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# A Keynesian Defense of the Reagan Deficit:

## *A Comment*

By RICHARD J. CEBULA\*

ABSTRACT. The argument of Professor *R. J. Alexander* that the *Reagan deficit* had little impact upon *interest rates* is attacked on the basis of a lack of empirical analysis and its reliance upon the non-market *prime rate* of interest. Procedures used follow Hoelscher, Barth, Iden, Russek, and others and relate to the *expected inflation rate*.

### I

PROFESSOR R. J. ALEXANDER in a recent issue of this *Journal*, (Jan., 1989, pp. 47–54), alleges that during the Carter-Reagan period the federal budget deficit did *not* exercise a significant impact upon interest rates. Indeed, Alexander (p. 50) goes so far as to say that “. . . if there has been any relationship between growth of the deficit and interest rate trends, it has been perverse.” The purpose of this Comment is to refute Alexander’s oversimplified argument and conclusions.

### II

TO BEGIN WITH, Alexander (p. 50) focuses upon the prime rate of interest, which he labels as “Everyone’s favorite interest rate. . . .” The deficit-interest rate literature [cf. Barth, Iden, and Russek (1984; 1985), Evans (1985; 1987), Feldstein and Eckstein (1970), Hoelscher (1983; 1986), and Makin (1983)] has dealt with a variety of interest rates, including the three-month Treasury bill rate, the commercial paper rate, Moody’s Aaa-rated corporate bond rate, the ten year Treasury note rate, and the 30 year Treasury bond rate, *but not the prime rate*. Moreover, the fact that the prime rate is not expressly determined in the marketplace apparently does not concern Alexander. Next, he fails to provide any formal empirical analysis to substantiate his deficit-interest rate claims. As a result, Alexander’s analysis ignores (among other things) the potential impact of inflationary expectations upon the interest rate. Indeed, as illustrated below, in contrast to Alexander’s claims, formal empirical analysis reveals that the nominal interest rate yield on 30 year Treasury bonds was in fact positively and significantly influenced by the budget deficit during the Carter-Reagan period.

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Our empirical analysis uses the well-known loanable funds model developed in Hoelscher (1986, p. 6). That model, expressed in terms of a quarterly framework, is:

$$i_t = a_0 + a_1P_t + a_2r_t + a_3y_t + a_4d_t + \mu \quad [1]$$

where  $a_0$  = constant term

$\mu$  = stochastic error term

The variable  $i_t$  represents the nominal average interest rate yield in quarter  $t$  on 30 year Treasury bonds. These data were obtained from the *Federal Reserve Bulletin* (Feb., 1977–June, 1980, p. A27; July, 1980–Feb., 1986, pp. A25, A28, A26, A24) and are expressed as a percent per annum. Following Hoelscher (1986), the variable  $P_t$  represents the *expected* inflation rate in quarter  $t$ , expressed as a percent per annum. Use of the expected inflation rate is also found in most other related studies [cf. Barth, Iden, and Russek (1984; 1985), Feldstein and Eckstein (1970), Cebula (1988), Hoelscher (1983), and Makin (1973)]. Our inflationary expectations data are the well-known Livingston survey data, which were obtained from the Federal Reserve Bank of Philadelphia. The variable  $r_t$  represents the expected real interest rate yield in quarter  $t$  on three month Treasury bills, expressed as a percent per annum. Variable  $r_t$  was computed by subtracting the expected inflation rate in quarter  $t$  ( $P_t$ ) from the nominal average interest rate yield in quarter  $t$  on three month Treasury bills,  $B_t$ ; variable  $B_t$  is also expressed as a percent per annum and was obtained from the *Economic Report of the President* (1980, Table B-64; 1981, Table B-65; 1984, Table B-67; 1987, Table B-68). The variable  $y_t$  represents the change in the per capita seasonally adjusted trend GNP, expressed in 1982 dollars. These data were computed using data from the *Economic Report of the President, 1989* (Table B-31) and Holloway (Table 2). Finally, the variable  $d_t$  represents the seasonally adjusted total federal budget deficit in quarter  $t$  divided by the seasonally adjusted middle-expansion trend GNP in quarter  $t$ ; variable  $d_t$  is expressed as a percent. The data for  $d_t$  were obtained from the *Economic Report of the President* (1980, Table B-72; 1982, Table B-75; 1984, Table B-75; 1986, Table B-76; 1987, Table B-76) and Holloway (Table 2). According to Hoelscher (1986), the expected signs on the coefficients in equation [1] are, as follows:

$$a_1 > 0, \quad a_2 > 0, \quad a_3 > 0, \quad a_4 > 0 \quad [2]$$

A number of observations are now in order. To begin with, our model is quarterly and runs from 1977:1 through 1985:4. The analysis thus covers the entire Carter Administration and the first Reagan term, as well as the first full year of Reagan's second term. We end our analysis with 1985:4 solely due to

data limitations. Nevertheless, since Alexander's "observations" on the interest rate (prime rate) do not go beyond mid-1986, the period covered by our empirical analysis almost completely coincides with Alexander's "observation" period.

Next, the total federal budget deficit consists of an exogenous component, the so-called "structural deficit," and an endogenous component, the so-called "cyclical deficit." Since the total budget deficit is partly endogenous, its inclusion in the analysis introduces the possibility of simultaneous-equation bias. Accordingly, structural equation (1) is estimated using an instrumental variables technique (as well as the Cochrane-Orcutt procedure to correct for serial correlation), with the instrument being the seasonally adjusted quarterly unemployment rate of the civilian labor force (lagged one quarter). The choice of instrument is based upon the fact that the lagged unemployment rate of the civilian labor force systematically explains the budget deficit, whereas the contemporaneous error terms in the system are not correlated with the lagged unemployment rate. The unemployment rate data were obtained from the *Economic Report of the President* (1979, Table B-27; 1981, Table B-27; 1983, Table B-33; 1985, Table B-33; 1986, Table B-35). Furthermore, to allow for endogeneity of the variable  $r_t$ , we also adopt a second instrumental variable: the nominal average interest rate yield in quarter  $t-1$  on three year Treasury notes. These data were obtained from the *Economic Report of the President* (1980, Table B-64; 1981, Table B-65; 1984, Table B-67; 1987, Table B-68) and are lagged one quarter for the same reason the unemployment rate is.

### III

ESTIMATING EQUATION (1) by two stage least squares yields:

$$i_t = 2.71 + 0.5422P_t + 0.7637r_t + 0.0009y_t + 0.5308d_t, \quad [3]$$

(+5.31)    (+5.30)    (+0.55)    (+2.79)

$$DF = 30, \quad DW = 1.74, \quad \text{Rho} = 0.10$$

where terms in parentheses are t-values.

In equation [3], the estimated coefficient on the deficit variable is positive and statistically significant at the one percent level. Thus, in contrast to Alexander's claims, the deficit during the Carter-Reagan period did in fact raise interest rate levels. Indeed, the evidence further shows that it was the long term rate of interest<sup>1</sup> that was elevated during the period in question. According to the conventional wisdom, long term interest rates transmit the effects of deficits to the "real" side of the economy. Thus, it follows that the upward pressure on long term interest rates caused by the budget deficit during the period very likely

resulted in some degree of “crowding out.” This conclusion is in turn obviously at odds with another of Alexander’s (p. 50) conjectures, namely, that: “The argument that the growth of the deficit has squeezed out private investors would seem to be as fallacious as the charges having to do with . . . the interest rate.”

#### Note

1. It can be shown that *short-term* interest rates during the Carter-Reagan period were *not* significantly affected by the deficit.

#### References

- Alexander, Robert J., “A Keynesian Defense of the Reagan Deficit,” *American Journal of Economics and Sociology*, January 1989, 47–54.
- Barth, James R., George Iden, and Frank S. Russek, “Do Deficits Really Matter?” *Contemporary Policy Issues*, Fall 1984, 79–95.
- , ———, and ———, “Federal Borrowing and Short Term Interest Rates: Comment.” *Southern Economic Journal*, October 1985, 554–59.
- Cebula, Richard J., “Federal Budget Deficits and Interest Rates: A Brief Note,” *Southern Economic Journal*, July 1988, 206–210.
- Evans, Paul, “Do Large Deficits Produce High Interest Rates?” *American Economic Review*, March 1985, 68–87.
- , “Interest Rates and Expected Future Budget Deficits in the United States.” *Journal of Political Economy*, February 1987, 34–57.
- Feldstein, Martin and Otto Eckstein, “The Fundamental Determinants of the Interest Rate.” *Review of Economics and Statistics*, May 1970, 363–75.
- Hoelscher, Gregory, “Federal Borrowing and Short Term Interest Rates.” *Southern Economic Journal*, October 1983, 319–33.
- , “New Evidence on Deficits and Interest Rates,” *Journal of Money, Credit, and Banking*, February 1986, pp. 1–17.
- Holloway, Thomas, “The Cyclically Adjusted Federal Budget and Federal Debt: Revised and Updated Estimates,” *Survey of Current Business*, March 1986, 11–17.
- Makin, John, “Real Interest, Money Surprises, Anticipated Inflation and Fiscal Deficits.” *Review of Economics and Statistics*, May 1983, 374–84.

#### **Reply of Professor Alexander\***

I HAVE THREE COMMENTS in reply to the comments of Professor Cebula.

First, I do not think that any formulas could refute the fact that interest rates—whether on mortgages, government notes and bonds, bank certificates of deposit, or virtually anything except credit cards—were lower at the end of the Reagan Administration than they were when it began. This was in spite of the fact that

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