Options for Market Access Reforms

There are no unambiguous rules for undertaking a process of reform. Planning reform requires making an informed choice among potential targets or strategies, and each option is likely to imply different distributions of costs and benefits. And, because trade and domestic policies are operationally linked, independent reforms of one pillar can be expected to have an effect on the costs and benefits of the others. WTO member countries have proposed numerous options for achieving further agricultural policy reform. Rather than analyze specific country proposals, we analyze generic options for achieving further, partial reforms of market access, domestic support, and export subsidies. Our framework takes into account the current structure of agricultural policies, differences in policies' effects on production and trade, and the interdependence of their operation and reform.

Options for Liberalizing Tariffs

In the Uruguay Round, members agreed to "bind" their tariffs, meaning that they would not raise their tariffs above a certain fixed, or bound, level subject to negotiating compensation to other countries. The bound rates became the base rates from which reduction commitments were calculated. Industrial countries bound most tariffs (including the over-quota tariffs of TRQ regimes) at the 1986-88 average levels of tariffs actually applied to imports, or "applied" tariffs. Many developing countries set their bound rates at levels well above their applied rates, creating "water" in their tariffs, a buffer zone that may allow the countries to raise their tariffs while remaining within their tariff reduction commitments. In the URAA, countries committed to reduce their simple (unweighted), bound average tariff by 36 percent (24 percent for developing countries), with a minimum cut of 15 percent (10 percent for developing countries) for each individual tariff line.

The URAA approach to agricultural tariff reduction kept in place two characteristics that describe the current profiles of global agricultural tariffs: differences among countries in their average agricultural tariff; and variation, or dispersion, in tariff rates across commodities within countries' tariff schedules. Dispersion of tariff rates, such as the escalation of tariffs with the degree of product processing, can lead to greater distorting effects than uniform tariff rates. Tariff escalation can result in a product's effective tariff protection exceeding its nominal tariff rate if tariffs on the imported intermediate goods used in its production are relatively low. Imposing higher tariffs on processed goods also impedes trade in high value products, the fastest growing segment of world agricultural trade, which tends to be highly sensitive to price. The occasional very high tariff, or "megatariff," which is some-

Modeling the impacts of policy reform on global agriculture

Four different models were used to develop the quantitative analyses of the potential effects of the agricultural negotiations: a dynamic, global computable general equilibrium (CGE) model, a static global CGE model, the European Simulation (ESIM) models, and the Food Aid Needs Assessment (FANA) model. Key features of these models are:

Base year. For the CGE models, the base year is 1997, for ESIM it is 1997/98, and for the FANA model it is the average of 1997-99. The base year is a "representative" year. The models describe how this representative year would change, either in a single long run end-point or annually, due to a controlled experiment in which specific policy reforms occur. The models are not projection models and do not capture the many other forces that are likely to determine what may actually occur in the economies in the long run.

Agricultural policies. The models use common agricultural policy data for 1998, the latest year for which a comprehensive policy database is available. Export subsidy data are from WTO notifications by member countries. Tariff data are from the Agricultural Market Access Database (www.amad.org). We developed a database on domestic support in OECD member countries that is consistent with the concept of the AMS. We include the amber box, domestic expenditure component from the 1998 OECD PSE database; and tariffs and export subsidies for commodities for which administered price support programs were notified to the WTO.

Economic behavior. The models incorporate assumptions about supply and demand responses to price changes in order to represent real world behavior and model results can vary depending on the chosen parameters.

times called a tariff peak, also brings to light another dispersion-related issue. Tariff peaks create large relative price distortions within a country.

The average (simple, unweighted) post-Uruguay Round agricultural tariff rate for industrial countries is bound at 45 percent (fig. 1).[3] These bound tariff rates include the ad valorem equivalents of specific tariffs, which are in some cases very high, and whose values depend on current prices. They also include the over-quota tariffs in TRQ regimes. By including the over-quota tariff, the average bound rate may overstate actual rates of protection. Imports that enter a country within the quota limits are usually subject to a much lower tariff rate, and in some cases, over-quota tariff rates are not actually applied to imports. On the other hand, a country can levy additional fees and taxes on imports, which can lead to bound tariffs providing an underestimate of actual import costs.

The average U.S. agricultural tariff of 11.9 percent is relatively low in comparison with the average agricultural tariffs of the EU (21 percent), Canada (24 percent), Japan (33 percent), and Norway (152 percent).

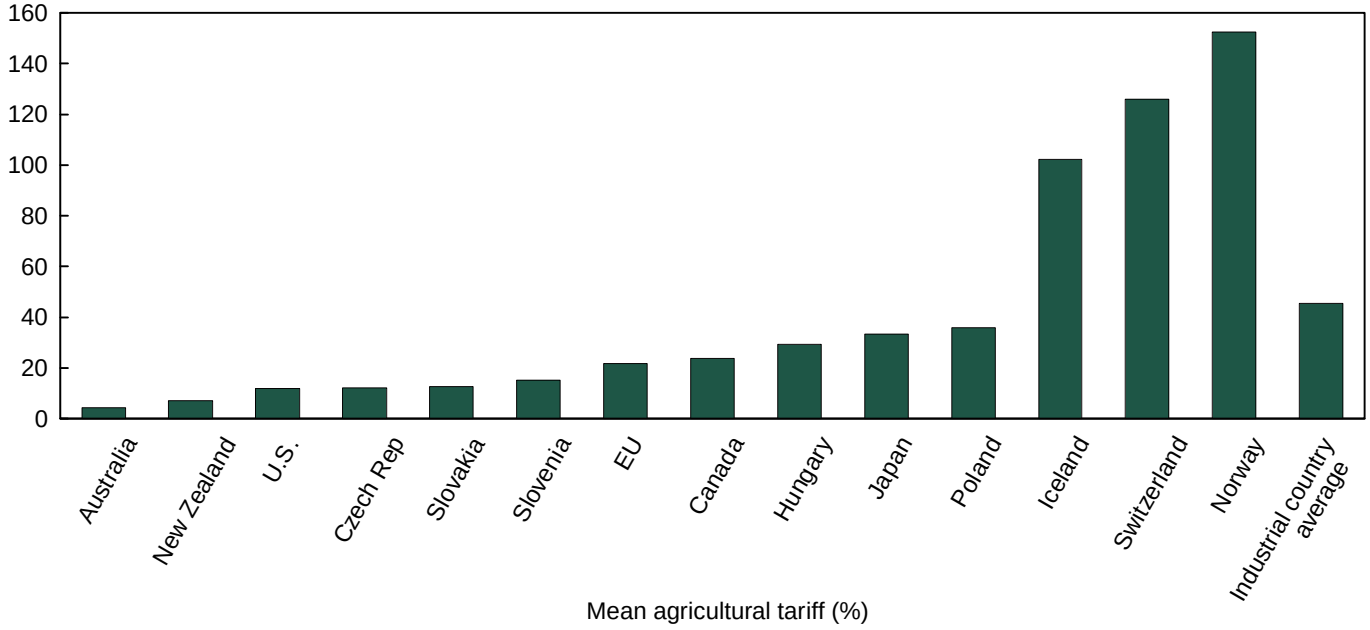
One way to measure and compare tariff dispersion is to analyze the frequency with which countries' tariff lines fall within specified ranges of tariff rates. Figure 2 shows a frequency distribution of selected countries. All of the industrial countries in this analysis have tariff schedules characterized by a relatively large number of low tariffs and a small number of very high tariffs. The United States differs from other industrial countries in that over 50 percent of its tariffs are extremely low, at 5 percent or less, while only a very small share are extremely high, at over 100 percent. All other industrial countries have a much larger proportion of tariffs over 5 percent. For the industrial countries as a whole, nearly 50 percent of tariffs are above 25 percent.

Historically, trade negotiations have taken two broad approaches to tariff reform: formula and sectoral approaches. The formula approach defines some general rule that applies to all tariffs, for example, "reduce all tariffs by 10 percent." Sectoral approaches have been conducted as either bilateral or multilateral negotiations. One bilateral approach is the request-offer

[3]This analysis of reduction formulas focuses on industrial countries only. For more information on world tariffs, see *Profiles of Tariffs in Global Agricultural Markets. Gibson et al. (2001).*

Figure 1

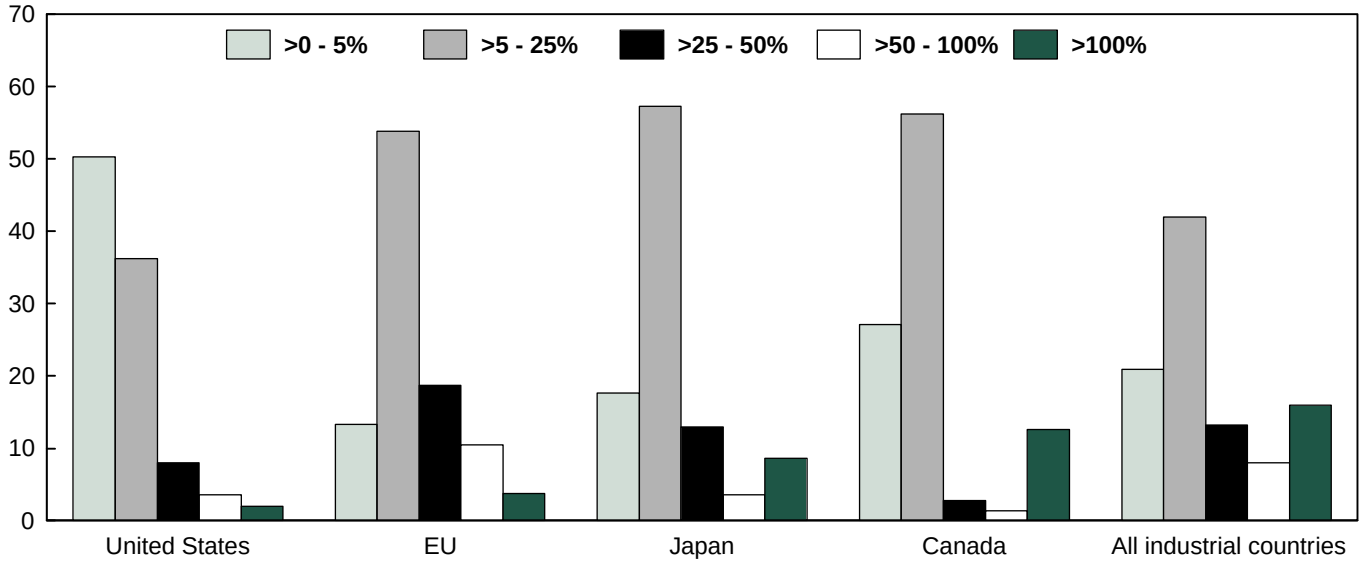
Post-Uruguay Round average agricultural tariffs of selected industrial countries



Source: Wainio, Gibson, and Whitley (2001).

Figure 2

Frequency distributions of agricultural tariffs—selected countries



Source: Wainio, Gibson, and Whitley (2001).

system in which countries draw up lists of the tariffs they want other countries to reduce and the tariffs they are willing to reduce in exchange. An alternative approach is to attempt to solve sectoral problems for a commodity or commodity group on a multilateral basis. A "zero-for-zero" agreement, in which all countries agree on a zero tariff on specific commodities, is an example of a successful multilateral approach. During the Uruguay Round, a zero-for-zero agreement was reached for beer. (A "super zero-for-zero" would address reforms of all three pillars in a sector.) Sectoral approaches can be more effective than formula approaches in achieving greater market access for specific commodities. On the other hand, sectoral approaches can leave protection in place for the least competitive industries, they can create cross-commodity distortions, and they may be unable to achieve deep enough cuts in the very high tariffs that abound in industrial countries' tariff schedules.

While a formula approach has some distinct advantages, it can produce very different outcomes depending on the type of formula that is adopted. There are two generic types of formulas for targeting the level and the dispersion of tariffs: linear reductions and harmonization. A linear reduction formula reduces the average tariff rate by reducing all tariffs proportionately (the dispersion of the tariff would also decline by the same proportion). For example, a country with a uniform tariff (it has zero tariff dispersion) undergoing a linear reduction of 10 percent would reduce its average tariff by 10 percent. Its tariff dispersion would remain unaffected, however, because its tariffs are already uniform. In contrast, harmonization formulas target tariff dispersion. Conceivably, a harmonization formula could require that all countries make all of their tariffs a uniform rate, equal to their average rate. This would leave the average tariff unchanged, but would reduce the dispersion to zero. In practice, many of the tariff reduction formulas proposed in past trade negotiations have included variants that address both tariff levels and tariff dispersion. Many combine some overall reduction of the average rate with harmonization, based on the progressively larger reduction of higher rates, or at least, a requirement that all tariffs be reduced so that the problem of tariff dispersion is not worsened.

What is the most effective formula in terms of achieving greater market access? From a global perspective, a linear formula may be sufficient when tariff dispersion is low. When there is high tariff dispersion, as is the case currently, some harmonization element is needed if the very high tariffs are to be effectively restrained. For individual countries, the effects of tariff reduction formulas will depend on their own tariff profile.

The structure of industrial countries' agricultural tariffs suggests that an effective tariff reduction strategy should address both the mean and the dispersion of tariffs. For illustrative purposes, we show the effects of three tariff reduction formulas on the mean and dispersion of tariffs in the United States, and the average of industrial countries: a linear reduction of 50 percent and two harmonization formulas targeting low tariffs and high tariffs. Table 7 illustrates that harmonization formulas are more effective than a linear approach in lowering the average tariff, because of the many very high tariff lines in the current structure of global tariffs. Formulas that focus on eliminating low, or "nuisance," tariffs have a relatively large effect on the average U.S. tariff, because most U.S. tariffs are low. Formulas such as the Swiss formula, which mandates proportionately larger cuts in high tariffs, have a relatively greater impact on other industrial countries' tariffs than on the United States because most other industrial countries' tariffs have a larger number of higher tariff rates.

Options for Liberalizing Tariff Rate Quotas

The URAA abolished all prior nontariff measures restricting agricultural trade, but allowed members to convert these restrictions into tariff rate quotas. A TRQ is a two-tiered tariff in which the rate charged depends on the volume imported. A limited volume can be imported at the lower tariff — this is the "quota" part of the TRQ — and imports in excess of the quota volume are charged a higher tariff. For most countries, the average in-quota tariff is substantially lower than the over-quota tariff rate. A TRQ, although it contains a quota, is not considered a quantitative restriction because it is always possible to import over the quota. In practice, if the over-quota tariff is set high enough, it effectively deters further imports and so can replicate a quota. An additional provision of the URAA defined a minimum access for commodities previously covered by import restrictions. The URAA set the minimum access, the quantity allowed to be imported at the lower tariff, at 3 percent of consumption in 1986-88 in the base period, to be increased to 5 percent of base consumption by 2000 (2004 for developing countries).

At the end of 1999, notifications to the WTO totaled over 1,300 TRQ's (table 8). Of the 137 WTO members, 37 use TRQ's. Three countries account for one-third of all TRQ's: Norway, Poland, and Iceland together have 431. By comparison, the United States has notified 54 TRQ's. Forty-seven percent of notified TRQ's are actually administered as a simple tariff, that is, there is no over-quota tariff or effective quota. When the TRQ's that behave as tariffs are excluded, the countries with the greatest number of enforced TRQ's are the EU, Hungary, South Korea, and the United States.

The quota element of the TRQ creates the opportunity to earn excess profits, or "economic rents." If the quota places an effective limit on the volume of imports, the importer of goods at the within-quota tariff rate can earn an excess profit, or rent, based on the effects of scarcity in driving up the domestic price that consumers are willing to pay. If some over-quota imports

Table 7—Alternative, tariff reduction: Levels of average tariffs and dispersion

Formula name	Formula	United States		All industrial countries	
		Average	Dispersion	Average	Dispersion
		Percent			
Base	- -	11.9	55.0	45.0	130.0
Linear	50% reduction in all tariffs	6.0	27.5	22.5	65.0
Sliding scale	Eliminate tariffs under 5%, 50% reduction in other tariffs, with a cap of 50% on tariff levels	4.2	8.9	11.3	16.6
Swiss	Progressively larger cuts on high tariffs, with a cap of 45% on tariff levels	5.5	7.4	11.0	12.3

Dispersion is measured as one standard deviation — the average distance of all tariffs from the mean tariff. In the Swiss formula, the reduction parameter is 45.
Source: Wainio, Gibson, and Whitley (2001).

Table 8—Notified and enforced TRQ's, by country

Countries ranked by no. of notified TRQ's			Countries ranked by no. of enforced TRQ's		
Country	TRQ's notified	TRQ's enforced	Country	TRQ's enforced	TRQ's applied as tariff
Norway	232	19	EU	87	0
Poland	109	35	Hungary	68	2
Iceland	90	12	S. Korea	63	1
EU	87	87	U.S.	54	0
Bulgaria	73	45	Bulgaria	45	28
Hungary	70	68	Poland	35	74
Colombia	67	34	Colombia	34	33
S. Korea	64	63	S. Africa	25	28
Venezuela	61	2	Czech Rep.	24	0
U.S.	54	54	Slovakia	24	0
Subtotal	907	419	Subtotal	459	166
All others	461	307	All others	267	476
Total	1,368	726	Total	726	642

Source: Skully (2001).

can enter and be sold at the above-quota tariff rate, then agents with the right to import goods at the lower, within-quota tariff rate can earn rents because they can compete with higher-cost imports. TRQ administration is the process of rationing these profit opportunities. While the GATT established general rules governing how TRQ's should be administered, in practice, there are widely varying interpretations and methods of administration. The most common forms of TRQ administration are "license on demand" and "first-come, first-served" (table 9). Many TRQ's are allocated on the basis of historical market shares. In these cases, the importing agent, rather than the exporter, can capture the economic rent. Because TRQ's create economic rents, they also make it profitable to import from other than the least-cost suppliers, leading to economic inefficiencies in resource allocation.

There Is No Simple Rule for Reforming TRQ's

From a global perspective, there is no single best way to reform TRQ's (table 10). One reason is that individual TRQ's vary with respect to the component of the TRQ (under-quota tariff, quota, or over-quota tariff) that restricts trade. About one-quarter of TRQ's are characterized by a low fill rate, that is imports are less than 20 percent of the quota level. For these TRQ's, if the within-quota tariff is the binding constraint, reducing the within-quota tariff is likely to increase market access.

About one-half of TRQ's have a high-fill rate, that is, imports are at least 80 percent of the quota level. For these TRQ's, and for TRQ's with over-quota imports, reducing the in-quota tariff would have little impact, and the effects of increasing the quota levels is uncertain. On one hand, increasing quota levels can have positive effects if it increases imports and reduces the domestic price, or if it results in the entry of more efficient suppliers. It can also result in the within-quota tariff becoming the binding constraint, an effective reform because the TRQ then becomes a simple tariff regime, and the problems of rents and inefficiencies of suppliers are eliminated. On the other hand, it can have negative effects if it increases the opportunities for economic rents and the entry of inefficient suppliers.

About 25 percent of TRQ's consistently have imports that exceed quota levels. In many of these over-fill cases, the over-quota tariffs are very high. For these TRQ's, the appropriate reform is to reduce the over-quota tariff. Furthermore, reducing the over-quota tariff may always be an appropriate reform, since it is the only policy option on TRQ's that either achieves reform, or does no harm. Alternatively, the reform of over-quota tariffs can be approached through disciplines on tariffs in general, since the over-quota tariff is the same as the bound tariff that was made subject to tariff reduction commitments in the URAA.

Table 9—Methods of allocating right to import within quota

Method of TRQ Administration	Explanation	Percent of all TRQ's
Applied tariff	Unlimited imports are allowed at the in-quota tariff rate: that is, the quota is not enforced.	47%
License on demand	Licenses are required to import at the in-quota tariff. If demand for licenses is less than quota, Q, the system operates like a first come, first served system. If demand exceeds Q, import volume requested is reduced proportionately among all applicants.	25%
First come, first served	The first Q units of imports to clear customs are charged the in-quota tariff; all subsequent imports are charged the over-quota tariff.	11%
Historical	Right to import at in-quota tariff is allocated in proportion to import market shares in a base period.	5%
Auction	Right to import at in-quota tariff is auctioned.	4%
State trader or producer group	Right to import in-quota is granted wholly or primarily to a state trading organization or an organization representing domestic producers of the controlled product.	2%
Mixed	Describes a combination of two or more of the six methods above.	4%
Other, or not specified	Includes methods that do not correspond to any of the seven methods above and are not specified in WTO notifications.	2%

Source: Skully (2001).

Table 10—Impacts of TRQ reforms on market access and quota rents

	Binding constraint in TRQ		
Policy reform	Within-quota tariff	Quota	Over-quota tariff
Lower within-quota tariff	+	-	-
Increase quota	0	?	-
Lower over-quota tariff	0	0	+

Notes: (+) denotes policy reform increases market access and reduces economic rents. (-) indicates the opposite impacts. Zero denotes no effect.
Source: Skully (2001).

Fully eliminating one of the components of the TRQ (either reducing within or over-quota tariff to zero, or leaving the quota level open) is an alternative to reforming one or more components. An infinite expansion of the quota would eliminate the quota problem embedded in TRQ's. If the quota is increased enough, the TRQ would then become a simple tariff regime, and the problems of rents and inefficiencies of suppliers would be eliminated. If the over-quota tariff is eliminated, the TRQ would become a free trade system, since importers of duty-free goods would be unlikely to choose to import within the quota system. If licensing is still required, removing the over-quota tariff would make the problems linked to the opportunity to import under an administered quota system more apparent. Eliminating the within-quota tariff may worsen the distortions of the TRQ if it increases quota rents and (without auctions) the potential for less efficient suppliers to enter the market.

The conditions imposed by tariff administration may act as the binding constraint on trade, in which case the administrative rules should be the target of reform. From a purely economic perspective, the most effective direction for reform of TRQ administration is auctions. Auctions in effect transform a TRQ system back into a simple tariff system. Auctions absorb all quota rents into the equivalent of government tariff revenue and rely on markets to allocate the rights to import or export. Auctions, however, are used for only 4 percent of TRQ's, probably because governments would prefer to simply apply tariffs. Despite the inefficiencies of other types of TRQ administration, TRQ's persist for many reasons, including their linkages to domestic farm support objectives and the underlying political economy of rent-seeking behavior. Market access could be enhanced if existing WTO disciplines on TRQ administration and import licensing were clarified and better enforced.