

ECONOMIC COMMENTARY

Federal Reserve Bank of Cleveland

Do Deficits Matter?

by Owen F. Humpage

The federal debt keeps rising, like a monster from the sea, and now threatens to take a \$12,700 bite out of each of us.¹ Many observers blame the deficit beast for—among other things—high real interest rates, an overvalued dollar, and the deterioration in our international accounts, and they warn that it will inevitably gnaw away at our standard of living. With national concern rising, President Clinton has made deficit reduction a focus of his economic policy, and his opposition has found it a convenient topic for political haranguing.

Yet, large budget deficits have persisted for more than a decade with few, if any, such dire predictions coming to pass. This has encouraged many economists to reexamine the effects of persistent budget shortfalls. Many now regard deficits as rather innocuous and focus instead on the overall level of government spending and on how specific fiscal programs that underlie the budget directly affect private decisions to consume, work, save, and invest. Amid a swirl of proposed tax hikes, expenditure cuts, and constitutional amendments to the federal budget process, we should realize that slaying the deficit behemoth may prove of little consequence.

■ Budget Deficits and Government Debt

The federal government runs a deficit when its expenditures exceed its receipts, and it must issue debt (Treasury securities) to cover the difference.² When shortfalls persist year after year, the outstanding debt of the federal government rises. With an 11-year string of triple-digit deficits, the ratio of U.S.

publicly held debt has risen from 26.5 percent of gross domestic product (GDP) in 1981 to 51.1 percent of GDP last year (see figure 1). According to Congressional Budget Office estimates, which assume no changes in current policies and moderate overall economic growth, the debt ratio will approach 80 percent of GDP by 2003, higher than at any time since 1950.³

■ The Conventional View

According to the conventional view, deficits can be both a blessing and a curse. When the economy is in a recession or otherwise is operating below its full potential, an increase in government spending or a decrease in taxes can provide stimulus, particularly if the government borrows to finance this fiscal program. As the effects of the initial tax cut or federal spending program ripple through the economy, aggregate demand expands by a substantial multiple of the fiscal initiative, and employment rises. The deficit may put some upward pressure on interest rates, but because the private economy is operating below its full capacity, conventional-view proponents consider this effect rather mild compared to the more direct, favorable effects of the fiscal stimulus on aggregate spending.

In a similar way, government can rely on fiscal policy—this time tax hikes, expenditure cuts, and budget surpluses—to rein in economic activity when the economy returns to its full potential. The government budget then becomes an instrument with which to finessé real economic activity around its optimal growth path.

Despite widespread anxiety about ballooning federal debt levels, there is no decisive evidence that government budget deficits are related to interest rates or real exchange rates. At least equally critical to determining the nation's long-term economic growth are the size and composition of the government's budget.

According to common view, when output is below par, a fiscally induced expansion of current income does not come at the expense of future economic growth. Problems can arise, however, if the government continues to borrow after the economy reaches full employment. To sustain long-term growth, the nation must save and invest in productive capacity.

The deficit places private and public borrowers in competition for the available supply of national savings. Interest rates will rise both to encourage some additional saving and to discourage private investment. Government borrowing, however, is insensitive to higher interest rates. With some luck, the most immediate effect of this crowding out of private investment may only be a change in the composition of national output: an increase in the relative size of the government sector. However, conventional belief holds that a persistent deficit will lower the economy's long-term potential growth path, implying an inevitable reduction in the nation's standard of living.

The exact nature of this crowding-out effect depends crucially on the extent to which capital is internationally mobile. If persistent government borrowing increases domestic interest rates relative to foreign interest rates, offshore investors will begin acquiring interest-earning assets in the country with the higher rates. This capital inflow will mitigate the rise in domestic interest rates, thereby limiting the crowding out of private domestic investment.

To purchase assets in the domestic economy, however, foreigners must first acquire the domestic currency in the foreign exchange market. This causes the domestic currency to appreciate, which then increases the foreign-currency price of the deficit country's exports and lowers the domestic-currency price of its imports. All else equal, the trade balance will then deteriorate, according to the conventional view.

As the discussion reveals, however, the inflow of foreign capital does not eliminate crowding out. It merely shifts this effect from interest-rate-sensitive to exchange-rate-sensitive sectors of the economy. When financed internally, persistent deficits lower private investment, leaving future generations with a smaller stock of capital to sustain real economic growth at potential. When financed externally, persistent deficits do not lower the future stock of capital, but the deficit country must now devote a greater portion of its future output to servicing its foreign debts. The domestic standard of living (what is left per capita for domestic consumption) may then be lower. Proponents of the conventional view often point to events of the past decade—the rapid appreciation of the dollar early on, the subsequent record deterioration of the U.S. trade balance, and the eventual shift in our international investment position to debtor status—as a classic example of this type of crowding out.

■ Is It the Deficit?

Despite its prominence, the conventional view of budget deficits lacks decisive statistical support. A glance at figures 2 and 3 reveals no clear correlation between federal budget deficits

FIGURE 1 THE U.S. FEDERAL BUDGET DEFICIT AND DEBT HELD BY THE PUBLIC

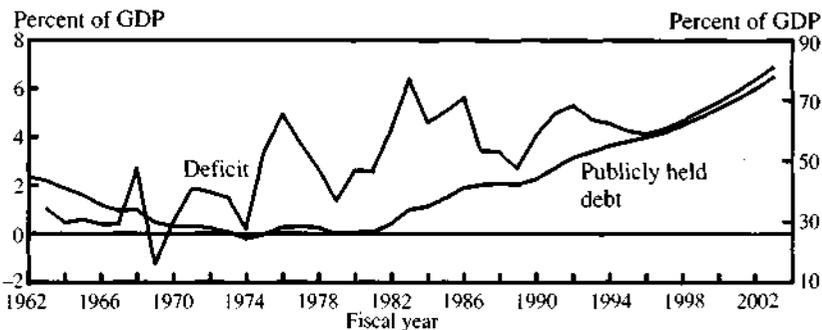
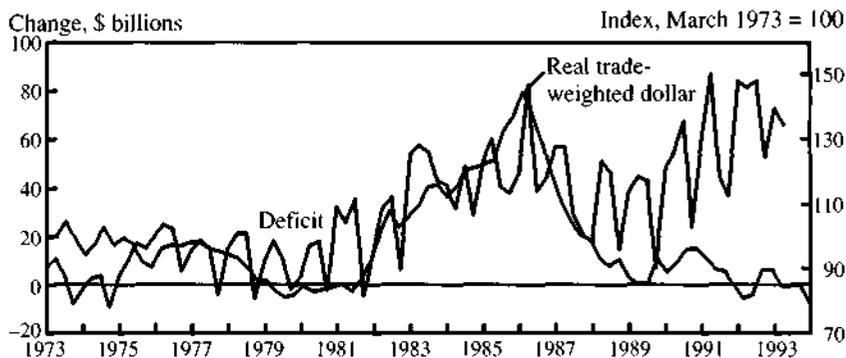


FIGURE 2 THE U.S. FEDERAL BUDGET DEFICIT AND THE REAL TRADE-WEIGHTED DOLLAR



SOURCES: Congressional Budget Office, *The Economic and Budget Outlook: Fiscal Years 1994-1998*, Washington, D.C.: U.S. Government Printing Office, January 1993; and Board of Governors of the Federal Reserve System.

and either the real trade-weighted dollar exchange rate or real interest rates.⁴ Taken together, sophisticated empirical studies of the causal relationship between budget deficits and these same variables are inconclusive.⁵ Although these findings do not necessarily refute the standard view, they have encouraged many economists to consider other possibilities. Perhaps deficits are not the problem. Could a causal relationship run between these economic variables and the types of spending and taxation policies that also produced the deficit, instead of directly between the variables and the deficit itself? Does the relative size of the government sector influence a nation's economic growth and standard of living? If so, eliminating the deficit without changing underlying fiscal programs might not reduce interest rates or depreciate the exchange rate. It could have exactly the opposite effect.

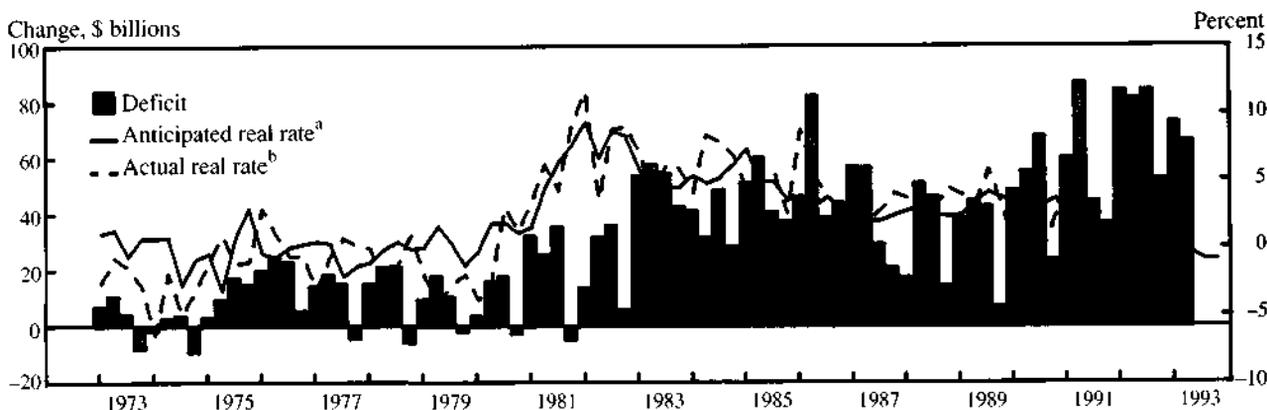
■ Deficits Don't Matter

An alternative view claims that *under certain assumptions*, deficits and taxes are equivalent. Although the types or

levels of government spending might affect economic activity, the method of financing those activities is irrelevant. Deficits do not matter.⁶ This approach rests on two plausible presumptions: First, governments must ultimately pay for their debts, so that the present value of their expenditures must equal the present value of their expected receipts. Second, taxpayers realize that deficits imply a future tax liability for themselves or their heirs and, therefore, increase their current saving by an amount equal to the present discounted value of this future tax bill. In this case, taxes and government debt become equivalent means of financing government spending. Because an offsetting increase in private saving matches any rise in the deficit, public borrowing has no effect on real interest rates or real exchange rates.

Although many find its assumptions rather stringent, the equivalence theorem nevertheless presents an internally consistent model, which empirical tests have not clearly refuted.⁷ One can, therefore, consider how changes in its

FIGURE 3 THE U.S. FEDERAL BUDGET DEFICIT AND THE REAL ONE-YEAR TREASURY BILL RATE



a. Anticipated real rate equals one-year Treasury bill rate minus Michigan Survey of Inflation Expectations.
 b. Actual real rate equals one-year Treasury bill rate minus inflation as measured by the Consumer Price Index.
 SOURCES: Board of Governors of the Federal Reserve System; and the University of Michigan, Survey of Consumers.

underlying premise might invalidate the theorem and create the conventional linkage between budget deficits, interest rates, and exchange rates. An important assumption concerns the nature of taxes.

The equivalence theorem presupposes that taxes are lump-sum; that is, they are straightforward dollar assessments as opposed to being a proportion of income, wages, or expenditures. Lump-sum taxes do not affect individuals' saving and working decisions. Assume, for example, that the equivalence theorem holds and that the government offers a deficit-producing tax cut. The inclination of taxpayers is to offset their implied future tax liabilities, and they will do this exactly if the tax reduction is lump-sum. The effects of the deficit and tax cut on national savings will net out with no impact on interest rates.

If, however, the tax cut also serves to alter the return on savings relative to consumption, it will induce consumers to change their consumption and saving behavior independent of their desire to finance their future tax liabilities. The effects of the deficit and the tax reduction on savings will not net out, in which case interest rates will change. Accordingly, the non-neutral effect of taxes on saving decisions may account for any apparent link between the deficit and the interest rate.

■ A Balanced-Budget Connection

Those unwilling to accept the suppositions of the equivalence theorem can uncover similar connections between key economic variables and specific types of spending and taxation policies by imagining that the federal budget were always balanced. A spending increase, financed by a tax hike, would transfer current purchasing power between the government and private sectors. The resulting effect on interest rates and exchange rates would depend only on how the government's spending patterns compared to those of the private sector. Suppose the government temporarily increased its revenue by \$100 through a lump-sum tax and spent this on current output. For every dollar paid in additional taxes, however, the private sector might reduce consumption by 95 cents and lower savings by 5 cents. Because the government spent all of its tax revenue on current output, and because the public failed to cut its consumption by the full amount of the tax, this transfer from the private to the public sector would reduce national savings. Real interest rates would then rise to balance savings and investment.

Similarly, private individuals spend their income on a host of domestic and imported goods. If government buys only domestically produced goods, the resulting increase in their demand relative to foreign goods would tend to appreciate the domestic currency in world markets.

In these examples, fiscal policies produce adverse effects on interest rates and exchange rates, but these effects do not depend on the existence of a deficit, as suggested in the standard view. They arise solely because of differences between government and private spending patterns. When one considers permanent changes in government spending, even lower interest rates are possible.⁸

■ What's Missing from the Debate?

Popular discussions of the budget focus almost exclusively on the size of current and prospective deficits, and current debates about budgetary policies typically concentrate on how the nation might equitably share the burden of reducing the deficit. Yet, the empirical evidence and theoretical arguments outlined above suggest that government budget deficits may be unrelated to interest rates or real exchange rates and that they pose no direct threat to our economic well-being.⁹

This does not mean, however, that governments' fiscal actions have no bearing on a country's ability to grow and prosper. The relationship is substantially more complicated than generally acknowledged, and depends on the relative size of government and on the types of spending and taxation programs inherent in the budget.

Over the last three decades of persistent and generally expanding federal budget deficits, other profound fiscal changes

have taken place in the United States. Most notably, the federal government has greatly expanded its influence over the allocation of economic resources. One direct example is the steady rise in government expenditures from approximately 19 percent of GDP in the early 1960s to roughly 23 percent of GDP in the early 1990s, but others are found in the expansion of federal off-budget spending, loans and loan guarantees, and other mandates. In addition, the composition of federal spending and taxation has changed. Entitlement programs have doubled as a percentage of GDP since the early 1960s, and social insurance taxes to pay for them have ballooned from 19 percent to 38 percent of total revenues.¹⁰

The behemoth deficit casts a long shadow, which seems to have obscured from our critical review other important aspects of fiscal policy. The size and composition of a government's budget are important determinants of its long-term economic growth. Higher proportions of nondefense, noneducation government spending relative to GDP across different countries appear to be correlated with lower rates of per capita GDP growth.¹¹ This relationship may reflect the distortionary effects of taxation and spending programs on individuals' decisions to consume, work, save, and invest. If so, how we attempt to slay the deficit beast may be more important than whether we actually succeed.

■ Footnotes

1. The Congressional Budget Office expects publicly held debt in fiscal year 1993 to be \$3,290 billion. See Congressional Budget Office, *The Economic and Budget Outlook: Fiscal Years 1994-1998*, Washington, D.C.: U.S. Government Printing Office, January 1993. U.S. population will be approximately 259 million at the end of fiscal year 1993.

2. Some economists complain that the federal budget deficit merely reflects arbitrary accounting rules and is devoid of economic meaning. See Alan J. Auerbach, Jagadeesh Gokhale, and Laurence J. Kotlikoff, "Generational Accounts: A New Approach to Fiscal Policy Evaluation," Federal Reserve Bank of Cleveland, *Economic Commentary*, November 15, 1991.

3. See Congressional Budget Office, *The Economic and Budget Outlook* (footnote 1).

4. In figures 2 and 3, the deficit is the change in outstanding publicly held government debt less that held by the Federal Reserve System; the *anticipated* real interest rate is a 12-month Treasury bill less expected inflation as measured by the Michigan Survey. The *actual* real interest rate is a 12-month Treasury bill less the actual inflation rate in the period.

5. For references to the empirical work, see the articles contained in "Symposium on the Budget Deficit," *Journal of Economic Perspectives*, vol. 3, no. 2 (Spring 1989), pp. 17-93.

6. An introduction with references to the literature is found in Robert J. Barro, "The Ricardian Approach to Budget Deficits," *Journal of Economic Perspectives*, vol. 3, no. 2 (Spring 1989), pp. 37-54.

7. See John J. Seater, "Ricardian Equivalence," *Journal of Economic Literature*, vol. 31, no. 1 (March 1993), pp. 142-90.

8. A more detailed discussion is found in Owen F. Humpage, "An Introduction to the International Implications of U.S. Fiscal Policy," Federal Reserve Bank of Cleveland, *Economic Review*, vol. 28, no. 3 (1992 Quarter 3), pp. 27-39.

9. Government debts, of course, cannot grow without bound, and under some scenarios can grow explosively. See John B. Carlson and E.J. Stevens, "The National Debt: A Secular Perspective," Federal Reserve Bank of Cleveland, *Economic Review*, vol. 21, no. 3 (1985 Quarter 3), pp. 11-24.

10. For data on budget trends, see Congressional Budget Office, *The Economic and Budget Outlook* (footnote 1).

11. See Robert J. Barro, "Economic Growth in a Cross Section of Countries," *Quarterly Journal of Economics*, vol. 106, no. 2 (May 1991), pp. 407-43.

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