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Free Trade, Unemployment, and Economic Policy

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It is now widely recognized that a country's ability to compete effectively in the world market can be vital to its long-run prospects. Of course, in the short and medium run a country can protect itself from international competition through a variety of devices. Outright protection in the form of tariffs, quotas, and even subsidies can help insulate individual industries or regions. Manipulation of the exchange rate can enhance the competitiveness of national industries vis-à-vis the corresponding world sectors. And manipulation of the interest rate can induce foreign capital inflows and thus help cover any existing trade deficits. But in the long run, it seems, the issue of international competitiveness must be faced squarely.

Crucial questions are: how does opening up a country to international competition through free trade affect its levels of production and employment? Does free trade equalize competitive advantages, or does it worsen existing inequalities? Is laissez-faire the best way to participate in international trade, or is some degree of state support and management preferable?

The questions are age-old ones, and they involve both theoretical and policy considerations. To answer them adequately, we must address the actual workings of the capitalist world market. This means examining not only the *immediate* effects of international trade, but also the *longer-term* consequences, the ones that assert themselves through a slow and steady alteration of the initial effects, or by giving rise to unexpected or even unacceptable side effects. Successful policy therefore requires a structural analysis of international competition and

the world market. In this regard, the analysis of the exchange rate is of critical importance, because it is the exchange rate that translates local costs and prices into the international arena (Chrystal and Sedgwick, 1989).

In what follows, we will examine the conventional views of the effects of free trade and international competition. We will then criticize these theories and present an alternate framework based on a structural approach to international competition.

Conventional Analyses of International Competition

Virtually all traditions of economics analyze competition within a single nation in roughly the same manner: as a process in which the strong firms win out against the weak ones. More specifically, within a given industry firms with lower unit costs are assumed to be able to beat out ones with higher costs. At the most abstract level of analysis, in which firms in the same industry are assumed to face the same wage and input costs, lower unit costs arise from greater efficiency in production. Efficiency can be broken down into efficiency in use of raw and auxiliary materials, efficiency in use of plant and equipment, and efficiency in use of labor. The overall effect can be summed up as "more advanced technology." At a more concrete level, where we consider firms located in different regions of the same country, or with differential access to segmented labor pools, the differential wage rates can also play an important role in influencing labor costs (Shaikh, 1991).

As long as the frame of reference is a single nation, then economic theories generally assume that competition is driven by the law of *absolute costs*, that is to say, firms with lower unit costs of production enjoy an absolute competitive advantage. Note that this particular outcome does not require full mobility of labor or even of investment capital. It requires only that customers will flock in greater numbers to firms with lower selling prices, and that investment funds will be more readily available to firms with higher profitability.

From this perspective, within any one country, high-cost regions would suffer from a competitive disadvantage. If unprotected, firms in such regions would tend to have declining shares in the national market. Their higher costs would make it difficult for them to sell outside the region and would leave their markets vulnerable to products pro-

duced in lower-cost regions. In other words, under unrestricted trade, high-cost regions would tend to have declining exports and rising imports relative to lower-cost regions. This in turn implies that if existing trade barriers were reduced among regions, the high-cost regions would tend to suffer job loss and a decline in real wages (due to both unemployment and to pressure from lower-wage regions).

The preceding implications are inherent in the very notion of competition and are common to virtually all schools of economic theory. But there are certain crucial respects in which conventional theory diverges from other approaches from this point onward.

To begin with, conventional economic theory asserts that full employment obtains within each country. Thus, increased interregional competition merely redistributes employment from less competitive to more competitive regions. Given full employment, the possibility of overall job losses is automatically excluded. Needless to say, theories that do not assume automatic full employment yield a very different perspective.

The orthodox treatment of competition between countries (i.e., of international trade) is even more curious. Here, it is argued that the existence of separate national currencies changes the very nature of competition itself: whereas orthodox economics concludes that national competition is ruled by absolute costs, it has always insisted that international trade is ruled by *comparative costs.*

The argument is well known and need only be sketched here. Consider the case of two countries, one of which has higher costs of production (due to lower productivity and/or higher wages) at some initial exchange rate. Now imagine what would happen if international trade is initiated between the two countries. In the case of fixed exchange rates, the country with an initial absolute disadvantage (higher unit costs) in international trade will suffer a balance of trade deficit, which will in turn lead to a money outflow to pay for this deficit. Orthodox economics assumes that this money outflow will lower the national price level in the deficit country. As prices fall, the industries with the least initial disadvantage (i.e., the "comparative advantage") will be the first to get back into competition, and the process will continue until enough of the country's industries become competitive to ensure that overall trade is balanced.

In the case of flexible exchange rates, it is the exchange rate that supposedly does the adjusting. As before, the absolutely disadvantaged

country initially suffers a balance of trade deficit. But now this leads to the depreciation of its currency, which in turn lowers the foreign currency equivalents of its product prices. The process is assumed to continue until, once again, enough of the country's industries are competitive to ensure that trade is balanced.

1 he two cases above can be summarized by noting that in either scenario it is the *real exchange rate* that is assumed to **move** in such a way as to balance automatically the trade of every country, thereby making *all nations equally "competitive" in international trade, regardless of how backward their technology or how high their wages* (Officer, 1976, pp. 10–13; Arndt and Richardson, 1987, pp. 12-13). Moreover, since full employment is always assumed to hold, there can be no question of net job loss for either country. (Strictly speaking, it is assumed **that** any decline in employment is purely voluntary, on the grounds that under changed circumstances some workers may prefer not to work and hence voluntarily withdraw from the labor market, Nonetheless, markets clear.)

If it is assumed that international competition requires producers **of** the same good to sell at roughly the same price in common currency, after allowing for transportation costs, taxes, and tariffs, then the conventional argument depicted above also implies some version of the theory of Purchasing Power Parity (PPP): i.e., that price levels will be roughly similar in all nations when expressed in common currency'. Some authors emphasize the general price level (Schumpeter, 1954, p. 1106), while others emphasize the price level of tradable goods alone. (Hat-rod, 1933, pp. 53-63; Marston, 1987; Kravis and Lipsey, 1987, Dornbusch, 1988). Some even argue that PPP theory implies that unit *costs* of production will be equalized across countries, so that the automatic mechanisms of free trade end up making all countries truly equal in competition (Officer, 1976, pp. 1 O-l 2).

In theoretical models, it is often assumed that the real exchange rate is precisely at the trade-balancing level. It is, of course, understood that any actual balancing process would take time. Thus, at the empirical level **the** basic expectation of orthodox international trade theory is that

> [even though] an economy's international competitiveness might rise and fall over medium-term periods . . . on average, over a decade or so ebbs and flows of competitive "advantage" would appear random over time and across economies. (Amdt and Richardson, 1987, p. 12)

At a more concrete level of analysis, orthodox theory takes up the question of international capital flows and their effect on the exchange rate. In the absence of capital flows, the balance of trade is the same thing as the balance of payments, and since it is assumed that the real exchange **rate moves to equalize the former, it also automatically** equalizes the latter. Once capital flows are considered, the same reasoning leads to the conclusion that the real exchange rate moves to equilibrate the overall balance of payments. In the face of exogenous capital inflows, this implies that the real exchange rate would move to accommodate these inflows by giving rise to a deficit in the trade balance, so that the overall payments are balanced (Rueff, 1967, p. 125; Krueger, 1983, p. 106). But the important point here is that insofar as the capital inflows arise in response to real interest rate differentials between countries, they will serve to arbitrage these differences and hence tend to eliminate them-which in turn will eliminate the need for the capital flows themselves. Therefore, although exogenously induced capital flows might disturb the process in the short and medium runs, it is expected that over the long run "trade will be balanced so that the value of exports equals the value of imports" (Demburg, 1989, p. 29). In other words, in the long run international trade will operate as if nations "barter" exports for imports of equal value (Dombusch, 1988, p. 3).

In sum, conventional theory concludes that neither technological backwardness nor high costs are ultimately a disadvantage in international trade. Real exchange rates will always move in such a way as to make all trading partners equally competitive, so that no country will suffer persistent trade deficits or enjoy persistent trade surpluses.

The **trouble with all nf this is** that **it has never fitted the facts. In the** Postwar period, for instance, neither competitive advantages, nor trade balances, nor even overall payment balances have been the least bit random across time or across economies. On the contrary, international trade has been characterized by "persistent, marked competitive advantage for [countries such as] Japan and marked competitive disadvan-**tage for countries [such** as] the United **States,"** coupled with "Persistent, marked trade balance surpluses for Japan and deficits for the United States." As some orthodox economists themselves admit, such patterns have served to undermine confidence in the traditional arguments (Amdt and Richardson, 1987, p. 12).

For a while it was thought that the fixed-exchange-rate system of

the Bretton Woods was the explanation for this marked discrepancy between conventional theory and the facts. It was therefore widely expected that the switch to flexible exchange rates after 1973 would finally confirm the basic hypotheses of orthodox trade theory. But the results have been quite the opposite. Not only have persistent international imbalances failed to disappear, they have actually intensified. Moreover, it has rapidly become apparent to the best practitioners of orthodox economics that their theories are not able to explain the observed movements in flexible exchange rates. Dornbusch, who is one of the most influential voices in the field, has this to say:

> After twenty or thirty years of exchange rate modelling . . . we are left with the uncomfortable recognition that our understanding of exchange rate movements is less than satisfactory. Most models have lost their **ability to** explain **what has happened,** when exchange rates moved a lot, as in the 1980's. (Dombusch, 1988, pp. l-2)

The persistent discrepancies between orthodox theory and the historical facts have created great difficulties for the theory of international trade. In an effort to deal with this, two different tendencies have emerged. By far the dominant one has been to insist that the basic results still hold, but only in the long run. The observed discrepancies between the data and "the 'fundamentals' suggested by theoretical models of the exchange rate" (Dornbusch, 1988, p. 9) are then addressed as short- or medium-run phenomena. The four competing explanations in this vein are the monetary approach, the new classical approach, the equilibrium approach, and what Dornbusch calls the macroeconomic approach (ibid., p. 10). As the preceding quote from Dornbusch makes clear, he concludes **that these** models do not work well.

The other main reaction to the empirical difficulties of orthodox theory has been to try to make comparative cost theory "more 'realistic' " (Dosi, Pavitt, and Soete, 1990, p. 18) by relocating it within imperfect or monopolistic competition in the context of technological differences, economics of scale, differentiated products, multinational corporations, and so on. However, certain core assumptions concerning the behavior of maximizing agents and the automatic clearing of all markets are retained, even though they "are difficult to accept on either theoretical or empirical grounds" (ibid., p. 24). Most import-

ant, the central assumption that international trade is regulated by comparative costs remains unchallenged.

The Impact of Theory on Policy: The Case of NAFTA

Given the difficulties with orthodox trade theory, one would think that empirical studies and policy analyses would be undertaken within alternate frameworks. But the hold of the theory is so great that one finds just the opposite: most empirical studies take the basic propositions for granted.

The debate around NAFTA is a good case in point. It was widely reported that three hundred prominent economists, ranging from conservatives to liberals, publicly **endorsed NAFTA. Most studies also** concluded that the United States, Canada, and Mexico will all benefit in terms of employment, wages, and lowered prices (Faux and Lee, 1993, pp. 24). Indeed, in October 1993 the White House issued a statement to the effect that "19 of 20 comprehensive studies" had concluded that NAFTA would benefit the United States (JEC, 1993, pp. v, xv).

But closer examination of these studies reveals that they simply assume that labor always remains fully employed, at least in the United States (JEC, 1993b, p. 12; Stanford, 1993, pp. 98-100). Thus *job loss is ruled out by assumption.* This is, of course, a reflection of a basic tenet of conventional economic theory. However, one can question whether it is appropriate to build such an assumption into empirical studies that purport to guide economic policy in the present-day world.

Most studies also assume that no investment will be diverted from the United States to Mexico. This, too, derives from the basic theory, since as we have seen, orthodox theory assumes that in the long run there will be no net capital flows between countries. Once again, it is difficult to justify such an assumption on empirical grounds, given that "the fundamental economic purpose of NAFTA is to facilitate the shift in investment to Mexico" (Faux and Lee, 1993, p. 11). Within Mexico, the openly declared official position is that the agreement will lead to a massive inflow of foreign investment. Many in the business community look upon the low wages and high potential productivity of Mexican workers as a great incentive for investment, particularly when

coupled with a promised codification of liberal foreign trade and in-
vestment policies, permission for foreigners to enter into previously
protected areas such as agriculture and oil, enforcement of interna-
tional standards on patent and copyright laws, and notoriously poor
treatment of labor and of the environment (Faux and Lee, 1993, p. 12;
Koechlin et al., 1993, pp. 60–61; Stanford, 1993, p. 101).

Models that embody such standard neoclassical assumptions do not
perform well in predicting actual outcomes. In the previous instance of
the 1989 U.S.-Canada Free Trade Agreement (FTA), standard models
turned out to be seriously deficient. Their predictions ranged from that
of no significant change in Canadian manufacturing employment to that
of increases on the order of 16–21 percent. The actual result turned out
to be a severe employment decline of 14 percent (Stanford, 1993, p.
101). It is useful to note that models that do not simply assume, a priori,
that there is full employment in each country and capital immobility
between countries, end up predicting substantially different and more
negative outcomes (JECb, 1993, p. 34; Stanford, 1993, p. 104).

Allowing for the possibility of unemployment and capital flows is a
step in the right direction. But I would argue that this is not sufficient
so long as the underlying theoretical structure is premised on the no-
tion that competition between nations, unlike that within a nation, is
essentially an equalizing process. This characteristic duality in ortho-
dox theory is rooted in the claim that competition within a nation is
regulated by absolute costs, while that between nations is regulated by
comparative costs. It is supported neither by historical evidence nor by
policy experience. If this basic proposition is indeed unsound, then
substituting oligopoly theory for that of competition, or even relaxing
the assumptions of full employment and lack of international capital
mobility, may not be sufficient. Particularly if we aim to ground eco-
nomic policy in the actual forces at work, it may be better to start from
a different foundation. This is the issue to which we turn next.

An Alternate Approach to the Theory of
International   Competition

The approach presented here is an extension of earlier argument4
(Shaikh, 1980, 1991). It has its roots in the classical tradition and in
some recent empirically grounded approaches in the post-Keynesian,
structuralist, and historical traditions. For instance, Adam Smith be-

lieved that international trade would operate in essentially the same manner as national trade: i.e., that it would be regulated by the absolute cheapness of the products involved, as determined by "natural or acquired" advantages (Allen, 1967, pp. 5356; Dosi, Pavitt, and Soete, 1990, pp. 29–30). This is basically the law of absolute costs. It is Ricardo who substituted the law ot comparative costs, although he did retain the idea that there exist persistent technological differences between nations. In more recent times, the assumption of different technological conditions reappears within the work of Dornbusch, Fisher, Samuelson, Posner, Vernon, and many others (Dosi, Pavitt, and Soete, 1990, pp. 21-22, 25-26). Finally, it is a widespread assumption in the classical, marxian, and neoricardian literature that real wages are primarily determined by forces within a country, and that the full employment of labor is not an automatic outcome (Emmanuel, 1972, ch 3)

To ground the argument developed here, we return to the theory of comparative costs. We begin with the familiar situation of fixed exchange rates, in which the country with less efficient technology and/or relatively higher wages suffers an absolute disadvantage in international trade. It therefore experiences a persistent deficit in the balance of trade, with a corresponding persistent outflow of money to pay for this trade deficit. According to conventional analysis, the outflow of money will lower the price level in the country, thereby making it more competitive in international trade, until the point is reached where it is sufficiently competitive to achieve balanced trade. All of this is supposed to be automatic. In the end, high domestic costs are no real handicap in international trade (Feldstein, 1993, p. 4).

Many authors reject the monetarist foundation, which is the crucial link in the preceding argument (Moore, 1988; Wray, 1990). For instance, Harrod argues that the primary effect ot a money outflow is to make the economy less liquid, which in turn tends to raise interest rates above the international level. Insofar as investment is at all sensitive to the interest rate, output and employment may fall, rather than prices (Harrod, 1933, p. 53; Keynes, 1936, p. 348). In any case, the resulting discrepancy in international interest rates will tend to attract short-term capital into the country, thus covering *up* the structural trade imbalance with international borrowing. This is evidently a limited solution, since it merely transforms the structural trade problem into one of rising international indebtedness, with all its attendant difficulties and limits. Of course, if the government acts to prevent interest rates from rising,

it must then support the currency by running down reserves (devaluation is addressed below), or directly intervene by restricting imports and stimulating exports, or seek long-term capital inflows and/or foreign assistance to finance the trade deficit. But as long as the root cause, the relatively high unit costs of national industry, are not altered, the problem will reappear when such devices are exhausted.

Standard theory also tells us that balanced trade can be restored by devaluing the currency (in the case of fixed exchange rates) or allowing it to depreciate (in the case of flexible exchange rates). But the well-known difficulties with this approach are equally severe. First of all, insofar as devaluation or depreciation is successful in lowering the foreign currency equivalent of export prices (i.e., in causing the terms of trade to fall), this lowers export revenues and hence worsens the balance of trade at any given level of exports and imports. To offset this effect, export levels must rise and/or import levels must fall **by** sufficient amounts so as to improve the overall trade balance. This is the famous Marshall-Lerner-Robinson-Metzler "elasticities problem" that has so bedeviled the neoclassical literature. At best, it leaves us with the conclusion that the effects of devaluation and depreciation are theoretically **indeterminate.** But no such indeterminacy exists in the empirical record, since as we have already noted, the flexibility of exchange rates in the latter half of the postwar period has not led in any way to balanced trade among nations (Dombusch, 1988).

Considerations such as these suggest that a reexamination of the theory of comparative costs might prove fruitful. A formal model of an alternate approach appears in Shaikh (1991) and is tested against the empirical experience of five advanced industrial countries (United States, Canada, United Kingdom, Germany, Japan). Here, we only outline the basic steps in the argument.

First, it is an essential feature of our analysis that production conditions and real wages are assumed to differ across countries. Neoclassical theory tends to assume that production functions are similar across countries, and even derives a fundamental theorem that factor prices (i.e., wages and interest rates) will therefore be equalized, through international trade alone, across countries (Leontief, 1985, p. 377). Yet nothing could be further from the empirical facts. Production conditions and real wages have always varied considerably across countries throughout the history of capitalism.

Although this point was already an essential part of the classical

tradition, it has recently been emphasized once again. Dollar, Wolff, and Baumol (1988) find that for any given industry, productivity varies substantially across countries, with an average variation of 100 percent (p. 31, Table 2.1). For any given international industry, such international productivity variations are largely explained by corresponding variations in real capital-labor ratios. Moreover, countries with higher productivity and/or capital-labor ratios in one industry tend to have higher measures in all industries (p. 33, Table 2.3), and countries with higher productivity in a given industry tend to also have higher wages in the same industry (p. 42). On this basis we assume that real wages and technology are determined locally in each nation. Of course, money wages can be sticky in the short run. But it is expected that in the long run the key determinants of the real wage are factors such as national productivity, output growth, level of unemployment, and balance of forces between workers and their employers. This also implies that the real wage is not necessarily a market-clearing variable, so that full employment of labor is not presumed—unlike conventional models, in which the real wage is assumed to move in such a way as to make trade balanced or to bring about the full employment of labor (Krueger, 1983, pp. 159–60; Dornbusch, 1988, p. 5).

Second, it is assumed that international competition *binds together* the prices of internationally traded commodities. We will call this the Law of Correlated Prices (LCP). Note that this does not require an immediate and complete international equalization of the prices of a common good, as is often assumed in the conventional notion of the Law of One Price (LOP). For one thing, the existence of transfer costs (transport, insurance, etc.) and of tariffs and taxes implies that there exists a band within which a country's producers are insulated from international competitive pressure, but outside of which competition begins to assert itself. This band of "commodity points" is similar in nature to that of "gold points" under the gold standard. Leontief (1985, pp. 379–80, Tables 1–2) estimates that transfer costs can be substantial, so that when one also adds in tariffs and taxes, it is certain that the band in question is quite wide. Inside this band, local factors will determine the location and movements of a commodity's price. Outside of it, international competition will become the dominant influence. It is therefore hardly surprising that the empirical evidence rejects the notion that international prices are precisely equal at all times (Levich, 1985, pp. 1002–6). But if one views the LCP as a longer run process

subject to commodity point bands, the evidence is much more support-
ive. Crouhy-Veyrac (1982), Crouhy and Mélitz (1982), Aizenman
(1986), and Protopapadakis and Stoll (1986) all show that the presence
of commodity points implies an essentially nonlinear process of adjust-
ment, and that conventional tests will reject the LCP even when it is in
fact true. Since conventional price data do not include estimates of the
actual bands involved, Protopapadakis and Stoll (1986) test a nonlinear
process of adjustment on the data and conclude that (viewed in this
way), "The long run Law of One Price is a usable approximation of the
behavior of commodity prices for macroeconomic purposes" (p. 350).
In a similar vein, McCloskey and Zecher (1985) argue that the LCP
should be understood as implying "a close correlation among [corre-
sponding] price levels brought about by the ordinary workings of mar-
kets" (p. 66). They find that even as early as 1880–1913, in the period
of the gold standard, there is a high correlation between British and
American prices and interest rates (pp. 64–73).

The hypothesis of roughly similar prices (in the above sense) does
not tell us anything about the common level around which the prices
gravitate. Thus, a third hypothesis is required, linking the price struc-
ture to the international costs of production for any particular product.
There are two parts here.

To begin with, we argue that international competition behaves in
the same way as national competition, in that producers with lower
unit costs will be able to cut prices and expand their market share at
the expense of their less fortunate rivals. It is implicit here that we are
speaking of prices adjusted for quality differences, because a higher
quality product offered at the same price is equivalent to a cut in prices
for a given quality. In speaking of producers with lower costs, it is
important to note that if these costs are to be effective in driving prices,
the supply from these producers must be capable of being expanded.
Thus, it is producers with the lowest generally reproducible cost struc-
tures who will be able to drive the market price of products. We will
call them the *regulating producers* for a given international commod-
ity. (In case of agricultural and natural resource production, the regu-
lating producers will be the lowest cost producers on the best land still
available, the latter being in general on the margin of cultivation.)

We further specify the link between market prices and the unit costs
of the regulating producers by assuming that relative prices can be well
approximated by the relative *total (i.e., direct and indirect) unit labor*

costs of the regulating producers. The term total unit labor cost refers to the product of the money wage w and the total unit labor requirement λ, the latter being what is often called the vertically integrated labor coefficient (Milberg and Elmslie, 1992, p. 103). This result can be derived either from a classical framework, along the lines of Ricardo, Sraffa, and Pasinetti, or from a mark-up pricing framework as in Eichner (Shaikh, 1984; Milberg and Elmslie, 1992). It has strong empirical support (Ochoa, 1988; Bienenfeld, 1988).

In the international context, the two preceding assumptions translate into the proposition that countries with reproducibly lower total real unit costs (e.g., Japan and Korea) will have dynamic and growing export markets. More formally, we can derive several specific results concerning the determinants of real exchange rates, trade patterns, and the competitive position of various countries in the world order (Shaikh, 1991).

The Law of Correlated Prices implies that the prices of a given commodity are roughly equal across nations (in the sense specified earlier), when expressed in common currency. We can also say that for any given commodity the international currency price (p') is therefore roughly equal to the price ($p^{*'}$) set by the regulating producer, where the superscript * refers to the regulating producer and the apostrophe refers to money magnitudes expressed in a common international currency. Accordingly, the average price of country i's bundle of tradable goods will be roughly equal to the average regulating price of this same bundle, in common currency. It follows that the ratio of the average prices of tradables in countries i and j will roughly equal the ratio of average regulating prices of the corresponding bundles: (p_i'/p_j') $(p_i^{*'}/p_j^{*'})$. Finally, since relative regulating prices can be closely approximated by the relative total unit labor costs of the regulating producers, we can also write: $(p_i^{*'}/p_j^{*'})$ $(v_i^{*'}/v_j^{*'})$, where $v^{*'} = (w^{*'})\lambda^* = $ total unit labor cost and $w^{*'} = $ the money wage, in common international currency, and $\lambda^* = $ the total or vertically integrated labor coefficient, *of the regulating producers.* Putting all of this together allows us to link the relative prices of the tradable goods of any two countries i and j to the total unit labor costs of the *regulating* producers of the two corresponding bundles of tradables, all expressed in a common currency.

$$(p_i'/p_j') \cong (p_i^{*'}/p_j^{*'}) \cong (v_i^{*'}/v_j^{*'}) = (w_i^{*'}/w_j^{*'})(\lambda_i^*/\lambda_j^*) \qquad (1)$$

Notice that equation 1 tells us that the average price of any two bundles of tradable goods will be equal only when the bundles are the same (in which case $w_i{*}' = w_j{*}'$ and $\lambda_i{*} = \lambda_j{*}$).

We have already argued that real wages are primarily determined by forces within a given country. If we represent real wages by wr, and the price of tradable consumption goods by pc, then the relative money wages of the regulating producers of tradable bundles i and j, expressed in a common currency, can be written as $(w_i{*}'/w_j{*}') = (wr_i{*}/wr_j{*})(pc_i{*}'/pc_j{*}')$. But if the bundles of tradable *consumer* goods are similar across countries (the extension to nontradables is addressed in Shaikh, 1991), $pc_i{*}' \cong pc_j{*}'$, so that

$$(w_i{*}'/w_j{*}') = (wr_i{*}/wr_j{*})(pc_i{*}'/pc_j{*}') \cong (wr_i{*}/wr_j{*}) \qquad (2)$$

Equation 2 says that the common currency relative money wages of the regulating producers of bundles i and j are essentially determined by the relative *real* wages of these collections of producers. This implies that common currency relative money wages and hence *relative unit labor costs are independent of the exchange rate*, in the long run. Of course, since money wages are sticky in the short run, exchange rate variations can affect the real wage and real unit labor costs through their effects on the prices of consumer goods. But in the long run these variables will be nationally determined (by the nations in which the regulating producers of a given bundle are located).

Since all of our propositions have been in terms of general bundles of tradable goods, we can express them equally well in terms of the exports and imports of any given country. Equations 1 and 2 then immediately yield the proposition that *the long-run terms of trade of a country are independent of its exchange rate*. Let p_x', p_m' represent common currency export and import prices, respectively.

$$(p_x'/p_m') \cong (wr_x{*}\lambda_x{*})/(wr_m{*}\lambda_m{*}) \qquad (3)$$

The left-hand side of equation 3 is the terms of trade of a given country while the right-hand side represents the ratio of the regulating unit labor costs of its export and import bundles, respectively. But the latter is cast entirely in terms of real variables and is therefore independent of exchange rates.

An equivalent expression can be written for the ratio of common

currency prices of the tradables of any two countries i and j, by directly combining equation 1 and 2. Since the common currency price ratio is merely the local currency price ratio (p_i/p_j) divided by the nominal exchange rate ratio $e_{ij} = (e_i/e_j)$, the nominal exchange rate e_i being defined here as units of local currency i per unit of international reference currency. This makes it analogous to the real exchange rate $er_{ij} = e_{ij}/(p_i/p_j)$. Thus, if country i is Japan, and the U.S. dollar is the reference currency, then e_i = yen/\$. Note that a rise in the nominal or real exchange rate implies a *depreciation* of the currency, since more yen are required to purchase a dollar.

$$(p_i/p_j)/e_{ij} = (p_i'/p_j') = (w_{ri}^*\lambda_i^*)/(w_{rj}^*\lambda_j^*) \tag{4a}$$

$$er_{ij} = \frac{e_{ij}}{(p_i/p_j)} \cong \frac{1}{(w_{rj}^*\lambda_i^*)/(w_{rj}^*\lambda_j^*)} \tag{4b}$$

$$e_{ij} = \frac{p_i/p_j}{(w_{ri}^*\lambda_i^*)/(w_{rj}^*\lambda_j^*)} \tag{4c}$$

Equations 4a to 4c are equivalent, but they tell us different things. Equation 4a says that the common currency prices of the tradables of two countries are determined by the real cost conditions of the regulating producers of these bundles, and are independent of the exchange rate, in the long run. Equation 4b shows that the real exchange rate varies inversely with the real costs of the regulating producers involved (which need not be the countries i and j themselves). It follows from this that the real exchange rate can have a trend in the long run, depending on the movements of the real regulating costs. As we have seen, this implies that (absolute) Purchasing Parity would not hold even in terms of tradable goods alone, except in the case where both countries have similar baskets of tradables (so that the right-hand side of equation 4b is simply one). Finally, equation 4c shows us that the nominal exchange rate between any two countries will depend on two sets of factors: their relative nominal price levels, as expressed in their local currency tradable price ratio p_i/p_j; and inversely on the real costs of the regulating producers of the tradable goods of the two countries, as expressed in their real vertically integrated unit-cost ratio $(w_{ri}^*\lambda_i^*)/(w_{rj}^*\lambda_j^*)$.

Equation 4c also leads to another important conclusion. If we take the rates of change of both sides, we find that the rate of change of the nominal exchange rate equals the difference between the relative infla-

tion rates of the two countries and the relative rates of change of the real total unit costs of the regulating producers. Real unit costs change at a slow but steady pace, so that in the short run relative unit costs are limited in their variation. But the same is not true of relative inflation rates. Thus, one would expect that when a country has a high relative inflation rate, the changes in its nominal exchange rate would be dominated by its relative inflation rate. But when relative inflation rates are low, then the slower movement of relative real costs could dominate. In other words, the *relative* version of PPP theory would appear to work well when countries experience high inflation rates, but would not work well in the opposite case. This addresses an enduring puzzle in the empirical and theoretical literature (Barro, 1984, p. 524, Table 20.4; Frenkel, 1978).

The fact that the terms of trade of a country are independent of the exchange rate in the long run (see equation 3) implies that international trade will give rise to *structural* trade deficits or surpluses that reflect the competitive position of the country involved. The relative trade balance is the product of the terms of trade p_x'/p_m' *and the export-import ratio X/M.* But in the long run X/M itself depends on the terms of trade and on the country's relative growth rate (a higher relative growth rate increases the growth of import demand relative to that of exports and thus worsens the balance of trade). If the terms of trade are indeed independent of the exchange rate in the long run, then (barring structural changes) a country can improve its trade balance only by *lowering* its relative growth rate. But if deficit countries cut their rate of growth in order to lower their relative import demand, the surplus countries (from which the deficit countries get their imports) would also suffer a decline in growth. The competitive differences would not be eliminated, so the structural imbalances in trade would reappear— only now at a lower overall rate of growth.

Another way of looking at this result is to recognize that real exchange rates depend on real relative costs (see equation 4b), i.e., on the relative competitive position of a country. Since real unit costs will differ across nations, structural trade balances will be "normal" in free trade.

The relation between competition and market shares requires further elaboration. When a firm lowers its selling price, two things happen: it attracts to itself customers from other firms (demand switching), and it attracts to itself customers who are new to the market (demand ex-

panding). Both can have a large impact on the sales of an individual firm or region, even if the effect on the remaining firms or regions, or on the market as a whole, is initially small. The orthodox theory of "perfect competition" does away with the demand switching effect by simply assuming that firms never try to undercut their competitors' prices—i.e., by assuming that all firms are passive "price takers." This leads directly to an exclusive emphasis on the elasticity of demand of the market as a whole, which in the case of international trade leads to the well known Marshall-Lerner-Robinson condition as a necessary basis for the improvement in the balance of trade in the face of a depreciation or devaluation of the currency. But from the point of view of a more general theory of competition, the demand switching effect is the most powerful one. Given a sufficient cost advantage, a country can always lower its own prices, thereby expanding exports and contracting imports. It follows that a country with a competitive advantage will generally enjoy rising market shares and persistent trade surpluses, while the opposite will hold for a country at a competitive disadvantage.

Other things (such as government deficits) being equal, a persistent trade deficit will tend to make the economy less liquid and thus put pressure on national interest rates. This may in turn attract short-term capital into the country, thereby *covering up* the structural trade imbalance with international borrowing. But then the structural trade problem is transformed into one of rising international indebtedness.

A nation may resort instead to protection (tariffs, subsidies) and direct intervention in foreign trade (quotas, foreign exchange controls). The limitations of these are well known. More important, unless they are merely to serve to temporarily protect a country while it prepares itself for international competition, the problem will reappear (possibly at a worse level) when such devices are exhausted.

Austerity, which in practice means lowering the real wage and/or increasing the intensity of labor, has been another historical response. This may temporarily improve a country's competitive position, but unless it is tied to a rate of modernization sufficient to narrow the gap between national and international rates of growth of productivity, relative real unit costs will once again begin to rise and the problem will be back. In the meantime, the working population is impoverished, the distribution of income is further skewed toward the wealthy, and social and political stability is undermined. In the third world, the increased relative and absolute wealth of the upper segments of society

also tends to increase the relative demand for imported goods and thus worsen the balance of trade deficit.

Except for gifts and grants-in-aid, the other way in which a country can compensate for a persistent balance of trade deficit is by attracting long-term foreign investment. This requires that potential unit costs in the country be relatively low. Abundant natural resources provide one possibility. Relatively low wages, coupled with sufficiently high potential productivity (and favorable political and social conditions) provide another. However, even if long-term foreign investment is sufficient to cover the whole of trade deficit, it will do so only as long as the outflow of repatriated profits and dividends is not greater than the current inflow of net new foreign investments. In itself, this implies a rising level of long-term foreign debt, as long as the underlying trade imbalance remains in place.

Modernization is the only remaining alternative, both in theory and in practice. It is only by raising both the level and the growth rate of productivity that a country can, in the long run, prosper in international trade. This may be done through internal means, through (directed) foreign investment, or with the help of other nations. But it will not happen by itself, through the magic of free trade. On the contrary, precisely because free trade reflects the uneven development of nations, by itself it tends to reproduce and even deepen the very inequalities on which it was founded. It follows that success in the free market requires extensive and intensive social, political, and infrastructural support. While this may seem like heresy to the free marketeers of the world, it is nothing new to those familiar with the actual history and practices of successful capitalist nations.

Summary and Conclusions

The arguments in this paper stand in sharp contrast to those of orthodox theory. International competition is not a great equalizer. Rather, like competition within a nation, it rewards the low-cost producer and punishes high-cost producers, other things being equal.

As a corollary, real exchange rates do not automatically move to balance trade between nations. On the contrary, persistent trade imbalances are normal, since they represent the persistent differences in real unit costs that exist among nations.

There is absolutely no requirement that the opening of free trade

increase overall employment in the countries involved. Indeed, it is possible that both countries can suffer job losses. Koechlin et al. (1993, pp. 10–12) anticipate exactly such an outcome in the case of NAFTA: they estimate that imports of U.S. and Canadian corn will drive out small agricultural producers and result in Mexican unemployment of between 200 thousand and 2 million people. In addition, they calculate that investment flows diverted from the United States to Mexico will reduce employment in the United States but raise it in Mexico. The overall effect, in their estimation, is to create net job losses in both countries.

The theory outlined here suggests that the creation of a common market is least disruptive when the participants have similar levels of development, similar unit costs, and similar social and institutional structures. To a large extent, this is true of the European Common Market, and even of the 1989 Free Trade Agreement between Canada and the United States. But it is emphatically not true of NAFTA, since Mexicans' wages are roughly one-eighth of those in the United States, while their productivity levels in modern plants approach those of the United States. Here, the question of capital mobility becomes crucial, for if Mexico can provide the social and infrastructural elements to entice a substantial amount of foreign (including U.S.) capital, then its urban job gains may well be associated with corresponding job losses elsewhere. At the same time, as Koechlin et al. (1993) note, agricultural unemployment, and perhaps even total unemployment, in Mexico could rise. The political potential is quite explosive, as recent events in Chiapas, Mexico, make clear.

Lower unit costs, particularly lower unit labor costs, are the key to absolute cost advantage. This means that low-productivity nations face two options if they are to be competitive. They can try to keep real wages sufficiently low, so as to offset their own technological backwardness. Or they can modernize, thereby raising productivity and even providing room for rising wages. The former option shifts the burden of competitiveness onto the backs of the nation's workers. The latter requires firms to take the initiative (with attendant costs and risks) and provides for the possibility of benefits to both workers and firms (workers share the risks in any case, since business failures are associated with layoffs and job loss). This was the traditional route of German industrialization, which began with higher wages than in England but was able through innovation and technical change to lower

productivity and more than offset its higher wages. Japanese industrialization, on the other hand, benefited from both lower wages and rapid technical change. Even Korea and Taiwan, which entered the world market with among the lowest wages in the world, were not able to compete effectively except by rapidly increasing the productivity of labor (Amsden, 1991).

But to successfully implement such a path, it may be first necessary to protect industries that are modernizing so that they have time to prepare for their entry into the world market, while at the same time retraining displaced workers and training new ones for this same eventuality. This is particularly important in the present epoch of high unemployment and slow growth, in which gains on one can come at the expense of the other. In the long run, it may be more important to concentrate on stimulating growth than to rush into opening up free trade zones. All of it would require the most careful planning and coordination within and between nations. None of this can be accomplished by abandoning economic and social policy to the dictates of so-called free trade.