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# The Trade Deficit: The Biggest Obstacle to Full Employment

By Dean Baker

Since the collapse of the housing bubble in 2007, the unemployment rate has been far above almost everyone's estimate of full employment. Economists and politicians have suggested a long list of remedies for this persistently high rate, but one factor rarely mentioned is the trade deficit. This is a major omission, because at its 2013 level of $500 billion (3 percent of gross domestic product, or GDP), the trade deficit implies a large amount of demand that is directed outside of the country rather than at home, where it could create employment.

The simple arithmetic implies that increasing exports or reducing imports enough to bring trade into balance would generate 4.2 million jobs directly and another 2.1 million jobs through multiplier effects, for a total increase of 6.3 million jobs. (This math assumes that the number of jobs associated with an additional 3 percentage points of GDP is the same on average as for GDP as a whole.) The 4.2 million jobs directly created would be disproportionately manufacturing jobs, which continue to be a source of relatively high-wage employment for the 70 percent of the workforce that lacks a college degree. This level of job creation would be a huge deal in an economy that is operating at more than 8 million jobs below its trend level of employment. Thus, trade deserves our serious attention.

This analysis has four parts. The first discusses the basics of national income accounting and explains how trade deficits amount to a loss of demand that must be offset from other sources if the economy is to sustain a full-employment level of output. The second part outlines the origins of our large recent trade deficits. The United States has run trade deficits for most of the last four decades, but they became qualitatively larger in the late 1990s, in line with a rising value of the dollar. The third section discusses how lowering the value of the dollar relative to other currencies could make U.S. goods and services more competitive internationally. The fourth section addresses some of the implications of a lower-valued dollar and balanced trade. It has often been claimed that the United States must run a trade deficit because of the dollar's status as a reserve currency. As will be shown, this claim misunderstands both the nature of reserve currencies and the workings of the international finance system.

## Trade and the Basics of National Income Accounting

Anyone involved in debates on macroeconomic policy and full employment needs to have a mastery of national income accounting. This knowledge is crucial, since there is no way around the implications of the accounting. Misunderstanding national income accounting can only lead to failed policy.

Though the formulas themselves are relegated here to an appendix, the primary implication of these accounting identities is simple and, though it may sound underwhelming, of major significance: net exports must equal private plus public savings. This rule means that continuing to run trade deficits as we have in recent decades will require either large budget deficits or asset bubbles to offset the growth, jobs, and incomes sacrificed because of unbalanced trade.

Simply put, the trade surplus (or deficit) is equal to our total national savings (or dis-savings). This equation is not a preference or a policy — it is an "accounting identity" (like "assets equal equity minus debt"), which means it is true by definition.

In 2013, with a trade deficit of about $500 billion, the equation looked like this:

**-$500 billion = private savings + public savings**

This means that the deficit in private savings, plus the government budget deficit, summed to $500 billion. Let's imagine for a moment that private savings is on net zero, meaning that all of the private sector's saving is devoted to private sector investment. In this case the government budget deficit alone must be $500 billion to balance out the trade deficit.

In concrete terms, this scenario means that, because money being generated from producing GDP in the United States is creating demand overseas rather than here, we will end up with a budget deficit. How does this play out? Lower demand for U.S. goods and services will lead to fewer people working and paying taxes. As tax collections fall, government spending on unemployment benefits and other transfer payments will rise as laid-off workers and their families qualify for more benefits. Put another way, the demand created by the budget deficit offsets the demand lost due to the trade deficit.

We assumed in this scenario that private savings was exactly equal to investment, but that doesn't have to be the case. As a practical matter, the two are generally close. The usual logic is that the household sector is a modest net saver while the corporate sector is a modest net borrower, and the two even out. But in the late 1990s, for example, savings on the household side fell sharply in response to the stock bubble. There is a well-known stock wealth effect, usually estimated in the range of 3 to 4 cents on the dollar,[1] which means that for every additional dollar of stock wealth annual consumption increases by 3 to 4 cents. At its peak in 2000, the value of the stock market relative to the economy was more than twice its usual level, creating more than $10 trillion in ephemeral wealth[2] and, at 3 to 4 cents on the dollar, $300 billion to $400 billion in additional annual consumption (i.e. lower savings), an amount equal to 3 to 4 percentage points of GDP at the time.

A bubble, then, is one way to balance a trade deficit. When a bubble like the stock bubble of the late 1990s drives a sharp rise in consumption (implying a drop in savings), the increase in demand offsets the demand lost due to the trade deficit. The housing bubble had an even stronger effect. The housing wealth effect is usually estimated to be somewhat larger than the stock wealth effect — 5 to 7 cents on the dollar

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[1] James M. Poterba, "Stock Market Wealth and Consumption," *Journal of Economic Perspectives* 14(2): 99-118, 2000.

[2] At the peak of the stock bubble in March 2000, the value of the market was over $17 trillion, more than 1.7 times GDP. (Board of Governors of the Federal Reserve Board, *Financial Accounts of the United States,* Table L.213, Line 23, http://www.federalreserve.gov/releases/z1/Current/annuals/a1995-2004.pdf, accessed December 23, 2013.) By contrast, in the prior 40 years the value of the stock market averaged less than 0.8 percent of GDP.

versus 3 to 4 cents[3] — the main reason being that housing wealth is more evenly spread across the population than stock wealth. At the peak of the housing bubble, the value of residential real estate in the United States was more than $23 trillion,[4] $8 trillion above its trend value. A wealth effect of 5-7 cents on the dollar would imply a rise in annual consumption (i.e., a decline in saving) of $400 billion to $560 billion, or 3 to 4 percentage points of GDP.

In addition to reducing household savings, the stock and housing bubbles also boosted the investment side of the equation, though the size of the investment boom created by the stock bubble is often overstated. In 2000, investment peaked at 14.5 percent of GDP, 1.8 percentage points higher than at the previous business-cycle peak, in 1989. However, this increase was inflated roughly 0.3 percentage points by a surge in car leasing. (A leased car counts as investment, while a purchased car counts as consumption.)[5] The Y2K scare, in which companies invested in new software to ensure that their computer systems would not be paralyzed by the changing of the millennium, inflated investment spending as well.

Even with these factors, nonresidential investment as a share of GDP was still 0.2 percentage points lower than its peak in 1981, and much of this investment was wasted on nonsense projects that received funding only because, in a climate of irrational exuberance, investors were willing to throw billions at any company that planned a business on the Internet.

Of course, the most important part of the story is that the bubble was unsustainable. When the stock bubble burst, both the consumption and investment it was driving disappeared, and the demand from the private sector could no longer be counted on to offset the demand lost due to the trade deficit. The large budget deficits of the George W. Bush administration helped to fill this gap in demand; the deficit reached 3.4 percent of GDP in 2003 and 3.5 percent in 2004 (about $600 billion in the 2014 economy).[6]

During the housing bubble, the private sector deficit again expanded, thanks to the wealth effect of rising home prices and a boom in residential construction. The latter peaked at more than 6.5 percent of GDP in 2005, more than 2.1 percentage points above the average of the two decades before the housing bubble (1980-99).[7] This building boom presaged the inevitable deflation of the housing bubble, as record high vacancy rates made it impossible to sustain the bubble's peak prices — even with the easy access to credit made possible by ever-deteriorating loan quality. When the housing bubble burst, another massive gap in demand had to be filled by the government, increasing the budget deficit.

Both the stock and housing bubbles depressed household savings and led to consumption booms, but the booms lasted only as long as the bubbles. Since bubbles are by definition unsustainable, consumption was destined to fall back to more normal levels. On the investment side, it might be desirable to see a boom in genuinely productive private sector investment, but we have not seen one at any point in the last three decades — even during bubbles — and it is not plausible that we will anytime in the near future.

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[3] Karl Case, John M. Quigley, and Robert Shiller, "Comparing Wealth Effects: The Stock Market Versus the Housing Market," National Bureau of Economic Research, Working Paper 8606, 2002.

[4] Board of Governors of the Federal Reserve Board, *Financial Accounts of the United States,* Table B.100, Line 4.

[5] Data on annual spending on car leasing can be found in Bureau of Economic Analysis, *National Income and Product Accounts,* Table 2.4.5U, Line 190.

[6] Congressional Budget Office, *Budget and Economic Outlook, 2013-2023,* Historical Budget Data, Table 1, http://www.cbo.gov/sites/default/files/cbofiles/attachments/43904-Historical Budget Data-2.xls.

[7] These calculations are taken from *National Income and Product Accounts,* Table 1.1.5, line 13 divided by line 1.

This leaves us with one plausible way to offset the drain on demand from a large trade deficit, and that is with a large budget deficit. This conclusion is not theoretical — it follows from the accounting identity. And so if we want to get to full employment while maintaining a large trade deficit, then we have to be prepared to support large budget deficits. Alternatively, we can try to get the trade deficit closer to balance.

## The Origins of the Current Trade Deficit

The value of the dollar relative to foreign currencies is a major factor influencing the trade deficit, and in this regard it is important to recognize that the value of the dollar is in part a policy variable. This doesn't mean that we can simply set any value of the dollar we want, just as the Federal Reserve cannot simply set any interest rate it wants, but it does mean that policy can influence the value of the dollar, and policy tools can be used when the need arises.

The trade deficit gets remarkably little attention even among those who are aware of its size, and its origins are little understood. Discussions seem to assume that the United States has a long history of running large trade deficits, but this is not the case. The trade deficits of the four decades up until the late 1990s, though persistent, were generally small, usually close to 1.0 percent of GDP. In the three decades immediately following World War II the United States almost always had surpluses; it ran deficits in just three years between 1946 and 1975. (See Figure 1.)

The factor that first shifted the country's trade to deficits on a consistent basis was the jump in oil prices in the 1970s, when the Organization of the Petroleum Exporting Countries (OPEC) launched its first big round of price increases. Our tab for oil imports rose from less than 0.3 percent of GDP in 1970 to 1.7 percent of in 1974.[8] However, exports grew rapidly in the middle of the decade and restored the country to surplus. In 1979 Iran, at the time the world's second-biggest oil exporter, cut off oil exports in the wake of its revolution, producing a second round of oil price increases that pushed U.S. trade back into deficit. But even with this second jump in oil prices, the trade deficit still held at less than 1.0 percent of GDP. The trade deficit began to expand again in 1983, partly due to rapid growth coming out of the recession. The trade deficit will generally grow when the U.S. economy expands rapidly, since we buy more of all goods and services, including imports, when the economy grows. In the same vein, the trade deficit will generally fall when our trading partners are growing more rapidly than us. The logic is that they buy more of all goods and services, including exports from the United States, when their economies grow.

However, something else occurred besides strong growth to help increase the trade deficit in the mid-1980s. The dollar rose rapidly in these years against the currencies of our major trading partners, making U.S. goods and services more expensive to people in other countries and prompting them to reduce their purchases. At the same time, the high dollar made foreign goods and services cheaper for people living in the United States, and so we bought more imports. The result was a rapid rise in the trade deficit to a peak of just under 3.0 percent of GDP in 1987. (There is generally a lag of roughly two years between a change in the value of the dollar and the full effect of its impact on trade patterns. When the dollar falls, for example, the immediate impact is to increase what we pay for imports in dollar terms. Over time we respond to these higher prices, trade patterns shift, and the deficit declines.)

After 1987 the deficit began to fall again. The explanation is not a mystery: the Reagan Administration negotiated an agreement known as the Plaza Accord, under which our major trading partners would gradually raise the value of their currencies against the dollar. The deal was a remarkable success. The

[8] *National Income and Product Accounts,* Table 4.2.5, line 30.

value of the dollar fell in an orderly fashion in 1987 and 1988, and the trade deficit fell back to 1.5 percent of GDP by 1989.

This drop in the dollar had only a modest effect on inflation. A lower-valued dollar does mean that we pay more for imports, but core inflation edged up only slightly during this period, from 4.0 percent in 1986 to 4.5 percent in 1989, at least partly because higher import prices caused us to switch to domestically produced goods and services, which was of course the point.

The economy went into a recession in 1990, and weakness caused the trade deficit to fall to less than 1.0 percent of GDP in the years 1992-93. However, even when the economy had recovered in the middle of the decade, the deficit remained modest; in 1997 it was less than 1.2 percent of GDP, essentially flat after four consecutive years of healthy growth.

But in 1997 the trade deficit began to rise rapidly. The explanation is again simple: the dollar soared relative to the currencies of our trading partners in the wake of the East Asian financial crisis. As a result of the conditions of the bailout, the countries of the region were forced to run large trade surpluses in order to repay their debts. But the impact of the bailout went far beyond East Asia. To avoid falling into the same situation as the East Asian countries and being forced to seek a bailout from the International Monetary Fund (IMF), countries throughout the developing world began to accumulate large amounts of reserves (mostly dollars) by reducing the value of their currencies and running trade surpluses.[9]

On a trade-weighted basis, the real value of the dollar rose by 23.7 percent from the summer of 1997 to its peak in the winter of 2002.[10] As was the case with the earlier run-up in the dollar in the mid-1980s, U.S. goods and services became less competitive in the world economy.

The dollar began to fall after 2002, but the drop was interrupted by the world financial crisis in 2008, which prompted a flight to the dollar as a secure asset. As the crisis largely faded, the dollar returned to its pre-crisis level and is now somewhat below its value in 1997, before the East Asian financial crisis. While the decline in the dollar had the predicted effect on reducing the trade deficit (see Figure 2), the deficit has not fallen all the way back to its mid-1990s level, for two reasons.

First, oil prices jumped between 1997 and 2013. Oil was selling for around $25 a barrel in 1997, but in 2013 the average price was close to $100,[11] and as a result oil imports grew from less than 0.8 percent of GDP in 1997 to almost 1.9 percent in 2012. In principle a rise in the price of oil should mean that the dollar falls so that we can increase net exports of other goods and services and cover our increased spending on oil.

The second reason that the U.S. trade balance has not returned to its pre-1997 level in line with the dollar is that some industries lost during a period in which the dollar is overvalued might not return when the dollar falls back to its earlier level. This is likely to be especially true of manufacturing. When U.S. manufacturing companies relocate operations to developing countries with lower-cost labor, they are not

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[9] The jump in reserve holdings in the developing world is discussed in Dean Baker and Karl Wallentin, "Money for Nothing: The Increasing Cost of Foreign Reserve Holdings to Developing Countries," Center for Economic and Policy Research, 2001, http://www.cepr.net/index.php/publications/reports/money-for-nothing-the-increasing-cost-of-foreign-reserve-holdings-to-developing-nations/.

[10] This calculation is based on the price-adjusted broad dollar index, Board of Governors of the Federal Reserve, http://www.federalreserve.gov/releases/h10/summary/indexbc_m.htm, accessed December 26, 2013.

[11] Oil prices are available from the Energy Information Agency, http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=RWTC&f=M.

likely to shut down these new facilities just because a falling dollar takes away some of the advantages of producing goods there. In many cases the dollar would have to fall well below its original value in order for manufacturers to find it profitable to return production to the United States.

Nonetheless, there is still a solid relationship between the value of the dollar and the size of the trade deficit, as shown in Figure 2. The dollar will have to fall further from its current level in order to bring the trade deficit down to a level more consistent with full employment.[12] Moreover, the fact that the dollar may have to drop below its original level shows the permanent cost of enduring a prolonged period in which the dollar is overvalued.

It may yet prove to be the case that the trade deficit will fall further due to continued increases in domestic energy production. This outcome would reduce the need for a decline in the dollar to effect more balanced trade. Whether this is as positive for employment as getting to balanced trade through a lower dollar would depend on the jobs created per dollar in the energy industry as compared to the jobs created per dollar in the trade sector.

## Mechanisms for Reducing the Value of the Dollar

A variety of tools have been suggested for reducing the value of the dollar against the currencies of our trading partners.[13] The key issue involves getting our trading partners to sell some of the dollars their central banks already hold and to curtail purchases in the future. It was the decision by these central banks to buy large amounts of the dollars after the East Asian financial crisis that first sent the dollar soaring. Reversing this policy would allow the dollar to fall to a level more consistent with balanced trade.

The tools for reducing the value of the dollar involve various sanctions against countries that have acted to keep down the value of their currencies against the dollar. The United States can look to counter their actions by enacting retaliatory tariffs, taxing the dollar holdings of foreign central banks, or directly intervening in currency markets to push the dollar in the opposite direction.

Complex legal questions attach to any of these actions, but the important point is that at the end of the day the issue will inevitably be resolved through negotiations. The U.S. government will have to discuss terms under which the dollar will fall in value, just as it did in the 1985 Plaza Accord that led to the fall in the value of the dollar in the second half of the 1980s.

Since negotiations involve give-and-take, wringing a lower-valued dollar from our trading partners may mean foregoing some other concession. When members of the Administration sit down to negotiate with China or other countries with whom we have large trade deficits, they bring to the table a long list of demands, including items like increased patent protection for the prescription drug industry, strengthened copyright enforcement for the software and entertainment industries, and increased market access for the financial services industry. So securing concessions in the form of a lower-valued dollar might be good from the standpoint of reducing the trade deficit and increasing employment, but not so good from the standpoint of protecting the balance sheets of drug companies, tech companies, or banks.

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[12] A regression of the trade deficit measured as a share of GDP against the real broad dollar index lagged two years had a coefficient of -0.0007, meaning that a 10-point rise in the index would be associated with an increase in the deficit of approximately 0.7 percentage points of GDP after two years. This relationship is significant at the 0.01 percent level.

[13] See Fred Bergsten and Joe Gagnon, "Jobs and the Currency Wars," Peterson Institute for International Economics, 2012, http://www.iie.com/publications/opeds/oped.cfm?ResearchID=2207#long, accessed January 2, 2014.

Moreover, many U.S. companies benefit directly from an overvalued dollar. Major manufacturers that have set up operations overseas to take advantage of lower-cost labor will not be eager to see the price of the items they produce abroad rise by 15 to 20 percent due to a decline in the value of the dollar, and so these manufacturers can be counted on to lobby directly against a lower-valued dollar. The same will be true of major retailers like Walmart that have invested enormous resources in establishing low-cost supply chains around the world, a major source of their competitive advantage.

Thus, it is important to bear in mind the domestic political issues involved in a lower-valued dollar, since not everyone has a common interest in this particular route for promoting growth and jobs. Powerful domestic interests will not want to see the dollar fall if the price is losing out on a trade demand or seeing the value of their investments abroad diminished.

In other words, dollar policy is part of the larger story of inequality and how inequality can be self-perpetuating. From the standpoint of promoting economic growth and full employment, a lower-valued dollar would almost certainly be a top priority in negotiations with our trading partners. However, the powerful interests who don't especially share these goals may prevent the government from taking the steps necessary to reduce the trade imbalance.

## But Isn't the Dollar the World's Reserve Currency?

It is sometimes argued that the dollar can't fall because of its use as the world's reserve currency. (A reserve currency is a currency that is held as a store of wealth to protect against unpredicted events in the same way that gold is held as a store of wealth.) This claim reflects a misunderstanding of the meaning of a reserve currency and the operation of the international financial system.

First, it is inaccurate to call the dollar *the* reserve currency because it is one of several; the list includes the euro, the yen, the Canadian dollar, the British pound, and the Swiss franc, and it is likely that the Chinese yuan will be added in the not-distant future. The dollar is by far the preeminent reserve currency, but there is no reason that central banks could not reduce their holdings of dollar reserves by 20 to 30 percent and replace these holdings with other currencies. In fact, the mix of reserves changes all the time.

Second, there is not a fixed amount of reserves that banks need to hold. As noted earlier, central banks in developing countries hugely increased their reserves in the late 1990s on the heels of the East Asian financial crisis. They felt this a necessary step to protect themselves against dealing with the IMF on unfavorable terms. However, there is no reason in principle that such a run-up in dollar holdings could not be unwound. Certainly central banks could carry on their ordinary business with far smaller amounts of reserve holds than they currently possess. Owing to innovations in domestic finance, banks and other financial institutions need hold only a tiny fraction of their deposits as actual reserves, since they have the ability to gain quick access to more funds if needed. But this innovation has not spread to international finance, where the ratio of reserves to trade have exploded, at least in the period following the East Asian financial crisis. If we saw the same degree of innovation in international finance as we have in domestic finance, the amount of reserve holdings would likely fall sharply relative to world GDP and trade through time.

In short, there is no reason that the dollar's status as the world's leading reserve currency implies that the United States must run a trade deficit on an ongoing basis. In fact, insofar as the rest of the world actually does need ongoing supplies of dollars to conduct its business, it can get them through investment flows, as it did in the three decades immediately following World War II, when the United States consistently ran trade surpluses.

Maintaining the dollar as a currency with international credibility is important, but it requires first and foremost a strong economy, not a specific value of the dollar. In fact, the current overvalued dollar represents a risk to its credibility. If for whatever reason China and other major holders of dollars decided to suddenly offload their reserves, the dollar's value would drop sharply and quickly. We are best protected from this sort of risk by having a dollar valued at a level that is consistent with balanced trade.

## Conclusion

As a simple matter of accounting, it is not plausible for the United States to return to a level of output consistent with full employment without substantially reducing its trade deficit. The United States did manage to attain near-full-employment levels of output with large trade deficits in the late 1990s and in the last decade, but the mechanism was bubble-driven demand, an unsustainable endeavor.

The large trade deficits of the last 15 years can be shown to be directly related to the run-up in the value of the dollar following the East Asian financial crisis. The key to reducing the trade deficit to more manageable levels is to bring down the value of the dollar against other currencies.

The most likely way that the value of the dollar will be reduced is by negotiating agreements with the countries that have deliberately propped up the dollar against their own currencies. But while a lower-valued dollar is important to workers who want to see more jobs and the ability to bargain for higher wages, it is not going to be important or popular with the powerful interest groups that benefit, directly or indirectly, from an overvalued dollar.

In other words, the major obstacle to lowering the value of the dollar is political. Considering the powerful interests lined up behind a high dollar, the United States will likely continue to run substantial trade deficits and have great difficulty getting back to full employment without strong support lined up on the other side.

## Appendix I: The Basic Accounting of Trade and GDP

We can add up GDP on the output side by summing its components — consumption, investment, government, and net exports — which must equal the incomes generated in production. This gives us a basic identity that:

1) $C+I+G+(X-M) = Y$

where Y stands for income. This identity must always hold; it is true by definition.

We can then break down Y into disposable income plus taxes. This gives us:

2) $Y = YD + T$

We can then break down disposable income into savings and consumption, since by definition any income that is not consumed is saved. This gives us:

3) $YD = C+S$

Since we now know that $Y = C+S+T$, we can rewrite equation 1 as,

4) $C+I+G+(X-M) = C+S+T$

we then eliminate consumption from both sides and we get:

5) $I+G+(X-M) = S+T$, and rearranging terms gives:

6) $(X-M) = (S-I)+(T-G)$

Equation number 6 has a clear and useful meaning. X-M is exports minus imports, or the trade surplus, S-I is private saving minus private investment, and T-G is taxes minus government spending, or the budget surplus. This identity means that the trade surplus is equal to the sum of the surplus of private savings over investment and the government budget surplus.

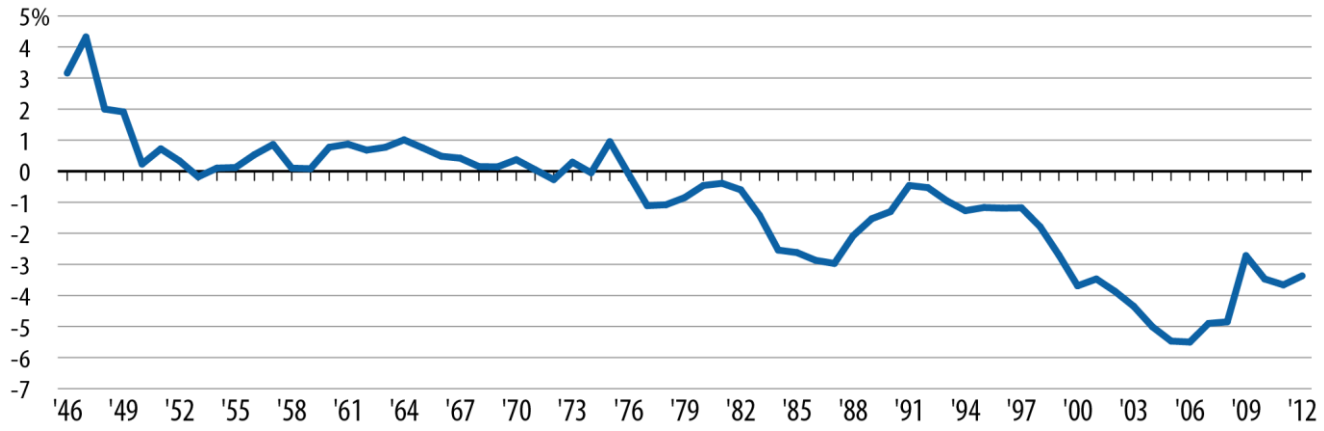
## Appendix II: Trade Deficits and the Value of the Dollar

Figure 1 shows the nominal trade deficit as share of GDP. These data are taken from the National Income and Product Accounts Table 1.1.5, Line 15 divided by Line 1.

Figure 2 shows the non-oil trade deficit as a share of GDP measured against the price-adjusted broad dollar index, lagged two years. The non-oil trade deficit is calculated by subtracting oil imports (NIPA Table 4.2.5, line 30) from the trade deficit and adding oil exports. Data on the nominal value of oil exports were obtained by taking the real value of oil exports from the Census Bureau for 2000 and adjusting it with an index of nominal exports obtained from the Federal Reserve Bank of St. Louis (series number IQ111). The calculation for the non-oil trade deficit is divided by GDP from Table 1.1.5, Line 1.

Figure 1

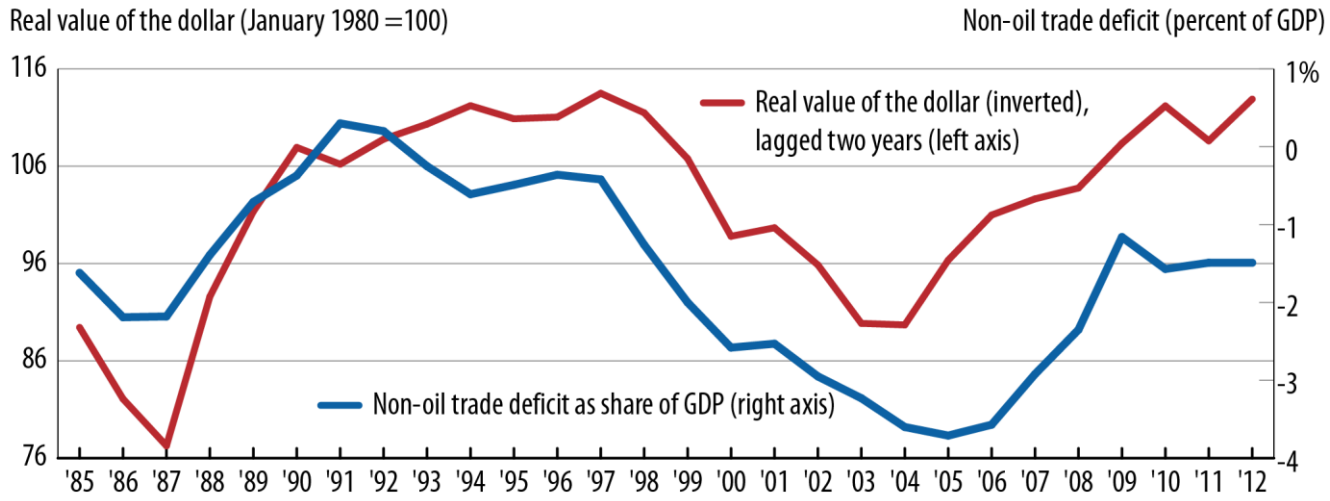
**Trade Surplus or Deficit as a Share of GDP**




Source: Bureau of Economic Analysis.

Figure 2

**Real Value of the Dollar and Non-Oil Trade Deficit**




Source: Bureau of Economic Analysis, Federal Reserve Board, and author's calculations (see Appendix II).