The Budget Deficit and the Trade Deficit: What Is Their Relationship?

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Summary

In the 1980s expansion, the trade deficit and budget deficit moved together. This pattern re-emerged in the recession and subsequent expansion beginning in 2001. This is the opposite of what happened in the last half of the 1990s, when the budget deficit fell as a fraction of gross domestic product (GDP) and the trade deficit rose sharply as a fraction of GDP. From this experience it is clear that international capital flows, which drive the net balance of trade, do not depend solely on movements in the budget deficit. During the last half of the 1990s, real gross domestic investment rose as a fraction of real GDP. This resulted from the rise in U.S. productivity and the related rise in the real yield on U.S. assets. This drew in additional private capital from abroad. If the twin deficits theory is correct, it has an adverse implication for the efficacy of fiscal policy as a stimulus tool. It suggests that in an environment of highly mobile international capital, the effect of policy induced increases in the structural budget deficit (e.g., tax cuts) on short-run economic growth would be largely offset by increases in the trade deficit. The experience during both the 1980s and 1990s demonstrates that a large and growing trade deficit need not be an impediment to overall job creation even though it may have had an effect on the type of jobs that were created since it affected the composition of U.S. output. This report will be updated periodically.

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Introduction

One of the most lively debates among economists and policymakers during the 1980s was the relationship between the federal budget deficit and the international trade deficit. When the dust settled those arguing that the two deficits should move together seemed to have carried the day, although doubters remained. This prediction was based on mainstream macroeconomic theory. As the 1990s unfolded, the two deficits did not move together. As the federal budget deficit came down as a fraction of gross domestic product (GDP), the trade deficit rose as a fraction of GDP. Is this evidence inconsistent with theory? The analysis will suggest that the answer is no. There are other forces besides the federal budget deficit that can influence the U.S. trade deficit. They were not decisive during the 1980s. They appear to have been operative during the 1990s. With the onset of the recession in 2001 and subsequent move to expansion, the coincident shift back to budget deficit, the two deficits began to move together again.

The Mainstream Explanation for the Twin Deficits

Mainstream macroeconomic theory explains the twin deficit phenomenon as follows. An increase in the federal budget deficit (measured as an increase in the structural deficit as a percent of full employment GDP) will—*all else held constant both in the United States and abroad*—put upward pressure on U.S. interest rates, raising them above comparable rates abroad.[1] This occurs because the position of the government's budget influences the national saving rate. When the structural budget deficit shrinks, the government adds to the national saving supplied by households and businesses and interest rates fall. When the structural budget deficit grows, it represents a claim on those savings, and interest rates must rise for the market to remain in equilibrium. In a world in which U.S. assets are good substitutes for foreign assets, foreign investors will be tempted to buy more of the now higher yielding American assets.[2]

Before they can buy these assets, they must first purchase dollars. Thus, the net demand for dollars in the foreign exchange market rises and the dollar increases in value and it is said to appreciate. Dollar appreciation reduces the price of foreign goods and services in America and increases the price of American goods and services abroad. The net result is that Americans spend more on foreign goods and services (the value of American imports rise) and foreigners spend less on American goods and services (the value of U.S. exports fall). If the trade accounts were in balance to begin with, the United States now has a trade deficit.[3] And, indeed, the data during the 1980s, shown on **Table 1**, conform to what the theory predicts.[4] The full employment or structural deficit rose from 0.6% of full employment GDP in 1981 to an expansion high of 4.8% in 1986, a

[1] The reason for the assumption of "all else held constant" is that the fiscal action must raise U.S. interest rates relative to those abroad. If this does not happen because of offsetting effects in the private sector or foreign interest rates have risen, theory suggests that fiscal expansion in the United States is unlikely to produce a trade deficit.

[2] An essential part of the explanation for the emergence of twin deficits is that capital flows be highly mobile internationally in response to small international interest rate differentials. If capital mobility is low, mainstream economic theory suggests that the trade deficit is unlikely to emerge, or if it does, it will be small.

[3] The trade deficit is the essence of the net inflow of foreign capital (or foreign saving) to the United States. Like any loan, it allows Americans to consume (use) more goods and services than we produce.

[4] The data in **Table 1** for the structural budget deficit are on a fiscal year basis whereas those for the trade deficit are on a calendar year basis. Ideally, the actual trade deficit should not be used in these computations. Rather, a structural trade deficit measured as a percent of full employment GDP should be used. Unfortunately, estimates of a structural trade deficit do not exist. The trade deficit and GDP data used in these computations are measured in terms of real 2000 chain-based dollars.

rise of 4.2 percentage points. The trade balance rose over this period from a surplus of 0.2% of GDP to a deficit of 2.5% of GDP, a rise of 2.7 percentage points (thus, the rise in the trade deficit was about 59% of the rise in the structural budget deficit). [5]

Table 1. The Two Deficits, 1981-1989

(as a percentage of GDP)

	1981	1982	1983	1984	1985	1986	1987	1988	1989
Budget Deficit	-0.6	-1.3	-3.0	-3.6	-4.3	-4.7	-3.3	-2.5	-2.2
Trade Deficit	0.2	-0.2	-1.1	-2.1	-2.3	-2.5	-2.3	-1.6	-1.1

Sources: Structural Budget Deficit data are from the Congressional Budget Office (January 2008). Trade deficit and GDP data are in chained 2000 dollars from the Department of Commerce.

Note: Budget deficits are for the fiscal year.

Further, as the structural budget deficit fell from 4.7% of GDP in 1986 to 2.2% in 1989, the last full year of the 1982-1990 economic expansion, a fall of 2.5 percentage points, the trade deficit fell from 2.5%, of GDP to 1.1% of GDP, a fall of 1.4 percentage points (or about 56% of the decline in the structural budget deficit).[6]

The 2000s Experience

As seen in **Table 2**, events subsequent to the recession in 2001 have mirrored the 1980s experience: as the budget deficit rose, the trade deficit rose. This occurred despite a major easing in monetary policy by the Federal Reserve which should have discouraged foreign capital from coming to the United States. However, unlike the 1980s, in this episode, the growth of the trade deficit is coincident with a fall in the international exchange value of the dollar which should signal a net decrease in the inflow of foreign capital. And, indeed, during 2002-2004 the inflow of private capital did abate. The trade deficit did not fall because the decrease in the inflow of private capital was offset by the inflow of official capital (from foreign central banks and treasuries).[7]

If the twin deficits theory is correct, it has an adverse implication for the efficacy of fiscal policy as a stimulus tool. In the mainstream model, policy induced increases in the structural budget deficit (through tax cuts or increases in government spending) boost aggregate spending by generating more government spending than the government's revenue intake. This outcome is predicated on the absence of foreign capital mobility. But if foreign capital flows are highly sensitive to changes in interest rates, then any increase in aggregate spending caused by the larger budget deficit would be largely offset by an increase in the trade deficit caused by the upward pressure placed on interest rates by the budget deficit. In other words, tax cuts or increases in government spending would not have much effect on the short-run growth in output and employment under this view.

[5] Had the trade balance relative to GDP measured in nominal dollars been used in this comparison, the increase would have been 2.3 percentage points or about 54% of the total.

[6] Had the trade deficit relative to GDP been measured in nominal dollars, the decline would have been 1.2 percentage points or 46% of the decline in the structural deficit.

[7] For a more complete discussion of this shift, see CRS Report RS21951, *The U.S. Trade Deficit: Role of Foreign Governments*, by (name redacted) and (name redacted).

The 1990s Experience—A Contradiction to Mainstream Theory?

Before looking at developments during the late 1990s, it should be noted that mainstream macroeconomic theory has never excluded an independent causal role for international capital movements. That is, international capital movements can occur independent of any change in the federal budget deficit. Foreign capital may come to the Untied States for a variety of circumstances unrelated to the pressures the federal budget deficit puts on U.S. interest rates. A change in U.S. tax law which increases the after tax rate of return on capital could attract foreign funds even if it had no effect on the federal budget deficit. Rising prospects for profit because of boom conditions in the U.S. economy or an increase in productivity could increase domestic investment relative to GDP, and could attract foreign capital even as the federal budget moves toward balance or into surplus. Similarly, fears of inflation, currency devaluation, or political repression could induce foreigners to seek the safety of U.S. assets. Moreover, if a falling federal deficit in the United States occurs with the onset of an economic downturn abroad such that yields on foreign assets fall relative to comparable U.S. yields, the emerging differential in favor of the United States could serve as a magnet attracting additional capital that could forestall a fall in the trade deficit or lead to a rise in that deficit. In this instance, it would be possible to have a falling budget deficit and a rising trade deficit. Other possibilities also suggest themselves.[8]

The data on **Table 2** show a very different pattern in the last half of the 1990s from the twin deficits of the 1980s. As the structural budget deficit fell from 2.0% of GDP in 1995 to a surplus of 1.1% of GDP in 2000 (a shift of 3.1 percentage points), the last full year of the 1991-2001 expansion, the trade deficit rose over the same period from 0.9% to 3.9% of GDP (a shift of 3 percentage points).[9]

Table 2. The Two Deficits, 1995-2007

(as a percentage of GDP)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Budget Deficit	-2.0	-1.2	-1.0	-0.4	+0.0	+1.1	+1.0	-1.2	-2.6	-2.5	-1.9	-1.8	-1.1
Trade Deficit	-0.9	-1.0	-1.2	-2.2	-3.1	-3.9	-4.0	-4.7	-5.0	-5.6	-5.6	-5.5	-4.7

Source: Structural Budget Deficit data are from the Congressional Budget Office (January 2008). Trade deficit and GDP data are in chained 2000 dollars from the Department of Commerce.

Note: Budget deficits are for the fiscal year.

These data show clearly that changes in the magnitude and direction of the net inflow of foreign capital can occur independently of changes in the federal budget deficit. The data in themselves do not explain why these movements occur, however. Yet, there are some interesting clues in the

[8] Foreign governments themselves can buy and sell U.S. assets. Slightly more than half of the privately held debt of the United States is owned by foreigners, mainly by central banks and treasuries. Transactions by foreign official institutions have the same effects on the trade balance as do transactions by private citizens abroad. In fact, in some years much of the net capital inflow to the U.S. has come from foreign official sources: 1993, 1995, 1996, 2003 and 2004. (Source: Department of Commerce, Bureau of the Census, and Bureau of Economic Analysis; U.S. Treasury Bulletin.)

[9] Had the trade deficit and GDP been measured in nominal dollars, the change between 1995 and 2000 would have been from 1.2% to 3.9%, or a shift of 2.7 percentage points.

data on domestic investment that suggest at least a *proximate* explanation for why the two deficits have not moved in the same direction in the 1990s.

The data in **Table 3** report real gross domestic investment as a fraction of real GDP during the years 1983-1989 (the expansion of the 1980s) and 1995-2007. There is a noticeable difference between these two expansions. Unlike 1983-1989, real gross domestic investment during the 1990s expansion was a rapidly rising fraction of GDP. The increase was especially strong in the period 1995-2000.

The increase in desired investment, motivated by the increase in productivity and the related rise in the real rate of return on American capital in the last half of the 1990s, served as a magnet for attracting foreign capital to the United States. And this increased inflow of foreign capital (saving) made possible the additional investment in the United States.

Table 3. Real Gross Domestic Investment as a Percentage of GDP

1983	12.2	**1994**	14.0	**2001**	16.2
1984	14.8	**1995**	14.1	**2002**	15.5
1985	14.0	**1996**	14.8	**2003**	15.7
1986	13.5	**1997**	15.9	**2004**	16.6
1987	13.4	**1998**	16.8	**2005**	17.0
1988	13.2	**1999**	17.3	**2006**	16.9
1989	13.3	**2000**	17.7	**2007**	15.7

Source: Department of Commerce.

Upward pressure on U.S. interest rates was the proximate cause of the inflow of capital, and resulting trade deficit, in both the 1980s and late 1990s. The difference between the two periods was what caused the pressure on interest rates. In the 1980s, the upward pressure came from the rise in the structural budget deficit. In the 1990s, it came from the increased productivity and related rise in the profitability of private investment.

An interesting aspect of both historical periods is that policymakers in the United States have managed to bring the U.S. economy to full employment with large and even growing trade deficits. These trade deficits have not hampered the overall creation of jobs. They have, however, influenced the nature of job creation since they alter the composition of U.S. output, away from export and import-competing industries toward industries the demand for whose output is sensitive to interest rates.

Conclusion

During the 1980s, a lively debate occurred, the outcome of which was a convincing case linking the growth in the structural measure of the federal budget deficit with the growth of the trade deficit (with cause and effect running from budget deficit to trade deficit via interest rates and dollar appreciation). Lost in the "small print" of this debate was that the budget deficit is not the exclusive determinant of net capital flows and trade deficits. International capital flows into and out of the United States can move in directions contrary to the movements in the position of the federal budget. They depend not only on economic conditions in the United States, but on similar conditions and decisions made abroad.

During the 1990s, the U.S. trade deficit did not moved in concert with the structural (or even the actual) measure of the federal budget deficit (both absolutely and as a fraction of GDP). Beginning in 1995, real gross domestic investment rose as a fraction of real GDP reflecting the increase in productivity and related increase in the real rate of return on American capital. This increase served to attract private capital to the United States. Thus, the trade deficit rose even as the budget deficit fell.

During the recovery that began in the fourth quarter of 2001 and the subsequent expansion, a rising structural budget deficit and the recovery of private investment spending once again attracted foreign capital to the United States, although in this episode the proportion of the inflow coming from foreign official sources (central banks and treasuries) has been especially important during 2002-2004 and 2006-2007.

If the twin deficits theory is correct, it has an adverse implication for the efficacy of fiscal policy as a stimulus tool. It suggests that when international capital flows are highly mobile, the effect of policy induced increases in the structural budget deficit (through tax cuts or increases in government spending) on short-run output growth and employment would be largely offset by increases in the trade deficit.

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