Some Intriguing Findings About Federal Spending

by

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In two prior exploratory articles, I found (1) that the federal spending share of GDP from 1981 through 2000 was a *negative* function of the federal revenue share and that (2) the rate of increase in real federal spending since World War II was lower during administrations in which at least one house of Congress was controlled by the other party.

Our new joint paper presents separate new estimates of each of these relations. We had first experimented with attempts to test these two hypotheses with the same test equation, but we found no way to estimate both the effects on the relative level and rate of growth of federal expenditures with the same equation.

The "Starve the Beast" Hypothesis

For nearly three decades, many conservatives and libertarians have argued that reducing federal tax rates, in addition to increasing long-term economic growth, would reduce the growth of federal spending by "starving the beast." This position has recently been endorsed, for example, by Nobel laureates Milton Friedman[1] and Gary Becker[2] in separate *Wall Street Journal* columns in 2003.

The problem with this hypothesis is that it is *not* consistent with the evidence, at least beginning in 1981. In my article published in 2002, I presented evidence that the relative level of federal spending over the period from 1981 through 2000 was coincident with the relative level of the federal tax burden in the *opposite* direction; in other words, there was a strong *negative* relation between the relative level of federal spending and tax revenues.[3] Controlling for the unemployment rate, federal spending during this period increased by about one-half percent of GDP for each one percentage point decline in the relative level of federal tax revenues. What is going on? The most direct interpretation of this relation is that it

represents a demand curve – that the demand for federal spending by current voters declines with the amount of this spending financed by current taxes. Future voters will bear the burden of any resulting deficit but are apparently not effectively represented by those making the current fiscal choices.

One implication of this relation is that a tax *increase* may be the most effective policy to reduce the relative level of federal spending. On this issue, I would be pleased to be proven wrong.

The "Divided Government" Hypothesis

My brief article in 2003 presented evidence that the rate of growth of real federal spending in the years since World War II was lower during administrations in which at least one house of Congress was controlled by the other party.[4] The only two long periods of fiscal restraint were the Eisenhower and Clinton administrations, during which the opposition party controlled Congress for the last six years of each administration. Conversely, the only long period of unusual fiscal expansion was the Kennedy/Johnson administration, which brought us both the Great Society and the Viet Nam War with the support of the same party in Congress.

One reason for this condition is that the prospect for a major war has been substantially higher under a unified government. American participation in *every* war in which the ground combat lasted more than a few days – from the War of 1812 to the current war in Iraq – was initiated by a unified government. One general reason is that each party in a divided government has the opportunity to block the most divisive measures proposed by the other party.

My own judgement is that our federal government may work better (less badly) when at least one house of Congress is controlled by a party other than the party of the president. American voters, in their unarticulated collective wisdom, have voted for a divided government for most of the past 50 years. Divided government is not the stuff of which legends are made,

but the separation of powers is probably a better protection of our liberties when the presidency and the Congress are controlled by different parties.

Updating the Test of the "Starve the Beast" Hypothesis

The following equation is used to test the "Starve the Beast" hypothesis:

$$(S/Y) = a + b(R/Y) + cU + dAR(1) + u,$$

where

$S =$ current federal expenditures

$R =$ current federal revenues,

$Y = $ GDP,

$U =$ civilian unemployment rate, and

$AR(1) =$ a first-order autoregressive term.

Our new estimates of this equation revise and expand my prior estimate in two ways:

The data for federal expenditures, federal revenues, and GDP are from the major new revision of the national income accounts.

A separate estimate of this equation is made for the sample 1949 through 1980, in order to test the stability of this relation over a longer sample.

These tests would be consistent with the "Starve the Beast" hypothesis only if the estimated coefficient on (R/Y) is positive and significant.

The results from these tests are summarized by Table 1 below. Standard errors of the estimated coefficients are in parentheses.

Table 1 Tests of the "Starve the Beast" Hypothesis

Sample

Variables	1949-1980	1981-2000
	Coefficients	
Constant	18.069 (6.763)	30.651 (2.001)
(R/Y)	- .038 (.304)	- .624 (.111)
U	.321 (.237)	.443 (.044)
AR(1)	.877 (.049)	.429 (.135)
Adjusted R-squared	.790	.943
S.E.R.	.791	.275
D-W	1.629	1.503

The first conclusion from these tests is that there was *no* significant effect on the relative

level of federal spending of either the relative level of federal revenues or the unemployment rate

in the sample 1949-1980; (all of the explanatory power of this equation is in the autoregressive

term.) This finding is not consistent with the "Starve the Beast" hypothesis in that the

coefficient

on (R/Y) is not positive and significant, but it does not suggest that a tax cut would increase

spending.

The more important conclusion, consistent with my prior estimate of this equation, is that

there was a very strong *negative* relation between the relative level of federal spending and the relative level of federal revenues in the sample 1981-2000. Controlling for the unemployment rate, federal spending during this period appeared to increase by about .6 of one percent of GDP for each one percentage point decline in the relative level of federal revenues. During the same period that conservatives and libertarians promoted the "Starve the Beast" hypothesis, the developing evidence was strongly contrary to that hypothesis.

Finally, we are left with a puzzle. Why was the relation between the relative level of federal spending and federal receipts strongly negative in the period 1981-2000 but insignificant in the period 1949-1980? What happened in federal fiscal politics that might explain the substantial difference in the estimates from these two samples? We do not know, but we suspect that the growing influence of the "supply siders," who have a strong case that high marginal tax rates significantly reduce economic growth, undermined the influence of the traditional fiscal conservatives' commitment to a balanced budget. Suggestions are welcome.

Updating the Test of the "Divided Government" Hypothesis

Our new test of the "Divided Government" hypothesis differs from my prior test in four ways:

The data on real current federal expenditures is based on the major new revisions of the national income accounts,

The test variable is now the per cent change in real current federal expenditures *per capita,*

The years 1949-1952 have been added to the sample, and

We use a formal difference of means test to estimate the significance of the differences in the mean rate of growth in real per capita federal spending in administrations during which the

same party controls both houses of Congress from the mean rate of growth in administrations during which at least one house of Congress is controlled by the other party.

This test is summarized by Table 2 below.

Table 2 Annual Per Cent Changes in Real Per Capita Federal Expenditures

Period	Administration	Unified	Divided	Difference
1949-1952	Truman	8.08		
1953-1960	Eisenhower		- .28	
1961-1968	Kennedy/Johnson	4.51		
1969-1976	Nixon/Ford		.77	
1977-1980	Carter	2.52		
1981-1988	Reagan		3.04	
1989-1992	Bush		2.77	
1993-2000	Clinton		- .46	
Mean		5.00	1.02	3.98
Standard Deviation		5.10	2.90	1.36
t-ratio				2.92

One important observation from Table 2 is the high variance in the annual per cent change in real federal expenditures per capita, even when averaged over the whole period of an administration. What explains this variance?

One explanation suggested by this table is that the average rate of increase in administrations during which the same party also controls both houses of Congress is nearly five times that in administrations during which at least one house of Congress is controlled by the

other party. And a difference of means test indicates that this difference is statistically significant.

Again, however, we are left with a puzzle. Much of the variance in total federal spending per capita is due to changes in defense spending. If most of the variance in defense spending is exogenous, it may be only an accident that the largest increases in total real spending per capita have been under unified government and the lowest increases under divided government. Our judgement, however, is that a large part of the variance in real defense spending has been a function of domestic political conditions. We find it hard to dismiss the implications of a nearly 200 year old pattern in which the American participation in every war involving more than a few days of ground combat was initiated by a unified government. Divided government may have the lowest rate of growth of real federal spending per capita, in part, because it has been an important constraint on American participation in a war.

Conclusion

Each of these tests has produced an intriguing finding about federal spending. Each of these tests, however, is a test of a single possible explanation of federal expenditures, without controlling for the condition addressed by the other test or for other conditions that may also affect federal spending. And each of these tests has left us with a puzzle for which the answer is not apparent. Our hope is that this paper has planted some ideas that others may nurture.

Notes

1. Friedman, Milton, "What Every American Wants," *Wall Street Journal*, January 20, 2003.

2. Becker, Gary S., Edward O, Lazear, and Kevin M. Murphy, "The Double Benefit of Tax Cuts," *Wall Street Journal*, October 7, 2003.

3. Niskanen, William A., "Comments," in Jeffrey A. Frankel and Peter R. Orszag, *American Economic Policy in the 1990s*, Cambridge, Massachusetts: MIT Press 2002.

4. Niskanen, William A., "A Case for Divided Government," in *Cato Policy Report* March/April 2003.