

U.S. TRQs for Peanuts, Sugar, and Tobacco: Historical Allocation and Nondiscrimination

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U.S. peanut, sugar, and tobacco tariff rate quotas (TRQs) are allocated to suppliers on an historical market share basis. Once allocated they become difficult to redistribute to accommodate changes in comparative advantage among suppliers. The distribution of trade departs increasingly from the tariff-equivalent distribution advocated by the WTO principle of nondiscrimination. Article XIII of the GATT regarding the rules for historical allocation is examined and applied to four cases of historical allocation: domestic tobacco quota and TRQs for peanuts, sugar and tobacco. The difference between the law enforcement objective of the WTO and the Pareto optimization objective assumed by economists is stressed throughout.

Before delving into the analysis of U.S. tariff rate quotas, it is best to survey the basic facts. The United States has formally notified the World Trade Organization (WTO) of 54 tariff rate quotas (TRQs). They may be divided into seven groups as reported in table 1. The beef TRQ replaces the 1979 Meat Import Act, repealed as part of the Uruguay Round Agreement. The TRQs for green olives and satsumas in airtight containers are carried over from earlier bilateral trade disputes. The tobacco TRQ is the U.S. response to a GATT ruling against U.S. domestic content regulations for cigarettes (discussed in the section on tobacco below). These first three groups are exceptions to the generalizations that follow.

Each of the four remaining groups finds the origin of its TRQs in a quota imposed to sustain a domestic price support program. Most resulted from the *tariffication* of the quantitative restrictions previously in place under Section 22 of the Agricultural Adjustment Act of 1933. Section 22 allowed the President to impose fees or quantitative restrictions on imports of products that could

materially interfere with the operation of domestic agricultural price-support programs. The law was amended in 1948, 1950, and 1951 to specify that the right to impose such restrictions could not be abridged by "any treaty or other international agreement in which the United States is or hereafter becomes a party." The clause was designed to insulate domestic agricultural policy discretion from the recently formed GATT. Import competition in the early 1950s triggered Section 22 actions. Between 1951 and 1955 quantitative trade restrictions were imposed on the following products: cotton and certain cotton waste; wheat and wheat products; dairy products, including dried milk, cheese, butter, chocolate crumb, and certain animal feed containing milk or milk derivatives; barley, rolled barley and barley malt; oats and ground oats; shelled and prepared almonds; shelled filberts; peanuts; peanut oil; flaxseed and linseed oil; and rye, rye flour and meal. (Jackson 1969, 733-737).

Several parties challenged these quantitative restrictions in the GATT. In 1955, the GATT granted the United States an indefinite waiver from its GATT obligations for actions taken under Section 22. Because the quotas were imposed to prevent disruption of domestic price support or production control programs, it was often necessary to restrict not merely the controlled commodity but also many of its processed derivatives and substitutes. Thus table 1 shows that in addition to cane sugar,

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Table 1. U.S. TRQs Notified to the WTO

Product	Number	Origin
Beef	1	Meat Import Act of 1979
Green olives (4), satsumas in airtight containers	5	Bilateral trade disputes
Tobacco	1	Domestic Content Law, 1993
Cane sugar, sugar containing products (11)	12	1934 quota
Peanuts (2), peanut butter	3	Section 22
Cotton	7	Section 22
Dairy products	25	Section 22
Total	54	

11 sugar containing items are also restricted. Similarly, there are 25 TRQs for dairy products, almost half the total TRQs.

This paper does not attempt to discuss all 54 TRQs. It focuses on three commodities: sugar, tobacco and peanuts. Each of these TRQs is administered on an historical supplier basis; and each one has its peculiar characteristics. However, the three cases represent the range of problems inherent in historical allocation. The discussion below can be generalized to cotton, dairy and beef TRQs.

First I present an economic interpretation of GATT Article XIII, the article governing administration of quantitative restrictions, including TRQs. The interpretation advanced here is that Article XIII is inherently contradictory. It advocates non-discrimination and the use of tariffs rather than quantitative restrictions, yet it also allows supplier tariff quotas to be allocated on an historical basis, a method that is inherently discriminatory.

The paper then examines the market for flue-cured tobacco quota in North Carolina. The flue-cured tobacco quota allocation problem is logically identical to the historical supplier TRQ problem. The disaggregated observations available for North Carolina tobacco quota provide an almost laboratory-quality data set for measuring the allocative inefficiencies of historical allocation and the distribution of welfare gains and losses among producers and quota owners. A key point raised is that law enforcement has a different objective function than does Paretian welfare maximization as assumed in most economic analysis. The WTO is a judicial body: it enforces the laws constructed by its members. In the enforcement of Article XIII, fair market access is all that matters; access to quota rents plays no role. Of course, the distribution of rents drives many trade conflicts, and this is the source of the TRQs' capacity to incite disputes.

Following the legal and welfare discussions in the first and second sections, the paper turns to case studies of the U.S. tariff rate quotas for sugar, tobacco, and peanuts to identify problems and issues for analysis in the administration of supplier TRQs. The focus is on selected features of each TRQ that illustrate more general problems in quota allocation.

An Economic Interpretation of GATT Article XIII

Tariff quota administration concerns how the rights to import at the in-quota tariff are distributed. How these rights are distributed can determine both the volume and distribution of trade as well as the distribution of quota rents. It is important to keep the distinction clear between the volume and distribution of *trade* and the volume and distribution of *rents*. The WTO is only concerned with how quota administration influences the volume and distribution of *trade*; it has no direct interest in the distribution of rents. However, it is the distribution of *rents* that motivates the politics of TRQ administration. The choice of how to administer a tariff quota becomes a political decision; many competing interests claim entitlement to quota rents.

GATT Article XIII, "Non-Discriminatory Administration of Quantitative Restrictions," governs the administration of quantitative restrictions (QRs). The next few paragraphs provide a brief history of the treatment of TRQs in international trade agreements. In particular, the narrative focuses on the underlying conflict between the GATT principle of nondiscrimination and the rationing problem posed by TRQs.

Quantitative restrictions, such as absolute quotas and tariff quotas, were rarely applied to imports until after World War I. The League of Nations, in the series of World Economic Conferences it sponsored in the interwar period, attempted to determine how QRs could be administered without discrimination, that is, in a way consistent with Most Favored Nation (MFN) principles. By 1930 four positions could be discerned in these deliberations:

1. QRs are *per se* inconsistent with MFN.
2. MFN requires that each country be assigned an *equal* share of the global quota.
3. MFN can be approximated by allotting the global quota in *proportion* to the trade shares of current suppliers.
4. QRs should be filled on a *first-come, first-served* basis.

Because of conflicting interpretations of the principle of nondiscrimination, there was no consensus, but that “there was fairly unanimous agreement that the use of global, race-to-the-border quotas (now permitted by GATT Article XIII) was inconsistent with MFN because it unduly favored countries with geographical proximity and/or better transport facilities” (Hudec 1997, 178. n. 14).

The first position claims there is no just way to solve the quota allocation problem. The second position argues for strict parity: if there are N parties to a trade agreement then a fair allocation gives each party exactly $1/N$ of the global quota. The third position advocates proportionality, giving as the just basis for proportionality the observed volume of trade in some recent representative period. The fourth position asserts (literal) priority in the form of first-come, first-served. Neither the League of Nations, nor the Havana Charter, nor the Uruguay Round of the GATT resolved this issue. Instead of advocating one principle of distributive justice and proscribing all others, Article XIII allows a conflicting set of distributive principles. Predictably, this leads to trade conflicts over TRQ administration. The interpretation advanced below might be classified as 1a: That QRs are inconsistent with MFN principles; however, if they are administered as if they were tariffs they can be MFN consistent. Two means of administering TRQs as tariffs are auctioning TRQ rights and allowing current TRQ holders to lease TRQ rights to other suppliers. The two methods have radically different distributions of rent, but identical expected distributions of trade. The expected distributions of trade are also identical to that generated by a tariff, and thus consistent with MFN. This point is elaborated in the next section.

The depression of the 1930s induced the governments of most industrialized countries to intervene actively in domestic agricultural markets, and domestic controls necessitated import controls. During the same period, a variety of bilateral and colonial systems of trade preferences were constructed and tariff discrimination was rampant. Those countries or industries benefiting from preferences and controls coalesced into constituencies for the preservation of preferences. Thus, delegates to the Havana Convention (1947) required devices such as Article XIII to preserve these obvious violations of the principle of nondiscrimination.

When governments decided, after World War II, that QR's would be permitted in many situations. . . . It became necessary to say, whether it was true or not, that QR's *could* be applied in a manner consistent with the MFN concept. And so GATT Article XIII was written. Given its less-than-robust conceptual

heritage, it is a small wonder that Article XIII proved to be a rather sickly child (Hudec 1997, 178).

Article XIII is a ‘sickly child’ because of a congenital deformity: it advocates both nondiscrimination and discrimination. The interpretation of Article XIII which follows emphasizes its advocacy of the principle of nondiscrimination, the principle of distributive justice upon which the GATT is constructed.

The economic interpretation of Article XIII and other related documents advanced here and in Skully (1999a) concludes that the GATT advocates two criteria for judging whether tariff quotas are being properly administered: (1) quota fill and (2) distribution of trade. Quota fill requires that imports of the in-quota volume be allowed if market conditions permit. That is, tariff quota administrators should not impose any impediments to imports beyond payment of the in-quota tariff. If apparent profitable arbitrage opportunities are not realized, it may be because of the TRQ administration method. Of course, there may be other legitimate costs that have not been observed, thus zero-fill or underfill does not necessarily mean TRQ administration is the cause.

As for the distribution of trade, GATT Article XIII, paragraph 2 states:

In applying import restrictions to any product, contracting parties shall aim at a distribution of trade in such product approaching as closely as possible the shares which the various contracting parties might be expected to obtain in the absence of such restrictions . . .

This language implies the construction of a tariff-equivalent counterfactual. That is, one determines what the distribution of trade (supplier market shares) would be were a tariff employed to restrict imports to the observed in-quota volume of imports. The administration of the tariff quota is then evaluated by how closely the observed distribution of the restricted volume of trade (under tariff quota) approaches the counterfactual distribution. The economic principle underlying the distribution of trade criterion is the minimization of trade distortions given the tariff quota constraint. The GATT principal of nondiscrimination asserts that trade shares should be determined by the relative efficiency of suppliers and not by alternative, discriminatory criteria.

Article XIII, paragraph 2 has four subparagraphs and it is in XIII 2c and 2d, the subparagraphs on supplier quotas, where the contradiction between advocacy of nondiscrimination and tolerance (if not advocacy) of discrimination is most clearly displayed. The subparagraphs allow for “supplier tar-

iff quotas," tariff quotas that are allocated to supplying countries and require that the imported product originate from a particular country or source. Thus, it allows importing countries a GATT-consistent means of discrimination. As for how the supplier tariff quota shares are apportioned, GATT Article XIII, 2d states that agreement should be sought among all interested WTO members but that if this is "not reasonably practicable," then:

the contracting party concerned shall allot to contracting parties having a substantial interest in supplying the product shares based upon the proportions, supplied by such contracting parties during a previous *representative period*, of the total quantity or value of imports of the product, due account being taken of any *special factors* which may have affected or may be affecting the trade in the product.

The two italicized phrases (here, not in the original) have been the subject of further definition by the GATT in a series of interpretative notes to Article XIII. The convention has been to use an average of the three years prior to the imposition of a restriction as the representative period. Several disputes have arisen over base periods during which there were other restrictions on trade. The GATT recommends that shares be allotted according to the trade shares "which would correspond to what could reasonably have been expected in the absence of restrictions." Once again, this is the free trade counterfactual distribution of trade, the operational equivalent of nondiscrimination.

With regard to the meaning of *special factors*, the GATT interpretation includes "changes in relative productive efficiency" which may have occurred since the representative period "as between the various foreign producers." Clearly, changes in comparative advantage are viewed as an appropriate cause for reapportioning supplier shares.

Thus, XIII: 2c and 2d instruct member governments that they are allowed to transfer TRQ rights to incumbent exporters, but that they should do so in such a way as to approximate the free trade counterfactual distribution of trade. This is not a simple task. The passage above elucidating the term "special factors" gives the impression that exporter shares can be (and, indeed, should be) reallocated in line with changing economic conditions. Logically this reapportionment should be without compensation. If quota rights are granted to partially compensate for lost market access due to the imposition of a quota, then quota rights should go to those suppliers actually harmed by the quota. If a supplier granted quota suffers a loss of comparative advantage and is incapable of export-

ing without the quota rent, then the quota clearly no longer denies market access and there is no basis for compensation. It is the lower-cost entrants who are impaired. However, once vested with quota rights, suppliers aggressively defend what they view to be their property rights to quota rents. I am unaware of a case where this kind of reallocation has occurred in accordance with Article XIII. The lack of such reallocations is hardly surprising. First, Article XIII 2d instructs the country imposing the quota to "seek agreement with . . . all other contracting parties having a substantial interest in supplying the product concerned." As share reapportionment is a zero-sum game from the point of view of quota holders, agreement among them is unlikely. Second, the primary reason the government imposing the quota chooses to allocate "supplier quota" is to appease suppliers harmed by the quota. In this regard it is similar to a VER (voluntary export restriction) whereby the quota-constrained exporter is partially compensated by the transfer of rents from the importing country. The U.S. tobacco, peanut, and sugar TRQs transfer quota rents from the United States to the holders of TRQ rights. The quota rights are nontransferable, and the product delivered in-quota must be the domestic product of the exporter. Such compensation might have been reasonably and nondiscriminatorily apportioned when the quota was imposed, but with the passage of time and changes in the relative comparative advantage of potential suppliers of the controlled product, the distribution of shares becomes increasingly malapportioned.

North Carolina Flue-cured Tobacco Quota as a Supplier TRQ

Given its rich data and the relative lack of extraneous policy noise, the flue-cured tobacco quota program provides almost laboratory-quality conditions for observing the malapportionment of quota rights. In an excellent and useful article, Rucker, Thurman and Sumner (1995) consider the allocative inefficiencies of restricting trade in U.S. tobacco quota. The quota is for the right to produce flue-cured tobacco for domestic sale. The program has no direct relation to international trade and Rucker et al. do not discuss the implications of their analysis for international trade or TRQ administration. But the problem they consider is identical to the historically allocated TRQ problem. The following discussion draws on their analysis and places it in a TRQ context.

The Kerr-Smith Act of 28 June 1934 established what was essentially a tariff rate quota for domes-

tic tobacco production. It established a national quota for production of (actually acreage for) each of the major varieties of tobacco. The national quota was allocated to individual farmers based on their tobacco marketings in the 1930 to 1932 period—an allocation consistent with the three-year representative norm. Individual allocations were enforced at the point of processing. Each eligible tobacco producer was given certificates for his or her allotment. All tobacco processed was guaranteed the market price. However, tobacco not accompanied by a marketing certificate was assessed an *ad valorem* tax of 33.3%. Similar enforcement mechanisms were employed for cotton, rice, and peanuts, products requiring significant processing prior to marketing. The Agricultural Adjustment Act of 1938, Title III, 16 February 1938, continued the Kerr-Smith quota allocations with little modification and raised the *ad valorem* tax (or tariff) for 'over-quota' tobacco to 50%. (Nourse, Davis and Black 1937; Capehart 1997).

The quota allocated by the 1938 act was tied to the land of the original farm and could not be transferred. In the 1960s, quota was allowed to be alienated from the original land and leased within its county of origin. In 1965, the quota was converted from an acreage allotment into a poundage allotment. This was necessary because increases in tobacco yields rendered acreage an unreliable control instrument. Rucker et al. study the period 1977 to 1986 when there was an active intracounty rental market for flue-cured quota, and observations of county rental rates and lease volumes are available. In 1987 intracounty quota leasing was disallowed and the market ceased.

Except for the distribution of tobacco quota among counties, almost everything else in North Carolina has changed in the last 60 years. In particular, urbanization and growth of industrial and service sectors provided alternative uses for former agricultural land and alternative employment for former agricultural labor (Daniel 1985). In counties experiencing urbanization or suburbanization, high complementary factor prices have reduced the value of quota. In addition, mechanization has substantially reduced the cost of production in flat tidewater counties in the Eastern Belt relative to the piedmont counties, particularly the Old Belt. These factors, among others, contribute to the divergence in the rental value of quota observed among counties: in 1977 it ranged from 6 cents a pound to 60 cents a pound. If quota could be leased or sold across county lines, rental rates would equalize. Rucker et al. simulate this liberalization of quota trade. Their results indicate that the quota

lease market would have cleared at 44.2 cents a pound in 1977. Quota migrates from high production-cost, low-quota rent areas (the Old and Middle Belts) to low-production-cost, high-quota rent areas (the Eastern Belt).

Figure 1 provides an overview of the liberalization of the intercounty quota market. The upward sloping curve (right axis) plots the observed intracounty quota lease-rates in 1977, each point representing one county. The flat line is the equilibrium intercounty lease-rate of 44.2 cents, as simulated by Rucker et al. for 1977. Treating each county as a single representative farm, the figure can be interpreted to show which county-firms will expand (and move up their marginal cost curves) and which will contract production. The upward sloping curve may be interpreted as a quota-constrained supply curve for tobacco. If intercounty leasing were allowed, the rate of 44.2 cents would obtain in all counties: this is realized by the redistribution of production among counties. The new 'supply curve' becomes a horizontal line at 44.2 cents. The simulated intercounty leasing of quota for 1977 is shown in the corresponding bar chart (left axis). Counties importing quota (i.e., expanding production) are those with preliberalization lease-rates exceeding 44.2 cents. Counties exporting quota have preliberalization lease-rates below 44.2 cents.

The intercounty market Rucker et al. simulate is a resale or secondary lease market. Quota owners in high-cost counties gain from liberalization, as they can lease out quota for 44.2 cents. In contrast, quota owners in low-cost counties lose rental income because quota imports lower the county price to 44.2. Allowing resale by quota owners is but one means of discovering the market clearing price. The market clearing price is determined by the willingness of tobacco growers to pay for quota, given the amount of quota available and the support (or market) price. The same market clearing price and the same county allocation of quota would result if the government were to repossess the quota rights from their current holders and auction them. The auction would result in a marginal bid (lease rate) equal to 44.2 cents, which is also the tariff equivalent of the quota. Thus, the identical output and distribution of production among counties could also be induced by abolishing quotas and imposing a 44.2-cent-per-pound marketing fee; that is, by charging the tariff-equivalent tariff. Each of the three allocation methods—secondary leasing, auction, and tariff—leads to the MFN allocation of quota: each renders the distribution that does not discriminate among suppliers on the basis

North Carolina, 1977

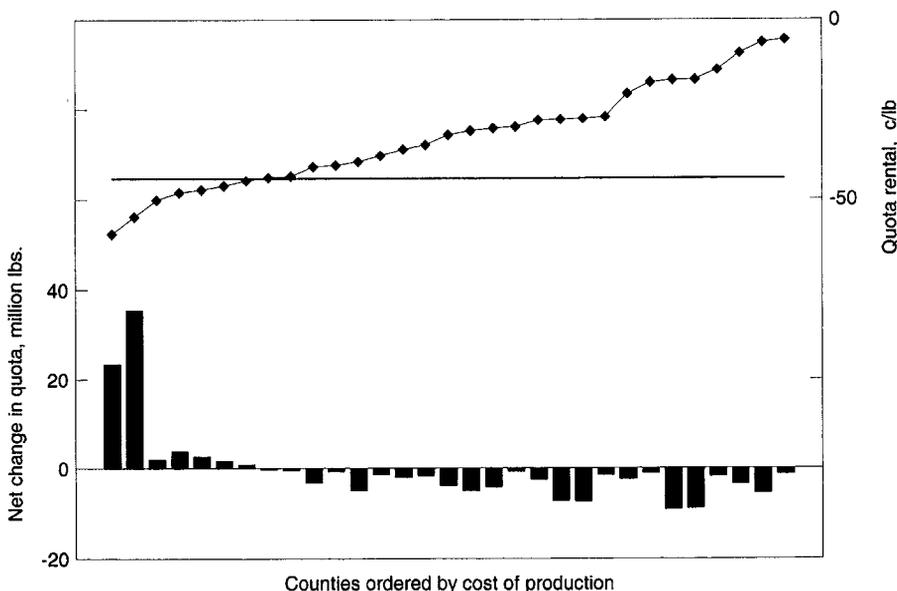


Figure 1. Intercounty Quota Transfers

of county of origin. The interpretation of Article XIII advanced above argues that the WTO should view these three methods as equivalent. While they render equivalent distributions of trade, they differ dramatically in the distribution of rent.

Rucker et al. calculate that the net Paretian welfare gain (that is, net of compensating losses) of allowing intercounty leasing amounts to \$12.2 million for 1977. This is a net welfare gain of about 3.8%. According to Becker (1983), if political markets are efficient, 3.8% welfare gains should not lie on the sidewalk very long before someone picks them up. Accordingly Rucker et al. pose the question, Why has such an obvious allocative inefficiency as the restriction on intercounty leasing persisted? The answer involves transaction costs. Although the net welfare gain is 3.8% the loss in growers' surplus is 10.3% and the gain to quota owners is 15.4%. The net gain is small relative to the gross transfers of income. Moreover, "the natural political groups supporting the tobacco program are split" (Rucker et al. 1995, 169). This can be seen in table 2. Examine the columns. Quota owners are split: the Eastern Belt loses while the other belts gain. Similarly, tobacco growers are split: the Eastern Belt gains while the other belts lose. Thus, the classical Ricardian classes, landlords and tenants, are divided. The rows of table 2 show that each geographic unit (the basis of legislative representation) is split between owners and growers. It

would require considerable political entrepreneurial effort to broker the Paretian settlement to yield a \$12 million net gain. So, the Beckerian answer is that the system persists because the costs of changing it exceed the gains or, weakly stated, there are better opportunities for politicians to exploit than liberalizing intercounty quota leasing.

From the point of view of the WTO, whose mission is law enforcement and dispute resolution, all that matters is that the distribution of trade be allocatively efficient. The distribution of rents does not enter into the calculus. Were the WTO to evaluate the allocation of North Carolina tobacco quota, all that would matter would be for the spatial distribution of production to resemble the tar-

Table 2. Gains and Losses from Intercounty Quota Leasing, North Carolina, 1977 (\$ million)

	Change in Quota Owners' Income	Change in Tobacco Growers' Surplus	Sum: "Producers' Surplus"
Eastern Belt	-6.2	10.3	4.1
Border Belt	3.1	-2.8	0.3
Middle Belt	8.2	-6.6	1.6
Old Belt	25.6	-19.3	6.2
Sum	30.7	-18.5	12.2

Source: Rucker et al. (1995, 162-63).

iff-equivalent counterfactual distribution. This is equivalent to allowing the market for quota to clear at one price. Alternatively stated, the marginal cost of production should be equal for all producers. The WTO needs only to look at the quota income column. As long as this value is maximized, an efficient allocation of production will follow. Who gets the quota rents does not matter, nor does compensation for losers. Indeed, high-cost tobacco growers must lose income for an efficient allocation to be realized. In conclusion, Paretian welfare analysis is useful as an accounting mechanism and for constructing voluntary contractual settlements. It can also be helpful in understanding the political economy of trade disputes. However, it is not the criterion employed by the WTO.

Sugar TRQ

The U.S. sugar quota is an excellent example of the persistence of quota allocations. Only exceptional economic or political circumstances have induced reapportionment. Supplier shares of the quota for U.S. sugar imports were first allocated in 1934 on the basis of trade volumes from 1931 to 1933. Save for wartime controls, the allocation was essentially unchanged until 1948. Legislation in 1948 and 1956 made minor adjustments to the shares of the two major suppliers, Cuba and the Philippines. The trade embargo imposed on Cuba after the Cuban Revolution forced a reassignment of the large Cuban share in 1961. It was formally reallocated in 1965 to countries, other than the Philippines, in proportion to their shares of the trade in 1963 and 1964. This allocation continued until 1974 when the quota was repealed. A new quota was imposed in 1982 on the basis of trade shares from 1975 to 1981; this allocation was transferred unaltered into a tariff rate quota in 1995 and remains in effect. Each major change was prompted by an economic or political shock that, in each case, altered the structure of the sugar market. Despite this, the allocation of shares was based on the pattern of trade prevailing before the change.

The present U.S. sugar tariff rate quota is allocated to exporting countries on the basis of their ‘olympic average’ market shares of U.S. sugar imports in the period 1975 to 1981. This was a period of exceptionally high world sugar prices, so high, in fact, that in 1975 the United States removed the quantitative import restriction that had been in place since 1934. During several months of the base period, the world price of sugar exceeded 30 cents per pound. At 30 cents virtually everybody is an inframarginal sugar supplier. Thus, the market

shares of U.S. imports during the period 1975 to 1981 included some unusually high-cost suppliers. The current TRQ was converted from a standard quota after Australia successfully challenged the U.S. quota on the grounds that it violated GATT Article XI in 1989. Establishment of the TRQ in 1995 resolved the dispute.

Skully (1998) examines the pattern of imports for quota exempt reexport sugar. Raw sugar may be imported to the United States outside of the quota if it is refined and reexported within 90 days. This trade is not distorted by tariffs or quotas (save for the embargo on Cuba), and so it provides an estimate of the free trade counterfactual distribution of trade. This distribution is contrasted with the allocation of TRQ shares in table 3. Low-cost sugar producers located relatively close to U.S. refining centers in the Gulf and Atlantic ports dominate the quota-exempt distribution of trade. If the quota were auctioned to suppliers, the quota-exempt suppliers would be those most likely to place the winning bids. Similarly, they would be the likely suppliers if the quota were replaced with the tariff-equivalent tariff or if international quota leasing or resale were allowed.

The requirement that sugar imported under the TRQ must be produced in the country allocated the quota rights amounts to an antiscaling law and is identical to the prohibition on intercounty leasing of tobacco quota discussed above. This restriction induces costly transactions. Taiwan, for example, has tariff quota rights for the export of about 24,000 short tons of sugar to the United States.

Table 3. Market Shares of U.S. Sugar Imports: TRQ and Quota-exempt Reexports

	Quota-exempt Reexports	Tariff-rate Quota
	<i>Share</i>	<i>Share</i>
Guatemala	39.2	4.6
Colombia	20.2	2.3
Costa Rica	11.4	1.4
Honduras	11.0	1.0
Dominican Rep.	9.2	17.0
El Salvador	5.8	2.5
Nicaragua	1.7	2.0
All others	1.6	69.2
<i>of which:</i>		
Brazil		14.0
Philippines		13.0
Australia		8.0
Argentina		4.2
Peru		4.0
Panama		2.8
All others		23.1

Source: Skully 1998

Taiwan always fills its quota; however, this is the only sugar it exports. Taiwan's domestic production does not satisfy its domestic demand. It imports sugar (usually from Australia or Thailand) to cover the difference, which includes an additional 24,000 tons to cover the domestic production exported to the United States. It would be more efficient for Taiwanese quota holders to charter a shipment of 24,000 tons of sugar from Queensland or Guatemala to the United States and simply pocket the arbitrage rents. Similarly, the Philippines, the third largest quota holder (13%), has recently been unable to cover its domestic needs with domestic production. In fact, it has a TRQ to limit sugar imports. To procure domestic sugar to fill its U.S. tariff quota, the Philippine sugar authorities have offered domestic mills 1.2 tons of imported raw sugar for every ton of domestic raw sugar delivered for export to the United States.

Hawaiian sugar production has been in decline since the 1980s (table 4). Since the mid-1990s, sugar production has ceased on the islands of Oahu and Hawaii, where sugarcane mills have been disassembled and shipped to Central America. The sole sugar refinery on the U.S. West Coast was constructed primarily to refine raw Hawaiian sugar for continental consumption. With the collapse of Hawaiian production, the refinery has not been able to run at normal capacity. Supplier TRQ shares are based on the distribution of supply to meet refinery import volumes between 1975 and 1981, when virtually all imports were to Gulf and Atlantic coast refiners. This historical allocation has made it difficult for the West Coast to find foreign quota-holding replacement suppliers, which led members of the California Congressional delegation to request a GAO (1999) investigation into the administration of the sugar quota. Thus, the allocative losses from malapportioned TRQ rights are not limited to foreign production. They distort the distribution of domestic sugar refining as well.

Table 4. Hawaiian Cane Sugar, 1982 to 1999

Year	Sugarcane area harvested	Sugar production	Sugarcane Farms
	1000 acres	1000 short tons, raw value	Number
1982	89	983	188
1987	80	979	79
1991	74	724	31
1995	53	491	9
1999E	35	350	4

Source: *Crop Production*, NASS, USDA and U.S. Census of Agriculture.

Tobacco TRQ

The tobacco TRQ is of relatively recent origin. Starting in the 1980s, U.S. cigarette manufacturers began to market generic cigarettes. These low-priced alternatives to premium brands were produced with larger proportions of imported leaf, the lower cost of which apparently provided sufficient margins to offset any erosion of premium brand sales. The growth in tobacco imports stressed various elements of the domestic tobacco regime. Perhaps more important, antismoking interests perceived the growth of generic cigarette sales as a public health threat. The regulatory response that eventually passed into law was a section of the Omnibus Budget Reconciliation Act (OBRA) of 1993. The law required that U.S.-manufactured cigarettes contain at least 75% domestically grown tobacco. Domestic content laws are an obvious violation of the GATT, and several tobacco-exporting countries promptly brought complaints. The dispute was resolved by negotiation between the United States and the various interested suppliers, in accordance with Article XIII 2d. The resolution was not simply to repeal the domestic content law, as this would have resulted in the status quo ante. Rather, a supplier TRQ was devised. President Clinton issued a proclamation making the TRQ effective on 13 September 1995. Thus, the quota year for tobacco import starts each year on September 13. Table 5 shows the allocation of this TRQ.

The TRQ is for cigarette leaf tobacco, primarily flue-cured and burley tobacco, the two most important tobaccos with production control programs. Oriental leaf tobacco is not produced in the United States and, until the 1980s, was the principal cigarette leaf tobacco imported. Cigarettes are produced from a blend of flue-cured, burley, oriental, and other tobaccos. Oriental tobacco is an essential input into cigarette and is not subject to TRQ. The TRQ covers nine eight-digit tariff lines; however, almost all in-quota imports are of "tobacco, partly or wholly stemmed/stripped, threshed or similarly processed, not from cigar leaf."

Figure 2 plots the TRQ fill profile for the quota year 1997/98. The profile plots how much of a TRQ allocation is filled and when: the x-axis measures the quota year from 13 September and the y-axis measures the percentage filled. Three profiles are plotted. First is the fill profile for the 3,000 metric tons allocated to all countries on a first-come, first-served basis. One would expect this quota to fill first, and it does, often very quickly. Also plotted are Brazil, the largest TRQ shareholder, and the total TRQ fill. With 53% of the

Table 5. U.S. Tobacco TRQ Allocations and Fill Rates

Supplier	Metric tons	Share %	1996/97 Fill	1997/98 Fill	1998/99 Fill
Argentina	10,750	7.9	100	100	65
Brazil	80,200	53.0	83	53	57
Chile	2,750	1.8	84	59	0
EU-15	10,000	6.6	23	31	32
Guatemala	10,000	6.1	43	45	14
Malawi	12,000	7.9	100	87	52
Philippines	3,000	2.0	10	0	2
Thailand	7,000	4.6	94	48	31
Zimbabwe	12,000	2.0	53	24	39
Other	3,000	2.0	100	100	99
Total	150,700	100.0	76.7	54.7	48.8

Source: Allocations, Harmonized Tariff Schedule of the United States (2000), Chapter 24, Additional U.S. Note 5(a). Fill rates, USDA Foreign Agricultural Service, *Tobacco: Markets and World Trade*.

TRQ, Brazil's export pattern dominates the total. As Brazil does not fill its share, the total TRQ also shows a significant underfill. Unlike the sugar and peanut TRQs, which always fill, tobacco does not. Is this because of how the quota is administered? Or does underfill result from a lack of import demand? The evidence available indicates that lack of demand is the principal cause of underfill, but that the nontransferability of quota among countries contributes to the problem. Lack of demand follows from the recent decline in U.S. cigarette production and consumption. Cigarette output has fallen from 755 billion in 1996 to an estimated 625

billion for 1999. Consumption has fallen from 487 billion in 1996 to an estimated 425 billion in 1999 (Capehart 1999).

Table 5 also reports the fill rates for TRQ holders for each quota year. The total fill rate has fallen from 77% to 49%. So there does not appear to be unmet excess demand for imported cigarette leaf. However, the fill rates also indicate that quota allocation may contribute to underfill. For example, the Philippines has never filled more than 10% of its quota of 3,000 metric tons while the other FCFS category always fills its 3,000 tons. As with its sugar quota, the Philippines and other exporters would benefit if they could lease their unused quota to quota-constrained suppliers in the "other" category.

Peanut TRQ

The U.S. peanut program supports the price of raw, in-shell peanuts for human consumption only, not the price of peanuts for oil or meal or other uses. The peanut TRQ covers raw, in-shell peanuts as well as shelled, blanched, and 'other' peanuts—processed substitutes in consumption for raw, in-shell peanuts. There is also a separate TRQ for peanut butter.

The Uruguay Round obligates WTO members who had imposed import bans or other quantitative restrictions to allow market access of no less than 3% of domestic consumption (in a base period) in 1995, and to expand the market access to no less than 5% by 2000. Because the United States regularly imports more sugar and tobacco than the 5% minimum access requirement, neither TRQ required expansion. The minimum access requirement was binding on U.S. peanut imports. Thus, the TRQ increased from 1995 through 2000 (Skully 1999b).

The peanut TRQ is a hybrid of two general forms of TRQ administration. It mixes historical allocation and first-come, first-served allocation. The in-quota allocation respects a bilateral agreement between the United States and Argentina that guarantees Argentina 78% of the minimum access (in-quota) volume. Peanuts from Mexico are excluded from the WTO peanut TRQ because Mexican peanuts have a separate TRQ. Peanuts from all other sources share access to the balance of the in-quota volume. The first-come, first-served method of administration allocates the in-quota volume to whomever imports first. Thus, there is a powerful incentive to import as early in the quota year as possible, and, predictably, there is a surge of imports on April 1, when the quota year commences. Figure 3 plots the monthly volume of im-

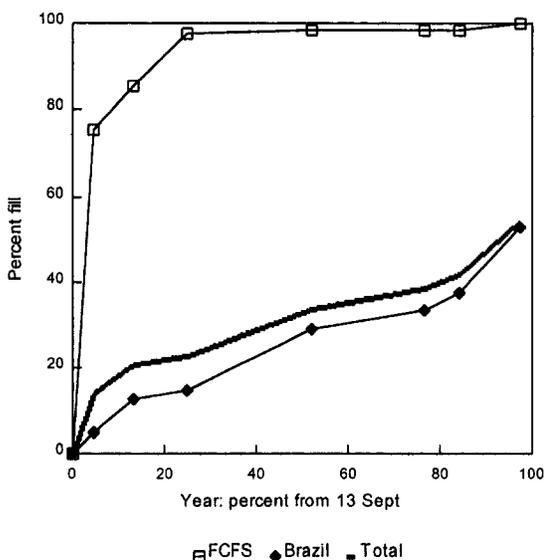


Figure 2. U.S. Tobacco TRQ Fill Profile, 1997/98

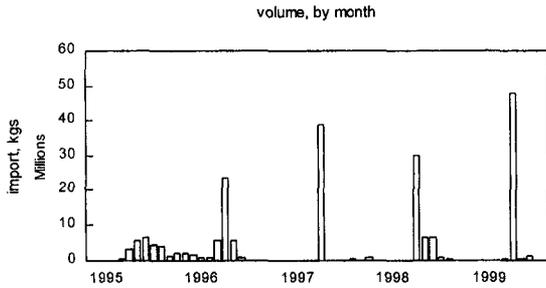


Figure 3. U.S. Peanut Imports under TRQ

ports under the U.S. peanut TRQ. Most imports enter in April.

While the United States allocated 78% of the in-quota TRQ volume to Argentina, it did not allocate the quota rights to the government of Argentina or to particular Argentine organizations or firms. The U.S. tariff schedule merely specifies that peanuts of Argentine origin are eligible to fill the Argentine share of the TRQ. Anyone can purchase peanuts from Argentina at the world price and try to import them into the United States before the quota is filled and capture the quota rent by selling them at the U.S. price. The government of Argentina contends that the quota rights and rents belong to Argentina or Argentine firms. Argentina has formally raised this issue at the WTO.

The U.S.-Argentine peanut dispute is over who should obtain the rents from the in-quota trade. While rents are at the heart of most TRQ disputes, as previously noted, the WTO is only concerned about whether member countries are abiding by their WTO obligations and is indifferent to distribution of quota rents. The WTO principally focuses on whether in-quota imports are impeded and whether market access is allowed to all member nations on a nondiscriminatory basis. If quota rights are assigned to Argentina that does not solve the quota allocation problem, but merely transfers it. Argentina would then have to allocate TRQ rights among Argentine peanut suppliers. Trela and Whalley (1995), in their study of the Multi-Fiber Agreement, demonstrate that the allocation of MFA quota by exporting governments to domestic firms causes far more allocative inefficiency (eight times as much, in fact) than the initial quantitative restrictions imposed by importing countries. The principal reason is that exporting countries tend to allocate quota rights on an historical basis.

Conclusion

This paper has focused on problems posed by TRQs allocated on an historical basis. Most U.S. TRQs are allocated by historical market shares. While markets and economies change, historically

allocated quota shares do not. Historical allocation becomes discriminatory and leads to trade disputes. Throughout this paper I have emphasized that GATT Article XIII advocates two contradictory principles of justice: nondiscrimination and historical entitlement. I have also presented evidence that nondiscrimination is the appropriate criterion for judging TRQ administration. Given a TRQ constraint, enforcement of the principle of nondiscrimination maximizes global allocative efficiency.

References

- Becker, Gary S. 1982. "A Theory of Competition Among Pressure Groups for Political Influence." *Quarterly Journal of Economics* 98(3):371-400.
- Capehart, Tom. 1997. "The Tobacco Program: a Summary and Update." In, *Tobacco: Situation and Outlook Report*, Market and Trade Economics Division, Economic Research Service, U.S. Department of Agriculture, April (TBS-238): 31-34.
- Capehart, Tom. 1999. "Tobacco Products." In, *Tobacco: Situation and Outlook Report*, Market and Trade Economics Division, Economic Research Service, U.S. Department of Agriculture, September (TBS-244):4-9.
- Daniel, Pete. 1985. *Breaking the Land: The Transformation of Cotton, Tobacco, and Rice Culture Since 1880*. University of Illinois Press.
- Hudec, Robert E. 1997. "Tiger, Tiger in the House: a Critical Appraisal of the Case Against Discriminatory Trade Measures." In, *Implementing the Uruguay Round*, John H. Jackson and Alan O. Sykes, eds. 167-212. Clarendon Press.
- Jackson, John H. 1969. *World Trade and the Law of the GATT*. Bobbs-Merrill.
- Nourse, Edwin G., Joseph S. Davis, and John D. Black. 1937. *Three Years of the Agricultural Adjustment Administration*. The Brookings Institution.
- Rucker, Randal R., Walter N. Thurman, and Daniel A. Sumner. 1995. Restricting the Market for Quota: an Analysis of Tobacco Production Rights with Corroboration from Congressional Testimony. *Journal of Political Economy* 103(1):142-175.
- Skully, D. 1998. "Auctioning the Tariff Quota for U.S. Sugar Imports." In, *Sugar and Sweetener: Situation and Outlook Report*. Market and Trade Economics Division, Economic Research Service, U.S. Department of Agriculture, May (SSS-223):17-22.
- Skully, D. 1999a. "The Economics of TRQ Administration." International Agricultural Trade Research Consortium Working paper 99-6, May.
- Skully, D. 1999b. "U.S. Tariff Rate Quotas for Peanuts." In, *Oil Crops Yearbook*. Market and Trade Economics Division, Economic Research Service, U.S. Department of Agriculture, October (OCS-1999):45-53
- Trela, Irene and John Whalley. 1995. Internal Quota Allocation Schemes and the Costs of the MFA. *Review of International Economics* 3(3):284-306.
- U.S. General Accounting Office (GAO). Resources, Community, and Economic Development Division. 1999. "Sugar Program: Changing the Method for Setting Import Quotas Could Reduce Cost to Users." GAO/RCED-99-209.