

The Transfer Problem in Reducing the U.S. Current Account Deficit

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Abstract

Correcting global trade imbalances is a form of the transfer problem: spending must be transferred from trade-deficit countries (mainly the United States) to trade-surplus countries. Reducing the U.S. current account deficit requires that net saving be increased in the United States and reduced abroad—particularly in Asia. But contrary to most literature on the subject, exchange rates need not, and probably best not, be changed as part of the transfer process for improving the U.S. trade balance. To show why this is so, I draw on the older literature on the transfer problem associated with paying war reparations. Adjustment in absorption, i.e., aggregate spending, is two-sided because the loser (the transferor) must raise taxes to pay an indemnity to the winner (the transferee), which then spends it. But there is no presumption that the terms of trade must turn against the transferor. That is, the losing country, which is forced into running a trade surplus (or smaller deficit), need not depreciate its real exchange rate to effect the transfer.

Introduction

Like it or not, the dollar is at the center of the world's monetary system, while simultaneously the United States runs large current account and trade deficits. Indeed, it couldn't have run such deficits for more than two decades if the dollar were not the definitive international money. Because much of the world is on a dollar standard, only the U.S. can borrow abroad indefinitely in terms of its *own* currency to cover its relatively low level of saving. This is possible as long as the U.S. Federal Reserve Bank keeps the purchasing power of the dollar fairly stable so that countries with trade surpluses are loath to appreciate against the currency in which most of world trade is invoiced. Thus, there is no immediate crisis and no need for precipitate action by governments—particularly on the exchange rate front—to “correct” the U.S. current account deficit.

Nevertheless this continual U.S. borrowing is *unsatisfactory* even if *sustainable*. The world is treated to the spectacle of its richest economy grabbing the lion's share of international finance that would be potentially available for economic development in much poorer countries. As well, the process of transferring resources from the rest of the world creates tensions within the American economy itself.

What is the transfer mechanism? In order to transfer real resources from the rest of the world (apart from surplus-saving oil-producing emirates), the U.S. runs very large trade deficits in manufactures from surplus-saving industrial economies such as China, Japan, a host of smaller ones in East Asia, and Germany. This real transfer of manufactures needed to cover the shortfall in American saving speeds the contraction in

employment in U.S. manufacturing beyond the natural rate of decline experienced by other mature industrial economies (McKinnon, 2005).

The upshot is a protectionist backlash in the United States, particularly by members of Congress with manufacturing constituencies. Instead of blaming America's own deficient saving which makes foreign borrowing necessary, American politicians incorrectly blame "unfair" foreign trading practices—undervalued currencies, substandard labor practices, dumping of subsidized exports in American markets, and so on. Rather than any imminent collapse in America's credit line with the rest of the world, this protectionist backlash is the serious threat to the world economy.

However, contrary to a widely held belief within the economics profession, devaluing the dollar is itself no panacea for correcting the savings (trade) imbalances across countries. The accompanying paper in this volume—"Exchange Rates and Trade Balances under the Dollar Standard", by Hong Qiao (2007)—shows that, unlike what the old and familiar elasticities model of the balance of trade would suggest, having creditor countries like Japan or China appreciate the yen or renminbi against the dollar would have no predictable effect on their trade surpluses. In effect, their savings surpluses (or the American saving deficiency) need not be corrected if the dollar is devalued. Nevertheless, any such major change in the dollar's nominal exchange rate could create serious monetary imbalances in the world economy: deflation in the appreciating countries or inflation in the United States, with the tradeoff between the two being somewhat arbitrary (McKinnon, 2007a), but where any long run impact on the "real" exchange rate washes out.

Instead, correcting international trade imbalances must start with countries' changing domestic absorption, i.e., aggregate spending, relative to income. International adjustment requires that net saving be increased in the United States or reduced abroad—particularly in East Asia. However, this truism raises two closely related issues:

1. Can international absorption adjustment work if it is just one-sided? For example, just the United States unilaterally raises taxes.
2. Suppose that absorption adjustment is balanced and two-sided: taxes fall abroad as they increase in the United States. Would any change in the exchange rate be necessary or desirable to facilitate the transfer?

Unfortunately, modeling possible monetary-cum-price-level repercussions together with the transfer itself presents problems. Instead, I will follow the time-honored but treacherous tradition in international economics of separating out monetary issues from “real” ones.

The Transfer Problem

The transfer problem is first modeled in real terms. To emphasize the importance of two-sided adjustment, I utilize the older literature on the economics of war reparations. The loser must raise taxes to pay a fixed sum to the winner, who then spends it and increases his absorption by that amount. What then happens endogenously to the real exchange rate?

To reduce the U.S. current account deficit from, say, 6.5 to 3.5 percent of GDP, adjustment must start with a permanent fall in total U.S. absorption relative to income of

at least 3 percent—and complementary inverse changes abroad. Because the United States bulks so large in the world economy, complementary foreign reactions to any change in American spending behavior must be explicitly modeled.

Consider the accounting identity

$$Y - A = CA = -CA^* = A^* - Y^*$$

where A is U.S. domestic absorption (total spending), Y is output (GDP), CA is the current account surplus (negative in the American case), and the starred variables are the counterparts in rest of the world (ROW).

Given full employment output at home and abroad, then clearly CA can only improve if $\Delta A < 0$, $\Delta A^* > 0$ and $\Delta A = -\Delta A^*$. To correct a trade imbalance for a large country like the U.S., *absorption adjustment must be symmetric with ROW*.

Let us assume that the 3 percent U.S. decline in absorption is not abrupt, but nevertheless is fairly definite as part of corrective government program. That is, fiscal improvement is highly visible and the Federal Reserve Bank avoids future episodes of excessively easy money that unduly stimulate U.S. private spending—as with the ultra low interest rate policy of 2003-04, which created the U.S. housing bubble of 2005-2006.

If well signaled and spread out over some years, the fall in absorption itself would gradually bid down the price of U.S. nontradables relative to tradables--which remain buoyed by robust external demand. This natural fall in the relative price of nontradables—largely services of all kinds—with slower wage growth in that sector gradually releases capital and labor for greater U.S. production of both importables and

exportables. Of course nobody (least of all economists!) would know exactly how much the relative prices of nontradables would eventually fall in the U.S. or increase abroad. But the American economy is flexible, with workers and firms continually adjusting to various shocks, and a 3 percent fall in absorption over some years isn't all that large. In the modern world, where the distinction between tradables and nontradables is eroding, the necessary relative price changes would be quite modest in the long run.

However absorption adjustment must be two-sided, if only because of the accounting identity: the gradual fall in U.S. absorption relative to income must be matched by a gradual rise in foreign absorption relative to income. Otherwise, unilateral absorption adjustment by either side to right the trade imbalance will always be frustrated. Putting pressure on China and Japan to increase consumption is all well and good, but only if matched by a reduction in consumption in the United States.

Suppose both sides begin the necessary adjustment—reducing absorption in the U.S. and raising it abroad. In long-run equilibrium, we know that relative prices of nontradables will fall in the U.S. and increase abroad. But should one presume that the U.S. terms of trade, the price of American exports relative to its imports, need fall as the U.S. trade deficit declines? Essentially, and perhaps surprisingly to most economists, the answer is no. In the long run, any change in America's real exchange rate (its terms of trade) associated with righting the international saving imbalance would likely be small with an unpredictable sign.

When one speaks of the *real* exchange rate, economists use at least two definitions.

The first and most common definition is simply the terms of trade and it arises naturally out of the old elasticities model. In its most stripped-down, short-run, version, the elasticities model presumes that the domestic-currency price of each country's export good is fixed. Thus a devaluation of the home currency reduces its terms of trade one-for-one—and this relative price effect is the mechanism by which it is presumed that exports expand and imports contract to improve the trade balance. This assumption is often incorporated into large-scale macroeconomic models (such as the Sigma model used by the U.S. Federal Reserve) by assuming all trading partners effectively produce just one aggregate good, some of which is exported and the rest consumed at home. Then, again, real exchange rate changes are associated with changes in the terms of trade.

An alternative definition of the “real” exchange rate is the price of tradable goods collectively relative to nontradables collectively. A real devaluation would then be defined as an increase in the relative price of tradables. And, as we just seen it is variation in this relative price that is most relevant for the transfer problem—with the relative price of tradables rising in the transferor and falling in the transferee. But to facilitate the transfer, does this leave any room for changes in the terms of trade?

The Jones Model and the Terms of Trade

From the 1950s into the 1970s, there was a spirited “real” (nonmonetary) literature on the transfer problem associated with war reparations. Given a fall in spending in the home country (the loser and the transferor) and a rise in spending in the foreign country (the winner and the transferee), what would happen to the terms of trade? The orthodox presumption then as now was that there would be a secondary burden on

the home country as its terms of trade deteriorated: the price of its exportables would fall relative to its importables in order for its trade balance to improve. However, several eminent authors—Paul Samuelson, Harry Johnson, John Chipman, and Ronald Jones—with some heavy mathematical artillery, in the context of a long-run real model where resources remained fully employed, successfully questioned the validity of the orthodox presumption that a real devaluation was necessary.

In particular, Ronald Jones in his article “Presumption and the Transfer Problem” (1975) built a model with a nontradable and two tradables sectors (importables and exportables) in each country. He showed that the relative price of nontradables declines in the transferor, and rises in the transferee, but what happened to the terms of trade is quite ambiguous. Only by making extremely strong assumptions about specialization in production or consumption could Jones get either the orthodox or the antiorthodox presumption of the change in the terms of trade to hold. However, for any large economy such as the United States with well diversified production and consumption, the effect of a transfer on its terms of trade is ambiguous—and presumably a second-order effect compared to the primary changes in the prices of nontradables relative to tradables at home and abroad.

We can extract Jones’s main result thus. In a stable market, the terms of trade of the transferor (the home country) worsen if and only if:

$$m_2^* + \omega m_3^* > m_2 + \omega m_3$$

Commodity 2 is the home country’s importable and foreign country’s exportable.

Commodity 3 is the nontraded good in each country. m_j is the marginal propensity to

consume commodity j at home, and m_j^* the marginal propensity to consume j abroad. (The subscripts i or j can assume the values 1, 2, or 3, in Jones's model.) The ω^* and ω terms are positive fractions, embodying the substitution effects in consumption and production triggered by the transfer's alteration of the relative price of nontradables to tradables in each country. If $\omega \approx \omega^*$, then terms of trade turn against the transferor only if $m_2^* > m_2$. That is, the foreign country (transferee) has a higher propensity to consume its own export good than the home country's (transferor) propensity to consume imports. In countries with large nontradables sectors, there is no reason to believe a priori that such a condition holds.

One can get an intuitive sense of Jones's result by noting that as absorption falls in the transferor, and the relative price of its nontradables begin to decline, then its exports will increase and imports decline as resources move into its tradables sector. If, myopically, one stopped at this point with adjustment only in the transferor, it then seems as if the orthodox presumption holds: the price of its exports would be bid down relative to the price of imports.

However, absorption adjustment must be two-sided. As the transferee's absorption of both tradables and nontradables increases, its nontradable prices are bid up relatively so that resources are drawn out of its tradable sectors. The transferee's exports will tend to fall and imports from the transferor rise. This foreign pressure by itself would tend to raise the prices of the transferor's exports relative to its imports. So putting the two offsetting sides together, Jones showed that there is *no presumption* as which way the transferor's terms of trade will move. If we use the terms-of-trade (most common) definition of the "real" exchange rate, there is no presumption as to which direction, if

any, the real exchange rate need move to facilitate the transfer in the long run. And, in the short run when export prices are “sticky” in each country’s home currency, there is no presumption as to which way the nominal exchange rate should change either.

What are the lessons from this “real” long-run model of the transfer problem?

1. Balanced international adjustment in both transferor and transferee is important for preventing a secondary burden on the transferor of having the terms of trade turn against it as its trade balance improves, and for maintaining macroeconomic equilibrium in the (two-country) system as a whole.
2. Precipitate action to foment a discrete major “real” depreciation of the dollar—which would initially turn the terms of trade against the transferor i.e., the United States, at the start of the adjustment process—is unwarranted. This would be painful but also quite unnecessary. In the long run, when the U.S. trade deficit was substantially reduced through mutual absorption adjustment, little or no change in the initial real exchange rate need characterize the final equilibrium.

Martin Wolf of the *Financial Times* constructively criticized my analysis and queried “...the price changes needed to bring that shift [a reduction in the U.S. trade deficit] around may not happen easily under a fixed nominal exchange rate, particularly if it requires a sizeable fall in nominal wages.” This is a common Keynesian worry for maintaining aggregate demand should domestic absorption be reduced.

Wolf is right to focus on the nature of wage adjustment. If taxes were gradually raised in the United States and decreased abroad by 3 percent of U.S. GNP, American *after-tax* wages and returns to the other factors of production must fall by 3 percent on

average—as would foreign after- tax wages rise by the same amount in dollar terms. This is the necessary primary burden on Americans for reducing the U.S. current deficit.

However, it is not at all clear that average *before-tax* (nominal) wages need fall in the U.S. There would be downward pressure on wages in the U.S. nontradables sector but upward pressure in the tradables sector from the increased foreign demand for American exports. The expansion of absorption abroad—most important for maintaining aggregate demand and limiting any necessary fall in American pre-tax wages—should parallel the contraction in the U.S. In particular, there would be no need for a nominal depreciation of the dollar as an inflationary backdoor device for reducing American real (before tax) wages as an adjunct to effecting the transfer.

Dollar depreciation would impose an unnecessary secondary burden on the United States as the terms of trade turned against it in the short run, although any real depreciation would eventually unwind in the long run. Because domestic export prices are sticky in the short run, a stable nominal exchange rate would have the great advantage of keeping the terms of trade fairly constant—rather than fluctuating unpredictably as mutual absorption adjustment proceeded. Without devaluing the dollar, U.S. net exports would gradually increase anyway.

A Concluding Note

This paper has approached the problem of correcting global imbalances from a somewhat unusual angle. The usual approach is to start off by estimating what the necessary “real” devaluation of the dollar must be to reduce the U.S. trade deficit by a predetermined amount—as in Cline (2005), or Obstfeld and Rogoff (2005). However,

Qiao (2007) has shown that appreciations by America's creditor countries, with large overhangs of dollar assets such as those in East Asia, are most unlikely to reduce their trade (saving) surpluses. Moreover, McKinnon (2007b) emphasizes the adverse deflationary consequences of any one of them being forced to appreciate—particularly in the face of continued expectations of further appreciation, as with the ever-higher yen for Japan in the 1970s to the mid-1990s, and the ever-higher renminbi for China today.

Any new international “Plaza” agreement should focus on directly adjusting international savings imbalances and not on exchange rates. Because naked exchange rate changes aimed at correcting international savings imbalances do no good and possibly much harm, the approach taken here has focused more directly on the underlying international transfer problem. Clearly, expenditures (absorption) must fall relative to income in the United States and rise relative to income in countries in East Asia and elsewhere. If governments want to reduce America's trade deficit and Asia's trade surplus, then they must act jointly to coordinate their fiscal and complementary other policies to achieve this result.

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