Can America Still Compete or Does It Need a New Trade Paradigm?

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The relentless increase in the US trade deficit since the early 1990s has raised concerns about America’s basic ability to compete in international markets. The emergence of China and India in particular has helped provoke these fears and given rise to calls for new ways to think about international competition and new ways of responding to US trade deficits. Unless US policymakers come up with something new, it is argued, the United States will face either continued losses of good jobs in manufacturing and services or the need to bring US wages much closer to Chinese or Indian levels. In this policy brief we challenge such views. We do find evidence that it has become harder for the United States to sell its goods overseas over the past decade. However, the change has been modest and well within historical experience. The exchange rate of the dollar is the major factor leading to the trade deficit rather than any structural inability of US manufacturing or services to compete in the new global environment. Accordingly, we judge that there is no need for a new trade paradigm, and it would be a mistake to adopt protectionist trade policies.

Any time a country runs a trade deficit (strictly, a current account deficit), there has to be an inflow of capital to pay for the excess of imports over exports. And that is true now for the United States. From 1990 to 2005 the rest of the world transferred $4.5 trillion to the United States, with $2.8 trillion, or over 60 percent of the total, in the five years through 2005. The United States went from being a substantial net holder of foreign assets to being a net debtor to the world of over $2.5 trillion. What would happen if the appetite of foreign residents for US assets were to weaken, resulting in a decline in the value of the US dollar? Would exports respond positively and imports slow to restore a more balanced trade? Would there be some kind of collapse or crisis that might require other policy responses? And even if there is no crisis and the United States keeps borrowing, will it be able to generate the export income necessary to service its foreign debts?

This brief reports on the first stage of an ongoing study of US competitiveness that will examine how to improve US living standards in the face of increasing globalization. Here we focus on a narrow but important piece of that work in which we use recent past experience to assess US trade performance. Growing trade deficits imply that the foreign demand for American goods and services is growing more slowly than the US demand for foreign goods and services. But why? Is it that US goods and services have become relatively more expensive because the dollar has appreciated? Or is it because US goods and services have become relatively less competitive in world markets for some other reason? The relative importance of these causes has significant implications for how the United States might have to adjust if foreigners are no longer willing to finance its deficit. To answer these questions, we look at the extent to which the runup in the trade deficit historically has been associated either with a change in the ability of US-based companies to compete at a given exchange rate or the extent to which the deficit has been the result of movements in the exchange rate itself.

1. These figures are the simple accumulation of current account deficits in each year, measured in current dollars. Since the bulk of the total has come in recent years, putting the total in constant dollars does not make a huge difference—$4.89 trillion in 2005 dollars versus the $4.5 trillion in current dollars.
Like many others, we view the current path of rising trade deficits as unsustainable over the long term and believe that at some point the dollar will adjust downward\(^2\)—indeed that process may be already under way, as the dollar has declined in 2006. Appropriate macroeconomic policies in the United States and globally would contribute to the adjustment process. Protectionist trade policies are a costly and usually ineffective alternative.

**THE US TRADE BALANCE AND THE REAL EXCHANGE RATE**

Exchange rates, trade flows, and capital flows are being determined in the global economy all the time in a complex interactive system that is hard to model or fully understand. Because trade flows react to the exchange rate with a substantial lag—a lag of up to three years—we can cut through this complexity and focus on the relation between the trade balance and the exchange rate. To a first approximation, the exchange rates that are relevant to determining today’s trade balance are those from the past. Taking advantage of this, we can create a picture of how the trade balance responds to the exchange rate and whether or not the relationship linking the two has remained stable over time or has shifted.

Figure 1 shows the US trade balance plotted against the exchange rate for 1981 to 2005, with each year’s position noted. We will explain shortly how we measure the two variables because this is not immediately intuitive. But for the moment suspend those questions and note that there is a very strong negative relation between the US trade balance and the exchange rate. The relationship jumps off the page: When a high dollar emerges from the global financial system, this emergence is associated with large US trade deficits after a lag and vice versa for low values for the dollar. In addition, the relation between the trade balance and the dollar has clearly shifted over time. The years from 1981 until around 1994 are scattered up or to the right relative to more recent years.

The trade balance that makes headlines each month is the dollar difference between exports and imports, but this figure does not link easily to empirical work on the impact of exchange rate changes. Instead, we start with the trade balance defined as the ratio of nominal exports to imports. When trade is balanced (exports and imports are equal), this ratio is unity. When there is a trade deficit, the ratio is less than unity, or less than 100 percent. Then, since the relation between trade and the exchange rate is a proportional relation, we look at the deviations of the trade ratio from balance. So the horizontal axis in figure 1 shows the deviations of the trade balance from 100 percent. A figure of, say, –40 percent would indicate that exports were 40 percent lower than imports, and so on.\(^3\)

\(^2\) This view is expressed by several authors in C. Fred Bergsten and the Institute for International Economics (2005).

\(^3\) The actual data used depicts the natural log of the ratio of exports to imports multiplied by 100. Even though the calculation is based on logs, the results are very close to intuitive percentage differences, taking account of both percentage increases and decreases. A figure of –40 percent, for example, occurs when exports are about 30 percent smaller than imports and when imports are about 50 percent larger. The average of 30 and 50 is 40 percent.
On the exchange rate side, we start with the broad real exchange rate index from the Federal Reserve Board and adjust it to equal unity, or 100 percent, in 2000. Given that the exchange rate affects trade only with a lag, we take the effective exchange rate in a given year to be the weighted average of the index in the prior three years. So the vertical axis in figure 1 shows the percentage by which the effective (lagged) exchange rate differs from the 2000 level of the Fed’s exchange rate index. More details of how the definitions are constructed and why they are done in this way are given in Baily and Lawrence (2006).

H OW M UCH HAS U S T RADE P ERFORMANCE CHANGED?

Figure 2 shows the results of a statistical regression to determine the quantitative response of trade to exchange rate changes and the amount by which the relation between the two variables has shifted. We find that each 10 percent change in the real broad exchange rate is associated (after a lag) with a 12.5 percent change in the nominal trade balance (an elasticity of −1.25). We explored two possibilities for the shifting relationship: There has been a slow but steady shift of the relationship over time, or there has been a one-time shift. The latter view fits the data better and fits it best under the assumption that the shift occurred in 1994. For any given exchange rate, the trade deficit is 10.5 percent higher from 1994 on than it was prior to that year. Or equivalently, the exchange rate now would have to be 8.4 percentage points lower than in the recent past to compensate for a loss of trade performance (8.4=10.5/1.25).

The loss of trade performance or trade competitiveness is significant. It shows that America is facing stiffer competition in global markets than it did 10 to 20 years ago. But that is hardly surprising. It is perhaps more remarkable how stable the relationship has been over time. The US trade balance declined by over 40 percentage points between 1991 and 2005—in terms of the headline number, the deficit rose by nearly $700 billion. Only about a quarter of this (10.6 per-

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4. This is simply setting the base of the index. There is no implication that the exchange rate was at a long-term equilibrium in 2000.
5. This elasticity is the export elasticity (a negative number) minus the import elasticity (a positive number)—in magnitude it is the sum of the two elasticities.

6. Many estimates of US trade flows adjust for the business cycle in the United States and in the rest of the world. We tried various cyclical variables and found no responsiveness of the trade balance either to the US cycle or the cycle in the rest of the world over this period. Adding such variables made very little difference to the results reported here.

7. Figures 1 and 2 use the ratio of current-dollar exports to current-dollar imports. This ratio is unaffected by general inflation but does include the impact of changes in the relative price of exports and imports. The charts look very much the same if constant-dollar trade volumes replace the current-dollar values. The responsiveness of trade volumes to the exchange rate is higher (elasticity 1.44) than for the dollar values, as would be expected, but not by much.
The exchange rate of the dollar is the major factor leading to the trade deficit rather than any structural inability of US manufacturing or services to compete.

Why Has Trade Performance Worsened? Oil and Exports

The point for 2005 in figure 2 falls well below the regression line. The trade deficit was bigger than would have been predicted from the post-1994 pattern. What will happen in the remainder of 2006 remains to be seen, but based on estimates of trade available at this writing, the 2006 value will be well below the regression line also. The price of oil is a very important reason for this result. The price index for imported petroleum and products is set to 100 in 2000. It fell to 83 in 2001, helping the US trade position, and then rose to 185 in 2005. In addition, the demand for oil in the United States has risen over time while production has stagnated, so the quantity of oil imports has risen over time. The increased dependence of the United States on imported oil and the rise in the world price of oil have worsened US trade performance over the past few years. If the price of oil stays as high as it is now, it would take a larger decline in the value of the dollar (larger than 22 percent) to bring about trade balance.

How much difference has oil made? If the price of imported and exported oil had remained constant at 2000 levels, the trade balance in 2005 would have been $38.6 percent rather than the actual value –43.8 percent shown in figure 2. With constant oil prices, the point for 2005 in figure 2 would have been much closer to the line. Apart from oil, the US trade balance (the ratio of exports to imports) started to improve in 2005. The decline in the value of the dollar since 2002 has begun to turn around the trade balance, a pattern that is masked by the rising cost of oil.

Despite its importance at times, oil is not, however, the explanation for the shift in trade performance that occurred around 1994. To most people, the reason for worsening trade performance is obvious. The conventional wisdom is that imports flooded the United States. But as a diagnosis of the shift in US trade performance, the conventional wisdom does not hold up. After controlling for changes in the price of oil, US imports grew more slowly from 1994 to 2005 than they did from 1984 to 1994. This is particularly the case from 2000 to 2005, when nonoil goods imports and total US spending (gross domestic purchases) both grew by 29 percent. The US economy was certainly increasing its spending faster than its production, widening the trade gap, but it was not diverting a larger share of spending to nonoil goods imports.

The fact that the shift in our line occurred in 1994 could suggest that perhaps the signing of the North American Free Trade Agreement (NAFTA) and the Uruguay Round trade agreements triggered the loss of trade performance. We do not

8. Strictly, the trade deficit is so high because macroeconomic conditions in the United States and overseas have resulted in a high dollar and an excess of US expenditure over US production.

9. Our colleagues Mann (2005) and Cline (2005) have looked at estimates of the impact of dollar adjustment on the trade deficit. In addition, Macroeconomic Advisers carried out estimates for Baily (2003) of the impact of a 20 percent devaluation. Our conclusions here show a larger impact of the dollar on the deficit than does Mann but a smaller impact than Cline and Macroeconomic Advisers. For a discussion of the sustainability of the trade deficit see Truman (2005) and the contributions by C. Fred Bergsten and Michael Mussa in C. Fred Bergsten and the Institute for International Economics (2005).

10. The Bureau of Economic Analysis (BEA) reports total imports and nonoil imports but does not do the same for exports—except in the detailed commodity breakdown. Exports are much smaller than imports but are not trivial. In making the above calculation we took account of the effect of price changes on both imports and exports.

11. GDP grew by 26 percent over this period, so nonoil goods imports grew from 11.2 percent of GDP to 11.4 percent.
think the data support that view, however. The shift took place in the early 1990s, prior to these agreements. Trade performance did not significantly deteriorate from 1994 to 2004. In the case of Mexico specifically, the US trade balance has declined over the past 10 years but not more so than the US balance with the rest of the world, allowing for the increased cost of Mexican oil.12

Much more than imports, trade performance has deteriorated because of weakness on the export side. Again controlling for oil prices, US exports grew at over 9 percent in 1993 and only 5.4 percent in 1995. The weakness in US export performance has been particularly problematic since 2000. US exports grew at only 3.3 percent a year from 2000 to 2005. The high value of the dollar best explains why export performance has been weak, but the shift in the line shown in figure 2 suggests US exports have also become less competitive at any given exchange rate.

An important task of future research is to figure out why exports have been weak. So far we have only eliminated a couple of possibilities and not found an explanation. Weak exports do not appear to be related to a lack of demand growth in major US trading partners, nor does it seem to be associated with the types of products the United States sells (see Baily and Lawrence 2004).

THE DETERIORATION IN US TRADE PERFORMANCE IN HISTORICAL PERSPECTIVE

After World War II the Bretton Woods agreement was in force, which fixed the dollar price of gold and set other global currencies in relation to the dollar. While some exchange rates were adjusted, the real exchange rate of the dollar changed relatively little until 1971. In the early postwar years, the world economy was emerging from the war, and capacity and technology in the rest of the world was weak compared with that of the United States. But at the same time, income overseas was limited, and imports were often restricted. US goods were unique, putting them in high demand, but exports were small and the trade balance was small and positive. As the rest of the world developed, however, the demand for US goods expanded and exports greatly exceeded imports, with the trade balance reaching a high point in 1964.

After 1964 the tide turned. With the dollar still kept roughly constant, the trade balance declined pretty steadily until 1972. The effective real exchange rate fell only about 5 percentage points over this period, while the trade balance fell by about 25 percentage points. Europe and Japan expanded their supply, improved their quality and technology, and began to compete head-to-head with the United States.

By the late 1960s, the world had moved from dollar shortage to dollar glut, even though other countries could have appreciated their currencies but chose not to, instead piling up dollar and gold reserves. It became difficult to maintain the fixed value of the dollar against gold, and President Nixon depreciated the dollar in 1971 and moved to a floating exchange rate system by 1973. The dollar exchange rate fell sharply.

By far the most important reason the trade deficit is so large today is that the dollar is much higher than it was in 1981 or 1991.

Because the dollar changed so little prior to 1971, it is not possible to identify exchange rate effects over the early postwar period. But after that, the dollar moved substantially, and so we have included the years 1972 to 1980 in the regression analysis described earlier, looking at the entire period 1972 to 2005 and covering all three episodes of dollar change (1970s, 1980s, and 1990s through the present). With the additional years included, the exchange rate continues to be a key determinant of the trade balance, although adding the earlier years lowers the responsiveness slightly from 1.25 to 1.13.13 The shift in the later years still occurs in 1994 and is estimated as a shift of 11.7 percentage points rather than 10.6. Overall, therefore, the results we gave earlier do not change very much by the inclusion of the 1970s. More important, a dramatic shift in trade performance occurred in the 1970s, with a much weaker dollar required to maintain any given trade balance. Modeling fully what happened during this period is a topic for future research, but the adverse shift in US trade performance that took place in the 1970s was much larger than the one that occurred around 1994.

In summary, the drop in US trade performance in the 1990s is troubling but needs to be seen in perspective. At the end of World War II, the US economy dominated. Other countries’ recovery and industrialization brought about a dramatic decline in the terms on which the United States trades. The addition of new global competitors in recent years has continued this process, but earlier there were far larger changes as foreign-based companies achieved global best practices.

13. Since there appears to be some cyclical movement of the trade balance in the 1970s, variables were included to capture the US cycle (the adult male unemployment rate) and the global cycle (the deviation of rest of world GDP from a centered five-year moving average). Neither variable turns out to be significant.
Americans look back nostalgically to the 1950s and early 1960s, when the United States could run trade surpluses and still have a dollar that made travel in Europe very cheap. That time has passed—it is long past.

HOW DEEP A HOLE?

The Financial Hole. Foreign residents held $13.6 trillion of US assets at the end of 2005, compared with $11.1 trillion of foreign assets owned by US residents, leaving the United States as a net debtor to the tune of $2.5 trillion. This large sum means that the chronic US trade and current account deficits have created a burden on future generations of Americans, compared with the large net positive asset position of the United States only 20 years ago.

However, it could be a lot worse, as Cline (2005) has pointed out. The current account deficits from 2001 to 2005 have totaled $2.55 trillion, but astoundingly enough the increase in net indebtedness over this same period went up by only $207 billion. Apparently US assets abroad, disproportionately held in the form of equity, have appreciated by more than foreign assets in the United States, a greater share of which takes the form of debt. The United States has been running larger and larger deficits and has been financing them with larger and larger inflows of capital, but the credit card balance does not look that much worse. In addition, US residents earn higher returns on their foreign assets than foreign residents earn on their US assets. Even though the United States is a large-net debtor, there is actually a small positive net inflow of capital income to the United States. (See figure, which shows US net indebtedness since 1997 and the net inflow of income.) How can these facts be the case?

There is no fully satisfactory answer to that question, and it is possible that there are errors in the data. But some partial answers exist. First US companies invest heavily in overseas subsidiaries, including buying foreign businesses, which are generally profitable and often experience gains in value. Foreign residents, including foreign governments, buy a lot of bonds earning low rates of interest that do not appreciate in value. Second, when the dollar declines, which it has done modestly since 2002, this increases the value of the foreign assets held by US residents that are denominated in foreign currencies while leaving the value of foreign-owned assets held in the United States unchanged. The United States borrows in its own currency, unlike many other countries, so that dollar depreciation actually improves its net investment position. Up until now, the United States could finance its deficits on very favorable terms indeed, borrowing in dollars at low interest rates. It may not be—and probably will not be—possible to do that forever, but so far the United States has not burdened present and future generations with high-interest debt.

Adjusting Trade Flows. The overall message of this brief is that US trade does respond to exchange rate change and that a 20 or 25 percent depreciation of the dollar would return the United States to a position where it had only a modest trade deficit. Some people argue to the contrary that foreign competition has so eroded the US manufacturing (and services) base that it could not respond effectively, but we do not agree. The evidence of the past 25 years, described here, does not support this view. Robert Lawrence (1990) carried out a study of the issue of trade “hysteresis”—this occurs if deep trade deficits make it difficult or impossible to get back to balance. He found no evidence for this phenomenon, as the response of trade flows to changing conditions was quite symmetric.

Trade deficits do cause some US operations to close down, but these deficits simply accelerate the process of adjustment that happens anyway. For example, employment in the apparel industry fell by nearly half from 2000 to 2005, but it has fallen almost every year since 1990. Employment was over 900,000 in 1990 and was down to 260,000 by 2005. For industries that have a comparative advantage, foreign competition forces productive companies to become more efficient and to compete more effectively (see, for example, Baily and Gersbach 1995, Bernard, Jensen, and Schott 2003). At the microlevel—that is for US-based producers—the economy can compete at the right exchange rate.

Many companies—Caterpillar, Boeing, and United Technologies—are actually doing just fine even at today’s exchange rates, producing in the United States and exporting elsewhere. If we really want to reduce the trade deficit, there has to be additional currency realignment, allowing US exporting companies to expand and increasing the number of exporting companies.

14. For a provocative analysis of this topic, see Hausmann and Sturzenegger (2006).

15. See Cline (2005) for a discussion of this issue.
Figure 3  Net foreign income versus net foreign debt, 1997–2005

*Net international position*

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*Source:* Bureau of Economic Analysis.
THE POLICY RESPONSE

Two simultaneous adjustments are required to bring about a smaller trade deficit. First, spending must switch from foreign to US goods. In addition, however, since the United States must reduce its borrowing from abroad, spending must fall relative to income. So far our focus has been on expenditure switching, but overall spending needs to be shifted as well.

Cline (2005) and Mussa (2005) have described the adjustment path for the United States and what would be required to move along it. Given that the economy is now close to what most believe is its potential, there has to be either an increase in US national saving (desirable but difficult to do) or a reduction in national investment (undesirable) or both. US production has been growing more slowly than demand, with the difference made up by net imports—exporting too little and importing too much. To unwind this, a period when domestic demand grows more slowly than supply needs to take place. Affirmative policies to slow consumption growth and an increase in US national saving can achieve this adjustment, or it can be forced upon the United States by a drying up of foreign capital inflows.

Americans—both private households and the federal government—are currently borrowing huge amounts of money. To satisfy that borrowing and at the same time fund domestic investment, larger and larger amounts are borrowed from overseas each year. The only way to both heavily borrow and invest is to run a larger and larger trade deficit, and so that is what happens. If America really wants to cut the trade deficit, it must find a way to reduce total spending relative to Americans' ability to produce here at home. Balancing the federal budget would be a good start. Paying off the second mortgage and putting something aside for retirement would help too.

No Easy Answers. Any path that substantially reduces the US trade deficit will involve a difficult domestic adjustment of the US economy. There is no avoiding the inevitable belt tightening. While it is tempting to use trade restrictions as a way to avoid reductions in spending, the trade balance is by definition equal to the difference between US incomes and US spending, and thus this cannot be done. Trade restrictions on China, for example, could effectively lower the trade deficit with China. But without more fundamental adjustment in spending patterns, the United States would simply see the deficit with other countries increase.

Comprehensive trade restrictions—broad tariffs or quotas on imports, for example—could in principle lower the trade deficit but only by inducing Americans to borrow less and/or save more in ways they might not like. A substantial reduction in the trade deficit would also involve a comparable reduction of capital inflows, including reduced net foreign purchases of US treasuries, private bonds, or other financial assets. If we assume the restrictions were phased in gradually and a recession was avoided (a big assumption), there would still be a large rise in US interest rates, forcing a large and undesirable reduction in investment. Imports would become more expensive, with potential consequences for inflation and costs to consumers. Trade restrictions only reduce the deficit if they lead to the belt tightening associated with balanced trade. They do not provide an easy way of lowering the trade deficit, as the spending shift would be at least as painful.

The side effects of trade restrictions also would be severe. An adjustment of the exchange rate encourages investment and job creation in the industries of tomorrow—high-paying export sectors. Import restrictions, on the other hand, encourage preserving the industries of yesterday. Such restrictions distort market signals.

The whole course of international economic policy since the end of World War II has been to open up a liberal world trading system. If the United States turns its back on this course, it would provoke retaliation in the form of trade restrictions by the rest of the world, further hurting its exports and leaving its citizens much worse off. The negative impact on poor countries would likely be even greater.

In sum, trade restrictions are neither necessary nor sufficient to lower the US trade deficit. They are not necessary

16. We do not want to let foreign policymakers off the hook. The Chinese government today and the Japanese government in the not so distant past have purchased large amounts of US assets in order to keep the values of their exchange rates low and keep selling in the US market. Our colleague Catherine Mann has aptly described the US addiction to borrowing and foreign addiction to selling goods into the US market as a codependency.

17. The federal budget was in surplus in 1999 and 2000, but there were still large trade deficits. Balancing the budget is not a guarantee of eliminating the external imbalance. The trade deficits persisted in 1999 and 2000 because there was an investment boom (overall a good thing, although perhaps it went too far) and household saving kept falling. The budget surpluses were helpful even if they did not result in trade balance. Today we do not have an investment boom, household saving has fallen even further, and the case for fiscal restraint is even stronger.

18. Bergsten (2006), Goldstein and Lardy (2005), and Goldstein (2005) have argued that China should revalue its currency. We agree that this is an important part of the overall US and global adjustment but only a part, as they fully acknowledge.
because the lesson of history is that currency adjustment would allow companies with production facilities located in the United States to sell internationally and compete effectively in the US market. They are not sufficient because cutting the deficit with one country may just cause it to pop up elsewhere. And while an effective program with comprehensive restrictions might eliminate the deficit, it would not only be extremely costly, but it would also send domestic interest rates soaring.

REFERENCES


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