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DEFICITS AND THEIR DISAPPEARANCE?

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ABSTRACT

This paper looks again at the U.S. deficit debate of the 1980s, this time with the benefit of the Commerce Department's newly revised data for that period and also in light of the experience of the 1990s when sizeable budget surpluses replaced chronic large deficits. The familiar conclusion that sustained government deficits at full employment depress private capital formation has stood up well in both regards. By contrast, the more recent experience in particular has sharply contradicted any simple notion that the government balance and the current account balance move in parallel. Other relevant issues include the equilibrium (that is, noninflationary) unemployment rate, the response of private saving to government dissaving, and the role of debt and equity in financing private capital formation.

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Robert Eisner was a forceful and tireless advocate for the kind of economics, and, importantly, the kind of economic policy, that he thought right. In his mind the two were largely the same. To Bob, the point of economic theory and empirical analysis was to further the ability to shape public policy in the interest of the working men and women who comprise the vast majority of the nation's citizens. Economics that did not somehow bear on practical questions of public policy was at best suspect, and more likely irrelevant. At the same time, economic policy initiatives that lacked firm underpinnings in theory and evidence were likely to prove at best misguided and possibly counterproductive. The commitment and integrity that Bob brought to his work on economics and economic policy — indeed, the sometimes surprising ferocity from such a gentle man — should stand as a model for serious scholars in our discipline.

That said, I disagreed with Bob Eisner on a significant matter of both economics and economic policy. The issue on which we differed was what to think about the historically large budget deficits that the U.S. Government ran in the 1980s and for some years into the 1990s, and what, as a matter of public policy, to do about them. Earlier, in the mid 1970s, we had both

argued that the deficits the government ran in the immediate post-OPEC years need not be cause for concern. Bob, in his pioneering work with Paul Pieper, showed that under a proper accounting, crucially including allowance for the implications of the rapid price inflation of that time, the deficits the government was then running were not so large after all and might even be surpluses. I focused instead on the country's available unused economic resources, arguing that below full employment the much discussed "crowding out" of investment attributed to the effects of government borrowing might even be "crowding in." But by the mid 1980s inflation had slowed and the American economy had returned to conventional full-employment benchmarks. And at that point our respective views on the deficit question diverged.

The end of the 1990s is an appropriate time to review these issues (in Bob's absence, sadly) for two reasons. First, as remarkable as the deficits of the 1980s and early 1990s were, since then their disappearance and the emergence instead of sizeable surpluses have comprised an even more remarkable fiscal phenomenon. And second, the Commerce Department has only just completed a major revision of the U.S. national income and product accounts, including changes in the saving and investment concepts that are central to any debate over how government budget imbalances affect economic activity. The object of this paper is therefore both to review and to extend the "deficit debate," looking once again at the experience of the American economy under large deficits but also considering the new developments that have emerged as the deficit has disappeared.

Deficits into Surpluses, and the Fin de Siecle Expansion

On at least one question, Bob Eisner has proved right and most of the rest of the American economics profession wrong. Perhaps the easiest way to reconcile Bob's ready acceptance of the Reagan-era deficits with the opposition of so many economists who in other respects thought the way he thought is to say that they (we) assumed the American economy was fully employed and he didn't. In one sense — perhaps the most important sense — it is to Bob's credit that he was never satisfied to consider a measured unemployment rate of, say, 6% as "full employment." In his view that meant accepting the inevitability of some six million men and women (today it would be more) failing to find work, a situation that he found morally repugnant. If the 6.1% unemployment that the United States maintained on average during 1985-90, for example, were known to have been well above the corresponding "full employment" rate, then many economists who viewed the deficits of that time with alarm would have had a more benign prospect.

The question at issue here is not, of course, how many potential workers one should want to see jobless, but rather how to think about the role of macroeconomic policy. If "full-employment unemployment" (or in the more precise phrase coined by Franco Modigliani, the "non-accelerating-inflation rate of unemployment") was 6%, as Robert Gordon and many others maintained, then further stimulating aggregate demand for goods and services by any means — fiscal, monetary, whatever — would only have led to renewed inflation. The laudable goal of putting more willing Americans to work was therefore a task for labor market reforms, or training programs to enhance workers' skills, or perhaps basic education, but in any case not stimulative macroeconomic policy. Further, with the economy's resources already fully employed, either

government spending programs or tax cuts that spurred consumption necessarily drew resources away from some other application, like domestic investment or production for export, or else forced higher imports, and more probably did both. By contrast, if full-employment unemployment were well below 6%, increased government spending and reduced taxes that spurred demand and thereby created jobs would not have been inflationary. And fiscal stimulus need not have crowded out investment, and might even have crowded in some.

The discussion below re-examines the 1980s from the perspective of just these questions. But it is worth recognizing at the outset that unemployment in the United States has now fallen to levels far below what not long ago most economists other than Bob Eisner thought, with high confidence, would prove inflationary. The widely cited 1997 paper by Douglas Staiger, James Stock and Mark Watson, for example, concluded by highlighting economists' empirical ignorance about the level of "NAIRU," arguing in effect that it could lie anywhere within a three percentage point range. But that range was 5-8% of the labor force. Yet the U.S. unemployment rate moved to 4.9% in 1997, 4.5% in 1998 and 4.2% in 1999, and as yet there has been no visible acceleration in any major recognized price index.

As many economists have now argued (for example, Robert Gordon and Lawrence Katz), this highly welcome development of the mid to late 1990s need not be inconsistent with the more pessimistic macroeconomic view of a decade and more ago. Under that view it would take microeconomic changes to push full-employment unemployment lower, and many such changes have in fact occurred. The rapidly expanding literature of this subject has pointed to developments like the growing role of temporary employment agencies, the new fungibility of the set of basic skills needed to use a personal computer keyboard, the rising U.S. prison population,

the declining power of trade unions, the eroding real level of the legal minimum wage, and so on. Evaluating these and other potential explanations for the happy economic results of the late 1990s lies beyond the scope of this paper. But the fact remains that by now unemployment has for some years remained well below what used to be conventionally accepted full-employment benchmarks, with no sign of greater inflation. Bob Eisner would surely not have been surprised.

By contrast, what would have surprised Bob Eisner — and this goes to the heart of the argument over the role of government budget imbalances — is that the rapid economic growth that has brought unemployment to this low level has occurred not only without a fiscal deficit but with a growing surplus in the U.S. Government's consolidated accounts. A constant theme in Bob's writing on this subject was the claim that fiscal deficits were not only not harmful but actually necessary to achieve full employment. In effect, his view was that no successful and lasting economic expansion could occur without positive fiscal stimulus. Implicitly, and sometimes explicitly, this view amounted to rejecting the efficacy of monetary policy with respect to real economic activity. In contrast to the conventional notion that there are two forms of potential macroeconomic policy stimulus, fiscal and monetary, such that either can be sufficient to spur an underemployed economy to full employment, Bob in effect thought that for this purpose only fiscal policy mattered. The evidence of the mid to late 1990s has plainly run the other way.

The turnaround in the U.S. Government's fiscal position in the 1990s has been perhaps the most remarkable shift in fiscal policy observed in this country's history apart from the immediate consequences of major wars. In the 1992 fiscal year, the government's unified deficit was \$290 billion, or 4.7% of U.S. gross domestic product. In fiscal 1999 the government ran a unified surplus of \$123 billion, or 1.4% of GDP. Calculated by the Congressional Budget Office on a

standardized employment basis, to eliminate the endogenous effects of recession and recovery on both taxes and spending, the budget moved from a deficit equal to 3.0% of potential GDP in 1992 to an even balance in 1999. Moreover — and this is the main point — through the course of this fiscal turnaround the American economy's real growth averaged a robust 3.7% per annum over the seven years 1993-99.

How about investment, the particular focus of so much of the debate over the impact of fiscal imbalances in the 1980s? Here too, the evidence is broadly consistent with the view that connects deficits at full employment (although, again, what is full employment in the 1990s?) with crowding out of domestic investment, and the elimination of full-employment deficits with a relaxation of constraints on investment.

Contrary to the fears repeatedly voiced by critics of the 1990 and 1993 tax increases that were a significant part of the story of the 1990s fiscal turnaround (for example, Martin Feldstein), business fixed investment has grown more rapidly than any other major component of U.S. aggregate demand. From 1993 through 1999, real investment in plant and equipment expanded on average by an astonishing 9.8% per annum, compared to 3.7% for real GDP overall. So much for the idea that modestly higher marginal tax rates on upper-income individuals would so blunt incentives as to throttle investment.

Further, the rise in the American economy's gross investment rate implied by this sharp difference in the respective growth rates of investment and GDP in the mid to late 1990s also carried over to net investment, which presumably matters more for enhancing productivity and therefore long-run economic expansion. The lowest rate of net investment in plant and equipment (as a share of GDP) recorded in the nearly four decades spanned by the Commerce Department's

revised data series, just 1.5%, occurred in 1992. To be sure, the investment rate usually drops during and immediately after business recessions, and the 1990-91 recession was no exception in this regard. But as Figure 1 shows, the decline in investment experienced even in the wake of recessions far more severe than that of 1990-91 never approached such a low level. In 1975 and 1976 net investment declined to 3.1% of GDP. In 1983 the low point was 3.0%. It is difficult to avoid the inference that the far larger full-employment deficit that the government ran before, during and after the 1990-91 recession was at least partly responsible for the record low net investment rate.

More importantly, as Figure 1 also makes clear, net investment as a share of GDP has recovered sharply since 1991 as the deficit has disappeared. Indeed, by 1998 net investment had risen to 4.0% of GDP, identical to the 1961-80 average. And when net investment data for 1999 become available, they will probably show yet a further increase. (Gross investment in plant and equipment in 1999 was 13.7% of GDP, versus 12.6% in 1998, and it would be unusual for capital consumption to have increased this sharply relative to GDP in just one year.)

Some Puzzles Posed by the Expansion

The comovements among budget deficits or surpluses, overall economic growth, and growth in both gross and net investment during the 1990s have been broadly consistent with the basic relationships to which critics of the Reagan deficits pointed. Even so, the experience of these years raises several interesting puzzles that should preclude any tendency toward complacency among macroeconomists.

First, most of the concerns expressed over the outsized deficits of the Reagan-Bush era reflected the belief not only that large deficits at full employment crowd out investment but also that investment in factories, machinery, office equipment and the like — that is, increments to the economy's stock of physical capital — are an important ingredient to productivity growth. And yes, at a broad-brush level, the rapid expansion of investment in the 1990s has gone along with a welcome increase in America's productivity growth. Productivity has advanced especially rapidly thus far during the second half of the decade: in the nonfarm business sector, 2.6 % per annum on average during 1996-99.

But the growth of employment during the economic expansion of the 1990s has also been unusually rapid, so much so that real physical capital per worker has declined. According to the Commerce Department's latest capital stock data — which, perhaps importantly, do not yet reflect the latest benchmark revisions of the NIPA investment data — the amount of capital for each worker in the economy's nonfarm business sector peaked at \$82,600 (measured in 1997 dollars) in 1992. The capital-labor ratio then fell in each of the next three years, reaching \$81,100 in 1995. Small increases since then have brought the amount of capital for each worker back only to \$81,900 in 1997 (capital stock data for 1998 or 1999 are not yet available as of the time of writing). Yet this period of unincreasing capital intensity has seen the best productivity performance in years.

One popular interpretation of these facts would be that in the "new economy" physical capital matters less than either human capital or the stock of knowledge that is embodied in neither machines nor labor. An alternative interpretation would point out that different vintages of physical capital embody different technologies, and go on to emphasize the role of rapidly

expanding gross investment in increasing the intensity of up-to-date capital even as rapidly expanding labor input is eroding the intensity of older capital. Evaluating these and other possible explanations for these particular facts at hand lies beyond the scope of this paper. But the fact of rapid productivity growth in the face of a declining overall capital-labor ratio (at least on the currently available capital stock data) is a flag of caution against too readily concluding that all of the events of the 1990s have affirmed the assumptions underlying the standard argument against large deficits in the 1980s.

Second, the decline of private saving in the 1990s raises anew the question of whether, as suggested long ago by David Ricardo and forcefully articulated in modern times by Robert Barro, individuals take account of the implications of government borrowing for future debt service obligations and hence future taxes, and adjust their own consumption-saving behavior in response. As Figure 2 and Table 1 show, in the 1980s U.S. private saving rates did not rise on average and even fell somewhat, thereby contradicting the Barro-Ricardo prediction of what would happen in response to the widening budget deficit. But the continued and much sharper decline of private saving in the 1990s, as government dissaving has given way to government saving, is consistent with the Barro-Ricardo equivalence proposition. And if this proposition is correct, then swings in the government budget due to tax changes need not affect the economy's saving-investment balance at all (they might do so if marginal tax rates changed, but that is a different matter), and budget swings due to changes in government spending would matter but in a different way.

It is far too soon to embrace such a conclusion. Private saving moves in response to many forces apart from government saving or dissaving, whether the Barro-Ricardo proposition is true or not. Indeed, much of the literature of this subject over the past decade and more has been

devoted to parsing out the effects of such other influences in the 1980s, to see if Ricardo equivalence might have been at work after all. (A concise but fair summary of the answer is no.) Especially for the period since private saving began its most precipitous decline, in 1993, the obvious influence to which to point is capital gains. Not only have equity prices risen extraordinarily during these years, but under the Commerce Department's new measurement concepts all such gains — even those distributed in cash by mutual funds, which most shareholders probably see as indistinguishable from cash dividends — are excluded from income and hence from saving as well. But this situation too represents a challenge for new research in the field.

Third, and somewhat apart from the gross mechanics of the economy's saving-investment balance, the growing role of equity inflows in the financing of American business in the 1990s raises once again the old question of whether interest rates are a useful guide to the influence of fiscal and monetary policies on investment. The simplest way of explaining the market mechanism by which aggregate saving and aggregate investment are brought into equality — the version of the story that, in one form or other, appears in most macroeconomics textbooks — centers on the negative interest elasticity of investment. Years ago, however, James Tobin showed that interest rates need not be decisive in this context if investment relies on equity finance and debt and equity instruments have different risk properties so that asset holders regard them as imperfect substitutes.

The American investment boom of the 1990s has occurred in the presence of a disappearing federal government deficit but also at a time of historically high real interest rates. During 1993-99 long-term Treasury bond yields averaged 4.66% above the average percentage

increase in the GDP chained price index, and the corresponding differential for Baa corporate bonds was 6.11%. For high-grade debt instruments, these are high real returns by U.S. postwar standards. (At the time of writing the stated real yield on inflation-protected long-term Treasury bonds was 4.28%.) But especially in sectors of the economy that are driven by new technology, the 1990s have also seen a surge in new stock offerings as well as an enormous flourishing of America's venture capital industry. Has Tobin's three-asset model finally become essential for understanding the U.S. economy's investment process?

A Look Back at the 1980s with the Newly Revised NIPA Data

In light of the Commerce Department's just-completed benchmark revisions of the U.S. national income and product accounts, it is also worth while to look once again at the basic magnitudes at issue in the 1980s deficit debate. Do previous conclusions on the major questions at issue still hold up? In short, yes.

As the decade averages presented in Table 1 show, all forms of U.S. net private domestic investment fell as a share of GDP in the 1980s compared to the 1960s and 1970s: net investment in plant and equipment, net residential construction, and accumulation of business inventories. Moreover, as is clear from Figure 1, especially for plant and equipment the decline in the investment rate continued throughout the decade, so that comparing the 1980s average to the 1970s average far understates the magnitude of the decline during this period. Even leaving aside the recession year 1990, the 2.7% net investment rate for both 1987 and 1988, and just 2.8% in 1989, were at that time the lowest levels recorded in more than a quarter century. (Similarly, comparing the 1990s average to that of the 1980s completely misses the sharp revival that began in

1993.) The Commerce Department's various redefinitions of capital and investment — for example, including computer software — slightly raised the average investment rate in each decade, but did not alter the basic conclusion that net investment shrank as a share of GDP as the deficit widened. Nor was it true that Americans invested less in factories and machinery because they were investing more in housing for a growing population. The share of GDP devoted to net residential construction declined as well in the 1980s.

Next, a useful point frequently made by Bob Eisner is that private investment is not the only kind of potentially productive capital formation. The highways, airports, seaports and research laboratories built and maintained directly by government are also part of the nation's capital stock. As some economists have argued (for example, David Aschauer), there is evidence for the United States showing that, at the margin, publicly provided capital may be just as effective in enhancing the economy's productivity as that provided by the private sector. Bob often made this point by asking (rhetorically) what harm is done, even if deficit financing does crowd out private investment, if the purpose of the deficit is to finance public investment.

A decade ago the national income and product accounts did not include government investment as an expenditure category distinct from other government spending. Newer data do, and so it is now straight forward to address this issue in ways that were not then possible. As Figure 3 shows, the share of GDP devoted to net investment by the federal government did rise during the 1980s. But that increase was small compared to the decline in the U.S. net private investment rate — see again Figure 1 — and it was especially small compared to the enlargement of the federal deficit. The increase in federal investment was hardly the main story of how the Reagan deficits occurred. (Moreover, as Treasury expenditure data showed at the time, much of

the physical capital formation that the federal government undertook in the 1980s was for defense installations. The share of federal spending that went into gross nondefense capital formation declined.)

Third, the Commerce Department's various conceptual redefinitions of the relevant income and saving data -- most importantly, the inclusion in personal income of additions to state and local government employees' retirement funds -- now make the 1980s decline in net personal saving, and therefore in overall net private saving, look more modest than it did before. In the revised data personal saving is consistently greater in every year, but the difference is not uniform across time. The old data showed net personal saving as a percentage of GDP rising from 5.3% on average in the 1960s to 5.8% in the 1970s, and then falling to just 4.8% in the 1980s. By contrast, as Table 2 shows, according to the new data net personal saving rose from 5.9% of GDP on average in the 1960s to 6.9% in the 1970s and then fell, but only to 6.5, in the 1980s.

Although the relevance of both corporate and state-local government pension accumulations to personal saving behavior is well known in the literature, for those who prefer to look simply at the personal saving data alone the contradiction of the Barro-Ricardo equivalence proposition in the 1980s, while still apparent, is now less sharp. (The new data show a slightly greater drop in net corporate saving from the 1970s to the 1980s, and so the difference that the revision makes for private saving overall is slightly less than for personal saving alone.)

Finally, nothing in the new data revision has affected the conclusion that a major part of the "crowding out" due to the Reagan-era deficits appeared in the economy's international sector. One of the biggest surprises of the 1980s for many economists was the extent to which, as Figure 4 shows, the American economy was able to cushion the federal deficit's absorption of domestic

U.S. saving by drawing on saving done by foreigners, as the United States switched from a capital exporting country to a capital importer — in other words, from positive to negative net foreign investment. Viewed from a real rather than financial perspective, what happened was that the U.S. economy ran a trade deficit and thereby turned to foreign production to allow it to consume and invest in excess of what it could produce domestically, and hence, on net, borrowing from the rest of the world rather than lending to it. In the process, America quickly went from the world's largest creditor country to the world's largest debtor.

One of the most interesting developments of the late 1990s, as Figure 4 also shows, is the reappearance of a large negative net foreign investment balance just as the federal deficit has given way to a surplus. While the 1980s showed that the United States is a sufficiently open economy that under some circumstances a budget deficit can crowd out the foreign sector too, the 1990s has put firmly to rest any naive version of the “twin deficits” view of the effects of government imbalances.

Concluding Remarks

The facts change from one decade to the next — that is part of what makes economics so endlessly fascinating — but many of the questions that economists put to those facts remain. They do so both because the analytical issues that these questions involve are interesting in themselves and also because they bear on perennial matters of public policy import. Bob Eisner knew that. He would have enjoyed debating the issues that the new developments of the 1990s, and the new view of the 1980s provided by revised data, have thrown up to us. I suspect that he

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would have disagreed with part, maybe even much, of what I have written in this paper. I am sorry he is not here to say so.

TABLE 1

U.S. NET SAVING-INVESTMENT BALANCE, 1960-1998

	<u>1961-70</u>	<u>1971-80</u>	<u>1981-90</u>	<u>1991-98</u>
<u>Total Net Investment</u>	11.1%	9.6%	6.1%	5.0%
Private Domestic	8.0	8.1	6.4	5.2
Plant and Equipment	3.9	4.1	3.4	2.6
Residential Construction	3.1	3.4	2.6	2.2
Inventory Accumulation	1.0	0.7	0.4	0.5
Government	2.4	1.2	1.4	1.0
Federal	0.4	(0.1)	0.4	0.1
State and Local	2.0	1.3	0.9	1.0
Net Foreign	0.6	0.2	(1.7)	(1.2)
 <u>Total Net Saving</u>	 10.7%	 8.5%	 5.6%	 4.7%
Private	9.7	9.8	8.8	7.0
Personal	5.9	6.9	6.5	4.5
Corporate	3.8	2.9	2.3	2.5
Government	1.0	(1.2)	(3.2)	(2.3)
Federal	0.1	(1.9)	(3.5)	(2.5)
State and Local	0.9	0.6	0.3	0.2

Notes: Data shown as percentages of gross domestic product.
 Total saving and total investment differ because of statistical discrepancy.
 Detail may not add to totals because of rounding.
 Source: National Income and Product Accounts (revised 1999).

Figure 1: Federal Deficit/Surplus and Net Investment, 1959-1998

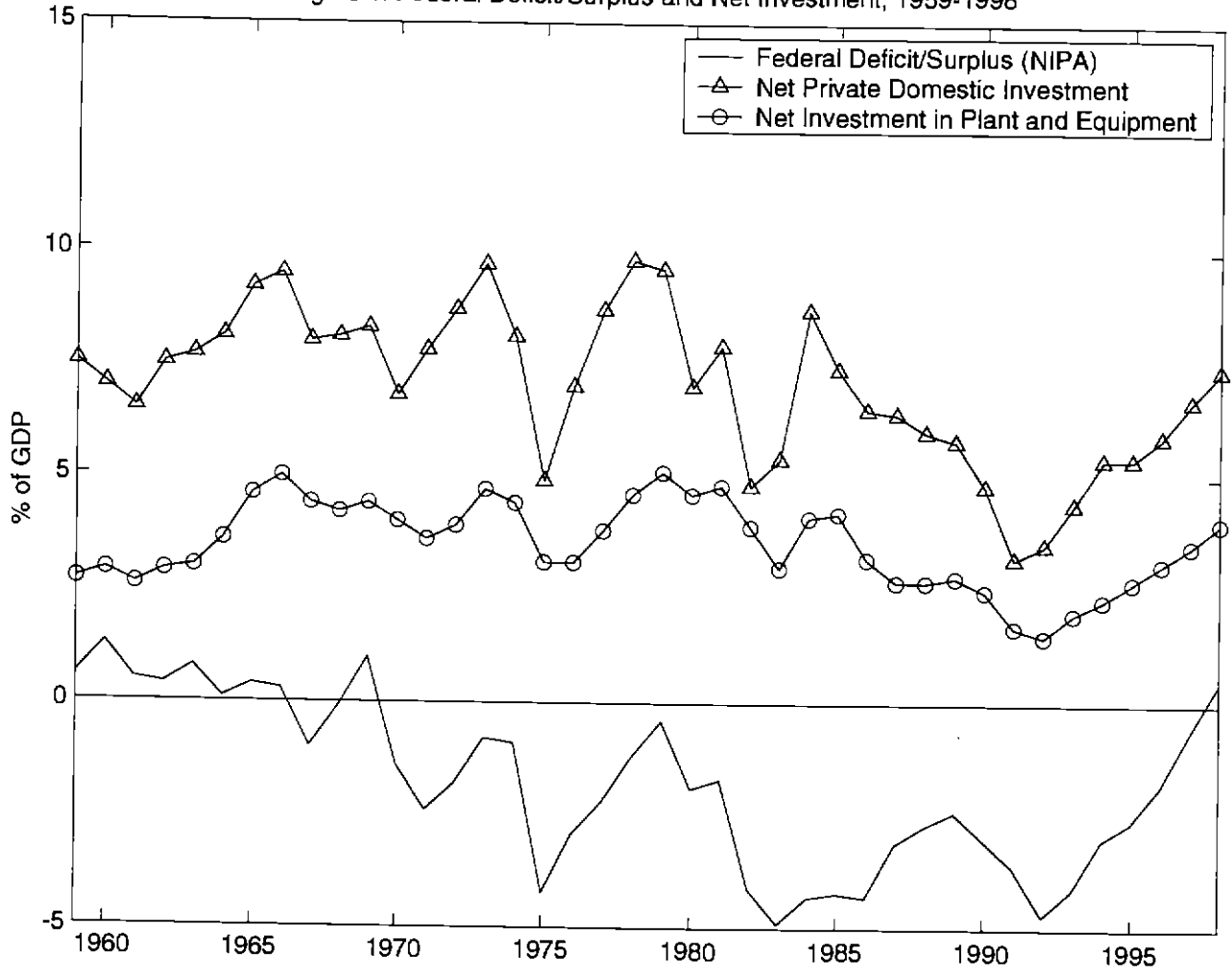


Figure 2: Federal deficit/Surplus and Net Saving, 1959-1998

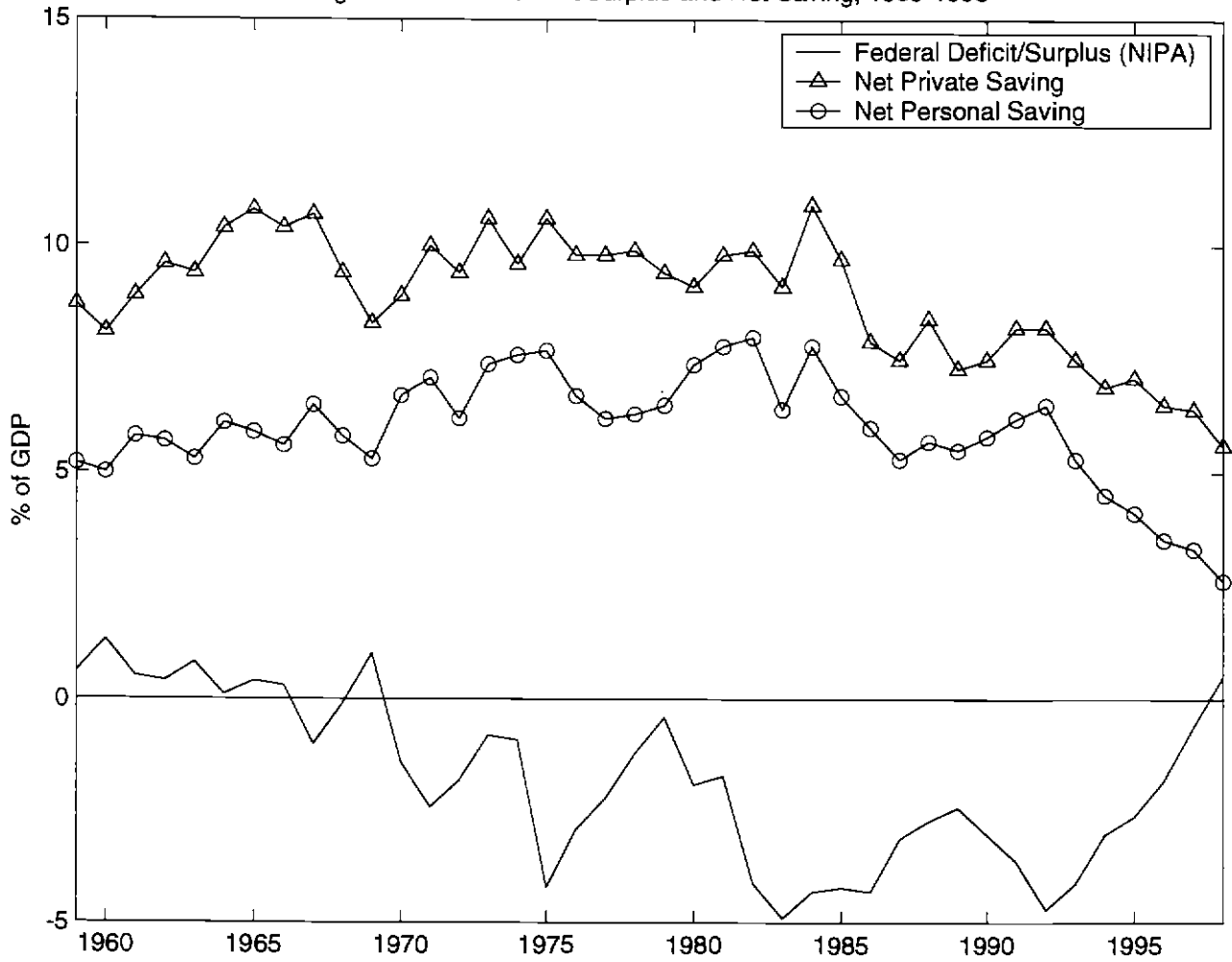


Figure 3: Federal Deficit/Surplus and Net Government Investment, 1959-1998

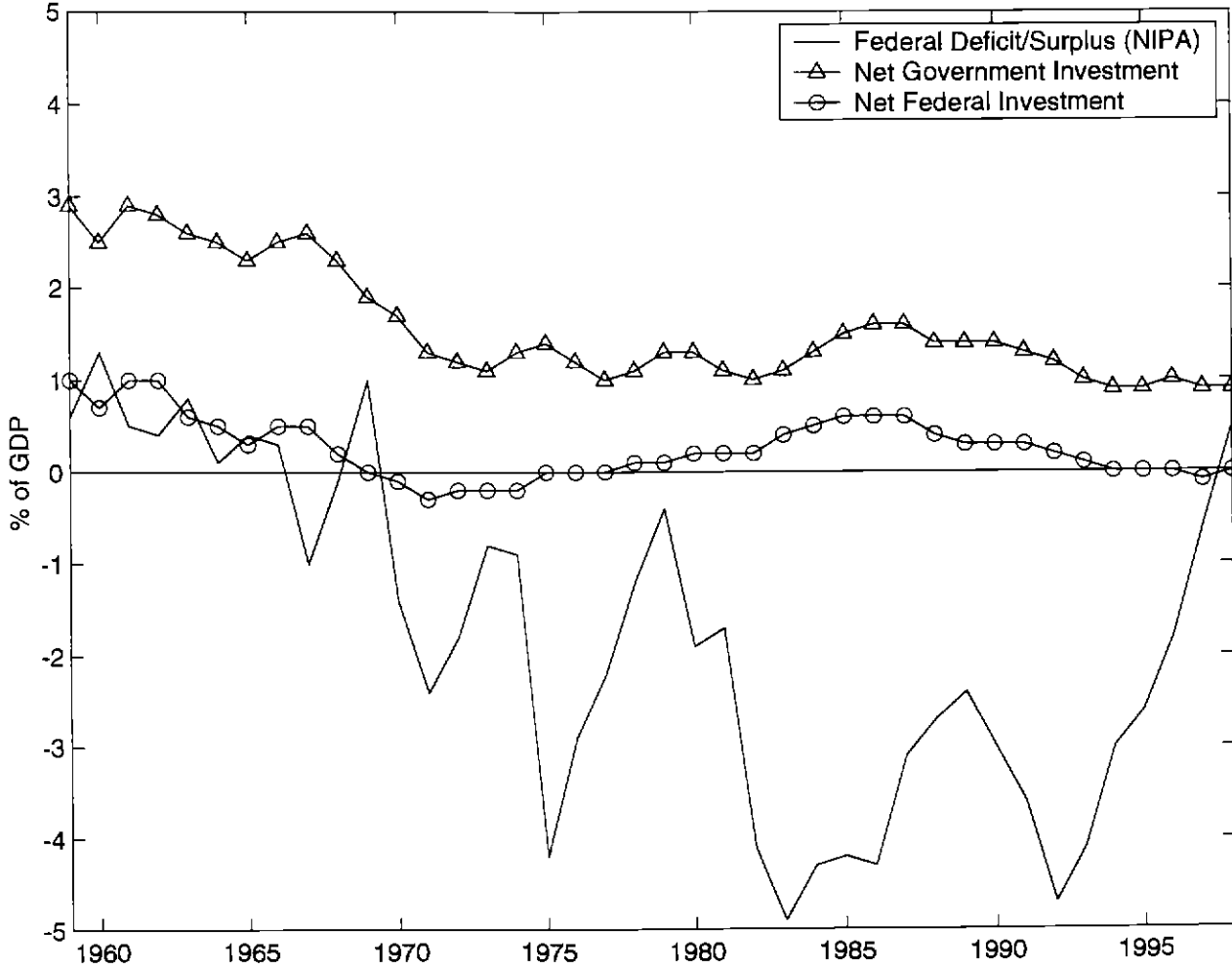


Figure 4: Federal Deficit/Surplus and Net Foreign Investment, 1959-1998

