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THE EFFECTS OF GOVERNMENT DEFICITS:
A COMPARATIVE ANALYSIS OF
CROWDING OUT

CHARLES E. DUMAS



INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY

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The author of this Essay, Charles E. Dumas, is an investment banker at Morgan Guaranty Ltd in London. Previously, after working on taxation, public finance, and fiscal policy for the Conservative Party in Britain and writing for the *Economist*, he served as international economist for General Motors and for Morgan Guaranty Trust Company of New York. He has often commented on taxation and economic issues on British radio and television.

PETER B. KENEN, *Director*
International Finance Section

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INTERNATIONAL FINANCE SECTION
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The Effects of Government Deficits: A Comparative Analysis of Crowding Out

1 Introduction

Economic recovery from a severe three-year recession in the United States and Western Europe is now about two and a half years old. Skepticism is widespread about the possibility of sustained growth in the medium term. The pessimists, whose case this Essay will argue, claim that large government deficits in the United States and Europe will cause interest rates high enough to restrain economic growth, and perhaps even bring on a new recession. Behind this concern lies the view that expansion in the developed economies, except perhaps Japan, can be lasting only if accompanied by a large increase in business fixed investment, inventory building, and probably housing—both absolutely and as a share of GNP. The savings needed to finance such increased investment, however, are being drained away to finance large government deficits.

Individual industrial countries have at various times been able to mitigate a shortage of domestic savings by imports of capital (corresponding to current-account deficits in the balance of payments). But such international flows have not in general been long lasting and have in any case merely reduced the availability of savings domestically in the countries running current-account surpluses. The industrial economies taken together are likely to remain net exporters of capital to the less-developed countries (LDCs), so that current-account surpluses will outweigh deficits.

In the eight quarters from the low point of the recession at the end of 1982 to the last quarter of 1984, real GNP grew at a rapid annual rate of 6.0 percent in the United States; the rate was 5.2 percent in Japan, 2.6 percent in West Germany, and 2.7 percent in Britain. In France, growth was only 1.4 percent, reflecting restrictive economic policies.

Supporters of the policies of the current U.S. administration, which has actively raised the U.S. government deficit, believe that the contrast between rapid growth in the United States and sluggish performance in Europe reflects more than cyclical factors. Vigorous U.S. performance in modern service and high-technology sectors, spurred (it is claimed) by large recent tax cuts, is compared with the constraints imposed on European economies by heavy dependence on government spending, restrictive labor practices, and excessive burdens of social security. On this view, the prolonged 1980-82 U.S. recession represented a necessary correction both of U.S. tendencies in the European direction under previous administrations and of the high infla-

tion that was a partial result. All is now set fair for continued expansion, with the main competition—at least in high-technology industries—coming from the Japanese and other countries in the Pacific Basin. The U.S. government deficit, while regretted, is not thought to threaten economic growth.

That the deficits are unlikely to thwart the recovery in the United States is also a traditional Keynesian view of the present economic situation. Likewise, budget deficits are not blamed for slow European growth. Rather, traditional Keynesians ascribe those deficits to underemployment of resources and believe that they would be largely or entirely eliminated by a move to “high” employment. Heavy borrowing by the government, and high consumption generally, are not thought to be a matter of concern as long as capacity-utilization rates and inflation are quite low. On this view, neither inflation nor interest rates should be unduly raised by rapid expansion, at least for some time. In the United States, these points have to some extent been plagiarized by administration spokesmen supposedly hostile to Keynesian theory.

In Europe, where Germany and some other countries have been making a certain amount of progress in controlling government deficits (especially on a “high-employment” basis), traditional Keynesians tend to treat restrictive fiscal policies as the cause of the recovery’s sluggishness. The debacle accompanying France’s major swing into budget deficits in 1981-83 is explained by observing that such a policy was out of phase with the restrictiveness and recession elsewhere in the industrial world. Japanese economic success, after all, has also been accompanied by significant government deficits.

The main rival macroeconomic theories—the monetarist/supply-side blend adopted by the U.S. administration and traditional Keynesianism—are united in the view that government deficits should not be an obstacle to continued economic growth at this point. But financial markets have been signaling the opposite. Although lower than at their highest levels of the early 1980s, interest rates in the United States and Europe remain very high, and they started to rise again in the United States at an unusually early stage in the recovery. Real interest rates (i.e., after removing the effects of inflation) remain at very high levels (see Table 1 below). Moreover, yields in bond markets worldwide are mostly well above money-market interest rates and have remained so in a growth period, contrary to normal cyclical experience. High and rising real interest rates cannot plausibly be attributed to perversely tight monetary policies, which have their primary impact on money markets.

The contention developed in this Essay is that the main cause of present high real interest rates is a fundamental disequilibrium between the supply of and demand for investable funds. If instead of present real interest rates we were to have historically normal real rates, the sum of demand for investment funds—government deficits, housing, business fixed investment, and inventory building—would exceed the supply of private savings—personal savings

plus business depreciation and retained profits. Hence, abnormally high real interest rates are necessary to establish equilibrium in financial markets. Moreover, high interest rates achieve this equilibrium neither by diminishing government deficits (rather the contrary) nor by stimulating private savings, even in the household sector. Equilibrium has been achieved by forcing levels of housing and business investment (fixed and inventory) below where they would be at more normal real interest rates. The danger is that this will result in inadequate longer-term economic growth and general economic welfare.

A gamut of influences has probably contributed to the slowing of growth during the last fifteen years, and these are touched on in this Essay. But action to reverse the crowding out of private investment by government deficits is a necessary condition for a return to low unemployment with faster growth of productivity and real income. Viewed from the perspective of present vs. future welfare, personal or government consumption must be sacrificed today if disproportionately larger amounts of consumption are not to be sacrificed in the future.

I begin the crowding-out analysis developed here by asking why interest rates are so high. I argue that current capacity utilization is high in relation to that part of the productive apparatus that is economically usable at present costs and prices (section 2).

This inadequacy of existing productive capacity is examined by an international comparative analysis of downward trends in capital formation relative to GNP. Against this I set the increased investment needed to accommodate demographic growth and raise employment, to substitute for much more costly oil and labor, to provide for shifts in the pattern of demand and means of production caused by the high-technology revolution, and to accommodate the effects of regulations and controls on business. To the extent that investment achieves deepening of capital by substituting for high-priced labor, the investment needed to achieve increases in employment—capital broadening—represents a doubling-up of the demand for capital (section 3).

The downswing of business investment in 1974-79, the first-round result of falling economic growth and business profitability (together with the psychological deterrents of the oil shocks, inflation, and widespread antibusiness sentiment), made a sharp recovery of business investment all the more imperative for economic health in the 1980s. In the event, investment has declined further (even allowing for its recent recovery) and is unlikely to be fully revived without a removal of government deficits. These deficits are examined in the context of the overall generation of savings in the five major industrial economies (section 4).

After a look at the impact of international flows of capital and exchange-rate changes (section 5), I explain why the monetarist/supply-side and traditional

Keynesian theories and prescriptions do not adequately meet the present situation. The fiscal retrenchment required for a return to satisfactory medium-term economic growth is estimated to vary between 2½ and 5½ percent of GDP in the United States and the major three European economies. Such retrenchment will have only a slight short-term restraining effect on growth; the lower interest rates made possible by such a policy will quickly bring forth currently pent-up investment. Increased investment by itself may not be enough to restore satisfactory growth and high levels of employment over the long term. If a return to normal real interest rates and higher rates of net business investment does not adequately revive economic growth, or if such lower real interest rates do not result in the needed stimulus to investment, that will be the time to take additional policy measures (section 6).

The Essay concludes with a survey of the severe risks associated with continuation, even for a short while, of present levels of government deficits.

2 The Case for the Crowding-Out Analysis

Why Are Real Interest Rates So High?

Explanation of the abnormally high level of interest rates in relation to recent inflation lies at the heart of the crowding-out analysis. In most countries, interest rates on short-term money-market instruments and Treasury bills were only about 1 to 2 percent above the rate of inflation in the twenty years between 1953 and 1973 (Table 1). For government bonds, real yields were typically about 1 to 4 percent. They were even lower in the 1970s than in the 1950s and 1960s. But around the turn of the decade, real interest rates moved up sharply, and they have been at or near record highs since the end of the prolonged recession of 1980-82.

Why did real interest rates move down and then up so sharply? The answer seems to lie in motives for private business investment. It illustrates the two-way causality whereby business investment may be affected by the level of real interest rates (both directly and through the effect of the rates on overall demand and output), while the level of real interest rates is simultaneously affected by the strength of business investment. While high interest rates were necessary to choke off potentially strong private business investment (and also housing) in recent years, it is government deficits in combination with a strong private propensity to invest, rather than by themselves, that have been the cause of high interest rates, in a context of "inadequate" savings (except in Japan).

The chief reason for low real interest rates in 1974-79, on the crowding-out approach, was a low private-sector propensity to invest. The downswing in the growth of output and demand and in business profitability mainly explain

TABLE 1
REAL INTEREST RATES, 1954-85
(in percent)

	U.S.	Japan	Germany	France	Britain
Short-term rates:					
1954-63	2.6 ^a	9.6 ^b	3.4	4.1	4.1
1964-73	5.6	7.1	5.3	6.2	6.5
1974-79	7.7	7.7	5.1	9.2	10.3
1980-84	12.3	7.6	8.0	13.3	11.7
April 1985	8.3	6.1	5.7	10.5	12.4
Government bonds (medium-term):					
1954-63	3.6	n.a.	6.4 ^c	5.3	5.3
1964-73	5.6	7.0 ^d	7.5	6.6	8.1
1974-79	8.3	8.0	7.7	9.5	13.6
1980-84	12.4	8.0	8.7	14.0	12.6
April 1985	11.6	6.7	7.3	12.0	10.4
Increase in consumer spending deflator p.a.:					
1954-63	1.7 ^a	3.8 ^b	1.9 ^c	4.2	2.6
1964-73	3.5	6.0 ^d	3.6	4.7	5.5
1974-79	7.4	9.4	4.7	10.4	15.5
1980-84	6.3	3.6	4.4	10.8	9.3
April 1985 ^e	3.6	2.0	2.5	6.5	6.9
Real short-term rates:					
1954-63	0.8 ^a	6.0 ^b	1.5	0.0	1.5
1964-73	2.2	1.3	1.8	1.6	1.1
1974-79	0.6	-1.3	0.5	-0.7	-4.2
1980-84	5.6	3.9	3.4	2.3	2.2
April 1985	4.5	4.0	3.1	3.8	5.1
Real long-term rates:					
1954-63	1.9	n.a.	4.1 ^c	1.1	2.7
1964-73	2.1	0.8 ^d	3.8	1.8	2.6
1974-79	1.0	-1.3	2.9	-0.8	-1.2
1980-84	5.7	4.2	4.1	2.9	3.0
April 1985	7.7	4.6	4.7	5.2	3.3

^a 1955-63; corresponding increase in consumer spending deflator was 1.8 percent.

^b 1957-63.

^c 1956-63; corresponding increase in consumer spending deflator was 2.2 percent.

^d 1966-73; corresponding increase in consumer spending deflator was 6.2 percent.

^e 12-month increase in CPI.

SOURCE: Interest rates from the IMF's *International Financial Statistics* (IFS). Consumer-price inflation from OECD, *National Income Accounts of Member Countries* (NIA), IFS, and national sources.

NATIONAL SOURCES: U.S., *Survey of Current Business*; Japan, Ministry of Finance publications; Germany, *Statistisches Bundesamt* and Bundesbank; France, Institut National des Statistiques et Etudes Economiques; Britain, Central Statistical Office.

this. Less tangible discouragements to business investment in 1974-79 were the psychological effects of the first oil shock (which was rightly, if vaguely, perceived as a watershed), the widespread antibusiness climate of public opinion, and the disturbing increase in inflation. Antibusiness sentiment contributed to a range of regulations and controls (varying in style across countries) that tended to restrain business freedom of action and management prerogatives, often in a much more obstructive form than was needed to achieve the declared regulatory goals. Probably more directly important was the effect of wage behavior: there was a massive increase in the ratio of wages to GNP in the period until the mid-1970s. Not only did this stimulate inflation, but it contributed directly to lower profitability, especially by making actual profits very vulnerable to the slowdown in growth that followed the first oil crisis. However, this wage behavior was itself encouraged by antibusiness sentiment.

Because of these discouragements to business investment, the increase in government deficits in 1974-79—large in Japan and most of Europe if not the United States—did not crowd out private investment and thereby cause high real interest rates. Moreover, the OPEC current-account surplus also offset the effect of budget deficits in 1974-79, permitting the industrial countries to import capital to finance their current-account deficits. Private savings remained relatively stable except in Britain, where they rose sharply.

Most of these downward influences on real interest rates were reversed during the early 1980s. After the second oil-price shock, high oil and labor prices tended to encourage cost-saving investment, despite lower economic growth. For many businesses, such investments became necessary for survival or at least for the avoidance of further decline. Low growth also helped to depress oil demand; together with rapid growth in OPEC imports, this has switched OPEC from surplus to deficit. Investment demand must now be met from industrial-country savings. Slow growth has constrained government revenues and further boosted social-security spending on unemployment, tending to enlarge government budget deficits. In some countries, especially the United States, budget deficits have been stimulated by discretionary tax cuts and spending increases. The business sector is aware of the need to put right the shortfall of investment in 1974-79, but government deficits are diminishing the flow of funds to investment. High real interest rates reflect the need for a large shift from private and public consumption to saving and investment. They also suggest that this need is matched by the will to invest; otherwise, real interest rates would decline.

Another possible explanation for high real interest rates is that monetary policies are particularly tight in the industrial countries, but there are three major reasons for doubting this explanation. First, except in Britain, there is a significant positive gap between bond-market yields, which are compara-

tively unaffected by monetary-policy actions, and money-market yields, which are directly affected. This suggests that monetary policy is hardly an upward force on interest rates generally. Second, real interest rates did not reach their present high plateau at the point when monetary policy was generally considered to be causing deflation (late-1979 to mid-1982) but only in the subsequent period of cyclical recovery. Third, this recovery has been associated with a switch to an accommodative monetary policy, reflected in the change from negative to positive real monetary growth in most countries. Indeed, monetary growth is near or above the top of the target bands, not lower as might be expected during a tight-money period (see Table 2). (In France, the target bands are ambitious in relation to the last few years' inflation and to actual money growth; monetary policy is quite tight. In Britain, an expanding government deficit and buoyant private demand have raised monetary growth well above target, forcing up short-term interest rates.) Even some Keynesian economists, who have in the past attributed high interest rates to tight monetary policy, are adapting Keynesian analytical methods to support the crowding-out analysis (e.g., Rivlin, ed., 1984).

The supply-side/monetarist school of thought relies mostly on inflationary expectations to explain current high interest rates. On this approach, current interest rates are not high in relation to prospective inflation. (Some supply-siders—in common with traditional Keynesians—also maintain that mon-

TABLE 2
INFLATION EXPECTATIONS AND MONETARY INDICATORS
(in percent)

	U.S.	Japan	Germany	France	Britain
April 1985 bond yields	11.6	6.9	7.3	12.0	11.4
1954-73 real bond yields	2.0	0.8	3.9	1.5	2.6
Implied inflation expectation	9.4	6.1	3.3	10.3	8.6
12-month increase in CPI	3.6	2.0	2.5	6.5	7.0
Differential	5.6	4.0	0.8	3.6	1.5
Monetary growth:					
Indicator	M2	M2	M3	M2	M3
Dec. 1982 to Dec. 1984	10.1	7.5	5.7	9.6	10.4
1985 target	6-9	8	3-5 ^a	4-6	5-9
12-month actual to April 1985	8.1	7.7 ^b	5.0 ^c	8.2 ^c	12.6

^a Germany's targeted variable is central bank money.

^b To March 1985.

^c To February 1985.

SOURCE: Morgan Guaranty Trust economics departments (MGT) and national sources.

etary policy is tight.) Clearly, such expectations can have a role only in explaining bond yields; they have little relevance to short-term interest rates, whose high real level therefore requires further explanation. In the United States, a comparison of 1954-73 real government-bond yields, which averaged about 2 percent, with current nominal bond yields of about 11.5 percent, implies that the bond market expects the inflation rate to be 9 to 9.5 percent. This is well above the average inflation rate for the last ten years, a period that included two major oil-price shocks. It is hard to believe that these are typical financial-market expectations. While inflation may have been promoted from an underrated menace in the 1970s to an overrated problem in the 1980s, typical public comment points to a belief that the reduction in inflation from earlier levels has been one of the achievements of recent years. Longer-term economic forecasts tend to envisage inflation in the 5 to 6 percent region. Of course, the size of government deficits might result in an excessive stimulus to demand, causing people to expect rising inflation. But that would hitch the expectational argument to the crowding-out analysis, leaving the policy conclusion unaltered, and would also imply the view that monetary policy is or will be lax.

Can one believe that monetary policy is loose or will be loosened in the United States and Europe? Again, taking the United States as the most extreme case, a projection of 9 to 9.5 percent inflation plus 4 percent real growth (excluding crowding out as the explanation of high interest rates) implies a projection of 13.5 percent growth in the broad monetary aggregates, whose velocity is not subject to a steep upward trend. Yet the current target of 6 to 9 percent for M2 is being achieved, as is the target for M3, although M1 is above target. Furthermore, monetary growth is as high as it is now because demand for credit by the public sector is high, spurred by the budget deficit. Without this deficit, total monetary growth could be lower even with lower interest rates and faster growth of private-sector credit linked to faster growth of business investment, housing, and demand for consumer durables.

While the argument here has been based on U.S. statistics, a similar relationship exists in Europe and Japan among real bond yields in the past, the implied inflationary expectations embodied in present bond yields, past inflation averages, and the targets for, and performance of, monetary growth (see Table 2).

Another suggested cause of present high real interest rates, tangential to these macro theories, involves the recent worldwide wave of financial innovation. An increase in the range and sophistication of financial instruments available to savers has lessened the access of banks to free or low-interest deposits, putting upward pressure on lending rates. It is hard to believe that this accounts for real interest rates so far above historical norms, though it may have had a minor influence. Free or low-interest deposits continue to finance

a portion of the total volume of gross indebtedness of industrial economies (including bonds, mortgages, government debt, etc., as well as bank loans). This portion has fallen, but not to zero, and the change has been smallest in the continental European economies and Japan, where dependence on bank financing is greatest. Moreover, financial innovation has generated increased efficiency and competition and novel lines of business in banking, so that smaller gross margins yield adequate net profits and higher interest rates on deposits do not spill over fully into lending rates.

A variant of the argument is that, because of deregulation, interest rates must now do the work once done by constraints on the supply of credit. But formerly those constraints would presumably have driven corporations to the bond and equity markets and individuals to greater reliance on unconstrained home-mortgage finance. The structure of rates would have been affected, especially the yield curve, without an effect on the general level of interest rates. Yet the yield curve was not significantly steeper than now.

Another suggested reason for high real interest rates in the United States, and to a lesser extent in other countries, is that interest received is taxable and interest paid is tax deductible. On this view, after-tax interest rates are the chief issue, and these are clearly lower than pretax rates in nominal and real terms. However, this tax effect is not new and does not explain the increase in real interest rates. Even on an after-tax basis, the rise in real interest rates has been significant. Moreover, it is important to remember that only the corporate sector is taxed at up to 50 percent marginal rates. Rich individuals have usually been able to avoid high marginal rates (which have been lowered in any case over the past few years in the United States and Britain); home-mortgage borrowers typically face lower marginal tax rates; the government as borrower and many institutional investors, especially pension funds, are essentially unaffected by taxes.

The Inadequacy of Productive Capacity

While 100 percent utilization of capacity is generally recognized as being impossible, it could be argued that present rates of utilization—80 percent and more in the United States and Germany—do not represent the “ceiling” at which rapid growth in investment becomes vital to increase industrial production. It would follow that growth could proceed for a while without a higher share of net business fixed investment in GDP, in which case it would be possible to finance government deficits from private savings at reasonably low real interest rates.

The crowding-out hypothesis, however, is that the present productive capacity of Western economies is inadequate. Business fixed investment in equipment, though not in buildings, began to grow at the very start of the recovery (not with a lag, as is usual) and as fast or faster than consumption and

TABLE 3
 INVESTMENT PERFORMANCE IN RECOVERIES: REAL GROWTH IN FIRST RECOVERY YEAR
 (in percent)

	<i>GDP</i>	<i>Equipment Investment</i>	<i>Difference</i>
U.S.:			
1971	3.1	-0.6	-3.7
1976	4.9	5.4	0.5
1981	3.0	3.4	0.4
1983	3.3	4.9	1.6
Japan: ^a			
1972	8.8	6.7	-2.1
1975	2.4	-5.5	-7.9
Germany:			
1968	5.9	7.0	1.1
1976	5.5	6.5	1.0
1983	1.3	6.1	4.8
France:			
1976	5.2	9.4	4.2
1982	2.0	-0.4	-2.4
Britain:			
1972	2.5	-0.2	-2.7
1976	3.7	1.9	-1.8
1982	2.3	7.5	5.2

^a Japan had no recession in the early 1980s.

SOURCE: NIA and national sources.

final sales generally, except in France (see Table 3). This strong response to the decline in interest rates in late-1982 (earlier in Britain) indicates the need and potential for larger investment should interest rates be brought down to more normal real levels. Businessmen see the need for rapid increases in capacity even though measured utilization rates are not high. By implication, a reduction in real interest rates would lead to even more vigorous growth of investment. Yet interest rates remain very high. The result will probably be frustration of investment potential. We can therefore expect a more than usually serious mismatch between actual productive capacity and what is needed to satisfy demand and provide high employment in the industrial economies, together with a less than full adjustment of existing capacity to the changes in costs and prices of the last ten to fifteen years.