other retirement benefits programs, including the military and civil service pension programs.

These trust funds have accumulated substantial assets. For example, in 2003, the Social Security, Medicare, and Civil Service Retirement trust funds were projected to run a surplus of \$233 billion, and all federal trust funds were projected to run a surplus of \$3.4 trillion over the next ten years.⁷¹ These surpluses suggest that the government has successfully saved money on behalf of future retirees, and that the government can pay promised benefits without placing too much of a burden on future taxpayers. However, these surpluses are only half of the story, for

⁷¹ Congressional Budget Office, *The Impact of Trust Fund Programs on Federal Budget Surpluses and Deficits*, (Nov. 4, 2002)

their growth over the past two decades has been offset by a steady increase in the deficit run by the rest of the federal government (the “federal funds” deficit).⁷²

Nataraj and Shoven demonstrate that this relationship may be causal, and that it may have resulted from the adoption of the unified budget in 1970. Prior to 1970, discussions about the government’s surplus (or deficit) focused on the administrative budget, which excluded trust funds.⁷³ This changed, however, on the recommendation of the 1967 President’s Commission on Budget Concepts. The Commission advocated the use of a unified budget, which includes trust fund surpluses.

Since Social Security was operated on a pay-as-you-go system at the time, the switch to a unified budget had little effect; the Social Security trust funds did not have a substantial surplus, so the administrative budget essentially equaled the unified budget. However, following the Greenspan Commission reforms, the trust funds began to accumulate surpluses. From that point on, balancing the unified budget meant that the government could run a federal funds deficit equal to the surpluses generated by the trust funds.⁷⁴ Viewed from an economic standpoint, then, the trust funds have failed to increase national saving, because while the government has saved more in trust funds, it has spent those savings on other areas of the budget.

To test their hypothesis that the unified budget caused this relationship between the trust fund surplus and the federal funds deficit, Nataraj and Shoven use a time series regression to measure the relationship between the two. They make two findings. First, over the past fifty

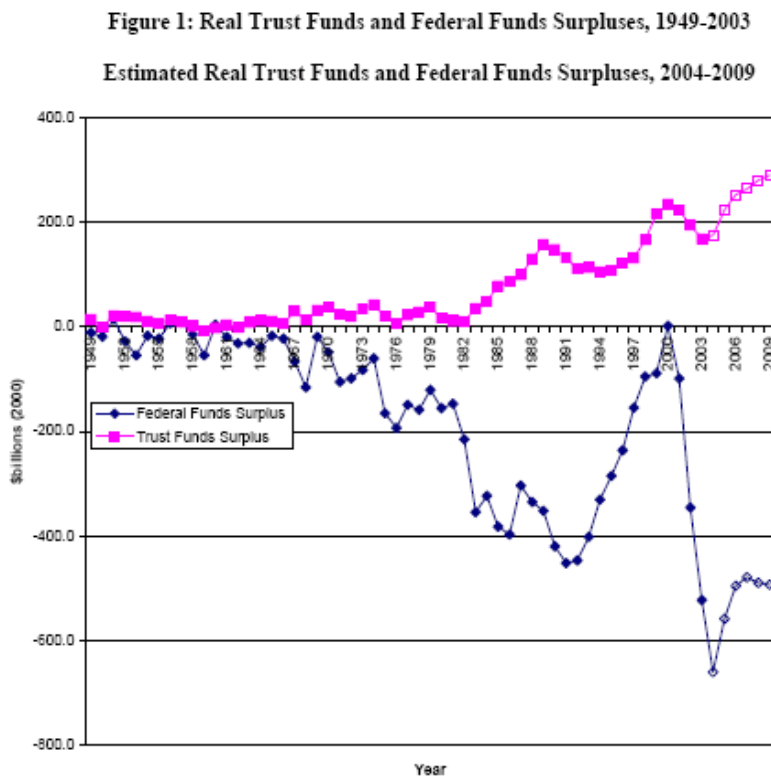
⁷² The federal funds surplus is similar to the on-budget surplus, in that both exclude the surpluses of the Social Security trust funds. However, the on-budget surplus also includes the surpluses of other government trust funds, such as those for Medicare, military retirement and transportation. The federal funds surplus does not. *See* Nataraj & Shoven, *supra* note 70, at 2.

⁷³ *See id.* at 6.

⁷⁴ *See id.* at 3. The federal funds surplus is similar to the on-budget surplus, in that both exclude the surpluses of the Social Security trust funds. However, the on-budget surplus also includes the surpluses of other government trust funds, such as those for Medicare, military retirement and transportation. The federal funds surplus does not. *See id.* at 2.

years, an increase of \$1 in the surplus of all federal trust funds is associated with a \$1.44 to \$1.54 decline in the federal funds surplus.⁷⁵ This confirms that increased national savings through trust funds was offset by larger deficits in other areas of the government.⁷⁶

Second, and more importantly, this effect only began to appear after 1970. From 1949 through 1967, a \$1 increase in trust fund surpluses did not have a statistically significant effect on the federal funds surplus, but from 1970 through 2003, such an increase was associated with a \$1.62 increase in the federal funds deficit.⁷⁷ The following chart, from Nataraj and Shoven, suggests this effect graphically:



⁷⁵ *Id.* at 14. This result has been confirmed in other studies. For example, Bosworth and Burtless found similar results in other countries that employ a unified budget. See Barry Bosworth & Gary Burtless, *Pension Reform and Saving*, (Jan. 5, 2004), available at <http://www.brookings.edu/views/papers/200401bosworthburtless.pdf>. However, Bosworth and Burtless also found that U.S. state governments were able to increase state-level saving through the use of pension funds without accumulating deficits in other areas of their budgets. See *id.* at 15.

⁷⁶ The \$1.44 increase in the federal funds deficit is greater than expected, but is not significantly different from \$1. See *id.* at 14.

⁷⁷ See Nataraj & Shoven, *supra* note 70. at 22-23.

As compelling as this chart appears, some commentators have disputed the conclusions Nataraj and Shoven seek to draw from it. For example, Peter Orszag has argued that their results are extremely sensitive to the variables included in the regressions, and the time periods used for the equations.⁷⁸ Kent Smetters, whose research has reached the same findings as Nataraj and Shoven, acknowledges similar concerns, noting that the relatively short time series (1949 – 2002) limits the conclusiveness of the findings.⁷⁹ However, Smetters notes that this limitation would actually bias the results *against* a finding that trust funds are an ineffective means of saving, implying that the results are actually stronger.

With these concerns in mind, Nataraj and Shoven's research suggests several conclusions for purposes of the federal budget process. First, when the federal deficit or surplus is measured from a unified budget perspective, trust funds do not appear to be an effective tool for increasing national saving. Second, as a corollary to this, the accounting and presentation of the federal budget may affect budgetary outcomes. Nataraj and Shoven do not speculate as to what federal funds spending (or federal taxes) would have been if either the unified budget or the trust fund surpluses had not been present. However, one plausible result would have been a decreased federal funds deficit, as the federal government's deficit would be more visible to politicians and the public in general.

B. THE EFFECTIVENESS OF FISCAL RESTRAINTS

One could interpret Nataraj and Shoven's research as suggesting that the way in which the budget deficit is measured might adversely affect a government's fiscal policy. Are

⁷⁸ Alicia H. Munnell, *Are the Social Security Trust Funds Meaningful?*, 2 (May 2005), available at http://www.bc.edu/centers/crr/dummy/issues/ib_30.pdf (citing Peter R. Orszag, Remarks at the National Press Club's conference on The Future of Social Security (Aug. 12-13, 2004)).

⁷⁹ See Kent Smetters, *Is the Social Security Trust Fund a Store of Value?*, *Am. Econ. Rev.*, May 2004, at 176, 180.

procedural restrictions in the budget process equally important? Research by Fabio Canova and Eli Pappa suggests they are not.⁸⁰

Canova and Pappa examine whether and how fiscal constraints – such as balanced budget requirements and borrowing restrictions – affect macroeconomic performance. In theory, tight fiscal constraints would limit a government’s ability to use fiscal policy to respond to economic shocks. This, in turn, could lead to greater variance in certain macroeconomic variables, such as unemployment, inflation and total output. A government with no fiscal constraints, by contrast, could freely adjust its fiscal policy, giving it greater power to smooth the highs and lows of the business cycle.⁸¹ Thus, theory predicts that a government with loose fiscal constraints would lead to less economic volatility than would a government with tight fiscal constraints.

Canova and Pappa test whether such a difference exists, using data from 48 U.S. states. They begin by classifying each state in terms of three different variables: whether it has a balanced budget requirement,⁸² whether it has restrictions on its ability to borrow⁸³ and whether it has certain political fiscal constraints, such as line-item veto power or a requirement that state borrowing be authorized by a constitutional amendment.⁸⁴ Next, using regressions, they

⁸⁰ Fabio Canova & Evi Pappa, *Does it Cost to Be Virtuous? The Macroeconomic Effects of Fiscal Constraints*, (Jan. 2005), available at <http://www.nber.org/papers/w11065>.

⁸¹ Not surprisingly, there is a fundamental disagreement as to whether fiscal restraints are even desirable. Proponents argue that they can reduce the volatility of federal spending, thereby making taxes more predictable, and limiting the ability of parties to play political games with state resources, as discussed in Auerbach, *infra*. Critics counter that fiscal restraint robs the government of a powerful tool for counteracting the volatilities of the business cycle. Furthermore, if a government can only spend the revenues it receives, its fiscal policy may be procyclical. *See id.* at 2-3.

⁸² In particular, Canova and Pappa examined three formulations of balanced budget requirements: (i) a requirement that the proposed budget be balanced (ex-ante), (ii) a prohibition on carrying a negative balance more than one year into the future (carryover), and (iii) a requirement that the state balance its budget at the conclusion of a fiscal year (ex-post). *See id.* at 13.

⁸³ Again, three forms of debt restrictions were analyzed: (i) states with some form of debt restriction, (ii) states that prohibit guaranteed (full faith and credit) debt, and (iii) states that prohibit short-term debt. *See id.* at 14.

⁸⁴ *See id.*

examine whether the presence of these fiscal restraints affects the variance of output, unemployment and price levels.

Their research shows that the nature of fiscal constraints does not have a statistically significant effect on the volatility of the states' macroeconomic performance; states with tight fiscal constraints exhibit just as much macroeconomic volatility as do states with loose fiscal constraints.⁸⁵ Furthermore, they do not affect states' economic performance with regard to specific economic shocks, implying that fiscal restraint does not affect short-term economic performance, either.⁸⁶

These results can support two alternative conclusions. First, they might suggest that fiscal policy does not affect economic performance – a result contrary to standard economic theory. Alternatively, the results suggest that fiscal constraints do not affect states' ultimate fiscal policies; even though a state may be prohibited from running a deficit, it may find other ways to increase expenditures beyond tax receipts.

Canova and Pappa argue that the second explanation is correct. For example, governments can avoid fiscal constraints through creative accounting, by shifting expenses to less restricted branches of government (such as local governments), and through the use of rainy-day funds. To support this view, Canova and Pappa point to evidence that the ratio of local government spending to state government spending grows faster in times of recession in states that have tight fiscal restrictions than it does in states that have loose fiscal restrictions.⁸⁷

Furthermore, in a separate set of regressions, they demonstrate that tight or loose fiscal

⁸⁵ See *id.* at 16. One exception to this, however, was that restrictions on a state's ability to carry short-term debt did appear to reduce deficits in those states. However, long-term debt levels were not reduced. See *id.* at 18-19.

⁸⁶ See Canova & Pappa, *supra* note 80, at 23.

⁸⁷ See *id.* at 19-20.

constraints make very little difference in the amount of state expenditures.⁸⁸ In other words, fiscal constraints do not have much effect on deficit levels.

While Canova and Pappa's research suggests that fiscal constraints do not influence fiscal policy or macroeconomic performance, other research has yielded different results.⁸⁹ For example, Fatás and Mihov examined the effects of fiscal restraints in 48 U.S. states and found that tight fiscal restraints reduce volatility in fiscal policy and reduce the responsiveness of fiscal policy to output shocks.⁹⁰ These results suggest that fiscal constraints can, in fact, have a substantive impact on budgetary and economic outcomes. However, Fatás and Mihov also found evidence consistent with Canova and Pappa's argument that state governments can circumvent fiscal restraints. For example, states with strict rules governing the use of rainy-day funds exhibited less volatility in their fiscal policy, suggesting that unrestricted rainy-day funds might reduce the effectiveness of other fiscal constraints.⁹¹

Anecdotal evidence from Europe also suggests that fiscal constraints may affect budgetary and economic outcomes. The Stability and Growth Pact ("SGP"), which became effective in 1999, provided that E.U. member countries could be forced to pay fines if their budget deficits exceeded 3% of GDP. In the first few years of the SGP, member countries complied with this limit, even as deteriorating economic conditions pressured governments to surpass it. While many member countries have since crossed the 3% threshold, it seems clear that the SGP had at least some marginal influence over fiscal policy.

⁸⁸ See *id.* at 27.

⁸⁹ See generally Kenneth D. West, *Comments on: Does it Cost to be Virtuous? The Macroeconomic Effects of Fiscal Constraints*, in NBER International Seminar on Macroeconomics 2004, 3 (Richard Clarida, Jeffrey Frankel & Francesco Giavazzi eds., July 2004) available at <http://www.nber.org/books/ISOM0304/west8-13-04comment.pdf> (summarizing alternative findings on whether fiscal rules affect macroeconomic performance).

⁹⁰ See Antonio Fatás and Ilian Mihov, *The Macroeconomic Effects of Fiscal Rules in the U.S. States*, (March 2004), available at <http://faculty.insead.edu/mihov/files/FPindUS%20v31.pdf>.

⁹¹ See *id.* at 13.

Canova and Pappa acknowledge that their results differ from other studies in the literature, and offer several econometric explanations for the differences.⁹² They go on to suggest that fiscal constraints can be effective, but only if they are accompanied by clearly stated and easily verifiable enforcement requirements.⁹³ Otherwise, such constraints can simply invite creative accounting and the shifting of expenses to non-restricted areas of the budget, or even off-budget. While these findings are arguably more important to the European Union than the federal government,⁹⁴ they show that any attempt to impose fiscal discipline through procedural restrictions must be carefully designed if it is to be effective.

C. BUDGET WINDOWS AND SUNSET PROVISIONS

One method that the federal government has employed to help exercise fiscal restraint is the budget window, a technique that was introduced by the Budget Enforcement Act of 1990. A budget window is intended to reveal a policy's future financial effects. Presumably, this imparts fiscal restraint by making it more difficult for the government to push budget deficits into the future. In the U.S., budget windows are set by budget rules, with 5- and 10-year windows being used in recent years.⁹⁵ Social Security estimates fiscal solvency over a 75-year window.⁹⁶

Alan Auerbach argues that while budget windows are a valuable tool for promoting fiscal responsibility, poorly designed budget windows can have unintended consequences. For example, if a budget window is too short, politicians can simply shift deficits one year beyond

⁹² See Canova & Pappa, *supra* note 80, at 28. The specific explanations are beyond the scope of this paper, but Canova and Pappa generally explain the differences as shortcomings in others' research.

⁹³ See *id.* at 29.

⁹⁴ In the E.U., fiscal constraints are imposed on member countries through the Stability and Growth Pact. The purpose of that pact is to ensure fiscal discipline by member countries, because one country's fiscal profligacy could threaten monetary stability for the entire Union.

⁹⁵ See Elizabeth Garrett, *Accounting for the Federal Budget and its Reform*, 41 Harv. J. on Legis. 190 (2004).

⁹⁶ See Alan J. Auerbach, *Budget Windows, Sunsets, and Fiscal Control*, 1 (Aug., 2004), available at <http://www.nber.org/papers/w10694>.

the scope of the window. If a budget window is too long, on the other hand, a different problem arises. Specifically, through the use of sunset provisions, politicians will choose to place higher taxes (or reduced benefits) in years towards the end of the budget window. Under this technique, short-term deficits would be offset by surpluses in later years, meaning that the budget window would show long-term fiscal balance. But this balance would come at the expense of future generations – the very group that budget windows are designed to protect. Furthermore, it is possible that when the law does sunset (causing taxes to rise or benefits to fall), the government will simply renew the deficit-generating measures, once again pushing the expenses towards the end of the budget window. Taken together, these two problems suggest that budget windows are an ineffective tool for fiscal restraint.

Auerbach demonstrates that it is possible to design an optimal budget window that minimizes these two opposing problems. He begins by showing that each political party, when in control, has an incentive to spend as many resources as it can (both future and present). They do this in order to tie the hands of the competing party when it gains control – instead of spending money on its own preferred programs, the competing party must use government funds to pay off the debt.⁹⁷ Thus, the government will always spend too many resources in the present, unless there are fiscal rules to limit the parties' incentives.

In Auerbach's model, both parties recognize this problem, and will seek to implement budget rules designed to counteract these incentives. According to Auerbach, the optimal budget rule would be one in which each party is entitled to spend a fixed portion of the budget each period.⁹⁸ Such rules do not exist, however, and Auerbach speculates that this is because it would

⁹⁷ See *id.* at 9-14. In Auerbach's model, two parties, R and D, compete for control of the government. R likes to spend money on tax expenditures, while D prefers to spend money directly. Furthermore, neither party gains any utility from the other party's preferred method of spending.

⁹⁸ See *id.* at 15.

be difficult to implement.⁹⁹ The second-best solution, then, would be for the parties to agree that spending should be split evenly over each period.¹⁰⁰ But, while this rule may be good from a deficit reduction perspective, it is suboptimal from a fiscal policy perspective because it limits the government's ability to respond to economic shocks and changes in the business cycle.

A good alternative, then, is to limit total spending over a period of time. Thus, a government would have the flexibility to spend more in the first period, provided that such overspending was compensated for by less spending in future periods.¹⁰¹ Budget windows are exactly this solution. Unfortunately, as currently implemented, budget windows do not achieve their intended effect. For example, given a five-year budget window, the governing party can shift expenses into the sixth year. This keeps resources out of the hands of the opposing party (should it come into power), while still abiding by the limits on increased expenses over the budget window.¹⁰² Alternatively, the controlling party could implement a policy that places all of its expenses in the first year, and through the use of sunset provisions, makes up for those losses by reducing benefits or increasing taxes at a point that is still within the budget window. As an example of this problem, Auerbach points to the tax cuts of 2001 and 2003. Because these tax cuts were set to sunset within the budget window, they essentially pushed taxes onto future taxpayers in order to give a tax-cut to present taxpayers.

Auerbach argues that both of these problems can be solved by making two changes to budget windows. First, budget windows should be of a duration that corresponds to the likely

⁹⁹ *See id.* Specifically, he speculates that the relative values of certain policies change unpredictably over time, making it difficult to enforce such a rule.

¹⁰⁰ *See id.* at 16. The Gramm-Rudman-Hollings Act and the European Union's Stability and Growth Pact can be seen examples of per-period spending limitations.

¹⁰¹ *See Auerbach, supra* note 96, at 17-18.

¹⁰² Auerbach cites the Roth IRA program as an example of this strategy. Under the Taxpayer Relief Act of 1997, investors were permitted move their money from a traditional IRA to a Roth IRA. While this measure lost revenue from the government in present value terms, it accelerated tax revenues to within the budget window, making it appear to be a revenue increasing proposition. *See id.* at 2.

permanence of the program, which would prevent policymakers from shifting expenses beyond the budget window.¹⁰³ Second, future obligations and spending commitments should be discounted, so that policy proposals would not get “full credit” for expenses that they shift onto future taxpayers. Such discounting would be in addition to any discounting for present value purposes, and would reflect the possibility that such policies might be changed in the future.¹⁰⁴ While such an approach to budget windows would be difficult to implement, it would improve their effectiveness, thereby reducing the governing party’s incentives to spend too many future resources in the present.

D. CORRUPTION AND PROCYCLICAL FISCAL POLICY

Alberto Alesina and Guido Tabellini demonstrate that fiscal policy can also be affected by political constraints. For example, in democracies, voters do not always understand optimal fiscal policy and in some cases may force their government to operate inefficiently.

Alesina and Tabellini’s research begins with the observation that many countries have employed procyclical fiscal policies.¹⁰⁵ Such policies are suboptimal because they exacerbate the volatilities of the business cycle. A government that employs a procyclical fiscal policy spends more when the economy is doing well, causing it to overheat. When the economy is doing poorly, the government spends too little, thereby missing an opportunity to restore it to health. An acyclical or countercyclical fiscal policy, by contrast, would fix these problems.

¹⁰³ *See id.* at 28. Auerbach concedes that estimating the permanence of a program can be difficult. The Congressional Budget Office currently assumes that programs will terminate as legislation provides. However, this may not always be the case. The program may be rescinded at an earlier date (if the opposing party gains control), or it may be extended to a later date (if political considerations force the controlling party to renew the program). Ultimately, the appropriate length depends upon the strength of the commitment. *See id.* at 29.

¹⁰⁴ *See id.* at 30.

¹⁰⁵ Alberto Alesina & Guido Tabellini, *Why is Fiscal Policy Often Procyclical?*, 2 (Sept. 2005), available at <http://www.nber.org/papers/w11600>.

The most obvious explanation for this phenomenon is based on credit markets. When a nation's economy is performing poorly, tax revenues are low, so the government must turn to credit markets to finance expenditures. Unfortunately, lenders will charge high interest rates, reflecting the risk that the economy will not right itself in the near future. Low tax receipts and high borrowing costs leave the government with too little money, creating a procyclical fiscal policy. Conversely, during boom times tax receipts are high, and governments can borrow cheaply. Flush with cash, they spend more freely, once again creating a procyclical fiscal policy.¹⁰⁶

This explanation has two weaknesses, however. First, governments should recognize the limitations of the credit market in advance, and save more while the economy is doing well. Second, lenders should recognize that a country in recession will likely return to a growth period in the future, and therefore should be willing to offer lower interest rates.¹⁰⁷

Given these weaknesses in the credit market explanation, Alesina and Tabellini examine an alternative theory, which argues that procyclical fiscal policy stems from a political agency problem. Specifically, if a government is corrupt, then it will spend its extra resources on rent-seeking activities. This problem is particularly significant during periods of economic growth, as the government has lots of extra money to spend. Voters are aware of this problem, however, which they address by demanding that the government spend all available resources in the present period, either through higher spending or tax cuts. In Alesina and Tabellini's model, voters are not aware that such demands may create a procyclical fiscal policy.¹⁰⁸

¹⁰⁶ *See id.*

¹⁰⁷ *See id.*

¹⁰⁸ *See id.* at 3.

This model generates two verifiable predictions. First, the model predicts that countries with greater amounts of corruption will also exhibit a greater degree of procyclicality in their fiscal policies. Second, the model predicts that this corruption effect will only be observed in democracies, since it is voter demands that cause the problem.

Alesina and Tabellini test these hypotheses using data from 87 countries, and find significant support for both. First, they construct a measure of the procyclicality of each country's fiscal policy.¹⁰⁹ Next, they employ regressions to measure the correlation between corruption – as measured by a corruption index – and procyclicality.¹¹⁰ Consistent with the first hypothesis, countries with higher degrees of corruption exhibit a higher degree of procyclicality.¹¹¹

To test the second hypothesis, Alesina and Tabellini included an interaction term, which measured how a country's being democratic *and* corrupt affected its fiscal policy. The inclusion of this term demonstrated that, among countries with corrupt governments, those that are democratic exhibit a greater degree of procyclicality than those that are non-democratic.¹¹² This result is consistent with the hypothesis: in the presence of corruption, constituents will prefer that their government spend all money at its disposal, but only in democracies are the constituents capable of making such a demand.

Other researchers have also tested political explanations as to why countries employ procyclical fiscal policies. Tornell and Lane, for example, have argued that procyclical fiscal policy can be attributed to a “voracity effect,” whereby competition between political parties

¹⁰⁹ Alesina and Tabellini measured this by regressing the change in the government's overall budget surplus upon the deviation of actual GDP from predicted GDP. *See id.* at 14.

¹¹⁰ *See id.* at 16.

¹¹¹ *See* Alesina & Tabellini, *supra* note 105, at 18.

¹¹² *See id.* at 19.

leads the government to spend too much during periods of economic growth.¹¹³ Taken together, such studies provide strong evidence that political elements can prevent a government from achieving an optimal budget deficit.

E. LEGISLATIVE REPRESENTATION AND FISCAL POLICY

The structure of government can also affect fiscal policy. Brian Knight has investigated the importance of this phenomenon in the U.S. Senate, testing the existence of what is known as the small state effect.¹¹⁴ The hypothesis behind this study is that smaller U.S. states will be able to receive a relatively large share of federal expenditures, because they have greater representation in the U.S. Senate, on a per-capita basis, than larger states.

Knight employs a model of legislative bargaining, which reveals two channels through which the small state effect can occur. First, legislation begins when it is proposed by an agenda-setter.¹¹⁵ Intuitively, the agenda-setter has a significant bargaining advantage, because bargaining is costly, and so delegates simply vote up or down on the agenda-setter's proposal. The agenda-setter is aware of this, and therefore will propose legislation that confers as many benefits on the state he or she represents, while attaining the support of a majority of the legislators. In the U.S. Senate, then, small states have a bargaining advantage over large states because they have a greater chance, on a per-capita basis, of having a representative in the agenda-setting position.

Developing the model further, Knight specifies that delegates follow a simple rule when voting on proposed legislation: a legislator will support the legislation so long as the benefits his

¹¹³ See Aaron Tornell and Philip Lane, *Voracity and Growth*, Am. Econ. Rev., Mar. 1999, at 22, 22.

¹¹⁴ Brian G. Knight, *Legislative Representation, Bargaining Power, and the Distribution of Federal Funds: Evidence from the U.S. Senate*, (March 2004), available at <http://www.nber.org/papers/w10385>.

¹¹⁵ See *id.* at 6. In the federal government, the agenda-setter position can be seen as membership on important committees, such as authorization and appropriations committees.

or her state receives exceed the federal taxes paid by the state's constituents.¹¹⁶ This aspect of the model also provides a bargaining advantage for small states in the U.S. Senate. To see this, observe that the agenda-setter will seek to build a coalition consisting of the representatives whose support is most easily obtained. In the Senate, these states are the smallest states, since they pay the least federal taxes, but have as many votes to give as the large states.¹¹⁷ Therefore, the agenda-setter will always cater to the interests of small-states, implying that they will receive a larger share of federal expenditures.¹¹⁸

Knight confirms the existence of the small state effect by employing a series of regressions. In the first specification, he measures the correlation between a state's size, and the total amount of federal funds it receives. Under this specification, an extra Senator per-capita is associated with an increase of 0.02 percentage points in the share of total federal spending sent to that state.¹¹⁹ Knight acknowledges that this result is economically small, if statistically significant. To explain this, he points out that many federal expenditures, such as Social Security payments, are distributed to the states evenly on a per-capita basis.¹²⁰

Knight's second specification tests for the small state effect in the context of earmarked funds. This regression yields a much larger result, in which an increase of one Senator per-capita leads to an increase of 0.44 percentage points in the share of earmarked expenditures.¹²¹

Presumably, this increased economic significance results from the fact that it is much easier to

¹¹⁶ *See id.*

¹¹⁷ This feature is not present in the House of Representatives, because while it is more expensive to obtain the votes of a large state, the large states also have more Representatives than small states do.

¹¹⁸ *See id.* at 8.

¹¹⁹ *See id.* at 12.

¹²⁰ *See id.*

¹²¹ *See Knight, supra* note 114.

manipulate the geographic distribution of earmarked funds than it is to manipulate the geographic distribution of federal funds generally.

In a third specification, Knight demonstrates that legislation originating in the Senate exhibits a larger small state effect than legislation originating in the House of Representatives.¹²² This result is consistent with Knight's modeling of the small state effect, because representation in the House of Representatives is on a per-capita basis, and is therefore less likely to give small states more bargaining power than large states.

The relationship between per-capita representation and per-capita spending has been studied and confirmed in several other contexts, as well. In the U.S., Atlas, *et al.* confirms Knight's first specification, demonstrating that small states receive a greater share of total federal expenditures on a per-capita basis.¹²³ The relationship between per-capita representation and expenditures has also been found in the E.U.,¹²⁴ and in U.S. state governments.¹²⁵

Knight does not speculate as to how or whether the small state effect impacts federal fiscal policy in the aggregate. In other words, does the small state effect cause the federal government to have a different budget deficit than it otherwise would? Or does it simply affect the geographic distribution of funds once that deficit is incurred? Either way, it seems likely that an optimal budget deficit would reflect the needs of each region of the United States. If that is the case, the distortions created by the small state effect are likely to inhibit the federal government's ability to operate an optimal budget deficit.

¹²² See *id.* at 13.

¹²³ See Cary M. Atlas, Thomas W. Gilligan, Robert J. Hendershott, and Mark A. Zupan, *Slicing the Federal Government Net Spending Pie: Who Wins, Who Loses, and Why*, *Am. Econ. Rev.*, June 1995, at 624.

¹²⁴ See Jonathan Rodden, *Strength in Numbers? Representation and Redistribution in the European Union*, *Eur. Union Pol.*, Feb. 2002, at 151, available at http://web.mit.edu/polisci/research/rodden/strength_in_numbers.pdf.

¹²⁵ See Stephen Ansolabehere, Alan Gerber and James M. Snyder, *Equal Votes, Equal Money: Court-Ordered Redistricting and the Public Spending in the American States*, *Am. Pol. Sci. Rev.*, Dec. 2002, at 767.

IV. CONCLUSION

This briefing paper has provided an overview of the considerations that should go into designing an optimal budget deficit, and various factors that may inhibit a government's ability to implement that deficit, if one can be calculated. While no research has yet produced a definitive conclusion as to what this number should be, this paper suggests that the major relevant factors include (i) normative views about the intergenerational distributive effects of a deficits, (ii) the composition of taxes and spending producing fiscal imbalance, particularly the degree to which deficits are used to smooth tax rates and to finance capital investments as opposed to current expenditures, (iii) macroeconomic indicators such as growth, savings, and inflation, (iv) national debt levels, and (v) the expected impact of certain political and procedural aspects of the budget process.

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