

## How to calculate the deficit: Can't Anyone in Congress Count?

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In my last comment I demonstrated that the US public debt is not very large, and its annual servicing quite small. It occurred to me (and to several people who wrote to me in response to my comment), that it might be illuminating to carry out a similar exercise for the annual public deficit. You are likely to be under the impression that the US budget deficit is more than ten percent of GDP, in excess of US\$ 1.6 trillion in 2010. Or, as a Tea Party Republican might put it, **\$1.6 trillion!!!**

To verify that the US budget deficit is, unlike the public debt, a danger to the health and welfare of the population requiring instant action, I went to the source, the US Treasury statistics as reported by the Bureau of Economic Analysis of the Department of Commerce. As those who have ever attempted to balance a checkbook know (if anyone still has such 20th century relic), sorting out a budget is not straight-forward even if you get your arithmetic right. This applies to the US federal budget.

Assessing the federal deficit requires knowing what to measure. Total revenues minus total expenditures is the overall deficit. This is not the deficit for judging budget policy because it includes interest on the public debt. Cutting interest expenditure would imply defaulting on part or all the public debt, so it is excluded from serious discussions of deficit reduction. In the United States about forty percent off the interest is paid to government agencies (a mere change of public pockets), which is another reason for leaving out interest payments. Their exclusion results in the primary deficit. It is this measure that the International Monetary Fund applies for all its infamous "stabilization" programs.

It is a general principle of business finance that current revenue should cover current costs, and investment should be funded by borrowing (i.e., businesses going into **debt**). No successful business would spend years squirreling away funds to pay up-front for a factory expected to last twenty years. Banks exist to lend for such investment. The same principle applies to public investments. For example, there is no rational economic argument for the federal government to pay up-front to build a toll road that would generate net income for years. The same argument applies if there is no toll, in which case the net income implicitly accrues to the users of the road (e.g., us drivers). Thus, the appropriate rule of public finance is that current revenue should cover current expenditures, and borrow for capital expenditures, or the current deficit.

Third, more commonsense, some expenditures and revenues go up and down as the economy goes up and down. The most obvious case is unemployment payments. When unemployment rises, payments to the unemployed rise. The same applies to most taxes. This means that deficits are affected by the cyclical fluctuations of the economy.

Tedious inspection of the website of the Bureau Economic Analysis of the Department of Commerce, plus arithmetic and the rule for calculating percentages allow calculation these deficits, in the table below. The first thing to notice is that the bottom fell out of revenue in 2009 and 2010, while the expenditure share increased (columns 2 and 3). Public revenue declined by \$460 billion from its maximum in 2007 to its nadir in 2009. Over half of this fall was in personal income taxes, which dropped by twenty

percent. Almost all of the remaining decline was in corporate tax, down by half. Meanwhile, from 2007 to 2009 expenditure increased by almost \$800 billion. Of the civilian (non-military) part, two-fifths of the increase were in unemployment benefits, welfare payments and the temporary mortgage relief program.

Back in the days when economists studied the economy instead of mathematics, these changes were called automatic stabilizers (see Schultz 1964). When the economy declines various reactions occur that reduce the potential decline. Among these are: 1) personal income tax receipts fall more than household income falls because the tax rates are mildly progressive and the various exemptions; 2) the corporate income tax declines dramatically because corporate profits absorb almost all the initial fall in demand for goods and services; and 3) household income is partly stabilized by unemployment benefits and temporary welfare payments.

In those by-gone days before economists lost interest in the economy these automatic stabilizers were considered a good thing. The seriousness of the implicit heresy cannot be exaggerated. If you consider automatic stabilizers a good thing, then you are saying that fiscal deficits should increase during a recession, that the deficit increase prevents things from getting worst. As hard as it may be for the young to believe, this heretical blasphemy was the accepted wisdom just forty years ago.

With these shocking heresies noted, I return to measurement of deficits. The overall deficit rose from about one percent of GDP in 2007 to over ten percent in 2010, and the primary deficit was 9.5 percent of GDP. If we should worry, the relevant measure is the current deficit, that portion of government consumption expenditure not covered by current revenue. This was less than six percent of GDP, far below the "headline" ten percent cited by the deficit vultures. A full percentage point of the current deficit was the result of the increase in unemployment (see last column, Net Unemployment Payments, NUP). Leaving this out is a step toward measuring the cycle-free component of the deficit. In 2007 the taxes funding unemployment payments exceed the benefits paid by \$6 billion. By 2010 the payments exceeded tax revenue by over \$140 billion.

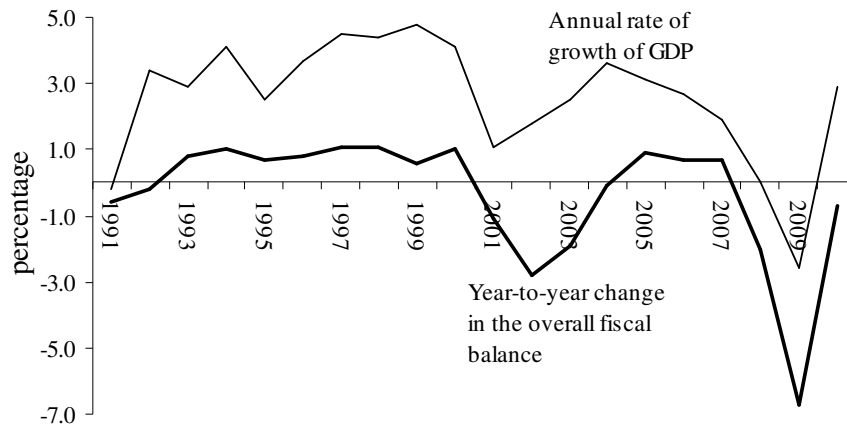
These calculations produce a straight-forward conclusion. The US public sector deficit is large by historical comparison, about six percent of GDP when appropriately measured. It is high by historical comparison because the recession in which we find ourselves is severe by historical comparison. End the recession, end the deficit problem (see the diagram below).

How do we cut the deficit? The answer is obvious, though none dare speak its name: an effective fiscal stimulus. The process by which the stimulus would bring recovery was once so generally accepted that it is astounding that I find it necessary to describe it: public expenditure would increase demand, employment would increase, reducing unemployment payments and welfare payments, and generating tax revenue. Rising household consumption demand would increase corporate profits, simultaneously raising corporate tax collections and stimulating productive investment.

US GDP and Public Finances, 2005-2010 (billions of dollars and percentages)

Year	GDP	Revenue	Expenditure	Balance	Less:			NUP
					Interest	Investment		
2005	12,638	2,154	2,472	-318	184	392	7	
2006	13,399	2,407	2,655	-248	219	425	10	
2007	14,078	2,568	2,729	-161	223	462	6	
2008	14,441	2,524	2,983	-459	232	496	-6	
2009	14,256	2,105	3,518	-1413	169	514	-85	
2010	14,660	2,165	3,721	-1556	168	540	-143	
							Less	
	<u>% GDP</u>	<u>Revenue</u>	<u>Expenditure</u>	<u>Overall</u>	<u>Primary</u>	<u>Current</u>	<u>Unemp</u>	
	2005	17.0	19.6	-2.5	-1.1	2.0	2.0	
	2006	18.0	19.8	-1.9	-0.2	3.0	2.9	
	2007	18.2	19.4	-1.1	0.4	3.7	3.7	
	2008	17.5	20.7	-3.2	-1.6	1.9	1.9	
	2009	14.8	24.7	-9.9	-8.7	-5.1	-4.5	
	2010	14.8	25.4	-10.6	-9.5	-5.8	-4.8	

Notes: NUP is net unemployment revenue (tax minus payments). All numbers for 2010 preliminary.  
Source: US Office of Management and Budget, reported at <http://www.bea.gov/>.



"None are so blind..." Rate of growth of US GDP and the percentage point change in the overall public budget balance, 1991-2010 (see text for definition). A rise in the growth rate reduces the amount by which the deficit increases.

But, that would be irresponsible: the public deficit is over ten percent of GDP with default and disaster staring us in the face as the omniscient financial markets tremble and quake. Cut expenditures. Cut education, health, social security payments, and unemployment benefits, too. Don't repair roads, bridges and schools.

This reactionary ideology is not merely madness, it is madness with a purpose: using the recession and the public deficit as weapons further to strengthen the power of capital over social and political life in the United States. The forces of reaction are following the advice of Rahm Emanuel, President Obama's former chief of staff: a good crisis cannot, and should not, be wasted.

References:

Charles Schultze *The Behavior Of Income Shares: Selected Theoretical and Empirical Issues*  
New York: NBER, 1964)

All statistics from <http://www.bea.gov/>.