Voodoo Multipliers

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Back in the 1980s, many commentators ridiculed as "voodoo economics" the extreme supply-side view that across-the-board cuts in income-tax rates might raise overall tax revenues. Now we have instead the extreme demand-side view that the multiplier effect of government spending on output is greater than one (Team Obama is reportedly using a number around 1.5).

To think about this assumed multiplier, suppose first that it took on the lower value 1.0. In this case, an increase by one unit in government purchases and, thereby, in the

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aggregate demand for goods would lead to an increase by one unit in real gross domestic product (GDP). Thus, the added public goods are essentially free to society. If the government buys another airplane or bridge, the economy's total output expands by enough to create the airplane or bridge without requiring a cut in anyone's consumption or investment. The explanation for this magic is that idle resources—unemployed labor and capital—are put to work to produce the added goods and services. If there is a social cost, it is only that people who used to be unemployed have less leisure because they are working.

If the multiplier is greater than 1.0, as apparently assumed by Team Obama, the process is even more wonderful. In this case, real GDP rises by more than the increase in

government purchases. Thus, in addition to the free airplane or bridge, we also have more goods and services left over to raise private consumption or investment. In this scenario, the government spending is a good idea even if the bridge goes to nowhere or if government employees are just uselessly filling holes. This free lunch would make Charles Ponzi proud. If the deal is genuine, why stop with only $1 trillion or so of added government purchases?

So, where is the flaw in the argument? The theory (a simple Keynesian macroeconomic model) implicitly assumes that the government is better than the private market at marshaling idle resources to produce useful stuff. Unemployed labor and capital can be utilized at essentially zero social cost, but the private market is somehow unable to figure any of

this out. Implicitly, there is something wrong with the price system. Keynes thought that the problem lay with wages and prices that were stuck at excessive levels. But this problem could be readily solved by expansionary monetary policy, enough of which will mean that wages and prices do not have to fall. So, something deeper must be involved—but economists have not convincingly identified market failures, such as incomplete information or moral-hazard problems, that generate multipliers above one.

A much more plausible starting point is a multiplier of zero. In this case, the real GDP is given, and a rise in government purchases requires an equal fall in the total of other parts of GDP—consumption, investment, and net exports. In other words, the social cost of one unit of additional government purchases is one. This approach is the one usually applied to cost-benefit analyses of public projects. In particular, the value of the project (counting, say, the whole flow of future benefits from a bridge or a road) has to justify the cost of the public outlay. I think this perspective, not the supposed macroeconomic benefits from fiscal stimulus, is the right one to apply to the many new and expanded government programs that we are likely to see this year and next.

Aside from theory, what is true about multipliers in the data? Because it is not easy to separate movements in government purchases from overall business fluctuations, the best evidence comes from large changes in military purchases that are driven by shifts in war and peace. A particularly good experiment is the massive expansion of U.S. defense expenditures during World War II. This case works well because the United States from 1941 to 1945 did not suffer from the massive destruction of property and life that led to large declines in real GDP in many other countries during WWII. In any event, the usual Keynesian view is that the WWII fiscal expansion provided the stimulus that finally got the U.S. economy out of the Great Depression. Thus, I think that most macroeconomists would regard this case as a fair one for seeing whether a large multiplier ever exists.

I have estimated (in my book Macroeconomics, *A Modern Approach*) that World War II raised U.S. real defense expenditures by $540 billion (1996 dollars) per year at the peak in 1943–44, amounting to 44% of trend real GDP. I also estimated that the war raised real GDP above trend by $430 billion per year in 1943–44. Thus, the multiplier was 0.8 (430/540). The other way to put this is that the war lowered components of GDP aside from military purchases. The main declines were in private investment, non-military parts of government purchases, and net exports—personal consumer expenditure changed little.

We can consider similarly three other U.S. wartime experiences—World War I, the Korean War, and the Vietnam War—although the added defense expenditures were much smaller in comparison to GDP than that for WWII. When I combined the evidence for all four wars, I got an overall estimate of the multiplier of 0.8, the same value as before. (This similarity is not so surprising because WWII gets a lot of weight due to its particularly large change in government purchases when expressed as a ratio to GDP.) In an earlier study in the Journal of Political Economy, I got a similar regression-based estimate for the multiplier effect on real GDP from temporary defense purchases—for a sample from 1942 to 1978, the coefficient was 0.71, with a standard error of 0.06.

There are reasons to believe that the war-based multiplier of around 0.8 substantially overstates the multiplier for peacetime government purchases. For one thing, the temporary nature of much of military spending during wars means that consumer demand would not fall a lot. In contrast, an increase in non-war spending—which historically has been mostly permanent— would tend to reduce consumer demand substantially through a negative income effect. Second, the use of the military draft in wartime has a direct, coercive effect on total employment. Third, the U.S. economy was already growing rapidly after 1933 (aside from the 1938 recession), and it is probably unfair to ascribe all of the rapid GDP growth from 1941 to 1945 to the added military outlays. Another point is that the added labor during the two world wars was very large, and much of this expansion cannot be viewed as merely putting idle labor to work. For example, the dramatic rise in female labor during WWII likely had a sizable social cost.

When I attempted to estimate directly the multiplier associated with peacetime government purchases, I got a number that was statistically insignificantly different from zero. In the regression-based results from my 1981 Journal of Political Economy paper, for the sample from 1942 to 1978, the estimate was 0.14 with a standard error of 0.51. Thus, the regression did not pin down the non-war multiplier very well.

As we all know, we are in the middle of what will likely be the worst U.S. economic contraction since the 1930s. In this context and from the history of the Great Depression, I can understand various attempts to prop up the financial system. These efforts, akin to avoiding bank runs in prior periods, recognize that the social consequences of credit-market decisions extend well beyond the individuals and businesses making the decisions. That is, externalities are likely to be important in the financial sector.

But, in terms of fiscal-stimulus proposals, it would be sad if the best that Team Obama can offer is an unvarnished version of Keynes's General Theory, 1936. The financial crisis and possible depression—which I take very seriously—do not invalidate everything we have learned about macroeconomics since 1936.

In designing effective policy responses, much more focus should be on incentives for people and businesses to invest, produce, and work. On the tax side of fiscal stimulus, we should avoid programs that throw money at people and emphasize instead reductions in marginal income-tax rates—especially where these rates are already high and fall on capital income. We should keep in mind the structure of rate-cutting programs that worked: Kennedy-Johnson 1963–64, Reagan 1981–83 and 1986, and Bush 2003. At the present moment, the full elimination of the federal corporate income tax would be brilliant. (In the long run, the best way to raise more real tax revenue—for example, to pay for health-care and public retirement programs—is likely to involve a value-added tax. However, I hesitate to recommend this efficient form of taxation because its presence makes it too easy for government to grow.)

Going back to the spending side, my main point is that we should not use the cover of fiscal stimulus to undertake massive public-works programs that do not pass muster from the perspective of cost-benefit analysis. (And, by the way, "shovel-ready project" is probably the silliest term I have ever heard in a discussion of macroeconomic policy.) Just as in the

1980s, when extreme supply-side views on tax cuts were unjustified, it is wrong now to think that added government spending is free.

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REFERENCES AND FURTHER READING

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