

The Limits of Trade Policy Reform in Developing Countries

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Trade and development is not a field lacking in surveys. Upon confronting yet another broad paper in this area, perhaps even the most devoted reader is entitled to yawn with boredom (or groan with anguish). At the very least, the reader is entitled to ask whether the literature needs another general paper on the subject. Some excellent surveys have been published recently, including Krueger (1985), Bhagwati (1988), Bliss (1989), and Evans (1989), as well as World Bank (1987), a comprehensive (if somewhat pre-disposed) review of the evidence. In addition, the masterful survey by Diaz-Alejandro (1975) has lost none of its relevance and freshness after a decade and a half, an eternity in academic economics. The question that naturally arises is whether there is anything new under the sun.

There is indeed something new, but in policy-making rather than in the development of theory. The 1980s have seen the beginnings of a change of heart among developing country policy-makers with regard to trade policy. The import-substitution consensus of the previous decades, with its preference for high levels of tariff and non-tariff trade barriers, has all but evaporated. As the capsule summaries contained in Table 1 show, some of the staunchest import substituters, such as Mexico and Turkey, have now made a decisive push towards trade liberalization. The simplification of import procedures, reduction or elimination of quotas, and the rationalization of the tariff structure are the most common reforms. Moreover, the reformist movement is not localized and encompasses countries in Africa, Latin America, the Middle East and Eastern Europe. No fewer than 42 countries have received loans from the World Bank during the 1980s with the express purpose of reforming their

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Table 1

Recent Trade Policy Reforms in Selected Developing Countries

Bolivia	Trade regime is overhauled in 1985, and quantitative restrictions (QRs) are eliminated. Two basic tariff rates exist, 10 percent for capital goods, and 17 percent for others.
Brazil	Major trade reform announced in March 1990 as part of the Collor stabilization package. Almost all QRs are to be phased out and replaced by tariffs. An average tariff rate of 20 percent is sought by 1994.
Chile	Substantial reform after 1973, with elimination of QRs and a uniform tariff rate of 10 percent (except for motor vehicles) achieved by 1979. The uniform tariff was raised to 35 percent briefly during the macroeconomic crisis of the early 1980s, but was subsequently reduced to 15 percent.
Ghana	Import licensing substantially liberalized and a uniform tariff introduced for most imports.
Jamaica	QRs eliminated and tariffs lowered to 20–30 percent for most items.
Mexico	Substantial liberalization of QRs since mid-1985. Tariffs reduced to an average of 11 percent by 1988. Accession to GATT in 1986.
Morocco	Significant reduction in protection since 1983 through the elimination of some QRs and the reduction of tariff rates. Maximum tariff reduced from 400 percent to 45 percent.
Nigeria	Trade liberalization initiated in 1986. Import licensing system reformed and substantial cuts undertaken in tariffs.
Peru	The newly elected Fujimori government embarked on a stabilization package in August 1990, including substantial trade reform. All QRs were eliminated, and the tariff system was simplified to include three rates (10 percent, 25 percent, and 50 percent) only. In March 1991, the top rate was reduced to 25 percent.
Poland	Foreign trade is de-monopolized. All QRs on imports and licensing on imports abolished by beginning of 1990. Tariffs average 13–14 percent.
Senegal	Most QRs removed during 1986–88; selective reductions in tariffs.
Turkey	General trend towards liberalization since 1980. Substantial liberalization of QRs and licensing procedures.
Venezuela	Comprehensive import liberalization introduced in 1989. Most import prohibitions abolished and tariffs reduced to a maximum rate of 50 percent.

Sources: Whalley (1989), Williamson (1990), World Bank (1989), and national sources.

trade regimes (World Bank, 1989). Of course, not all of these countries have strong reform programs; and only a few have carried out most of what they promised.¹ But the disappointment in import substitution and the interest in trade reform appear genuine, even among the more equivocating countries.

It is paradoxical that the 1980s should have become the decade of trade liberalization in the developing countries. Thanks to the debt crisis, the 1980s have also been a decade of intense macroeconomic instability. Common sense would suggest that the conventional benefits of liberalization become muted, if not completely offset, under conditions of macro instability characterized by

¹Among the 24 countries for which an assessment was possible, the World Bank (1989, p. 27) lists nine with good implementation records: Chile, Korea, Mauritius, Ghana, Madagascar, Mexico, Philippines, Senegal, and Turkey.

high and variable inflation on the one hand, and fiscal and balance-of-payments crises on the other. Trade reform is expected to work by reducing the distortions in the structure of relative prices and by directing resources to sectors that can make the best use of them; macroeconomic instability interferes with both. High and variable inflation serves to confound price signals by making it difficult to disentangle relative price changes from movements in the price level. The slowdown in domestic activity renders structural change more painful by exacerbating transitional unemployment.

If a period of macro instability is the worst time to undertake a trade reform, why are so many countries doing it? As academics we may like to believe that we are seeing the delayed effect of the studies of the previous decade, in particular the research directed by Little, Scitovsky and Scott (1970), Bhagwati (1978), and Krueger (1978). Perhaps also the establishment of a manufacturing base in these countries now makes liberalization a less threatening prospect for policy-makers. But the main reasons would appear to be different, and drawn from the broader domain of political economy.

First, a time of crisis occasionally enables radical reforms that would have been unthinkable in calmer times. That it takes the prospect of a severe denouement to bring a nation to its collective senses is the aggregate version of an insight due to Samuel Johnson: "[W]hen a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully." The quip seems to apply with equal force to nations in severe crisis, as some of the key cases of radical trade reform illustrate: Bolivia (in 1985), Mexico (since 1987), Poland (1990), Peru (1990). In all of these cases, a macroeconomic crisis of unprecedented proportions has led the leadership to embrace a wide range of reforms, of which trade liberalization was one component.

The second reason has to do with the role of foreign creditors, and of the IMF and World Bank in particular. The 1980s were a decade of great leverage for these institutions vis-a-vis debtor governments, especially where poorer African countries are concerned. The trade policy recommendations of the World Bank were adopted by cash-starved governments frequently with little conviction of their ultimate benefits. This accounts for the high incidence of wobbling and reversal on the trade front, once again especially in Africa. It also indicates that we ought not be too optimistic on the sustainability of reform in many of these countries.

As these considerations would suggest, trade reform is now raising some new issues. First, how can trade reform be sustained? In the first instance, this question has to do with credibility: can governments convince business, labor, or consumers that trade reform will be lasting, so as to forestall possible adverse reactions that would jeopardize the sustainability of the reform? Secondly, what role should trade reform play when it is implemented in the context of macroeconomic instability? Are there potential conflicts between the standard desiderata for trade reform and the requirements of macro stability? Finally, we have an older issue which has become more amenable to analysis thanks to the

development of the “new” trade theory with its emphasis on imperfect competition: should we be worried about the consequences of trade reform in the imperfectly competitive market environments that characterize the developing economies? This paper deals with these three sets of questions.

The paper shares the presumption, dear to the heart of every neoclassical economist, that a liberal trade regime is good for economic development in the long run. However, I will argue that this general idea is not tremendously helpful for policy at the present time. My main theme will be that the current context requires a more nuanced view of the role of trade policy. This view would recognize that in most of the countries that have undertaken radical trade reforms in the 1980s, the direct efficiency consequences of trade liberalization are still uncertain and likely to be small. It would recognize that a wobbly trade reform can be worse than none at all, and that governments can complicate their macroeconomic stabilization efforts by placing too much faith on the magic of liberalization. And it would have room for unorthodox roles for trade policy such as buttressing credibility for a government’s anti-inflation program, helping out with fiscal retrenchment, and jolting entrepreneurial expectations. Governments that understand the limited (and possibly unconventional) role to be played by trade reform are likely to make the most of it; governments that pin on it their hopes for future growth and development are likely to be disappointed.

Credibility and the Design of Trade Reform

Trade reform is frequently met with skepticism on the part of the private sector. The Argentine reform of the late 1970s, for example, had such low credibility that it is reported many enterprise managers apparently chose not to respond.² With hindsight, they can hardly be blamed, as protective measures were re-imposed in the early 1980s. Similarly, a World Bank team that surveyed private enterprises in Mexico found considerable skepticism at the outset regarding the sustainability of the recent trade reform there. It is perhaps natural that after decades of import substitution policies, trade reform should have to confront less than perfect credibility.

The archetypal setting in which trade reform is undertaken illustrates why lack of credibility is the normal response. The country concerned is hit by a terms of trade deterioration, a reduction in foreign capital inflows, and capital flight. Inflation accelerates to new heights, while the economy comes to a standstill. The central bank runs out of reserves. Enter the IMF and the World Bank with the promise of structural adjustment loans, which would unlock

²Corbo and de Melo (1985, p. 9) write: “Eleven of the twelve firms interviewed waited between three and twenty months before starting to adjust. One firm, anticipating a policy change, even kept ‘idle’ workers to minimize the costs associated with layoffs and hiring.”

additional funds from other creditors, provided that the government undertakes a number of reforms, including the rationalization of the commercial regime. The government has few alternatives but to accept.

Within a year or two down the line, one or more of several things can happen: workers and students riot in the streets of the capital; the terms of trade improve and the cash crisis is temporarily alleviated; or the government realizes that it can hold the World Bank at bay while slowing down on the implementation of the measures agreed to. Any one of these will be enough to give the government reason to halt or reverse the reform. However, a government that is (or has become) convinced of the merits of trade liberalization will stick it out.

Nonetheless, the commitment of the leadership to the reform will often remain suspect in the eyes of the public. Formally, we have an instance of asymmetric information: the leadership may know its commitment to reform (that is, its “type”), but may be unable to communicate it to the private sector. In Rodrik (1989a), this is modeled as creating a confusion in the public’s mind between a “liberalizing” government and its nemesis, a “redistributive” government that likes trade protection because this transfers income to favored groups. Now, in the absence of an economic crisis and the need for World Bank assistance, there would be no confusion since the choices made by each government would reveal its respective type. With World Bank conditionality, however, the redistributive government may well choose to mimic the liberalizer for a while, because this allows it to have access to additional resources. Since World Bank tutelage is only temporary, the redistributive government will move back to protection once the Bank fades from the picture. Ironically, but also quite realistically, conditionality makes the well-meaning government’s job harder by causing it to be confused with its less committed counterparts.³ Moreover, even if the well-meaning government can communicate its resolve, it will have to put up with mounting political opposition as the reforms unfold.

What are the consequences of the resulting lack of credibility? In the first instance, adjustment incentives are blunted; therefore the productive efficiency gains from trade liberalization are delayed. But much more importantly, lack of credibility sets forces into motion that make it more difficult for the reform to be sustained. And skepticism regarding the sustainability of reform can render the reform itself harmful.

To understand why this is so, it is useful to reiterate the message of a paper by Calvo (1989). Calvo analyzed a situation where consumers expect that a

³An interesting example of this phenomenon occurred in Turkey in 1980. In January of that year, a package of economic measures was announced under IMF auspices. The government was handicapped in that its makeup differed little from previous governments that had fallen short in implementing past IMF programs. On the face of it, there was little reason to believe that the fate of this latest package would be different. To buttress credibility, Turgut Ozal, the architect of the 1980 measures, decided to go farther than the IMF recommendations (in particular he undertook a larger devaluation than the IMF expected).

trade reform introduced now will be reversed sometime in the future. Subject to these expectations, consumers then perceive imported goods to be rendered *temporarily* cheaper. This in turn leads to intertemporal substitution in consumption towards the present, and an enlargement of the current account deficit until the expected reversal materializes. This is not a bad explanation for what took place in Argentina in the late 1970s and early 1980s, the case that inspired Calvo. The basic point is that the mere expectation of a reversal is enough to distort the intertemporal structure of relative prices, even though it may turn out that the government will stick with the reform after all. Hence an incredible liberalization gets current prices right, at the cost of distorting tomorrow's prices relative to today's. Whether the economy gains or loses over time is ambiguous.

The efficiency costs generated by incomplete credibility can take many forms. In the above example, the economy suffers from over-borrowing. Since most developing countries have been shut out of foreign capital markets during the 1980s, this outcome sounds a bit anachronistic. A more realistic scenario henceforth is that the desired intertemporal substitution will reflect itself in under-investment: as consumers go on a binge in response to the "temporary" availability of cheap imported consumer goods, the savings rate will fall, raising the interest rate and crowding out capital formation (Rodrik, 1989a).

There is yet a third channel: lack of credibility in reform can interact with capital irreversibilities to produce a hefty tax on investment. To see this, consider an economy with a distorted, but perfectly sustainable relative price structure. Suppose, as is likely, that moving capital in and out of sectors (or in and out of the country) entails sunk costs (as in Dixit, 1989). Let the cost (per unit of capital) of moving capital from the import-competing sector to the export sector be given by ϵ , and that of moving back by θ . Let the rates of return to capital be denoted by r_m and r_x , respectively, and assume that these are equal prior to reform. Investors have a discount rate ρ . Now consider a trade reform which on impact increases the rate of return in the export sector relative to the import-competing sector by s ; that is, $r_x - r_m = s$. When will this be enough to make capitalists in the import-competing sector (or abroad) switch to the other sector? When the reform is viewed as permanent, investors will need to be compensated solely for the one-time cost of moving, so that capital re-allocation will take place provided $s > \rho\epsilon$, where $\rho\epsilon$ is the flow equivalent of the relocation cost.

Now suppose that investors attach a probability π (per unit of time) that the reform will be aborted. (In other words, they perceive that in every period there will be a constant probability of reversal, π .) Further, assume that if and when the reversal materializes it will pay for investors to move back to the import-competing sector (that is, the reversal will be a major one). Investors in the import-competing sector will now need to be compensated for the expected value of the additional costs they will incur if they relocate; this amounts to $\pi(\epsilon + \theta)$, where θ represents the cost of exit from the export sector.

Therefore, the condition for capital responding to the reform becomes that the return differential s must be enough to compensate both for the costs of shifting to the export sector and the (expected) costs of shifting back. In notation, $s > \rho\epsilon + \pi(\epsilon + \theta)$. The second component here, $\pi(\epsilon + \theta)$, is appropriately viewed as a tax on investment imposed by the incomplete credibility of the reform (Rodrik, 1989b, and Dornbusch, 1989, offer more details).

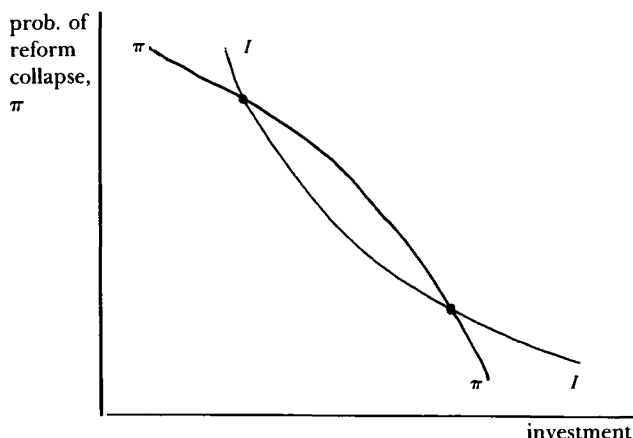
Relatively small amounts of uncertainty can result in a large tax. Suppose for example that investors believe there is a 20 percent chance in any year that the reform will be reversed, and that entry and exit costs sum to 50 percent of installed capital (that is, $\pi = 0.20$ and $\epsilon + \theta = 0.50$). Then the tax imposed on capital relocation by incomplete credibility amounts to 10 percent. This could easily exceed the direct inducement to investment in exportables generated by the shift in the trade regime, in which case we would have the paradoxical result that trade liberalization would reduce rather than enhance investment incentives in exportables.⁴ This is possible because the reform, by hypothesis, brings uncertainty. Moreover, if risk aversion is added to this simple model, the lack of credibility would reduce incentives to shift investment by even more.

On account of both over-borrowing and under-investment, then, trade reforms that lack credibility may prove difficult to sustain. First of all, macro-economic balances will come under further stress, forcing some of the best-intentioned governments to abort the reform process. Second, the delay in economic restructuring will block the emergence of new political alliances in favor of the reform, with the consequence that the political field will be open to the import-competing interests under strain.

These considerations in turn set the stage for a potential multiplicity of equilibria, as illustrated in Figure 1. Two downward-sloping schedules are shown here. The II schedule shows private investment as a function of the perceived probability that the reform will collapse. The $\pi\pi$ schedule reflects the endogenous determination of the probability of collapse as a function of private investment. The second schedule is likely to be downward sloping because of the considerations mentioned in the preceding paragraph; in particular, the lower is investment, the less buoyant is the economy and the lower is political support for the continuation of reform. A natural equilibrium to pick is one where investors' probability assessment is consistent with the equilibrium probability. Two such equilibria are shown in Figure 1: in one, the economy is stuck in a bad equilibrium with low investment and a high probability of collapse; in the other one, the outcome is more favorable. The economy can end up in either one of the two, depending on imponderables. The implication is that there may be a large degree of indeterminacy with respect to the success of reform.

⁴Note that in the presence of excess capacity, the normal situation in the midst of economic crisis, an export boom can be engineered without investment and capital re-location. Sustaining the boom, however, requires genuine investment.

Figure 1
Multiple Equilibria in Trade Reform



Leaving such indeterminacy aside, can governments do much to enhance the credibility of their trade policies? To design strategies that enhance credibility, we must first have a good idea of the sources of the credibility problems. When credibility is the casualty of a policy package that is internally inconsistent—as in the Argentine and Chilean programs of the late 1970s (Corbo and de Melo, 1987)—the policy implications are immediate. Since policy inconsistency is most common on the macroeconomic front, the importance of a sound fiscal and exchange-rate stance cannot be underestimated (as discussed in the next section). Other cases may be less clear-cut. When the government has time-consistency problems—that is, it is tempted to revert to its bad old ways once the private sector has reacted to the reform—the appropriate strategies will be to build reputation and to find mechanisms of commitment. Membership in the GATT, and placing a ceiling on maximum tariff rates by undertaking international obligations, can help. So can uniformity in the tariff schedule, as this may make it easier for policy-makers to withstand pressure from individual industries: it is easier to say “no” to supplicants when that would imply deviating from the norm of uniformity. When the government’s liberalizing intentions are discounted because its sincerity is uncertain (that is, its “type” is unknown), a signaling strategy may be appropriate, where a large enough reform is taken to create a distinction from other governments. These and other strategies are discussed at greater length in Rodrik (1989c).

Linkages Between Trade Policy and Macroeconomic Instability

The fact that practically all significant instances of trade reform in the 1980s have taken place in the context of a debt crisis and severe

macroeconomic disequilibria raises two sets of questions. First, was there any causal relationship between prevailing trade policies and the ensuing debt crisis? Secondly, what are the implications of the macro context for the design of trade reform?

It has become almost cliché to blame the debt crisis in part on the inward-looking trade policies in vogue in Latin America and Africa. This view has given license to advocacy of trade reform as a means of resolving the crisis. But whatever the merits of trade reform, the causal link drawn between trade regimes and propensity to macroeconomic crisis was bad economics. It is true that the outward-oriented east Asian countries managed to avoid prolonged external crisis. But it is also a matter of elementary economics to recognize that even the most protectionist commercial regimes are perfectly compatible with external balance and prompt debt service. It is Romania, not South Korea, that has managed to extinguish its foreign debt during the 1980s. Indonesia and India did not succumb to debt crises even though their commercial policies during much of the early 1980s combined the worst types of import restrictions. Conversely, Chile went through a bust in 1982–83 which was, if anything, worse than that experienced in other Latin American countries even though all of its quantitative restrictions had been eliminated and its tariffs lowered to a uniform 10 percent (with the exception of motor vehicles).

These examples highlight the crucial determinants of macroeconomic stability: the countries that went through a debt crisis were those that overvalued their currencies and let large fiscal deficits accumulate for prolonged periods. If what we understand by trade policy is the complex of microeconomic regulations concerning imports and exports, standard economic theory teaches that the direct effects of such policy on macroeconomic stability and external solvency are quite marginal. Provided the exchange rate is allowed to equilibrate demand and supply in the foreign exchange market (or else domestic prices are completely flexible), trade policy affects the volume of trade—that is, the ratio of imports (and exports) to national income—but not the relationship between the levels of imports and exports. In other words, tariff and non-tariff barriers to trade determine the openness of an economy, but not its trade balance (or the current account of the balance of payments). The latter is determined by the balance between national income and expenditures, that is by macroeconomic factors. An overvalued exchange rate wreaks havoc with macroeconomic balances by spurring domestic spending, as does an increase in the fiscal deficit. Trade policy can do the same only if accompanied by one of these two.⁵

⁵One argument often used in laying (part of) the blame for the debt crisis on trade protection is that inward-oriented countries, having already cut trade volumes to very low levels, are unable to adjust to unanticipated terms-of-trade shocks without seriously sacrificing output. But it is also true that countries that are less open have to suffer lower drops in real income when such shocks occur (as the welfare effect of any given change in the terms of trade is proportional to the ratio of trade to GNP). Which effect would dominate is unclear.

What then is the role that trade reform can play in the process of macroeconomic adjustment? It is noteworthy that some of the more successful stabilization programs to date have emphasized radical trade reform at the outset. In Mexico and Bolivia where inflation has been brought down to relatively respectable two-digit levels (around 20 percent), trade liberalization was a central component of the package; in Poland, where experience is more recent but some success has been achieved on the inflation front, the same is true. Moreover, we cannot ascribe the enthusiasm for liberalization in these cases solely to the role of the World Bank and IMF, and to the hope that foreign funding would be unleashed as a consequence. What was perhaps more important in these cases (as well as in the Brazilian and Peruvian trade reforms of 1990) was a desire on the part of a new leadership to make a clear break with the economic policies of the past, including the complex of import-substitution policies that had become discredited as a result of the generalized crisis. Trade reform can help break established modes of operation and provide governments with much-needed credibility in their fight against inflation. The psychological importance of such radical shifts in economic strategy cannot be underestimated, especially in countries where new stabilization packages are almost as frequent as plot twists in a Brazilian soap opera. Argentina has had seven stabilization packages in the last five years; Brazil has had five in the last four years (Drzen, 1990).

But there is a price to be paid insofar as trade reform also complicates the task of macro stabilization. As mentioned above, macro stability depends crucially on sound fiscal policy and sound exchange rate management, which for most practical purposes amounts to preventing the real exchange rate from appreciating and the parallel-market premium rising over long periods of time. Trade reform can interfere with both objectives.

The standard prescription to a country undergoing trade liberalization is to devalue the currency so as to offset any adverse effect the reform may have on the balance of payments. But such a prescription is problematic when inflation is still not safely under control. The exchange rate is a price closely watched by price setters in high-inflation environments, and an upward movement gets translated into domestic prices all too easily. It is precisely its importance in the determination of the domestic price level that gives the exchange rate a useful role to play as an "anchor" during inflation stabilization. This anchoring role derives from the potential of a fixed nominal exchange rate to coordinate private-sector expectations around a low-inflation path. Of course, to be successful, the stabilization has to rely on fiscal and monetary contraction also, as well as possibly other nominal anchors. While there remains controversy over whether using the exchange rate to fight inflation is a good idea during stabilization, there are enough successful cases (Bolivia and Israel since 1985, Mexico since 1987) to believe that the exchange rate, in conjunction with other nominal variables such as wages, may play a useful anchoring role during disinflation.

But if the exchange rate is to be targeted on inflation, it cannot be used for the external balance. In fact, the conflict is aggravated by the fact that the real exchange rate will typically have to be allowed to *appreciate* in the initial stages of the stabilization. That is the usual result even in the most successful stabilizations: the nominal exchange rate is held fixed (or crawls at a slow rate) while domestic prices work their way through their residual inertia. Trade liberalization, on the other hand, would call for a compensating depreciation. When the latter cannot be undertaken for fear of reigniting inflation, the result is likely to be a deterioration of the external balance.

The Mexican case illustrates some of the conflicts.⁶ At the end of 1987, Mexico implemented a stabilization program aimed at reducing inflation from the prevailing 225 percent rate. The program was centered on a Pact of Economic Solidarity signed jointly by the government, labor, agricultural workers and business that envisaged an increase in the budget surplus (exclusive of interest payments) of the public sector by three percentage points of GDP, a tightening of monetary policy, and the fixing of wages and the exchange rate (after an initial devaluation). The last element was the “heterodox” component of the program, and was designed to serve as an anchor for the price level. At the same time, trade liberalization was phased in considerably ahead of schedule: maximum tariffs were lowered to 20 percent and import permits were eliminated on a wide range of industrial goods. As this reform took place in the context of a basically fixed nominal exchange rate, the consequence was an import boom, with consumer goods imports rising by 150 percent in 1988. The deterioration of the current account led in turn to reserves falling from \$14 billion in 1987 to \$7 billion in 1988. Had it not been for the Brady plan, Mexico may have well ended up in another protracted external crisis.

Where trade reform *can* play a supportive role during stabilization is in mobilizing resources for the government, thus helping close the fiscal gap. This can happen in several ways. First and most obviously, governments can convert quotas on imports to tariffs, transforming quota rents that accrue to the private sector (although these can be dissipated in rent-seeking activities) into revenue for the public treasury. Such a policy may mean stepping on some powerful toes, but it is a quick way of raising much-needed resources. Since tariffs are generally expected to have less pernicious effects on resource allocation than quotas, the change may also yield some efficiency benefits. While the tariff-equivalent of the prevailing quota rents may not be easy to calculate, especially under conditions of monopoly (in which case the notion of equivalence itself is ill-defined), the precise fine-tuning of duty rates will not be that important. The main objective will be to raise revenue. Secondly, in many countries that share long and porous borders with neighbors, prevailing tariff rates may easily lie on the wrong side of a Laffer-type curve. Tariff reductions in such countries may

⁶The following account is based on Ortiz (1990).

actually expand official trade at the expense of smuggling, broadening the tax base.

But when tariff reductions are pursued at the expense of fiscal considerations, governments may find themselves facing a time bomb. In both Turkey and Morocco, for example, fiscal considerations have led to the reimposition of some import taxes which had been eliminated (or lowered) in the recent past. This kind of reversal is doubly harmful for all the reasons discussed in the previous section. Liberalizers ought to keep in mind that trade taxes constitute around 15 percent of government revenue in developing countries on average, and more than 20 percent in Africa (Farhadian-Lorie and Katz, 1989). While substitutes to trade taxes (such as the VAT) are typically envisaged, the implementation of new taxes takes a long time and can be administratively difficult. Tampering with already-fragile fiscal balances can have disastrous consequences which dwarf the efficiency costs of delaying trade reform.

Import liberalization is sometimes advocated on the grounds that it would impose price discipline on domestic producers and therefore help in the fight against inflation. This is an additional argument for converting quota rents into tariffs. But faith in international arbitrage should not be taken too far. When Chile decided to fight domestic inflation with such arbitrage in the late 1970s, the consequence was a sharp real appreciation of the peso and a vast current account deficit. Backward indexation of wages stood in the way of domestic price discipline in the traded sectors: even though the exchange rate was fixed after 1979, domestic wages and prices kept on increasing. In any case, the import-discipline hypothesis is only an argument in favor of tariffs rather than quota rents. Provided tariffs do not get redundantly high, domestic inflation can be aligned with world inflation at any level of protection.

Trade Reform under Imperfect Competition

Until recently, some of the most popular arguments in favor of trade liberalization made awkward company for standard trade theory. Graduate students in economics would learn about comparative advantage and the consumption and production losses (Harberger triangles) associated with protection. Advocates of liberalization, on the other hand, would base their arguments on the potential of foreign trade to spur entrepreneurial instincts and productivity, exploit returns to scale, and force domestic monopolists to behave competitively, on account of which the welfare benefits would be several orders of magnitude larger than the conventional gains. While reasonable, few of these expectations were integrated in the theoretical apparatus of the economist. The tools needed had not yet become commonplace. Developments in industrial organization theory, and its incorporation within trade theory in the last decade, have made it possible to analyze such arguments with greater rigor and precision (Helpman and Krugman, 1985, 1989). These developments have not

resolved the ambiguities that are inherent in analyses of markets with imperfect competition; but they have enabled us to evaluate more fully the likely consequences of liberalization in market structures much more reminiscent of the developing countries.

The hallmark of imperfect competition is that prices exceed marginal costs of production (the latter including all relevant opportunity costs). Consider an economy where trade protection is prevalent and which is subject to various types of imperfect competition. We would like to know the welfare consequences of a relaxation in trade restrictions. In such an economy, trade reform could affect welfare through four channels: (a) the volume of trade effect; (b) the excess profits effect; (c) the scale efficiency effect; and (d) the technical efficiency effect.⁷

The first of these represents the standard desideratum that imports should expand in those sectors where the domestic price has been raised relative to the border price thanks to protection. This is the conventional source of gains from trade, and is the only operative force in a perfectly-competitive environment. The second and third channels, however, point to some potential conflicts with this goal. The second effect requires that sectoral output expand where supernormal profits exist, while the third effect requires that firm output increase in sectors with unexploited scale economies, where average costs exceed marginal costs of production. The conflicts arise from the likelihood that protected sectors in developing countries will be precisely those with excess profits and unexploited scale economies. Some evidence for this is provided in Rodrik (1988a). If import expansion results in such sectors getting squeezed, liberalization can yield welfare losses.

Taking the first three channels together, whether domestic output should be reduced or expanded in import-competing sectors can be seen to depend on the relationship between world prices and domestic marginal costs. Provided

⁷To see this, we can develop an expression that decomposes the welfare effect of a small change in policy, obtained by totally differentiating an income-expenditure identity. First let $c_i(w, x_i; \alpha_i)$ stand for the *unit* (or average) cost function of the representative firm in the i th sector, where w denotes a vector of factor prices, x_i the output of the representative firm, and α_i a parameter representing the technical efficiency level ($c_{\alpha i} \equiv \partial c_i(\cdot)/\partial \alpha_i < 0$). Then:

$$dy = \underbrace{\sum (p_i - p_i^*) dM_i}_{(a)} + \underbrace{\sum (p_i - c_i) dX_i}_{(b)} + \underbrace{\sum n_i c_i [1 - (1/\theta_i)] dx_i}_{(c)} - \underbrace{\sum X_i c_{\alpha i} d\alpha_i}_{(d)},$$

where M and X stand for the sectoral levels of imports and output, n and x are the number of firms and the representative firm's output in each sector, p and p^* are domestic and world prices, θ is the ratio of average to marginal costs indicating the extent of scale economies in each sector, and y is welfare expressed in money units (Rodrik, 1988a). Note that this is quite a general framework allowing for all kinds of imperfect competition, scale economies, and induced changes in technical efficiency. Exit from and entry into industries can also be accommodated by treating x_i as the output of the representative incumbent firm (i.e., $dx_i = [1/n_i][dX_i - x_i dn_i]$). (But terms-of-trade effects are ruled out by taking p_i^* are given.) The equation identifies each of the effects mentioned in the text with the corresponding letter.

domestic marginal costs are above border prices, a (small) reduction in domestic production in import-competing sectors is on net still desirable. But the presence of imperfect competition rules out any guarantee that protection will have necessarily driven domestic marginal costs above world prices. What protection does is allow domestic prices to rise above world prices. Since excess profits drive a wedge between prices and marginal costs, it is quite possible for marginal costs to be lower than international prices while domestic prices are higher. Hence, when the effect of liberalization is to squeeze domestic import-competing production, considerable ambiguity must remain regarding the efficiency consequences of liberalization.

In a situation of imperfect competition, it is also possible for liberalization to result in an *expansion* of import-competing sectors or firms, an outcome that would be normally impossible under perfect competition (save for general-equilibrium effects). When this happens, the benefits of import liberalization may actually be enhanced by the presence of imperfect competition. There are two principal channels through which domestic firms' output may receive a boost when they face more external competition.

First, the perceived demand elasticity faced by import-competing firms is likely to increase as a result of trade liberalization. Consequently, their market power will erode, reducing the incentive to prop up domestic prices by withholding sales. It is possible for the inward shift in the demand curve faced by these firms to be more than offset by this change in its slope, prompting an increase in domestic sales. Experiments with an applied general equilibrium model calibrated using Cameroonian data illustrate the practical consequences of this possibility (Devarajan and Rodrik, 1989a, 1989b).⁸ When the simulation model is run under the standard assumptions of perfect competition, trade liberalization results in a contraction of the modern industries and the expansion of the cash crops sector. When instead the modern sectors are assumed to be oligopolistic and characterized by Nash-Cournot behavior, the resource pulls are reversed, and many of the modern sectors expand. The mechanism at play is the increase in the perceived elasticity of demand faced by the domestic oligopolists. Thanks to these resource pulls, the manufacturing sectors reap scale benefits while imports expand.

The second possibility is the industry-rationalization scenario, exemplified by Harris' (1984) work on Canada. This channel relies on relatively unhindered entry and exit of firms into affected industries. Firms produce under increasing returns to scale. Prior to trade liberalization, free entry forces domestic prices to approximate average costs of production. With liberalization, domestic prices in the import-competing sectors fall, and so must average costs. What allows this to happen is the exit of firms, hence the industry rationalization. Industry ends up with fewer firms, and aggregate import-competing output may even

⁸These experiments assume that there is a horizontal foreign supply curve faced by domestic import-competing oligopolists who, however, produce a differentiated product. The presence of fixed costs introduces scale economies in their technology.

fall; but the remaining firms have now traveled down their average cost curves, yielding improvements in scale efficiency and reductions in unit costs. The welfare benefits of liberalization may be greatly enhanced as a consequence. Applied general equilibrium models based on South Korean data have shown the possibility of similar outcomes in developing economies, once free entry/exit is allowed (Gunasekera and Tyers, 1989).

Of the original four channels identified above, the fourth remains to be discussed: the possible effects on levels of technical efficiency. Received wisdom would have it that quite a big welfare bang on this account awaits countries that undertake trade reform. The image of trade liberalization is frequently coupled with one of entrepreneurs scurrying around to cut costs, locate new markets and rationalize production (to mix geometric metaphors, recaptured *x*-efficiency rectangles are heaped on top of Harberger triangles).

Appealing as this argument may be, it is in fact quite difficult to sustain either empirically or theoretically. Starting with theory, while models that yield unambiguous technical efficiency benefits as a consequence of trade liberalization certainly exist, there is no shortage of models that yield the opposite result. Often, informal arguments seem to be motivated by models of satisficing behavior on the part of entrepreneurs. Such models would provide some support for the hypothesis of entrepreneurial slack in import-competing sectors, and they can be used to suggest that entrepreneurs in such sectors will be spurred into additional effort as they come under pressure in the wake of liberalization. Similar consequences can be generated from optimizing models where entrepreneurs undertake a labor-leisure choice *and* their labor-supply curve is backward bending. But these have the unappealing—and frequently overlooked—consequence of predicting increased managerial slack in export-oriented sectors for precisely the same reason: improved profitability in the export sectors should, by the same logic, push entrepreneurs towards the “easy life.”

Optimizing models in general yield ambiguous predictions: trade protection can enhance technological effort, or delay it (Rodrik, 1988b). As a simple example which goes in the perverse direction, consider the case of a single, import-competing firm. Think of technological effort as the investment of resources to lower unit production costs. Now, the larger is the market served by the domestic firm, the higher will be the marginal benefit of technological effort. This is because the benefit of cost reductions is proportional to the level of output. Consequently, any liberalization that lowers domestic output will harm technological effort.⁹

⁹There is related literature in the advanced-country context on whether product-market competition can alleviate managerial slack; see Nalebuff and Stiglitz (1983), Hart (1983), and Scharfstein (1988). This literature does not reach any definite conclusions. In any case, its relevance to developing countries is limited as it is based on the separation between ownership and management—much less common in poor countries—and on the principal-agent paradigm. A recent paper by Horn et al. (1990) focuses on *x*-inefficiency due to slack in employee (rather than managerial) effort, and also reaches ambiguous conclusions regarding the effect of trade.

On the empirical side, it should suffice to quote briefly the detailed survey of Pack (1988, p. 353): "...to date there is no clear confirmation of the hypothesis that countries with an external orientation benefit from greater growth in technical efficiency in...manufacturing." Part of the difficulty in discerning empirical trends lies in the scarcity of clean cases of trade liberalization. Much of the established wisdom on the consequences of liberalization relies on the well-known east Asian cases. However, typically very little attention is paid to disentangling the effects of macroeconomic policies from trade policies proper. As I argued in the preceding section, this leads occasionally to misleading policy recommendations. The enlarged number of trade reformers in the last decade should help resolve some of the empirical uncertainties. But it is currently too early to pass judgement on this recent experience.

A World Bank research project has recently begun the systematic analysis of the industrial structure and efficiency consequences of trade reform in selected developing countries. The initial findings on Chile do not provide a great deal of comfort regarding beneficial scale and technical consequences. Between 1967 and 1979, around half of the industrial sectors experienced a deterioration in scale and technical efficiency, the drastic trade reform in the intervening years notwithstanding. However, sectors with the greatest reduction in effective protection appear to have done on the whole less badly in terms of *x*-efficiency (Tybout et al., 1989; Roberts and Tybout, 1990). The evidence is too weak to sway anyone with strongly held priors; for the rest, agnosticism would seem to be the safe attitude.

Concluding Remarks

Carlos Diaz-Alejandro once wrote (1975, p. 97): "By now, any bright graduate student, by choosing his assumptions regarding distortions and policy instruments carefully, can produce a consistent model yielding just about any policy recommendation he favored at the start." It is tempting to add that in the intervening 15 years economic models have improved sufficiently to make the statement apply to even not-so-bright graduate students. In any case, the point made by Diaz is even more valid today than it was then. The purpose of modeling remains, as Diaz underscored, to "force a discussion of the realism of assumptions that are crucial to theoretical demonstrations."

To those who favor open trade regimes, the 1980s have brought some good news. Both because of disillusionment with past policies and because World Bank tutelage rules out alternatives, an increasing number of countries have taken significant steps to liberalize their trade regimes. But for all the reasons discussed above, it is too early to become optimistic regarding the sustainability of these reforms. Neither are the beneficial consequences of reform quite in evidence yet. In all likelihood, the success of reform will depend less on the direct consequences of the new trade policies than on the resolution

of the macroeconomic difficulties in which these countries are presently engulfed.

It will be important in the meantime not to over-sell trade reform as a cure-all for economic problems. Just as developing countries embraced protectionist policies in the 1950s and 1960s as a holistic solution to the problems of development, there is now a danger that free trade will be seen as the answer to the economic crisis of the 1980s.¹⁰ If the pendulum swings too far back, unrealistic expectations will be created regarding what can be accomplished by the use of trade policy alone. A reasonable hypothesis is that trade policy plays a rather asymmetric role in development: an abysmal trade regime can perhaps drive a country into economic ruin; but good trade policy cannot make a poor country rich. At its best, trade policy provides an enabling environment for development. It does not guarantee that entrepreneurs will take advantage of this environment, nor that private investment will be stimulated. As the recent literature on trade and growth underscores, it certainly does not guarantee adequate levels of economic growth in the longer run. Therefore, claims on behalf of liberalization should be modest lest policy-makers become disillusioned once again.

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¹⁰See for example the attitude conveyed in the survey of developing countries in *The Economist* of September 23, 1989.

References

- Bhagwati, Jagdish**, *Foreign Trade Regimes and Economic Development: Anatomy and Consequences of Exchange Control Regimes*. Ballinger: Lexington, 1978.
- Bhagwati, Jagdish**, "Export-Promoting Trade Strategy: Issues and Evidence," *The World Bank Research Observer*, January 1988, 1, 27–57.
- Bliss, Christopher**, "Trade and Development." In Chenery, Hollis, and T. N. Srinivasan, eds., *Handbook of Development Economics*, 2. Amsterdam: North-Holland, 1989, 1187–1240.
- Calvo, Guillermo**, "Incredible Reforms." In Calvo et al., eds., *Debt, Stabilization & Development*. London: Blackwell, 1989, 217–234.
- Corbo, Vittorio, and Jaime de Melo**, "Scrambling for Survival: How Firms Adjusted to the Recent Reforms in Argentina, Chile, and Uruguay," World Bank Staff Working Paper No. 764, Washington, D.C., 1985.
- Corbo, Vittorio, and Jaime de Melo**, "Lessons from the Southern Cone Policy Reforms," *The World Bank Research Observer*, 2, July 1987, 111–142.
- Devarajan, Shantayanan, and Dani Rodrik**, "Trade Liberalization in Developing Countries: Do Imperfect Competition and Scale Economies Matter?" *American Economic Review, Papers and Proceedings*, May 1989a, 79, 283–287.
- Devarajan, Shantayanan, and Dani Rodrik**, "Pro-competitive Effects of Trade Reform: Results From a CGE Model of Cameroon," National Bureau of Economic Research Working Paper No. 3176, Cambridge, 1989b (forthcoming, *European Economic Review*).
- Diaz-Alejandro, Carlos F.**, "Trade Policies and Economic Development." In Kenen, Peter B., ed., *International Trade and Finance: Frontiers for Research*. Cambridge: Cambridge University Press, 1975, 93–150.
- Dixit, Avinash**, "Intersectoral Capital Reallocation under Price Uncertainty," *Journal of International Economics*, May 1989, 26, 309–325.
- Dornbusch, Rudiger**, "Credibility and Stabilization," unpublished paper, MIT, 1989.
- Drazen, Allan**, "Why Are Deficit Reduction and Inflation Stabilization So Damn Difficult? Political versus Fiscal Slippage," paper presented at the NBER Conference on Political Economy, Cambridge, December 7–8, 1990.
- Evans, David**, "Alternative Perspectives on Trade and Development." In Chenery, Hollis and T. N. Srinivasan, eds., *Handbook of Development Economics*, 2. Amsterdam: North-Holland, 1989, 1241–1304.
- Farhadian-Lorie, Ziba, and Menachem Katz**, "Fiscal Dimensions of Trade Policy." In Blejer, Mario I., and Ke-young Chu, eds., *Fiscal Policy, Stabilization, and Growth in Developing Countries*. Washington, D.C.: International Monetary Fund, 1989, 276–306.
- Gunasekera, Don, and Rod Tyers**, "Imperfect Competition and Returns to Scale in a Newly Industrializing Economy: A General Equilibrium Analysis of Korean Trade Policy," Working Paper 89-4, Department of Economics, The University of Adelaide, 1989 (forthcoming, *Journal of Development Economics*).
- Harris, Richard**, "Applied General Equilibrium Analysis of Small Open Economies with Scale Economies and Imperfect Competition," *American Economic Review*, December 1984, 74, 1016–1032.
- Hart, Oliver D.**, "The Market Mechanism as an Incentive Scheme," *Bell Journal of Economics*, Autumn 1983, 14, 366–382.
- Helpman, Elhanan, and Paul Krugman**, *Market Structure and Foreign Trade*. Cambridge: MIT Press, 1985.
- Helpman, Elhanan, and Paul Krugman**, *Trade Policy and Market Structure*. Cambridge: MIT Press, 1989.
- Horn, Henrik, Harald Lang, and Stefan Lundgren**, "X-inefficiency and International Competition," paper presented at the European Research Workshop on International Trade, Aix-en-Provence, June 16–20, 1990.
- Krueger, Anne O.**, *Foreign Trade Regimes and Economic Development: Liberalization Attempts and Consequences*. Lexington: Ballinger, 1978.
- Krueger, Anne O.**, "Trade Policies in Developing Countries." In Jones, Ronald W. and Peter B. Kenen, eds., *Handbook of International Economics*, 1. Amsterdam: North-Holland, 1985, 519–569.
- Little, Ian, Tibor Scitovsky, and Maurice Scott**, *Industry and Trade in Some Developing Countries*. London: Oxford University Press, 1970.
- Nalebuff, Barry J., and Joseph E. Stiglitz**, "Information, Competition, and Markets," *American Economic Review, Papers and Proceedings*, May 1983, 73, 278–283.
- Ortiz, Guillermo**, "Mexico Beyond the Debt Crisis: Towards Sustainable Growth with Price

Stability," paper prepared for the Conference on Lessons of Economic Stabilization and its Aftermath, Jerusalem, January 1990.

Pack, Howard, "Industrialization and Trade." In Chenery, Hollis, and T. N. Srinivasan, eds., *Handbook of Development Economics*, 1. Amsterdam: North-Holland, 1988, 333–380.

Roberts, Mark, and James Tybout, "Size Rationalization and Trade Exposure in Developing Countries," paper presented at the NBER Conference on Empirical Studies of Commercial Policy, Cambridge, March 16–17, 1990.

Rodrik, Dani, "Imperfect Competition, Scale Economies, and Trade Policy in Developing Countries," In Baldwin, Robert E., ed., *Trade Policy Issues and Empirical Analysis*. Chicago and London: The University of Chicago Press, 1988a, 109–143.

Rodrik, Dani, "Closing the Technology Gap: Does Trade Liberalization Really Help?" National Bureau of Economic Research Working Paper No. 2654, Cambridge, 1988b (forthcoming 1991 in Helleiner, G. K., ed., *Trade Policy, Industrialization and Development: A Reconsideration*. Oxford: Clarendon Press).

Rodrik, Dani, "Promises, Promises: Credible Policy Reform via Signalling," *The Economic Journal*, September 1989a, 99, 756–772.

Rodrik, Dani, "Policy Uncertainty and Private Investment in Developing Countries," National Bureau of Economic Research Working Paper No. 2999, Cambridge, 1989b (forthcoming, *Journal of Development Economics*).

Rodrik, Dani, "Credibility of Trade Reform—A Policy Maker's Guide," *The World Economy*, March 1989c, 1–16.

Scharfstein, David, "Product-Market Competition and Managerial Slack," *Rand Journal of Economics*, Spring 1988, 19, 147–55.

Tybout, James, Jaime de Melo, and Vittorio Corbo, "The Effects of Trade Reforms on Scale and Technical Efficiency: New Evidence from Chile," The World Bank, 1989 (forthcoming, *Journal of International Economics*).

Whalley, John, "Recent Trade Liberalization in the Developing World: What is Behind It, and Where is It Headed?" National Bureau of Economic Research Working Paper No. 3057, Cambridge, 1989.

Williamson, John, *The Progress of Policy Reform in Latin America*. Washington, D.C.: Institute for International Economics, Policy Analyses in International Economics, 28, 1990.

World Bank, *World Development Report, 1987*, Washington, D.C., 1987.

World Bank, *Strengthening Trade Policy Reform, vol. II*. Washington, D.C., 1989.

