Explaining the U.S. Trade Deficit

Testimony before the
Trade Deficit Review Commission
Washington, D.C.

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December 10, 1999

Executive Summary

The U.S. trade balance consists of a *structural* component and a *short term* component. The structural component arises from long-term patterns in relative competitiveness and growth. The short term component is rooted in cyclical and historical fluctuations in exchange rates and relative growth rates.

The *structural* component of the U.S. trade balance has been declining since the 1960's, and crossed over into deficit in the mid-1970's. This downward trend in the US trade balance is evident in spite of substantial short term fluctuations (Figure 1 on the next page). An opposite trend is evident in the case of Japan, which exhibits a rising structural trade surplus amidst substantial fluctuations.

Relative growth rates have an important influence on the trade balance of any country. *But by themselves, they cannot account for whether a country runs a structural trade deficit or surplus*. For instance, it is clear that the current sustained expansion in the U.S. which began in 1992 has stimulated an upsurge in imports relative to exports and hence eroded the trade balance. Similarly, the recent Asian crisis has evidently reduced the relative demand for U.S. exports and hence further hurt the US balance of trade. But 'good times' at home and 'bad times' abroad are not sufficient to explain the existence of a trade deficit. If they were, then Japan would have had a whopping trade deficit in the face of its relatively rapid growth from the 1960-1990, and the U.S. would have had a trade surplus when it was in the doldrums in the mid-1970's and 1980's. The actual patterns in these two periods are just the opposite. The period of rapid growth in Japan was associated with a consistent *surplus*, while the one of slowed growth in the U.S. was associated with a consistent *deficit* (Figure 1).

It is *competitiveness* which is the principal factor behind structural trade deficits and surpluses. Conventional economic analysis is built around the premise that, in the long run, real exchange rates will move in such a way as to make nations equally competitive, without requiring any changes in wages and productivities. In other words, conventional theory assumes that real exchange rate movements will eventually do away with competitive differences. But I would argue that just the opposite occurs. Differences among the real production costs of nations determine their international terms of trade and hence their real exchange rates. With real exchange rates pinned by real relative costs, nations which are at a competitive disadvantage will tend to suffer persistent trade deficits. Conversely, nations with relatively low real costs will tend to run persistent trade surpluses. Contrary to what some economists argue, competitiveness matters a great deal.

The counterpart of a structural trade deficit is a structural rise in net foreign debt because each year's excess of imports over exports must generally be financed by additional net foreign borrowing (capital inflows). Debts and deficits are twins.

There are two policy paths out of a persistent trade deficit. The *high road* which emphasizes more rapid productivity growth, and the *low road* which puts the burden of adjustment on real wages. The high road is not only more desirable, but it is also the only one which is sustainable in the long run.

Introduction

The recent rise in the absolute level of the U.S. trade deficit has given much cause for concern. But it is important to note that as a percentage of GDP, the current trade balance is actually about the same as it was in the late 1980's, at about 2.5% of GDP (Figure 1). While that may be scant comfort, it does raise an important question: what is the overall trend of the trade balance? And here, it is important to distinguish between the *structural* component of the trade balance which arises from long-term patterns in relative competitiveness and growth, and the *short term* component which is linked to cyclical and historical fluctuations in exchange rates and relative growth rates.

From this perspective, I would argue that *the structural balance has actually been improving* because the U.S. has been closing the cost gap between itself and other advanced nations. Thus, in spite of the substantial fluctuations in the trade deficit over the last decade, Figure 1 shows that the trend (the dotted line) has actually stabilized. The fluctuations, on the other hand, can be traced back to movements in the relative growth rate of the U.S., most notably to the import boosting effects of its sustained expansion since 1992, the export reducing effects of the more recent Asian crisis, and to the extraordinary gyrations of the U.S. exchange rate in the mid-1980's.

In what follows, I will first show that the substantial cause of the long term decline in the U.S. trade balance is a decline in its terms of trade. I will then argue that, contrary to conventional economic theory, the terms of trade of a nation are regulated by the *real* costs of its tradable goods relative to those of its trading partners. I will sketch out the theory behind the argument and provide empirical evidence to support it (a much fuller development is provided in Shaikh and Antonopoulos 1998). We will see that the U.S. has been catching up to its trading partners in terms of its relative real unit labor costs, *which is why the trend of the trade deficit has stabilized*. But an absolute gap still remains, and it is this, in combination with shorter term factors arising from the U.S. boom and the Asian crisis, which accounts for the fact that a trade deficit still exists. A central policy implication of this argument is that it is crucial to maintain a high rate of productivity growth in the U.S., so as to turn the present cost disadvantage into a cost advantage, which would in turn convert the structural trade balance from deficit to surplus.

The Trade Balance and the Terms of Trade

The balance of trade is the difference between the value of exports and imports. But it can equally well be captured by the ratio of exports to imports, which I will call the *trade balance ratio*. When this is larger than one, the country is running a trade surplus, and when it is smaller than one, the country is running a deficit. The trade balance ratio has the

virtue that it can be written as the product of two components: the terms of trade (the price of exports to imports), and the ratio of real exports to imports (the quantity of exports to imports).

the trade balance = value of exports/value of imports = (terms of trade)A(real exports/real imports)

Slowed growth at home tends to raise the ratio of real exports to imports (the trade quantity ratio), because this makes our demand for imports from abroad grow relatively more slowly. A decline in a country's terms of trade also stimulates the trade quantity ratio, since a fall in terms of trade signifies that exports are relatively cheaper and imports relatively more expensive.

But, as is evident from the preceding expression for the trade balance ratio, a decline in the terms of trade also worsens the balance of trade. So the question arises: what is the overall effect in the case of the U.S.?

Figure 2 shows that the U.S. terms of trade declined sharply from 1960-85, and then stabilized thereafter. Figure 3 shows that the real export to import ratio exhibits a rising trend in that same period, and then stabilizes thereafter (albeit with substantial fluctuations). Finally, Figure 4 shows that the ratio of the value of exports to imports, which is the product of the two preceding components, declines sharply from 1960-85 and then stabilizes thereafter. *In other words, it shows that the dominant factor in the decline in the U.S. trade balance ratio is the decline in its terms of trade*.

Explaining the Terms of Trade

The fact that the decline in the U.S. terms of trade is the central factor behind the decline in the U.S. trade balance ratio leads us directly to the next question: what drives the *international* terms of trade?

The argument that follows has three steps. The first step begins with the recognition that a terms of trade is simply a relative price between two sets of goods. So let us first consider how relative prices are determined *within any one country*. And here, we know that the relative prices of two sets of goods are strongly conditioned by the relative costs of these goods. Since we can proxy these relative costs by relative unit labor costs (nominal wage rates divided by productivity), at first approximation we can say that within any one country the relative prices of two sets of goods are related to their relative unit labor costs. This has sound empirical foundations (Bienenfeld 1988, Ochoa 1988). Indeed, since we can divide each wage rate in any relative unit cost ratio by the consumer price index, we can also say that *within any one country the relative price of two sets of goods is strongly conditioned by their relative real unit labor costs.*

The second step is to consider what would happen in trade between any two regions *within* a given country. As far as internal competition is concerned, economic theory says that competition within a given country is driven by *absolute costs*, that is to say, firms with lower unit costs of production enjoy an absolute competitive advantage. From this point of view, within any one country, high-cost regions would suffer from a competitive disadvantage. If opened to competition, firms in such a region would tend to have declining shares in the national market . Their higher costs would make it difficult for them to sell outside the region ("exports") and would leave their markets vulnerable to products originating in lower-cost regions ("imports"). In other words, within a given country *regions with higher costs would tend to have structural "balance of trade" deficits*. This in turn implies that if such regions were to be subject to unregulated trade with other more competitive ones, they would tend to suffer job loss and real wage declines --- at least until they caught up and/or their labor migrated elsewhere.

The curious thing is that when conventional economic theory considers the question of free trade *between* countries, it abandons this eminently sensible analysis of competition in favor of its opposite. In international trade, it is argued, it is not absolute costs but rather

comparative ones which regulate trade (Krugman 1991). The conventional argument is well known, and need only be sketched here. In effect, it is assumed that if two initially unequally competitive countries were to open trade with one another, any initial trade deficit suffered by the higher cost country would eventually be negated because its real exchange rate would continue to depreciate until its trade was balanced. This is because the assumed depreciation of the real exchange rate would cheapen the international prices of the country's own products and make more expensive the prices of the products of its trading partners, thereby enhancing its exports and restricting its imports. As long as a trade imbalance remained, this process is assumed to continue, so that in the end trade would be balanced. For a country with an initial competitive advantage and corresponding initial trade surplus, this same mechanism would erode its surplus until it too arrived at balanced trade. Thus in the end all nations would end up equally competitive (Arndt and Richardson 1987, p. 12; Dornbusch 1988; Dernburg 1989, p.3).

In contrast to the conventional argument outlined above, the third step in my thesis is that *absolute cost advantage regulates competition both within a country and between countries* (Shaikh 1995, Shaikh and Antonopoulos 1998). In other words, international terms of trade, just like intra-national ones, are strongly conditioned by the relative real unit labor costs of the goods being traded.

Figure 5 depicts the relation between the U.S. terms of trade and the *real* unit labor costs of tradable goods of the U.S. relative to its OECD trading partners. Tradable goods costs were used as a proxy for export costs due to lack of adequate data, and coverage was restricted to the OECD countries. It should be emphasized that whereas the terms of trade contains the exchange rate, the real cost measure does *not*, since it is defined here as nominal unit labor costs in each country's local currency divided by the consumer price index in the country. It is also worth noting these are index numbers, not absolute levels. In the light of the approximations involved, it is quite striking how strongly the movements of the U.S. relative real unit labor costs correlate with the trends in its terms of trade. Even the period in which there is a significant deviation, in the early 1980's, fits well with the more general argument which incorporates the short term effects of international capital flows. From this point of view, an extraordinarily high interest rate differential between the U.S. and its trading partners attracted large international capital flows which raised the nominal exchange rate and temporarily drove the terms of trade and the real exchange rate off their long term trends (B. J. Friedman 1991; Shaikh and Antonopoulos 1998, p. 17).

Figure 5 demonstrates that the decline in the U.S. terms of trade from 1960-85 *actually reflects a secular improvement in its relative competitive position*. I would argue that it is

precisely because of this that the structural trade balance falls until 1985 and stabilizes thereafter, as shown in Figures 1 and 4. But then, why is the U.S. still running a structural trade deficit? The basic answer, I believe, is that it has not yet fully caught up. The absolute levels of U.S. labor costs in common currency now appear to be within striking range of those of many advanced countries (van Ark 1995), but seem to be significantly below those of Asian and other U.S. trading partners.

Finally, the thesis outlined here is capable of explaining several widely documented features of international trade patterns which appear quite puzzling from the point of view of conventional theory (Rogoff 1996, Arndt and Richardson 1987). Since the terms of trade is a real exchange rate, we would expect real exchange rates to have persistent trends as relative competitive positions evolve over time (i.e. to be *nonstationary*). In addition, we would expect the real exchange rate of a country to *depreciate* as its competitive position improves, because its falling real costs will permit a reduction in its relative international prices. Finally, relatively rapid inflation in a country will tend to drive up its nominal exchange rate so as to keep the terms of trade in line with the evolution of real costs (Barro 1984, Table 20, p. 542; Shaikh and Antonopoulos 1998, pp. 13-15).

Some Practical and Policy Implications of this Approach

A significant practical implication of the preceding approach is that it allows us to derive a policy rule-of-thumb by which to judge whether a real exchange rate is overvalued or undervalued. Because the terms of trade is regulated by relative real costs, the real exchange rate is sustainable when it keeps the terms of trade in line with these real costs (Shaikh and Antonopoulos 1998, Figure 3). Note that this is a quite different conception from the conventional one, which tends to view a real exchange rate as being 'correct' when trade is balanced. In the approach which I have present, there is no intrinsic tendency toward a zero balance of trade, though of course the overall balance of payments must be zero.

Lastly, it is a direct implication of the foregoing approach that a focus on productivity growth should be an essential component of trade related policy. But since more advanced technology can be put into place only through new investment, it requires ongoing economic growth. Economic growth therefore has a double character: it stimulates imports directly, but it also stimulates exports by putting lower cost methods of production into place. As the U.S. showed in earlier times, and Japan and Germany showed subsequently, strong economic growth can be a perfectly sound footing for a robust balance of trade.

References

Arndt, S.W. and Richardson J.D. 1987 (eds) *Real-Financial Linkages among Open Economies*, The MIT Press, Cambridge, Massachusetts.

Barro, R.J. 1984. *Macroeconomics*, John Wiley and Sons, New York.

Bienenfeld, M. 1988. "Regularities in price changes as an effect of changes in distribution", *Cambridge Journal of Economics,* 12(2), June: 247-255.

Dernburg, T. F. 1989. *Global Macroeconomics*, Harper and Row, New York.

Dornbusch, R. 1988. "Real Exchange Rates and Macroeconomics: A Selective Survey", NBER Working Paper No. 2775, Cambridge, Massachusetts.

Friedman, B.J. 1991. "U.S. Fiscal Policy in the 1980's: Consequences of Large Budget Deficits at Full Employment", in *Debt and the Twin Deficits Debate*, J.M. Rock (ed.), Mayfield Publishing Co., Mountain View, California

Krugman, P. 1991, "Myths and Realities of U.S Competitiveness, *Science Magazine,* November.

Ochoa, E. 1988. "Values, prices, and wage-profit curves in the U.S. economy", *Cambridge Journal of Economics,* 13(3), September:413-430.

Rogoff, K. 1996. "The Purchasing Power Parity Puzzle", *Journal of Economic Literature* Vol. XXXIV (June), pp. 647-668.

Shaikh, A. 1995. "Free Trade, Unemployment, and Economic Policy", in *Global Unemployment: Loss of Jobs in the '90's*, J. Eatwell (ed.), M.E. Sharpe, Armonk, New York.

Shaikh, A. and R. Antonopoulos. 1998. "Explaining Long-Term Exchange Rate Behavior in the United States and Japan", Working Paper No. 250, The Jerome Levy Economics Institute of Bard College (paper available online at HYPERLINK http://www.levy.org) www.levy.org)

van Ark, B. 1995. "Manufacturing Prices, Productivity and Labor Costs in Five Economies", *Monthly Labor Review*, July 1995, Bureau of Labor Statistics: pp. 56-72.

Tradable costs were defined here as manufacturing unit labor costs times an adjustment for tradable-to- nontradable goods, the adjustment being the ratio of the Consumer Price Index (representing tradable and nontradable goods) to the Producer Price Index (representing tradable goods), as explained in Shaikh and Antonopoulos 1998, Appendix B.

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