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Stimulus Spending Doesn't Work

Our new research shows no evidence of a Keynesian 'multiplier' effect. There is evidence that tax cuts boost growth.

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The global recession and financial crisis have refocused attention on government stimulus packages. These packages typically emphasize spending, predicated on the view that the expenditure "multipliers" are greater than one—so that gross domestic product expands by more than government spending itself. Stimulus packages typically also feature tax reductions, designed partly to boost consumer demand (by raising disposable income) and partly to stimulate work effort, production and investment (by lowering rates).

The existing empirical evidence on the response of real gross domestic product to added government spending and tax changes is thin. In ongoing research, we use long-term U.S. macroeconomic data to contribute to the evidence. The results mostly favor tax rate reductions over increases in government spending as a means to increase GDP.

For defense spending, the principal long-run variations reflect the buildups and aftermaths of major wars—World War I, World War II, the Korean War and, to a much lesser extent, the Vietnam War. World War II tends to dominate, with the ratio of added defense spending to GDP reaching 26% in 1942 and 17% in 1943, and then falling to -26% in 1946.

Wartime spending is helpful for estimating spending multipliers for three key reasons. First, the variations in spending are large and include positive and negative values. Second, since the main changes in military spending are independent of economic developments, it is straightforward to isolate the direction of causation between government spending and GDP. Third, unlike many other countries during the world wars, the U.S. suffered only moderate loss of life and did not experience massive destruction of physical capital. In addition, because the unemployment rate in 1940 exceeded 9% but then fell to 1% in 1944, there is some information on how the multiplier depends on the strength of the economy.

For annual data that start in 1939 or earlier (and, thereby, include World War II), the defense-spending multiplier that applies at the average unemployment rate of 5.6% is in a range of 0.6-0.7. A multiplier less than one means that, overall, other components of GDP fell when defense spending rose. Empirically, our research shows that most of the fall was in private investment, with personal consumer expenditure changing little.

Our research also shows that greater weakness in the economy raises the estimated multiplier: It increases by around 0.1 for each two percentage points by which the unemployment rate exceeds its long-run median of 5.6%. Thus the estimated multiplier reaches 1.0 when the unemployment rate gets to about 12%.

To evaluate typical fiscal-stimulus packages, however, nondefense government spending multipliers are more important. Estimating these multipliers convincingly from U.S. time series is problematical, however, because the movements in nondefense government purchases (dominated since the 1960s by state and local outlays) are closely intertwined with the business cycle. Thus the explanation for much of the positive association between nondefense spending and GDP is that

government spending increased in response to growing GDP, rather than the reverse.

The effects of tax rates on GDP growth can be analyzed from a time series we've constructed on average marginal income-tax rates from federal and state income taxes and the Social Security payroll tax. Since 1950, the largest declines in the average marginal rate from the federal individual income tax occurred under Ronald Reagan (to 21.8% in 1988 from 25.9% in 1986 and to 25.6% in 1983 from 29.4% in 1981), George W. Bush (to 21.1% in 2003 from 24.7% in 2000), and Kennedy-Johnson (to 21.2% in 1965 from 24.7% in 1963). Tax rates rose particularly during the Korean War, the 1970s and the 1990s. The average marginal tax rate from Social Security (including payments from employees, employers and the self-employed) expanded to 10.8% in 1991 from 2.2% in 1971 and then remained reasonably stable.

For data that start in 1950, we estimate that a one-percentage-point cut in the average marginal tax rate raises the following year's GDP growth rate by around 0.6% per year. However, this effect is harder to pin down over longer periods that include the world wars and the Great Depression.

It would be useful to apply our U.S. analysis to long-term macroeconomic time series for other countries, but many of them experienced massive contractions of real GDP during the world wars, driven by the destruction of capital stocks and institutions and large losses of life. It is also unclear whether other countries have the necessary underlying information to construct measures of average marginal income-tax rates—the key variable for our analysis of tax effects in the U.S. data.

The bottom line is this: The available empirical evidence does not support the idea that spending multipliers typically exceed one, and thus spending stimulus programs will likely raise GDP by less than the increase in government spending. Defense-spending multipliers exceeding one likely apply only at very high unemployment rates, and nondefense multipliers are probably smaller. However, there is empirical support for the proposition that tax rate reductions will increase real GDP.

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