OPTIONS FOR DISMANTLING TRADE RESTRICTIONS IN DEVELOPING COUNTRIES

Wendy E. Takacs

Although many countries have adopted freer trade regimes or are in the process of reforming quantitative restrictions, such reforms are not without short-term costs. Sudden removal of quantitative restrictions can release a surge of demand for imports that can deplete foreign exchange reserves and force rapid adjustment by domestic industries. Five methods to more gradually liberalize quantitative restrictions are discussed: raising quota ceilings until they are non-binding; eliminating quotas product by product; converting quotas to equivalent tariffs and then reducing them; auctioning quota licenses; and converting quotas to tariff quotas, and then liberalizing these. The various instruments are evaluated according to their implications for the adjustment period, for government revenue, for the balance of payments, and for the extent to which they are likely to produce political disruptions.

Many developing countries have resorted to trade restrictions to limit imports as a whole, to ration scarce foreign exchange (limiting it to payments for essential imports), or to protect particular domestic industries as part of a development program. Countries have used a seemingly baffling variety of policy instruments that have constrained and distorted trade: lists of banned imports, tariffs, surcharges, stamp fees, prior import deposits, import quotas, tariff quotas, discretionary import licensing, foreign exchange controls, multiple exchange rates, and local content requirements. And even this list is not exhaustive.

Several factors have prompted countries to liberalize their trade regimes. One important influence has been the high rates of growth achieved by the
outward-oriented Asian countries in contrast to the stagnation in many countries with highly protectionist inward-looking trade policies. Another influence has been a growing recognition of the magnitude of the costs of import restrictions, particularly quantitative trade restrictions. Import quotas, licensing requirements, and exchange allocation involve a high degree of bureaucratic discretion as to what is imported, who imports it, and where it comes from. These restrictions can thus create greater inefficiencies than a tariff that would provide the domestic industry with the same degree of protection or reduce imports by the same amount. Quantitative restrictions also encourage the wasteful diversion of resources from productive use to lobbying (rent-seeking) to obtain licenses to import. Unlike tariffs, quotas generally provide no revenue directly to the government treasury. For these reasons, trade liberalization programs often seek both to expand trade and to move away from quantitative controls toward tariffs. In many developing countries, the crisis precipitated by the inability to generate sufficient export earnings to finance burgeoning debt payments has led to reform programs. Trade liberalization, however, is not a simple matter. Governments contemplating trade liberalization programs face many political and economic constraints and many potential problems that could halt or reverse the process.

This article focuses on a narrow subject within the area of trade liberalization: ways in which the form of protection might be changed during liberalization to ease the transition to a freer trading regime. Given the additional inefficiencies associated with quantitative trade restrictions, the article discusses various methods of dismantling quota systems as part of the process of liberalizing trade. This article does not touch on several other crucial issues associated with trade liberalization, such as the role of accompanying fiscal, monetary, and exchange rate policies or the order of loosening controls in various markets.

The Nature of the Problem

Simply abolishing quantitative restrictions overnight would be one policy option. Such a move would not be unprecedented. Greece, for example, eliminated its quotas on most products virtually overnight in 1953, with beneficial overall effects (Papageorgiou 1988, p. 16). Bolivia also eliminated quotas in a one-stage move in 1985.

In many countries, however, the prospect of immediately abolishing all quantitative trade restrictions will not be attractive to policymakers. For many countries, the trade regimes are so restrictive that simply eliminating the quotas or licensing requirements could lead to large and rapid increases in imports. Pent-up demand, exacerbated by fear of future reversals of policy, could cause particularly large surges of imports and potentially severe problems for the country.
Rapid increases in imports are likely to impose short-run adjustment costs—in the form of losses of output, profits, and employment—which, if sudden enough, large enough, and concentrated in groups with significant political influence, could jeopardize the liberalization program. Also, the sudden removal of quantitative trade restrictions could create problems in the balance of payments if imports rapidly accelerated before liberalization and economic rationalization had a chance to improve the competitiveness of export industries. Liberalization policies in the financial sector or macroeconomic stabilization policies undertaken at the same time as the trade liberalization can have repercussions in the traded goods sector that also encourage imports. Corbo, de Melo, and Tybout (1986) report that after quantitative restrictions had been removed in Chile and Uruguay the attempt to use exchange rate appreciation as an anti-inflationary tool caused rapid increases in imports, especially of consumer goods.

For these reasons, removing quantitative restrictions in a manner designed to avoid abrupt, very large shifts in the volume or the composition of imports would be advantageous. Gradual liberalization would help make the adjustment to freer trade more gradual and thus lower adjustment costs. It would also help prevent problems in the balance of payments that might arise if imports accelerated rapidly before the economy had time to accomplish the structural adjustment needed to expand exports. It might also help obtain political support for trade liberalization or, at least, reduce the intensity of the political pressure against it. Michaely (1986) notes that a gradual liberalization may or may not be more politically feasible than a one-stage process. On the one hand, the one-stage policy may result in greater unemployment and larger changes in income distribution, which could be expected to generate resistance; on the other hand, a gradual process may require a repetitive political struggle. Krueger (1986) argues that drawn-out procedures provide ample time for political pressures to be brought to bear against liberalization. In any event, available evidence seems to indicate that the revealed preference of policymakers is for the gradual removal of quantitative measures (see Halevi 1988, pp. 37-38, 44).

Transitional measures can be designed to help liberalize quantitative restrictions in a gradual manner. At the same time, any transitional measures must ensure that eventually trade will actually be liberalized. If the transitional measures are too timid or too drawn out, they may postpone or prevent the actual liberalization.

Some experts argue that well-designed transitional measures will enhance the credibility of a liberalization program. A sudden drastic change in a country’s trade regime could signal a serious commitment to liberalization on the part of the government, or it could lead to sufficient economic disruption to make liberalization untenable. It may be more difficult to successfully execute a program of gradual liberalization if some expect the program to be reversed because of problems and disruptions. Edwards (1984) argues that the speed and
order of the liberalization should be set in such a way that expectations of a
reversal of the program will be low. An expected reversal of a liberalization
program could also cause a speculative bulge of imports when trade is first lib-
eralized. Diaz-Alejandro (1976, p. 207) reports that a good share of the increase
in imports in the early stages of Colombia’s 1965–66 program was motivated
by a speculative desire to take advantage of a liberalization that was not ex-
pected to last long. Unfortunately that expectation proved to be correct. In Bo-
livia, imports were high in 1986 and 1987 following the 1985 liberalization, but
they fell unexpectedly in 1988. This pattern may reflect hoarding of imported
goods caused by concern that the open trading system would not last. Also,
some transitional measures in themselves, such as auction quotas or tariff quo-
atal prothas, provide information during the process about the degree of restrictiveness
of the controls that could prove useful in subsequent stages of liberalization.

Transitional Measures

Five methods of liberalizing quantitative restrictions are: (1) gradually rais-
ing the quota ceilings and then eliminating them when they become nonbind-
ing, (2) eliminating quotas product by product over time, (3) immediately
converting quotas to tariffs and then reducing the tariff rates, (4) auctioning
licenses or permits to import within quotas, and (5) converting quotas to tariff
quotas and then liberalizing these.

Although these methods are discussed individually here, they are not neces-
sarily mutually exclusive. The programs actually implemented by countries of-
ten combine several features of these methods in novel ways. Australia’s trade
liberalization, for example, has used tariff quotas in which the quota compo-
nent has been expanded, some licenses to import within quota at a lower tariff
rate have been auctioned, and tariff rates for imports above the number previ-
ously allowed by the quota have been reduced. Ghana shifted imports item by
item from restricted to free lists, while imposing surcharges on delicensed im-
ports.

Raising Quota Ceilings

If the quantitative restrictions being liberalized are quotas with specified
ceilings, the most straightforward method of phasing out these restrictions is
to raise the quota ceilings gradually. If the volume of imports allowed under
the quota increases sufficiently, eventually the quantity that would be imported
in the absence of the quota is lower than the quota ceiling. As a result, the
quota becomes nonbinding. Trade would then be controlled by any other bind-
ing restrictions, such as tariffs on the product.

Such a liberalization could be administered by annually declaring a given
annual growth rate in the quota limits. The growth rate could be modest at
first, say 5 or 10 percent. To ensure that the quotas would eventually become nonbinding, the growth rate could escalate in ensuing years to rates, such as 100, 500, and 1,000 percent, that would without a doubt exceed the growth rate of domestic demand.

Several countries, primarily industrial ones, have raised quota ceilings as part of a liberalization process. The original members of the European Economic Community used the quota expansion method to eliminate quantitative restrictions among themselves as part of the transition to free trade. First, any bilateral quotas granted to other members were extended to all members. These quotas then had to be expanded at least 20 percent a year, with an increase of no less than 10 percent for each product. To ensure the liberalization of products with low or no imports in the base year, the initial quotas had to be at least 3 percent of national output of the product in question (see Frank 1961, pp. 112–14 and 253–58). If imports fell short of the quota ceiling for two successive years, the quota was to be abolished.

Quota ceilings were also gradually raised when Israel liberalized imports of raw materials in the 1950s by gradually increasing the ratio of allowed imports to total import applications (see Michaely 1975, p. 50). This raising of quota ceilings coincided with an increase in special levies imposed on the liberalized imports, so it could also be interpreted as an example of replacing quotas with tariffs, which is discussed later.

The quota ceilings in Australia's tariff quotas on textile imports were also raised gradually by the sum of a quota expansion component and an amount calculated to account for growth in the domestic market. Between 1981 and 1989 the quotas on individual categories of textiles expanded by as much as 105 percent a year, although on average the increases were much lower and in some instances quota ceilings were lowered (Industries Assistance Commission 1981–88).

Beginning in 1981, New Zealand both expanded its quotas and auctioned licenses to import under quota. When the bids for the quotas remained low for more than one auction round or when the full values of the licenses on offer were not taken up in the auctions, licenses were to be made freely available (Rayner and Lattimore forthcoming).

The method of gradually raising the quota ceilings is simple and straightforward. It will eventually move trade to a tariffs-only system as the quotas become nonbinding, provided that the growth in the quota outpaces the growth in domestic demand and that nothing increases costs in the importing countries. Moreover, the method has the advantage of liberalizing during the transition period.

This method of phasing out quotas is not without its problems, however. One practical problem is selecting the criterion for determining when the quota is considered nonbinding, so that it can be eliminated. One possible method is to track the quantity of imports and compare it with the quota ceiling. When the quantity actually imported falls below the quota ceiling, one might
conclude that the quota could be eliminated without causing any large, sudden change in the volume of trade.

It is not clear, however, that a quota has no effect on trade simply because imports do not reach the quota ceiling. Just the existence of a quota ceiling may act as insurance for the domestic industry by reducing the uncertainty about the prospect for sales and thus encouraging investment in the domestic industry while discouraging marketing attempts by foreign firms or investment abroad to supply that particular market. Removing the quota would eliminate the certain market for the domestic industry while offering an expanded market to foreign firms. As a result, the volume of imports could increase.

A quota could appear to be nonbinding because of the method of administering the quota arrangements. The method of allocating licenses might bestow monopoly power on a single importer or exporter, who would find it profitable to short-ship, that is, to keep imports below the quota ceiling to drive up prices and increase profits (see Murray, Schmidt, and Walter 1978 for an explanation of incentives to short-ship). Eliminating the quota would eliminate the monopoly power, and, again, imports would increase even though the quota had appeared to be nonbinding.

If licenses are allocated to firms arbitrarily, or allocated in proportion to imports of record in some base period, individual firms may receive more licenses than they need or want. Similarly, licenses may remain unused when the licensing system encourages importers to request more licenses than needed for their planned volume of imports. If importers have learned that a certain fraction of their requests for licenses probably will be rejected, they have an incentive to apply for more licenses than they intend to use (see Michaely 1975, p. 33). If licenses are not transferable, a significant number may not be used. The total amount imported will fall below the quota limits, but such a situation would not indicate that the quantitative restriction is not binding.

**Product-by-Product Elimination of Quotas**

Another method of phasing out a system of quantitative restrictions is gradually to eliminate them item by item. This method was chosen to phase out quantitative restrictions in Europe after World War II. Using 1948 as the base year for trade, each country was obligated to eliminate quotas on given percentages of their trade according to an agreed-on schedule, but each country was free to choose the order in which import quotas on different products would be abolished. The percentage was set at 50 percent in December 1949, 60 percent in September 1950, 75 percent in February 1951, and 90 percent in January 1955. By the end of 1957 all but five countries had eliminated quotas on 90 percent of their overall imports. Only France withdrew liberalization measures once they were implemented (see Frank 1961, pp. 56–60).

The Republic of Korea also successfully used this product-by-product dismantling of quantitative restrictions. After the Korean War, the Korean gov-
ernment controlled imports by using a positive list of products that could be imported. Some of these products received automatic approval, whereas others were restricted items requiring special approval by the government. The number of items on the permitted lists fluctuated between 1955 and 1965. From 1965 to 1967, the number of items that were granted automatic approval more than doubled. In the second half of 1967, the positive list of specific items that could be imported was changed to a negative list of specific items that could not be imported without approval, and this reform resulted in a drastic liberalization. Transferring products to the automatic approval list or switching from a positive to a negative list can be thought of as removing quantitative restrictions item by item.

Korea's second experiment in trade liberalization even more clearly used a product-by-product method. Between 1978 and 1988, Korea gradually shifted items to the automatic approval lists. The ratio of automatic approval items to total trade increased from 53.8 percent in early 1978 to a projected 95.2 percent by 1988. The trend within the decade was not absolutely smooth: progress stopped in 1980, when the current account deficit increased sharply, but it resumed thereafter. (For a discussion of the 1967 and 1978 trade liberalization episodes in Korea, see Kim forthcoming.)

Mexico liberalized its trade regime between 1985 and 1988 by removing licensing requirements on particular categories of imports. An initial rapid reform reduced the coverage of import licensing requirements from about 92 percent of domestic production in June 1985 to about 47 percent by December of that year. Subsequent liberalization further reduced the coverage to about 23 percent by April 1988. The Mexican case could be interpreted as a switch from quantitative restrictions to tariffs because a simultaneous tariff reform increased tariffs in approximately half of the tariff categories for which licensing was eliminated. Evidence suggests, however, that the new tariffs were not as high as the tariff equivalents of the previous licensing restrictions, and the tariffs were reduced suddenly and substantially soon afterward (World Bank 1988, pp. 3 and 25).

Other examples of countries dismantling quotas by gradually shifting products from restricted to free licensing include New Zealand from 1958 to 1979 (a reduction in coverage from 100 to 24 percent) and Ghana from 1967 to 1971 (a reduction in coverage from 97 to 24 percent). Turkey also switched from a positive to a negative list in 1984; the new system liberalized about 60 percent of 1983 imports (Rayner and Lattimore forthcoming, table 3.4; Leith 1974, pp. 142 and 148; and Baysan and Blitzer forthcoming, pp. 112–16).

Immediate Conversion to Tariffs

A third method of liberalizing quantitative restrictions is immediately to change the form of protection from a quota or licensing system to a tariff system that initially is equally restrictive, and then gradually to lower the tariff

Wendy E. Takacs
rate to allow an expansion of imports. Variations of this strategy have been used by Ghana, Israel, Mexico, the Philippines, Singapore, and Spain.

Singapore’s trade liberalization of 1965–73 is an example of a successful program based on a conversion of quotas to tariffs. Singapore gradually liberalized or abolished some quotas but for many categories replaced quotas with tariffs and then lowered the tariffs. Particularly rapid elimination of quotas occurred in 1965–66 and 1967–68.

Roberts (1988) studied the second liberalization and concluded that it was successful in several respects. Her empirical work provides evidence that the first stage of converting quotas to tariffs had a beneficial effect. Overall, although the rates of growth slowed in the liberalized industries, the liberalization’s adverse effect on the levels of employment or output was negligible, and both the government budget and the balance of payments showed surpluses during the liberalization period. It is important to note, however, the particular circumstances of the country at the time: (1) the quantitative restrictions had been imposed in 1964, so they had been in place for a relatively short time; (2) the tariffs and quotas, even at the height of the protectionist period, were generally not very restrictive compared with those of most other countries; (3) the declining industries were small, and rapid growth in other labor-intensive sectors, especially electrical machinery, absorbed displaced labor; and (4) the government made it clear that the protection was temporary. Thus Singapore’s experience may be difficult to generalize to other countries where quantitative restrictions are severely restrictive and longstanding, and where external conditions are less fortuitous than the sustained growth and relatively high demand in Singapore in the 1960s.

Another successful quota-to-tariff liberalization was undertaken by Israel in 1962. Between 1962 and 1968, a public commission reviewed each quantitative restriction. It was authorized to eliminate the restriction entirely, convert it to the tariff that would have the same protective effect, or leave the restriction unchanged. Since most final and consumer goods were in essence embargoed under the licensing system if produced domestically, the commission’s work consisted of calculating what would be a prohibitive tariff rate (see Michaely 1975, pp. 58–75). The second stage of gradually lowering the tariffs began in 1968 and continued through 1976. The entire process thus took close to fifteen years to execute.

In 1959, a reform of Spain’s trading system placed imports in one of four categories: (1) on a free list, for which applications to import could not be rejected; (2) subject to quota; (3) subject to individual licensing; and (4) governed by state trading. In 1960, a new tariff structure more than tripled the number of items subject to tariffs. The tariff rates, which were based on differentials between international and domestic prices, were established as the tariff equivalent of the quantitative restrictions. Between 1960 and 1966, the free list was enlarged annually, and duties were reduced (Dehesa, Ruiz, and Torres forthcoming, pp. 26–33).
Ghana did not explicitly convert quotas to tariffs, but when items were transferred from restricted lists to the open general import license lists (for which licenses were ostensibly freely available), the government imposed surcharges both to dampen the demand for imports and to capture for itself what had previously been quota rents (Leith 1974, p. 144). The surcharge was introduced in 1969, but at the very low rate of 5 percent. It is unlikely that this rate was high enough to be the tariff equivalent of the quotas. When more items were delicensed in 1970, the single rate was abandoned, and the surcharges imposed varied from 5 to 150 percent.

One of the problems of quantitative trade restrictions is their lack of transparency. The restrictiveness of a given set of quotas or a licensing system is difficult to estimate or measure. One can tell how much is entering the country but not how much would enter in the absence of the restriction. The volume of license requests may provide some information on the extent of demand for imported goods, but it may underestimate demand if the regime is so restrictive that potential importers are discouraged from even applying for licenses or overestimate demand if importers inflate their license requests because they know that some proportion will be rejected. If imports are banned completely, even information on license requests will be unavailable.

In principle, if the restricted product is fairly standardized, if the import quota is global, and if all firms involved in production and trading are fairly small so that production, importing, and exporting can be treated as competitive industries, then some tariff rate should duplicate the effect of the quantitative restriction, except for the distribution of the tariff-equivalent revenue. A tariff at a rate equal to the percentage difference between the selling price in the domestic market and the import price would approximate the effect of the quantitative restriction.

This price differential, however, may be difficult to observe. If the imported items are consumer goods that are resold at retail without significant changes, then the effect of the quantitative restrictions on price could be measured by the excess of the price to domestic consumers over the import price, allowing for normal distribution costs and markups. Some investigation and data gathering would be required to measure this price-increasing effect, but, at least in principle, it is measurable. Quotas and licensing arrangements in developing countries have often been used to reduce imports of consumer goods while allowing imports of raw materials and intermediate goods. For imported inputs, the firm issued the license uses the inputs itself. Given that the imported product is never resold, identifying the premiums associated with imports of raw materials and intermediate goods would be even more difficult. These premiums are also likely to fluctuate over time as the licensing system becomes more or less stringent (see Diaz-Alejandro 1976, p. 146).

Even when it is feasible to measure the difference between import prices and domestic prices under the quantitative restriction, the method could not accurately estimate the tariff with the same restrictive effect if there were monopoly
power in the domestic industry, a monopoly importer, or a single exporter (see Bhagwati 1965). In these cases, imposing a tariff equal to the difference between domestic and import price would not duplicate the effect of the quota.

Because of the difficulties involved in assessing the restrictiveness of licensing or quota systems, considerable uncertainty will necessarily surround a conversion of quantitative restrictions to tariffs. What tariff rate to set is not immediately obvious, and substantial error in either direction could pose serious problems.

If the tariff rates are set too low, imports could increase faster than the domestic industry can adjust without politically unacceptable levels of injury or faster than the balance of payments and the country’s reserve position can tolerate. This may have been a factor contributing to the demise of the Ghanian liberalization. Whether Ghana intended the surcharges to be the tariff equivalent of the quota is not clear. Leith (1974, p. 144) reports that the surcharges did not appear to have “a major dampening effect” on imports. If the tariff rates are set too high, the conversion to tariffs, at least in the short run, could result in greater restriction of trade than the quota. Also, Balassa (1986) points out that if reducing tariffs after the conversion proves difficult, trade could become more restricted in the long run. For all of these reasons, switching immediately and directly from quotas to tariffs may be difficult to do without risking unacceptable costs to the domestic industry, problems with the balance of payments, or further restriction.

**Auctioning Licenses**

When quotas are administered by issuing licenses or permits to import, the government can auction off these licenses to the highest bidder. The bids can provide useful information about what tariffs are equivalent in protective effect to the quotas.

Some developing countries have used auctions to distribute foreign exchange. Between 1953 and 1957, Brazil auctioned certificates that conferred on the purchaser the right both to obtain an import license and to purchase the foreign exchange to pay for the imports. The auctions in essence distributed permits to import products in five commodity classifications and about twenty different currencies (Kafka 1956). Between 1954 and 1958, Korea sporadically used an auctioning system to distribute foreign exchange (Frank, Kim, and Westphal 1975, pp. 34–35). In the 1980s, exchange auctions also have been adopted by Bolivia, Ghana, Jamaica, Nigeria, Sierra Leone, Uganda, and Zambia.

Part of the goal in each case was to use a market-oriented system to obtain information on the appropriate exchange rate for the country’s currency. The auctions themselves appeared to operate smoothly, but the degree to which bids could be interpreted as market-determined exchange rates is questionable. Some governments influenced the outcome by one or more actions: allocating
some foreign exchange outside the auction process for government or priority imports, imposing minimum bids, restricting participation in the auctions, borrowing heavily abroad to supply the auctions with foreign exchange, arbitrarily declaring some bids ineligible, using the average rather than the marginal market-clearing bid to set the exchange rate, or arbitrarily setting an exchange rate different from the one that emerged from the auction process (see Bennett 1986, Krumm 1986, and Quirk and others 1987).

Australia and New Zealand have auctioned import quota licenses as part of their trade liberalization programs, and each has interpreted the bids in the auctions as a measure of the restrictiveness of the quotas. New Zealand eliminated quotas on items when the bids fell sufficiently low. Under these provisions, 400 of 660 categories of products were moved to license-on-demand status in 1986 (Bergsten and others 1987, p. 102). Australia regularly reports the bids and interprets them as the degree of government assistance to the industry (Industries Assistance Commission 1981–88).

These interpretations of the bids for licenses raise the issue of whether bids in an auction accurately reflect the tariff equivalent of the quota. If they do, then auctioning licenses as a transitional measure could help to avoid setting tariff rates that increase protection or that cause difficulties in adjustment or in the balance of payments. If they do not, then using the bids to set tariff rates could leave sufficient problems to scuttle the liberalization or even to restrict trade further.

In a long-run competitive equilibrium in which bidders have perfect foresight, the bids that emerge from auctions of quota licenses should give a good approximation of the tariff equivalent of the quotas. The firms or individuals bidding for the licenses would be willing to bid up to an amount equal to the profit they expect to earn from importing the restricted good, which in turn would equal the difference between the price at which they could sell in the domestic market and the cost, including that for transportation, of the imported good. Under competitive conditions, a tariff equal to this difference would have the same aggregate effect as the quota.

In the short run or in cases in which markets are not competitive, however, bids might underestimate or overestimate the size of the quota rents and thus fail to reflect the tariff equivalent of the quota. Bids might underestimate the tariff equivalent of the quota if bidders had monopoly power or were able to collude. A monopoly importer or a few colluding importers could prevail in an auction by offering only a token bid. Bids also might underestimate the equivalent tariff if the exporters supplying products to the bidding importers had monopoly power. The quota limits supply to the domestic market and drives up the selling price of the restrained good. Competitive importers would be willing to bid up to the difference between what they pay for the imported good and the domestic selling price. Once the quota is in place, an astute monopoly supplier could increase the price charged to the importers to just below the domestic selling price less the importers’ transportation costs without
decreasing the amount sold. The importers' bids would correspondingly decline and would not accurately reflect the tariff that would achieve the same import levels (see Bergsten and others 1987, pp. 45–48 and appendix, or Takacs 1987, pp. 13–17).

Bids also might fail to reflect the tariff equivalent of the quota because of a phenomenon known as the winner's curse. The true value of the quota license is unknown at the time of the bidding. Bidders have to estimate the value of the right to import, but the actual value will depend upon future demand conditions for imported goods or the products made from them. If each bidder bids his estimate of the true value of the license, the winner of the auction will be the individual with the greatest overestimate. To avoid the winner's curse, bidders will shave their bids below their real estimates of the true value of the license being auctioned.

If information about the value of the right to import is sufficiently dispersed among the bidders, however, then the selling price converges to the true value as the number of bidders increases (McAfee and McMillan 1987, p. 721). These results imply that to increase the likelihood of obtaining good estimates of the tariff equivalents of the quotas, the authorities should release any available information that would help bidders estimate the values of the quota licenses and should allow open access to the auctions.

Bids also might overestimate the equivalent tariff. Importing firms may have fixed costs associated with distribution facilities or capital equipment for further processing imported raw materials or intermediate goods. If these firms do not obtain licenses and cannot import, they will be forced to cease operation and will incur a loss equal to their fixed costs. In the short run, firms with fixed costs can be expected to bid up to an amount equal to the expected profit generated by the quota plus the loss they would incur if they could not import. Their bids would thus overestimate the long-run tariff equivalent of the quota. (Mead 1967, p. 203, discusses a similar situation in the context of timber auctions.)

Strategic bidding might also result in bids greater than the tariff equivalent. Suppose that anyone can bid in the auctions and that the government has announced that it will set a tariff equal to the bids received. Domestic import-competing firms have an incentive to enter the auctions with high bids in an attempt to obtain continued protection at a high rate. They could make up part of the cost of the bid by reselling the licenses or by importing themselves and could cover the rest of the extra cost by the extra profits arising from the continued high rates of protection.

Thus auctioning licenses may provide useful information and revenue to the government but not if certain conditions prevail. If suppliers abroad or importers at home are few, auctions may provide neither revenue nor accurate information as to the size of the equivalent tariff. If the importing industry is characterized by high fixed costs or a proclivity to influence government policy, auctions will provide revenue but not accurate information.
The experiences of Australia, Brazil, India (which has recently auctioned textile export licenses), and New Zealand provide evidence of another problem with obtaining information on tariff equivalents through auctions. The bids received in the auctions can vary greatly over a short period. In Australia, for example, the bids were fairly steady over time for some items, such as textiles, but they fluctuated greatly from year to year on others. For footwear, the average bids were 100 percent for 1985, 1.4 percent for 1986, and 31 percent for 1987 (Bergsten and others 1987, p. 95). In the newly instituted Indian auctions for textile exporting licenses, the bids varied from 5 rupees to 74 rupees for the same items in successive auctions (Khanna 1988). Wide and frequent fluctuations of the auction premiums also characterized the Brazilian auctions (see Kafka 1956, p. 311). When bids vary so greatly, the choice of tariff rate is not clear.

Conversion to Tariff Quotas

Another transitional method for phasing out quotas is the use of tariff quotas. Australia has used these to liberalize its quantitative restrictions, and at least two variants of this method have been suggested for the textile trade (see Cline 1987, pp. 257–62, and Sampson and Takacs 1988).

Tariff quotas operate as a two-tiered tariff system. Imports to a given quantity enter at a low tariff rate; imports greater than that quantity enter at a higher rate. Tariff quotas can be used to gradually liberalize existing quota systems. The number of units that enter at the low rate can be set equal to the existing quota ceiling, and the rate charged on these within-quota imports would be the existing tariff rate. For imports above the quota ceiling, a higher, or penalty rate would apply. If this penalty rate were initially set high enough to be prohibitive (that is, to allow no over-quota imports), converting a quota system to a tariff quota would have no immediate effect on trade. The penalty tariff could then be gradually lowered. At some point, the tariff rate would fall far enough to allow some over-quota imports. Once the penalty rate fell to the level of the existing tariff, the quota would have no effect and could be eliminated.

The tariff quota option differs from an immediate conversion from quotas to tariffs because the increased tariff rate applies only to imports above the existing quota ceiling. If quotas were abolished and replaced by tariffs at higher-than-previous rates, all imports would be subject to the new rates. If the new tariffs were higher than the tariff equivalent of the quota, imports might fall; so the switch could make the regime more restrictive. But with the tariff quota, the danger of unintentionally increasing the restrictiveness of the current regime does not exist so long as the rate that applies to within-quota imports is not increased. If the penalty rate for above-quota imports is set above the tariff equivalent, no above-quota imports will enter. At worst, this
situation perpetuates the status quo. If the penalty rate is set below the tariff equivalent, imports can be expected to increase.

As transitional measures, tariff quotas present a relatively low risk of unintended disruption and a fairly high assurance that trade will eventually be liberalized. If the penalty rate is at first high enough to allow few or no over-quota imports, uncertainty about the immediate effect of the liberalization on imports will be lessened. Exactly how high a penalty rate would have to be to allow no imports is, of course, open to question and requires an informed guess. But guessing too high would do relatively little damage: it would not restrict trade further; it would simply postpone the liberalization. The penalty rate could be set even astronomically high at first—say at 1,000 percent—and then could follow a rapid, scheduled decline until a significant amount of imports entered, at which point it could decline more slowly.

Australia’s tariff quotas have been liberalized by a lowering of the penalty rates only very recently. The penalty rates remained the same (or were increased for a few items) from 1983 through 1988, but they were lowered substantially effective in 1989 (Industries Assistance Commission, especially 1987–88). The effect of this liberalization remains to be seen.

Implications of Transitional Measures for Adjustment, Government Revenue, and the Balance of Payments

The various methods of phasing out quota systems have differing implications for the process of adjustment to a new system, for the effect of the transition on government revenue, and for the balance of payments.

Effect on Adjustment

That gradual adjustments are necessarily preferable to sudden adjustments is not universally accepted. But gradualism can be justified on grounds of avoiding sudden shifts in income distribution or ameliorating unemployment (see Mussa 1986, Michaely 1975, and Kim forthcoming).

The argument for gradualism presupposes that resources will have more time to adjust to the new system. The transitional measures discussed in this article can be implemented so as to make adjustment gradual. But gradualism is worthwhile only if the transitional measures give clear signals to domestic economic agents so that they begin to adjust in the desired direction. The signals can be clarified by preannouncing the plan for gradual liberalization: by clearly and credibly specifying the rate at which quota ceilings will rise, the item-by-item schedule for elimination of quotas, the rate at which tariffs on imported products will decrease after a conversion to tariffs, or the rate at which the penalty tariff will decrease in a tariff quota arrangement.
Are some transitional measures likely to give clearer signals than others? Could some of the transitional measures give false signals or provide firms with temporary incentives to adjust in the wrong direction?

Some economists have argued that price-oriented measures provide clearer signals than quantitative measures. Michaely (1986), for example, argues that private economic agents would have difficulty translating a preannounced future level and structure of quantitative restrictions into a pattern of price levels and protection. He favors an initial transformation to protection through prices. Such a transformation presumably could be accomplished best by an immediate conversion from quantitative restrictions to tariffs or tariff quotas, provided that the schedule for lowering the tariff or the penalty rate were clearly announced and adhered to.

Maintaining the quantitative form of protection until it is eliminated can temporarily give wrong signals to domestic firms during the transition. One problem arises in the context of the item-by-item elimination of quotas. Governments are strongly tempted to start the process by eliminating quotas on the items that are politically easiest to liberalize. These are quotas on items that have the lowest ratio of “resistance against” to “support for” liberalization. Raw materials and intermediate products fall in this category because the final goods industries will benefit from lower input costs, and many raw materials do not compete directly with domestic production. India’s 1966 liberalization consisted of allowing priority industries expanded freedom to import their raw materials, components, and spare parts (Bhagwati and Desai 1970). Israel liberalized quotas on raw materials in the mid-1950s but did not begin to reduce the degree of protection of final goods industries until after quotas were converted to tariffs and those tariffs began to be reduced in 1986 (see Michaely 1975). New Zealand also provides an example in which quantitative restrictions were eliminated first on items that did not compete with domestic production and only much later on directly competitive items.

But eliminating quotas on inputs will increase the effective rate of protection of final goods and encourage expansion of these industries rather than contraction, as would be called for by the future elimination of protective quotas on final goods. If the future liberalization is preannounced and is clear and credible, the increased effective protection of final goods production might be recognized as only temporary and might not cause resources to flow into those activities. To the extent that the future liberalization is not credible or information about the future policy is imperfect, however, resources could initially flow in the wrong direction. This result could actually increase the adjustment costs for the final goods industries.

An immediate switch from quotas to tariffs or the auctioning of quota licenses that were previously allocated free of charge could cause a sudden, drastic decrease in the effective rate of protection of certain activities and could thus cause adjustment problems. If quotas on final consumer goods are converted to their tariff equivalents, the conversion should have no effect on
consumers because the tariff should keep the domestic price of the product above the world price by the same amount as the preexisting quota. Likewise, the effective rate of protection of the domestic import-competing producers of these goods should not be affected because the prices of the final goods would not change.

Licensing systems in developing countries often, in effect, embargo imports of consumer goods while allowing limited imports of raw materials, intermediate goods, and capital equipment. As already discussed, it is tempting to liberalize trade first in raw materials and intermediate goods and only later in final products. If the direct users of the intermediate goods and raw materials had been receiving free licenses to import, having to bid for them in an auction or to pay a tariff would immediately decrease the effective rate of protection of that industry by raising input costs. That lowering of protection could precipitate a more rapid decline in those activities than would otherwise be anticipated. This assumes that the firms were not expending the equivalent of the quota profits or rents by devoting resources to activities designed to ensure continued access to licenses. If they were, the potential adjustment problem described here would not materialize. The tariff quota option avoids the sudden change in incentives because it imposes no direct costs on previous recipients of licenses. The protective effect of the restrictive system would be gradually phased out as the penalty rates on both final goods and inputs decreased.

Effect on Government Revenue

Many developing countries rely on trade taxes as a principal source of revenue. Thus the fiscal effect of the alternative transitional measures is an important consideration. All of the transitional measures discussed here should have positive fiscal effects, at least initially.

If there are tariffs or other taxes on imports, any measure that expands imports will result in more government revenue. Simply raising the quota ceilings or, alternatively, eliminating licensing or quota restrictions item by item will increase tariff revenue because existing tariff rates are applied to a larger tax base as imports expand. During Colombia's liberalization, customs revenues, particularly from duties on automobiles, expanded sharply. The government budget actually showed a small surplus the year after the liberalization (see Diaz-Alejandro 1976, p. 201).

Converting quotas to their tariff equivalents should also immediately increase government revenue as windfall profits from the quota rents are transferred from the recipients of licenses to government coffers. Since tariffs are then reduced, the effect on tariff revenue is ambiguous. If demand for the import does not increase much in response to the lower effective price (that is, the elasticity of demand is low), then revenue would decline. Conversely, if the drop in price caused by the lower tariff induced a sufficient increase in demand for the import, revenue would rise.
Auctioning quota licenses as an interim measure could also be expected to shift the quota rents to the government; but for the reasons already discussed, the extent of the transfer is less certain. Collusion among bidders or the exercise of monopoly power by suppliers abroad may result in bids lower than the tariff equivalents of the quotas. The concern about such a result may have prompted the government to impose minimum bids in the Brazilian exchange auctions (see Kafka 1956).

A tariff quota in which the within-quota rate is not increased would not initially transfer any quota rents to the government, but a positive fiscal effect will be felt once the penalty rate falls far enough to allow imports above the quota ceilings. As with declining tariffs, the declining penalty rate will either increase or decrease revenue depending on the elasticity of demand for imports. If the tariff quota allows within-quota imports to enter without any additional duty, liberalization by way of tariff quotas would bring in less government revenue than an immediate conversion to tariffs or an auctioning of quota licenses subsequently replaced by tariffs, which are then gradually lowered.

Effect on Balance of Payments

Crisis in the balance of payments following trade liberalization appear to be a primary cause of the abandonment or reversal of the programs. When countries have loosened quantitative restrictions without increasing tariffs, imports have at times increased rapidly, as they did after Colombia’s liberalization of the import licensing system in 1965–66. The rapid increase in imports contributed significantly to a crisis in Colombia’s balance of payments (see Diaz-Alejandro 1976, p. 201). Colombian imports in the first three quarters of 1966 were 44 percent above the previous year’s level, and reserves were 17 percent lower. This rapid increase in imports, combined with declining coffee prices and a reluctance to devalue the peso, created a crisis that led to a return to rigorous import and exchange controls.

Similar circumstances doomed the trade liberalization program attempted by Ghana in 1967. Ghana began to phase out its quota system by transferring items from a restricted list to an open general-import license list. The categories of items on the open list expanded from 3.15 percent of total imports in 1967 to more than 76 percent of all imports in 1971. During the first few years of the liberalization program, unusually high earnings from the export of cocoa and the flow of aid financed the import expansion, but growing problems in the balance of payments forced an 80 percent devaluation. The shock of the devaluation proved politically unacceptable. A military coup ended both the government administration in power and the liberalization program when the new government reimposed strict import licensing (Leith 1974). Krueger (1978, p. 94) attributes the demise of Ghana’s trade liberalization attempt to balance of payments pressures.

Wendy E. Takacs
Similarly, Korean imports increased by 20 percent between 1967 and 1968 after the 1967 switch from a positive to a negative list (Frank, Kim, and Westphal 1975, p. 58). Although the liberalization was conducted while commodity exports were rapidly expanding, the current account deficit jumped, and the government suspended trade liberalization efforts, particularly the loosening of quantitative restrictions on imports. Likewise, the liberalization episode that began in 1978 came to a halt in 1980, when the current account deficit increased sharply (Kim forthcoming, p. 121). In the Korean case, the underlying long-run trend of increasing exports allowed a resumption of the import liberalization and prevented a reversal.

Problems in the balance of payments and the resulting inability to service foreign debt also contributed to the abrupt abandonment of Zambia's liberalization attempt. In 1985, Zambia had begun an ambitious liberalization program that included tariff reform and an immediate elimination of import licensing and of import prohibitions for protective purposes. In 1987, the government reversed the liberalization and began allocating foreign exchange through an administrative system that gave priority to essential imports (Fardi 1989, pp. 7, 19, 21; and Halevi 1988, pp. 52 and 54).

In Colombia, Ghana, and Zambia, the balance of payments crises can be ascribed more to world commodity price movements, inappropriate exchange rate policies, and incompatible macroeconomic management than to the trade liberalization itself. Nonetheless, the transitional measures discussed in this article could have helped prevent the unexpectedly large increase in payments for imports that contributed to the balance of payments crises.

A simple raising of the quota ceilings presents the least uncertainty in this respect, especially if quotas or licensing allocations are denominated in value terms. An item-by-item or product-by-product elimination of restrictions will present more uncertainty, particularly if quotas are abolished on a category of imports, such as automobiles, that represents a large proportion of the import bill. Replacing quotas or licensing systems with a tariff designed to be equally restrictive will not increase imports immediately. The tariff can then be allowed to decline slowly to keep import payments expanding at a rate that can be financed by the expansion of exports, flows of aid, or inflows of capital from other sources. For the reasons already discussed, however, it may be difficult to estimate accurately the degree of restrictiveness of the control systems, and thus the size of the tariff that would initially result in roughly equivalent import payments. Auctioning licenses may provide information on the tariff equivalent and so help to avoid setting the tariffs too low too quickly and causing an unacceptable drain on reserves.

A conversion of quotas to tariff quotas also helps prevent a too rapid expansion of imports, provided that the penalty rate for above-quota imports is large enough to approximate initially the restrictive effect of the quotas themselves. Again, if the penalty rate is set far below the tariff equivalent of the quota, imports could increase rapidly. As already discussed, to avoid the risk
of setting the penalty rate too low, tariff quotas could be designed with very high penalty rates and a scheduled reduction in the penalty rate that would ensure the eventual elimination, or at least redundancy, of the quota portion.

Summary

Developing countries frequently rely on quantitative trade restrictions to control their balance of payments and to protect domestic industries. These restrictions distort trade and domestic resource allocation and limit the country's ability to respond to changing conditions. Eliminating quotas overnight, however, may lead to problems in adjustment and the balance of payments. The various transitional measures examined in this article are designed to phase out quota systems and gradually liberalize trade. The choice among these measures involves tradeoffs among gains in efficiency, costs of adjustment, threats of balance of payments problems, and risks of reversing the liberalization program, all in the context of uncertainty.

Raising the quota ceilings until they become nonbinding allows trade to expand gradually and will eventually liberalize trade if the rate of expansion is sufficiently rapid and the quota limits are eventually removed. Another benefit of that method is that trade expands immediately; no delay occurs as it may if quotas are first changed to equivalent tariffs or to tariff quotas in which penalty rates are initially too high to expand imports above the quota limits. Abolishing quotas that are apparently nonbinding, however, may cause sudden increases in imports, which in turn may lead to large, immediate shifts in income distribution, unemployment costs, or balance of payments problems. Also, leaving the administrative mechanisms in place may make reversing the liberalization program easy.

Abolishing quotas item by item on particular products will also allow gradual trade expansion and liberalization. But it involves a risk that the protective structure will be changed during the liberalization process in a way that does not provide clear and consistent signals to domestic producers. Abolishing restrictions on raw materials and intermediate inputs before those on final products will temporarily increase effective protection of activities (production of consumer goods) that will later lose protection as quotas on final goods are abolished. Another risk is that imports may suddenly jump when quotas on important products that had been severely restricted are removed.

An immediate switch from quotas to equivalent tariffs coupled with a subsequent reduction in tariff rates could gradually liberalize trade. Uncertainty about the exact tariff equivalent of a given quota, however, suggests that the conversion may either increase imports too rapidly or restrict trade even more than the original quota. Reducing tariffs after the conversion may be difficult.

Auctioning licenses to import as a transitional measure can provide information about the tariff equivalents of existing quota systems, but the auction
system would have to be designed to minimize the possibility that bids may overestimate or underestimate the tariff equivalent. Auctioning licenses alone will not liberalize trade unless the quotas are converted to tariffs that are subsequently lowered.

Converting quotas to tariff quotas with prohibitive (penalty) tariff rates for imports above the number previously allowed by the quota will not liberalize trade immediately, but it will generate liberalization when the penalty rates are lowered. Tariff quotas also eliminate the risk that the transitional measures will unintentionally increase the restrictiveness of the regime. Liberalization may, however, be delayed if the penalty rate is initially too high or if it declines too slowly.

Of the transitional measures discussed in this article, liberalizing quantitative restrictions item by item and converting quantitative restrictions to tariffs are the ones with which developing countries have the most experience. Both of these methods appear to be viable options. Developing countries have had less experience with the raising of quota ceilings primarily because developing countries use discretionary licensing systems more frequently than quotas that specify a maximum quantity of imports. In some developing countries, quota-license auctions have been used, and in others, auctions of foreign exchange have operated smoothly. Perhaps more developing countries will find Australia’s experiment with tariff quotas a useful precedent for their own trade liberalization programs.

Note

Wendy E. Takacs is a professor of economics at the University of Maryland at Baltimore.

References

The word "processed" describes works that are reproduced from typescript by mimeograph, xerography, or similar means; such works may not be cataloged or commonly available through libraries, or may be subject to restricted circulation.


