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Crowding Out: An Empirical Note: Reply

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I wish to thank J. Kirker Stephens for pointing out possible shortcomings in my recent paper on “crowding out” [2]. In an effort to provide better insight into the crowding-out phenomenon, I have reformulated my model of investment behavior. In particular, the model now examines the existence of crowding-out in the United States by determining to what degree the proportion of GNP devoted to private investment in new capital was affected by the proportion of GNP devoted to aggregate federal government spending.

The specific model to be estimated is given by

$$(1) \quad I_t/Y_t = \alpha_0 + \alpha_1 G_t/Y_t + \alpha_2 P_{t-1} + \alpha_3 D_t + \alpha_4 \pi_{t-2} + \alpha_5$$

Where α_0 = constant; α_5 = error term; I_t/Y_t = ratio of investment expenditures in new plant and equipment during quarter t to GNP during quarter t ; G_t/Y_t = ratio of aggregate federal government expenditures during quarter t to GNP during quarter t ; P_{t-1} = consumer price index (CPI) during quarter $t-1$; D_t = an index for quarter t of expected versus actual selling prices and retail trade; these data are an indication of the degree to which businessmen’s actual selling prices and retail trade fell below their expected selling prices and retail trade; the data are based upon a Dun and Bradstreet survey of 250 businesses; and π_{t-2} = corporate profit rate after taxes in quarter $t-2$, expressed as a percentage rate of return on stockholders’ equity. The data in this regression cover the period from Quarter 1 of 1969 through Quarter 3 of 1978.

If crowding out does not occur, we would expect, *ceteris paribus*, that the greater the proportion of GNP devoted to federal government spending, the smaller the proportion of GNP devoted to private investment:

$$(2) \quad \partial(I_t/Y_t)/\partial(G_t/Y_t) < 0.$$

The OLS estimation of Equation (1) is given by

$$(3) \quad I_t/Y_t = + 8.946 - 0.072G_t/Y_t - 0.008P_{t-1} - 0.031D_t - 0.011\pi_{t-2},$$

(-2.85) (-5.25) (-4.18) (-2.41)

DF = 34, R² = .78, F-ratio= 29.526

where terms in parentheses are t -values.

The coefficient on variable (G_t/Y_t) is negative and statistically significant at beyond the .01 level. Thus the evidence here strongly supports the crowding-out thesis but indicates that there is only *incomplete* crowding out, as was found in [2]. This evidence of incomplete crowding out is at odds with the extreme monetarist position; the existence of a definite crowding-out effect, however is also at odds with the extreme Keynesian (fiscalist) position. Fiscal policy walks on, but with a slight limp.....

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REFERENCES

1. K. M. Carlson and R. W. Spencer, "Crowding Out and Its Critics", *Federal Reserve Bank of St. Louis Review*, Vol. 57 (December 1975), pp. 2-17.
2. R. J. Cebula, "Crowding Out: An Empirical Note," *Quarterly Review of Economics and Business*, Vol. 18 (Autumn 1978), pp. 119-23.