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THE BUDGET AND TRADE DEFICITS AREN'T REALLY TWINS

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ABSTRACT

Although the link between the U.S. budget deficit and trade deficit in the 1980s was so clear that the two were popularly labeled the twin deficits, it is wrong to generalize from the American experience of the 1980s to the conclusion that budget deficits and trade deficits are two sides of the same coin.

An increased budget deficit (or other reduction in national saving) must reduce either private investment or net exports but the division between them depends on certain key parameters and on changes in the external environment. Although more than 90 percent of the savings decline in the United States in the first half of the 1980s was offset by an increase in the international deficit and the associated capital inflow, this was not an inevitable result. Without the powerful incentives for business investment in the 1981 tax legislation, there might have been less investment and a smaller increase in the trade deficit.

The response to a reduction in national saving is not likely to be the same in the long run as in the short run. In my earlier studies with Charles Horioka and Phillippe Bacchetta I found that sustained differences in saving rates among developed countries lead to similar differences in investment rates. This paper updates the earlier analyses to the decade of the 1980s and shows that among the G-7 countries the decade-average savings retention coefficient was 0.73, implying that nearly three-fourths of each additional dollar that was saved in a country remained in that country.

The United States now appears to be moving from the "short run" in which the capital inflow offsets a decline in national saving to the "long run" in which lower domestic saving reduces domestic investment. Although national saving in 1990 was an even smaller fraction of GNP than in 1986 (because of the decline in private saving), the capital inflow fell from a peak of 3.5 percent of GNP in 1987 to 1.7 percent of GNP in 1990. As a result, net private domestic investment was reduced to only about 3 percent of GNP in 1990.

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## The Budget and Trade Deficits Aren't Really Twins

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The link between the U.S. budget deficit and trade deficit in the 1980s was so clear that the two were popularly labeled the twin deficits. In the public's mind, the two deficits appeared as siamese twins that could not be separated. Only by reducing the budget deficit would the trade deficit be made to shrink.

There is of course some truth to this oversimplified picture, indeed more truth and a much more benign policy implication than to the alternative view that our exploding trade deficit in the 1980s was due to the trade policies of Japan and our other trading partners.

But it is wrong to generalize from the American experience of the 1980s to the conclusion that budget deficits and trade deficits are two sides of the same coin. That's bad economic theory and its incompatible with a much wider body of evidence. And while the parable of the twins may prevent harmful protectionist policies and potential trade wars, it may also lead to complacency about both the budget deficit and our trade performance.

The savings gap that drives our enlarged trade deficit at the present time is no longer due to the increased budget deficit but rather to the sharp decline in private saving during the past decade. And the most serious adverse effect of the low rate of saving is no longer on the trade balance but on the rate of investment and therefore on our long-term economic growth.

Because I will focus on why the equality of trade and budget deficits is not a general rule, it is useful to begin by reviewing the experience of the 1980s when an increase of the

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U.S. budget deficit did lead to a parallel rise in our trade deficit.

#### 1. The U.S. Budget Deficit and Trade Deficit in the 1980s

The tax and spending changes that were initiated in 1981, together with the continuing growth of social insurance outlays and the increase in interest rates on the national debt, caused the federal budget deficit to rise sharply in the first half of the 1980s. The deficit jumped from \$74 billion in 1980 to \$128 billion in 1982 and \$208 billion in 1983, rising from 2.8 percent of GNP to 6.3 percent of GNP in just three years.<sup>1</sup> Although the perceived magnitude of the rise in the deficit was initially distorted by the recession-induced fall in tax revenues, by 1986 (when the unemployment rate was back under 7 percent) the structural budget deficit and the ordinary cash deficit had both increased by 2.5 percentage points of GNP from the start of the decade.

The rise in the budget deficit was paralleled by the increase in the trade deficit. The closely-watched merchandise trade deficit jumped from about \$30 billion a year in 1980-82 (where it had been since the rise in oil prices in the mid-1970s) to \$67 billion in 1983 and \$113 billion in 1984. As a percentage of GNP, it went from 1 percent in 1980-82 to 2 percent in 1983 and 3-plus percent from 1984 through 1987. Parallel and somewhat larger shifts occurred in the broader measure of net exports as a share of GNP.

It was of course not a coincidence that both the budget deficit and the trade deficit increased by about three percent of GNP between the beginning and the middle of the decade. The rise in the budget deficit caused real interest rates to rise, making investments in dollar

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<sup>1</sup>All GNP figures in this paper refer to the national income and product accounts before the 1991 revisions.

securities more attractive to portfolio investors around the world. The resulting rise in the dollar made U.S. products less competitive in world markets, causing the rise in the trade deficit.

Here are the basic facts. Although the U.S. inflation rate fell from more than 9 percent in 1979-82 to less than four percent in 1983-85, the strong demand for credit to finance the budget deficit (and the expectation of future deficits) kept interest rates high; interest rates on 10 year bonds fell by only one percentage point and even three-year interest rates fell by less than two percentage points. Real interest rates therefore rose by at least three percentage points. In response to the increased attractiveness of investing in U.S. securities, the multilateral trade-weighted real value of the dollar rose 70 percent between 1980 and the first quarter of 1985. With a 70 percent rise in the real value of the dollar, it is not surprising that Americans increased their appetite for imports and that U.S. firms found it difficult to sell American made products in world markets.

Other factors no doubt contributed to the dollar's rise (including the sharp fall in U.S. inflation and the pro-investment tax rules) and to the decline in U.S. exports (including the Latin American debt crisis, the changes in world agriculture, and the emergence of countries like Korea and Taiwan as producers of sophisticated electronic products). But there was a clear causal link between the increased budget deficit, the higher dollar, and the enlarged trade deficit.

To state that link in other words, the budget deficit induced a capital inflow from the rest of the world and an increased capital inflow must be matched by an equal increase in the net

inflow of goods and services as measured by the current account deficit.<sup>2</sup> The rise in the dollar is simply the mechanism that brings about this change in the net international flow of capital.

By 1985 there was a sense that the relative size of the budget deficit was declining and that the new Gramm-Rudman legislation would help to shrink it further in the future. Real interest rates fell sharply and the dollar began a rapid decline, falling 30 percent in 18 months in real trade-weighted terms. Within a year after the dollar's downturn, exports began to grow rapidly and imports leveled off. By 1987 the merchandise trade deficit was shrinking along with the budget deficit.

## 2. The National Income Equation

Despite the link between the U.S. budget and trade deficits in the 1980s, the observed parallel movements should be thought of as a special case rather than as a general phenomenon and certainly not as a sustained long-run relation. The fundamental national income equation that every student of economics learns is that the trade deficit is equal to the difference between national savings and national investment. This fact -- that exports minus imports equals savings minus investment -- is not an economic theory or an empirical regulatory but an accounting identity about which there can be no debate.

It follows from this identity that a decrease in national savings must lead to a decrease

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<sup>2</sup> The current account balance is equal to the trade balance in goods and services plus net investment income and unilateral transfers. The current account deficit is equal to the capital inflow. An increase in the trade deficit implies an immediate equal increase in the current account deficit. Over time, the resulting change in the country's international investment position causes a change in investment income and therefore a further change in the current account deficit.

in the sum of investment and net exports. Since national savings are equal to private savings minus the budget deficit, a rise in the budget deficit leads to a fall in national savings unless there is an equal offsetting rise in private savings. The rise in the budget deficit in the U.S. in the 1980s was not offset by higher private savings; indeed private savings as a share of GNP actually fell during those years. The increased budget deficit therefore had to reduce either private investment or net exports.

The twin deficit label is a shorthand way of saying that almost all of that adjustment was in net exports. Between 1980 and 1986 net national saving as a share of GNP fell by 3.6 percentage points and net private domestic investment fell by only 0.2 percentage points. The remaining 3.4 percentage point fall in national saving was offset by an increase in the international deficit and the associated capital inflow.

The division of the response to lower savings between investment and the trade deficit depends on certain key parameters and on changes in the external environment. All other things equal, the decline in investment is a smaller fraction of the fall in national savings when: (1) investment has a low sensitivity to interest rates; (2) the exchange rate is sensitive to the level of interest rates; and (3) trade is sensitive to exchange rates. In the United States in the first half of the 1980s investment was also stimulated by changes in tax rules that increased the desire of businesses to invest in new equipment and structures. At the same time, changes in the world economy reduced the demand for U.S. exports and increased the demand by American consumers for foreign products. The result of all of these factors was a relatively small move in interest rates and investment and a relatively large move in the dollar and in net exports.

But the key point to be emphasized is that this mixture of changes in investment and in

net exports need not have been the response to a decline in national savings, let alone to an increase in the budget deficit. Without the powerful additional incentives for business investment, there might well have been less investment and a smaller increase in the trade deficit.

More fundamentally, the response to a budget deficit or, more generally, to any fall in saving is not likely to be the same in the long run as in the short run. In a series of articles beginning with a joint paper with Charles Horioka published in 1980, I have found that changes in domestic saving are generally balanced in the short-run by changes in international flows but that changes in domestic saving that persist lead to parallel changes in domestic investment.<sup>3</sup>

### 3. National Retention of Savings in the Long-run

The experience of the G-7 countries during the decade of the 1980s confirms this earlier conclusion. Using the data provided by the OECD, the decade average of gross national saving as a percentage of GNP or GDP varied from lows of 16.3 percent in the U.S. and 16.6 percent in the U.K. to highs of 22.5 percent in Germany and 31.7 percent in Japan. A regression of the decade-average gross domestic investment rate on the decade-average gross domestic saving rate has a coefficient of 0.73 (with a standard error of 0.03), implying that nearly three-fourths of each additional dollar that is saved in a country remains in that country. This 73 percent "savings retention coefficient" is quite similar to the estimates reported in Feldstein and Bacchetta (1991) for earlier time periods and for different subsamples of OECD countries.

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<sup>3</sup>See Feldstein and Horioka (1980), Feldstein (1983) and Feldstein and Bacchetta (1991). See also Frankel (1991) and the papers cited therein for additional evidence supporting this empirical generalization.



Although Japan with the highest saving rate had the highest decade-average current account surplus (2.2 percent of GNP) and the U.S. had the highest corresponding current account deficit (2.0 percent of GNP), this 4.2 percentage point difference in external balance is small in comparison to the 15.4 percentage point difference in saving rates. Although the highest saving rate among the G-7 countries was twice that of the lowest saving rate, no country financed more than 15 percent of its investment by a capital inflow and no country sent more than 10 percent of its domestic savings abroad.

Since government saving or dissaving is a part of national saving, differences in government saving should in principle effect private investment in the same way as differences in private saving. To test this, Phillippe Bacchetta and I estimated a regression of domestic investment on the budget deficit and on private saving for the 13 OECD countries for which data were available for the period 1970 through 1985 (Feldstein and Bacchetta, 1991). We found that the responses to the two components of national saving were similar in magnitude and did not differ in a statistically significant way. More specifically, each incremental dollar of domestic private saving increased domestic investment by 70 cents (with a standard error 11.2 cents) while each incremental dollar of government surplus increased domestic investment by 86 cents (with a standard error of 15 cents).

The implication of this is clear: the cross-section relation that represents long-run equilibrium behavior shows that sustained increases in budget deficits crowd out domestic investment and are not financed by capital inflows from abroad.

#### 4. Current Account Deficits Driven by Shifts in the Desire to Investment

My comments until this point have assumed that the saving rate is the predetermined variable that influences domestic investment and capital flows. I believe that this is generally true when the analysis focuses on long-run relationships. Sustained differences in saving rates among countries reflect differences in national attitudes about saving and borrowing, differences in fiscal incentives for private saving, and differences in public attitudes toward persistent budget deficits. In previous studies, statistical estimates using instrumental variable procedures with appropriate identifying restrictions confirm the ordinary least squares estimates of the savings retention coefficients.

There are times however when changes in a country or in the world economy induce a shift in the desired rate of domestic investment in equipment and structures. Unless this happens to coincide with a spontaneous increase in domestic saving, the result will be an increase in the current account deficit. To some extent, the stability of U.S. investment in the early 1980s and the large size of the capital inflow reflected the investment incentives provided by the 1981 tax legislation as well as the decline in national saving.

Two recent examples are worth noting because they provide further evidence of the lack of identity between budget deficits and trade deficits even in the short run. The first example is the United Kingdom. During the period from 1980 through 1985, the United Kingdom had budget deficits that averaged 3 percent of GNP but nevertheless maintained a current account surplus because of high private saving relative to private investment. The rate of growth of fixed investment then jumped from an annual average of 1.3 percent during 1980 through 1986 to 7.5 percent in the final four years of the decade. Although the government budget shifted

from deficit to surplus during these years, the current account shifted from surplus to deficits of more than 3 percent of GNP. In this case, the increased desire to invest in plant and equipment caused the budget deficit and the trade deficit to move in opposite directions.

The second example is Mexico. Recent research by Carlos Sales (1991) documents that the Mexican economy experienced the classic twin deficit reaction to an enlarged budget deficit before the Latin American debt crisis of 1982 but that the recent increase in Mexico's current account deficit has occurred despite a shift of the Mexican budget deficit into an actual surplus. The recent increase in Mexico's current account deficit reflects the rise in private business investment from the depressed level of the earlier debt crisis period.

##### 5. The Outlook for Trade and Investment in the United States

I turn finally to the current situation in the United States and the outlook for the future of trade and investment. The level of saving in the United States remains extremely low. In 1990, net national saving was only 1.4 percent of GNP, even lower than it had been in 1986. The level of national saving remains low despite the fact that the budget deficit has been shrinking relative to GNP.

Using the national income and product account definition of the budget deficit (which correctly ignores deposit insurance payments and other purely financial transactions), the deficit in the federal budget declined from 4.9 percent of GNP in 1986 to 3.0 percent of GNP in 1990, only 0.8 percent greater than it was when the decade began. The surpluses of the state and local governments have declined from 0.9 percent of GNP in 1980 to 0.6 percent of GNP in 1990. The public sector deficit as a whole is therefore responsible for a 1.1 percent decline in the

national saving rate between 1980 and 1990.

In contrast, net private household and business saving has fallen from 6.4 percent of GNP in 1980 to only 3.8 percent of GNP in 1990, a decline of 2.6 percentage points. Thus, of the 3.7 percentage point drop in the national saving rate, more than two-thirds reflects the fall in private saving.

Unfortunately, the inflow of foreign capital has not increased to replace this decline in national saving. The current account deficit and capital inflow reached a peak of 3.5 percent of GNP in 1987 and has been declining rapidly since that time. In 1990 it reached 1.7 percent of GNP, half-way back to the current account balance with which the decade began. As a result, net private domestic investment was only 3.1 percent of GNP in 1990, more than one-third lower than the 4.9 percent GNP share in 1980. Persistence of this very low level of net investment in equipment and structures would mean a very slow growth in future productivity and in the American standard of living.

The United States appears to be moving from the "short run" in which the capital inflow offsets a decline in national saving to the "long run" in which each dollar of persistent change in domestic saving causes a nearly equal change in domestic investment. Looking ahead, the current account deficit is likely to remain at its present level or to continue to shrink relative to GNP. Unless there is a rise in the very low level of domestic saving, the level of domestic investment will remain very low. The only way to reverse that situation is to raise national saving by reducing the budget deficit and increasing the rate of private saving.

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