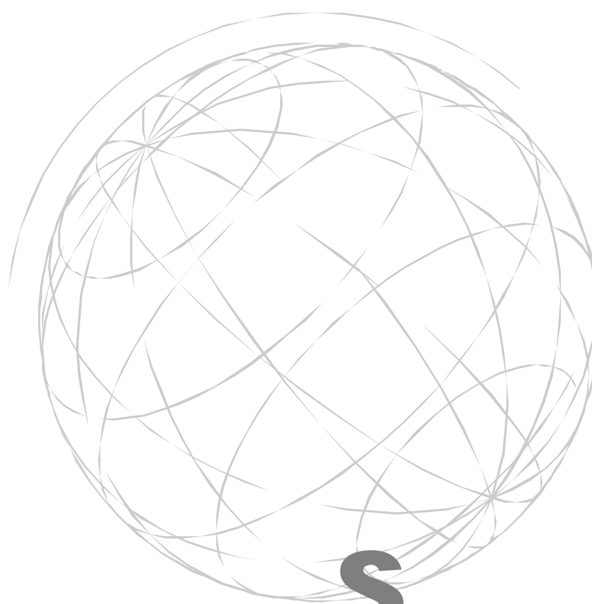
WORLD TRADE ORGANIZATION



SPECIAL STUDIES 6

MARKET ACCESS: UNFINISHED BUSINESS

POST-URUGUAY ROUND INVENTORY AND ISSUES

This study was prepared by WTO's Economic Research and Analysis Division with important contributions by the Agriculture and Commodities Division, the Trade in Services Division and the Integrated Data Base Section of the Statistics Division. The project coordinator was Marc Bacchetta.

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I. Introduction

This study has two closely related objectives: to evaluate post-Uruguay Round market access conditions and to contribute to a clarification of the stakes in the ongoing process of multilateral trade negotiations in the market access area. Industrial tariffs are included along with and agriculture and services, even though they are not currently the subject of a negotiating mandate, because their inclusion contributes to both objectives. The study also provides a brief overview of the progress to date in the mandateda negotiations on agriculture and services.

Negotiations to improve market access for goods and services are, as everyone knows, only one part of a long list of topics that have been suggested for a possible agenda of a new WTO round. No attempt is made in this study to explore any of those other suggested topics.

The description of market access conditions for industrial products focuses on the content of Members' schedules of tariff concessions. Schedules of tariff concessions are, of course, only one—albeit important—factor which determines the terms and conditions of access to a market. Market access is also affected by rules and disciplines in other parts of the WTO Agreement and other conditions in the market, but the present study does not discuss those factors in a systematic manner. For industrial products, the schedules of tariff concessions take the form of binding commitments on tariffs. For agricultural products, it is necessary to extend the discussion beyond traditional market access considerations—i.e. the tariff and other restrictions on imports. Disciplines with regard to all measures affecting trade in agriculture, including domestic agricultural support and the subsidization of agricultural exports were considered to be essential by negotiators in the Uruguay Round. This study focuses on the content of agricultural commitments as recorded in Members' schedules which list not only bound tariffs on agricultural products, but also commitments regarding tariff quotas, export subsidies, and domestic support.

The concept of market access for *services* is even more diffuse, for two reasons. First, the international exchange of services is vastly more complex than the movement of goods across frontiers. It is difficult, sometimes impossible, to disconnect the production of services from their consumption. This means that either the producer or the consumer must move in order for a transaction to occur, which accounts for the definition of trade in services in the GATS as taking place under different modes of supply, including the movement of capital and persons. Secondly, the production and consumption of services are subject to a vast range of policy interventions by government—policies which have usually been developed without regard for their trade effects because they serve other objectives. The assessment of market access in services, therefore, must be concerned not only with measures applied at the border, which are easily identifiable but often less significant in the services context, but also with a much larger range of regulations and controls going far beyond trade policy as traditionally understood. For services, Member countries' schedules state how much access foreign service providers are allowed for specific sectors and activities.

The "post-Uruguay Round" situation discussed in this study is the one that will be reached when all provisions of the WTO Agreement are fully implemented. At this stage, early in 2001, after more than five years of the existence of the Agreement, implementation of the provisions of the WTO Agreement is fairly advanced not completed. With regard to market access, the situation differs among sectors. For industrial products, tariff cuts were implemented in five equal stages starting on 1 January 1995 and terminating on 1 January 1999. Only some exceptions remain.[1] Similarly, the phasing out of grey-area measures had to take place within a period not exceeding four years after the date of entry into force of the WTO Agreement. Only one specific measure per Member could be maintained until the end of 1999. For agricultural products, implementation will take longer. Developed country Members had six years and developing country Members 10 years beginning in 1995 to implement their tariff cuts. Implementation periods for the reduction of non-exempt domestic support and export subsidies are also six years for developed Member and 10 years for developing Members.

For services, establishing the date at which all provisions of the WTO Agreement are fully implemented is even more difficult. WTO Members have been negotiating on services continuously since the end of the Uruguay Round in December 1993. In addition to the negotiations on rule making directed towards completion of the framework of the GATS, there have been four discrete negotiations whose purpose was the expansion of market-access commitments—on financial services, maritime transport, movement of natural persons and basic telecommunications. The essential motivation for further negotiation in the first three cases was dissatisfaction, for different reasons, with the results achieved in these sectors in the Uruguay Round. The case of basic telecommunications, however was different. Negotiators had agreed during the Uruguay Round that the time was not ripe for substantive negotiations in that sector because of the profound economic and political transformation it was undergoing. It was therefore agreed to open negotiations on

1 Some countries have up to 15 years to implement tariff cuts on a limited number of specific products.

basic telecoms in 1995. They were completed in February 1997.

The structure of the study

Section II discusses obstacles to trade in industrial products, focusing on tariffs. An overview of post-Uruguay Round tariff structures is presented for a sample of 42 Members of the WTO from all continents.[2] The study puts forward the tariffs bound by Member countries at the WTO. Bound rates are the ones that are negotiated upon by the Members and which, once agreed upon, represent commitments on the part of those Members. The study also compares bound rates with the rates actually applied by the countries in the sample, but does not discuss preferential tariff rates granted by some countries to their partners in regional or other agreements. In addition to the information on tariffs, Section II also gives up-to-date information concerning the use of anti-dumping procedures, the most frequently used "contingent" protection instrument and one whose use has increased in recent years.

Section III addresses distortionary measures affecting trade in agricultural products. Data concerning tariffs and tariff quotas, as well as export subsidies and domestic support are presented. As already mentioned, these three areas were tied together in the Uruguay Round. Section III starts with a discussion of the structure of bound tariffs of a sample of WTO Members. Detailed information concerning the current use of agricultural tariff quotas and the special agricultural safeguard is also provided. The Section continues with a presentation of the evolution of both domestic support and export subsidies since 1995, and concludes with a short discussion of recent trends in trade and progress in the negotiations.

Section IV discusses the degree of market access guaranteed by commitments under the GATS, the relative importance of the different trading modes and the main obstacles to trade for specific services. It also reflects upon some of the main policy and political challenges facing governments in the preparation for a new phase of the services negotiations. The analysis is essentially based on the GATS schedules of WTO Members and on a series of background studies covering the main sectors which were produced by the Secretariat. Readers interested in sectoral issues are invited to consult the background studies as Section IV does not contain a description of individual sectors.

Overall, this survey of market-access conditions confirms that the Uruguay Round, as well as previous rounds, have contributed to a substantial reduction of the overall level of protection. Since the creation of the GATT, more than 50 years ago, the simple average bound tariff on imports of industrial products of most developed countries has been brought down to under 5% and most non-tariff barriers have been prohibited. Developing countries are now participating more fully in the WTO and in many cases they have also bound most of their industrial tariffs. Non-tariff barriers affecting agricultural trade have been replaced with tariffs and all agricultural tariffs have been bound. A framework for the liberalization of trade in services is in place and in several sectors the liberalization process is already in progress. Most countries are more open now than they have been at any time since the end of the Second World War.

However, this survey also shows that in various areas, trade is still significantly affected by barriers. To give only three examples, trade in agricultural products and trade in textiles and clothing are still impeded by significant obstacles, and, for services, the majority of commitments negotiated and scheduled in the Uruguay Round were in fact "standstill bindings", committing the country concerned only to maintain the current level of access. In short, there is still much that can be done to expand trade in goods and services through the elimination of obstacles to trade and thereby improve the overall standard of living in participating countries.

The main findings:

Industrial products

- Binding coverage is 100% for all Latin American countries in our sample. It is close to 100% for most developed Members as well as for economies in transition. In Asia and Africa, the situation is one of contrast, with binding coverage ratios ranging from zero to hundred per cent, depending on the countries.
- For numerous countries in our sample, tariffs are bound at levels that are significantly above the rates actually applied. To take just two extreme examples, the simple average bound tariff of Costa Rica is close to 45% while its average applied rate is just above 6%. Similarly, Turkey's average bound rate is around 43% and its simple average applied rate is 8%. In such cases, bindings do not contribute much to the stability of applied tariff rates, as countries can, if they wish, raise their applied tariff up to the level of their binding.
- For the countries in our sample, the simple average level of bound tariffs ranges between 1.8% for Switzerland and close to 60% for India. The simple average bound tariff for developed countries is 6.5%.[3] This figure however should not hide the fact that these countries have numerous tariff peaks, mainly in the textiles and clothing and in the leather sectors. Almost three quarters of Australia's textiles and clothing tariff lines and more than 40% of Japan's leather tariff lines, for instance, are bound above 15%.

2 The sample includes all countries for which information was available in the WTO Integrated Data Base.

3 North America, Western Europe (excluding Turkey), Japan, Australia, and New Zealand.

- Among developing countries, the situation shows greater variation. The simple average bound tariff for Latin American countries in our sample is approximately 35%. This relatively high figure reflects the fact that most Latin American countries have chosen to bind their tariffs at ceiling levels—that is, well above the currently applied level. For developing Asian countries in our sample, the average bound tariff ranges from zero for Hong Kong, China to 59% for India. In Africa, bound tariffs seem to be lower on average than in Asia but the case of Tunisia, with its average bound tariff at 34%, suggests that this is a general rule.
- In the textiles and clothing sectors, non tariff barriers will not be fully phased out before 31 December 2004. Even after the phasing out of the MFA quotas, however, trade in textiles and clothing products will still be impeded by relatively high tariffs in the main importing countries. The simple post-Uruguay Round average bound tariff on textiles and clothing is approximately 9% for the United States, 8% for the European Union and just below 7% for Japan. There are, moreover, many tariff peaks within these averages.
- For certain products, such as textiles, clothing, leather, leather products and metals, most developed countries' tariffs increase with the level of processing. Many developing countries in Asia and Africa also exhibit escalating tariffs for these products. Developing countries argue that tariff escalation biases their production structure towards less refined products and thus represents a major impediment to their industrialization.
- Following a drop from 325 in 1992 to 156 in 1995, the total number of initiations of anti-dumping investigations has strongly increased over the last four years, reaching an all time high of 340 investigations in 1999.
- While in the late 1980s developing countries typically accounted for around 10% of all anti-dumping investigations, since 1995 they are responsible for approximately half the initiations.
- Forty-seven of the 136 Members of the WTO (April 2000) participate in the Information Technology Agreement (ITA) which provides for the elimination of tariffs on IT products. Together with five Observers which also participate in the Agreement, they currently account for 93% of world trade in information technology products. Mauritius is the only African participant, and only 3 Latin American countries are currently participating in the ITA: Costa Rica, El Salvador, and Panama.

Agricultural products

- As required by the Uruguay Round Agreement on Agriculture, all agricultural tariffs are bound, but in many cases these bindings are at very high rates and offer limited market access opportunities.
- Agricultural bindings are not always transparent. Transparency and comparability of agricultural tariffs is impaired by the use of specific or mixed tariff rates—that is, by non-*ad valorem* tariffs. Twenty-five Members, both developing and developed, have non ad valorem bindings on more than 50% of their agricultural tariff lines.
- The share of tariff lines with duties above 100% reaches 45% for India and 69% for Bangladesh, but it also reaches 45% for Norway, 8% for Iceland and almost 7% for Switzerland. Large traders among the developed Members also have tariff peaks. More than one third of the European Union's agricultural tariff lines, for instance, carry duties above 15%.
- Agricultural bindings are sometimes far above applied tariff levels. Evidence suggests that the level of tariffs applied by developing countries is often far below the level of their bindings.
- Tariffs tend to increase with the level of processing. There are signs of escalation in most countries' tariff structures.
- Tariff rate quotas were introduced to *establish minimum access* opportunities where there had been no significant imports before the tariffication process or to maintain *current access* opportunities where the tariffication would otherwise have reduced market access conditions. The "fill rate" of tariff quotas, however, has been disappointingly low. Between 1995 and 1998, the simple average fill rate for all quotas for which information was available fell from 66% to 62%. One factor explaining the low fill rates might be the high level of certain in-quota tariff rates. Administration methods might also play a role, although this role is difficult to ascertain from available information.
- The special agricultural safeguard that was put in place to help countries cope with the effect of tariffication has been moderately used in the last five years. Of the 38 Members who have reserved the right to apply the special safeguard, only 8 have used it between 1995 and 1999. The total number of actions reached a peak of almost 180 in 1996 before dropping to 132 in 1999.[4] However, this decline in the total number of actions should not mask the steady increase in the use of the price — based special agricultural safeguard, from 42

4 Some major users had not reported at the cut-off-date (25/05/2000).

actions in 1995 to 128 or more in 1999. So far this trend has been more than offset by the decrease in the number of volume—based special agricultural safeguard actions. Also, observers have noted that the special agricultural safeguard has been triggered where only minimal import quantities are taking place.

- Of the current 136 Members of the WTO (July 2000), 30 have commitments to reduce domestic support to agriculture, the so-called total Aggregate Measurement of Support (AMS) reduction commitments. Between 1995 and 1997, total AMS reduction commitments have generally not been binding, as total current AMS has been kept far below commitment level. For only half (10) of the 21 committed Members for which sufficient information is available, has the current AMS decreased between 1995 and 1997. For the others, total current AMS either increased (8 Members) or remained constant (3 Members) during this same period.
- Based on information for the period 1995-1997, the three years for which sufficient data are available, the evolution of total domestic support (more distortive or less distortive) does not show any clear trend. The composition of some Members' domestic support has however changed away from the most trade restrictive measures towards less trade restrictive ones. Most of the Members who reduced their total current AMS between 1995 and 1997 simultaneously increased their so-called Green Box support, i.e. support with no or only minimal distortive impact on trade.
- Data suggest that the potential impact of export subsidies on agricultural markets is still significant. Also, between 1995 and 1998, the average use of export subsidy commitments has increased for 10 of the 25 countries with reduction commitments, while it declined only for 5 of them.
- When considering the evolution of domestic support and export subsidies over the period 1995-1997, it is important to bear in mind that the level of support is influenced by commodity prices. Recent information from the OECD (2000) suggests that farm subsidies in OECD countries reached a low of 31% of gross farm receipts in 1997 after a decade of steady decline, but that since then, low commodity prices have prompted OECD countries to increase subsidies to 40% in 1999.

Services

- For the most part, the current schedules of commitments reflect the status quo of market access rather than the result of liberalization. Many Members have made minimal commitments and even the most comprehensive schedules contain a large number of restrictive limitations which will be a target for negotiating partners.
- There is considerable scope for further sectoral coverage of schedules. Of the 160 possible service subsectors on which Members can choose to schedule specific commitments, about one third of WTO Members have made commitments on 20 subsectors or less, one third on between 21 and 60 subsectors and the remaining third on between 81 and a maximum of 145 subsectors. On average across all schedules a "typical" WTO Member has undertaken commitments on slightly more than 25 subsectors, thus covering about 15% of the total possible.
- Of the sectors attracting the highest number of bindings, tourism, financial and business services rank the highest, while health and education services are the least commonly scheduled of the major sectors. Education and health and social services are the only sectors in which significant numbers of developed countries have chosen not to make commitments.
- The importance of different modes of supply will vary as between one service and another according to the ways in which they are commonly supplied. There are, however, some notable characteristics worth drawing attention to:
  - The bindings undertaken for mode 2 (consumption abroad) are significantly more liberal than those for the other three modes, with 50% of market access entries being marked without limitation. It is hypothesized that governments may have chosen to bind a more liberal regime under this mode because of practical difficulties in preventing their nationals from travelling abroad to consume services.
  - The bindings on mode 4 (movement of natural persons) are the least liberal of all, attracting a very high level of limited commitments and horizontal limitations from developed and developing countries alike. Despite the extended negotiations on movement of natural persons after the conclusion of the Uruguay Round, commitments are largely confined to the movement of intra-corporate transferees and highly qualified personnel and not low-skilled workers. The point is made, however, that the mobility of workers of all skill levels is an issue of importance to developed and developing countries alike.

- The two most economically important modes of supply are modes 1(cross-border) and 3 (commercial presence). It is on mode 3, however, that Members so far appear to have concentrated much of their negotiating effort. It is suggested that the ability of governments to exercise regulatory control over foreign established enterprises and an interest in attracting foreign direct investment, could be factors influencing government decisions to make relatively more substantial commitments under this mode. There may, however, be a greater focus on mode 1 commitments in the current negotiations as a result of the growth of e-commerce.
- All the nine countries that have joined the WTO since 1995 between January 1995 and July 2000 have assumed higher levels of commitments, in terms of sectors included, than current Members at comparable levels of development. This is particularly the case for most recent accessions. While the first group—Ecuador, Mongolia, Bulgaria and Panama—committed on 63 sectors on average, the corresponding number for the group of countries acceding later—Kyrgyz Republic, Latvia, Estonia, Jordan and Georgia—is 118. A closer look further reveals that the commitments assumed by acceding countries are generally deeper, i.e. are subject to a smaller number of limitations, than the commitments undertaken by other comparable Members.
- The paper clarifies the concerns about the possible impact of services liberalization on social, environmental and other public policy objectives. It stresses that services supplied in the exercise of governmental authority are not subject to the GATS—they are not subject to negotiation under the Agreement, they will not be subject to commitments in national schedules and that general disciplines such as the MFN and transparency obligations do not apply to them. It emphasizes that it is possible for governmental services to coexist in the same jurisdiction with private services. However, a government which wishes to make no commitments in the health sector is free to prohibit foreign supply of health services altogether.

What is at stake in market access?

In the preamble to the Marrakesh Agreement establishing the WTO, Members have clearly expressed their desire to contribute to objectives such as raising living standards, full employment, growth and sustainable development by entering into reciprocal and mutually advantageous arrangements directed to the substantial reduction of tariffs and other barriers to trade. Following the failure in Seattle to reach an agreement on the launch of a new Round of trade negotiations, the question is where does the trade agenda go next? Part of the answer is provided by the so-called "built-in agenda", that is, the work programme which Members are already committed to undertake. It includes an assessment of the implementation of Uruguay Round Agreements, and a review of particular agreements as well as negotiations on agriculture, services, and TRIPs. The negotiations on agriculture and services have begun and their potential value and significance is enormous. With regard to most areas not listed in the built-in agenda, however, there is as yet no consensus.

This study suggests that there is scope for "reciprocal and mutually advantageous arrangements directed to the substantial reduction of tariffs and other barriers to trade" in agriculture and services. It also suggests that this scope would be broadened by including industrial tariffs.

When considering the options for reciprocal and mutually advantageous arrangements, it is important to bear in mind that participants in negotiations do not only benefit from their partner countries' liberalization. They also, if not primarily, gain from opening their own markets. The elimination of protection and subsidies which distort agricultural markets, for instance, would certainly benefit producers in countries with a comparative advantage in agriculture, but it would primarily benefit consumers (and taxpayers if the subsidies exceed the tariff revenue) in traditionally protected markets. However, even if the largest gains accrue to the countries that liberalize most, political forces are such that trade negotiators continue to see their own liberalization as the price to pay for improved access to their partners' markets.

From this perspective, a precondition for the success of multilateral negotiations to increase market access is that there is scope for all participants to enter into reciprocal and mutually advantageous arrangements to reduce trade barriers. For most developing countries, labour intensive products such as textiles, clothing, footwear, toys and consumer electronics are of major export interest. Developing countries are particularly interested in the reduction of tariff peaks and tariff escalation. They also would like to see progress in the liberalization of certain categories of services trade, for instance the movement of persons.[5]

Export interests in developed countries often centre on products whose production relies heavily on skilled labour and capital. Developed countries are also increasingly interested in exporting services under mode 1 (trans-border) and mode 3 (commercial presence), such as financial and insurance services and telecommunications.

As this study shows, many countries, both developing and developed, continue to protect, support and subsidize their domestic producers and exporters of agricultur-

5 See for example Oyejide (2000).

al products. Much can be done by way of mutually beneficial reductions (or elimination) of harmful distortions in agricultural markets. Similarly, many Members have so far made minimal commitments in services and even the most comprehensive schedules contain a large number of restrictive limitations. *If industrial tariffs are drawn into the picture, the scope for mutually beneficial arrangements is significantly broadened.* Developed countries, for instance, have many tariff peaks in textiles and clothing as well as in leather products, two areas where developing countries have a strong export interest. As for developing countries, they still have relatively high tariffs on industrial products. Even if their applied tariffs are often lower than their bound tariffs, significant reductions of bound tariffs would certainly be of interest to developed countries.

Improved access to developing countries' markets for industrial products is important for developed countries' exporters, but it is also increasingly important for exporters in developing countries. Between 1990 and 1999, the share of intra-developing country trade in manufactures increased from 29 to 34%.

Changes in the composition of trade during the last decade support the idea that trade in manufactured products is increasingly important for developing countries. Between 1990 and 1999, world exports of manufactures increased by 7% in volume compared to 4% for agricultural products and 5.5% for mining products. During this same period, the share of manufactures in the total value of world exports of merchandise products has increased from 70.5% to 76.5%. This increase largely reflects the increased importance of manufactures in developing country exports. The share of manufactures in total merchandise exports has increased from 38% to more than 60% for Latin America and from 79% to almost 85% for developing Asia.

The discussion so far could give the impression that the effort to increase market access can be reduced to a north-south negotiation. Another result which comes out of this study however is that, with regard to market access, there are important differences among developing countries but also among developed countries, and that it would be a mistake to see the WTO as an arena for "north-south negotiations". In agriculture, for instance, countries such as Australia or New Zealand pursue very liberal agricultural policies while other developed countries are heavily supporting their farmers. The Cairns group of exporters of agricultural products includes both developing and developed countries sharing common interests. With regard to services, the study suggests that impediments to the temporary movement of workers can be a serious problem for services providers of all kinds, and that interest in their removal is by no means confined to developing countries.

With regard to trade developments, changes at the aggregate developing country level should not hide diverging trends among developing country groups. For Africa, excluding South Africa, exports of mining products and agricultural raw materials together accounted for 66% of total merchandise exports in 1990 and they still account for more than 60%, while for developing Asian countries, the share of mining products including fuels and raw agricultural materials dropped from 15% in 1990 to 8.3% in 1999.

To sum up, the main conclusions of this study of remaining impediments to market access are the following. *First,* the study shows that the Uruguay Round has significantly contributed to the liberalization of international trade but that the post-Uruguay Round situation still has many distortions. *Second*, the study suggests that while there is scope for mutually beneficial agreements in the negotiations on agriculture and services, this scope is significantly broadened if industrial tariffs are drawn into the picture. *Third*, the study points at the increasing importance of access to developing countries' markets for other developing countries' exporters. *Fourth*, the products of greatest export interest to the least developed countries—many agricultural products together with clothing and other labour-intensive manufactures—are among the most heavily protected in the markets of their current and potential trading partners, both developed and developing.

II. Industrial Products

This section describes the post-Uruguay Round market access situation for industrial products in both developed and developing countries.[6] The term "post-Uruguay Round" refers to the situation that will prevail following the complete implementation of commitments agreed to in the Uruguay Round. While the focus is on bound tariffs, applied tariffs, non-tariff barriers, and contingent protection are also considered.

The Uruguay Round produced significant improvements in market access for industrial products. *First*, both developing and developed countries agreed to significantly increase the share of their imports of industrial products whose tariff rates are bound. For developed countries, the share of industrial tariff lines subject to bound tariffs increased from 78% to 99%.[7] For developing countries, the increase in coverage was even more impressive, rising from 21% to 73%. *Second*, the average tariff on developed countries' imports of industrial products was cut by 40% on imports from all sources, and by 37% on imports from developing countries. For developing countries, the reductions averaged 25% on industrial products imported from developed countries, and 21% on industrial products imported from developing countries.[8] These tariff reductions, it should be noted, were negotiated line by line, rather than through the use of a formula approach. *Third*, substantial progress was made with regard to non-tariff barriers. Voluntary export restraints (VERs) are now prohibited and the Multifibre Arrangement will be phased out by 2005.

Despite these and earlier reductions in tariff levels in successive GATT rounds, tariffs still constitute an important source of distortions and economic costs. Developed countries' tariffs continue to show relatively important dispersions in rates and significant peaks on products such as textiles, clothing and leather products, while developing-country tariffs are often either not bound or bound at relatively high levels. Also certain contingent protection instruments have increasingly been used.

A. Post-Uruguay Round tariffs

The following discussion focuses on the tariff rates that are bound in WTO Members' schedules.[9]

1. Tariff bindings

Even after the progress made in the Uruguay Round, countries differ significantly with regard to the coverage as well as to the nature of their bindings. Some countries have bound less than 10% of their industrial tariff lines while others have bound 100%. In some countries the bound rates differ across tariff lines, while others, mainly developing countries, have bound all or a large part of their tariff lines at a uniform level, but often at a level above the applied rates. We refer to the latter as "uniform ceiling bindings".

As can be seen from Table II.1, the share of post-Uruguay Round industrial tariff lines covered by bindings is above 95% for most developed countries, as well as for most transition economies.[10]

The situation in developing countries is more varied. Most countries in Latin America apply a uniform ceiling binding for almost 100% of tariff lines. The level of the ceiling is usually between 25% (Chile) and 50% (Belize, Guyana, and Jamaica). In Brazil, the number of tariff lines covered by the uniform level is relatively low, but the country has bound all its industrial tariff lines. In Asia and Africa, however, the scope of bindings is usually more limited. A large share of the tariff lines are unbound in numerous developing countries in Asia. Sri Lanka, for instance, has bound less than 10% of its tariff lines, while in India, Malaysia and the Philippines 40% of the tariff lines remain unbound. In Hong Kong, China and Macao, China a high percentage of the tariff lines are unbound, but the applied rates on all those lines are zero. Gabon is the only African country in our sample which has bound more than half of its tariff lines (Cameroon, for instance, has bound only three tariff lines).

Appendix Table II.1 shows the share of bound lines by categories of industrial products for the countries in our sample. While the data do not show a clear pattern, a few regularities do stand out. *First*, for developed and transition countries, bound lines are less frequent in the transport equipment category. *Second*, in Asian countries bound lines are less frequent for fish and fish products and transport equipment than for other products. African countries tend to have a rather low percentage of bound lines across all product categories. An exception is South Africa, with a high percentage of bound lines in all categories except fish and fish products, where only about 15% of the tariff lines are bound.

2. Duty-free items

The share of duty-free tariff lines is often seen as an indicator of a country's degree of openness to trade. The larger this share, the more open a country is considered to

6 See the definition of industrial products in Table 4 of the Technical Note to this section. For the purpose of this study, the standard practice of excluding petroleum (MTN category 97) was followed.

7 See GATT (1994).

8 See Abreu (1996).

9 The source of all tariff information presented in this section, except where indicated, is WTO's Integrated Data Base (IDB).

10 One exception is Turkey which has a relatively low coverage of bindings.

Table II.1. Bound tariffs on industrial products.[a] Scope of bindings, simple averages, standard deviations and tariff peaks

Import markets	Total number of tariff lines	Share of bound tariff lines[b]	Share of bound duty-free tariff lines	Share of unbound duty-free tariff lines	Share of non-*ad valorem* tariff lines	Simple average bound tariff	Standard deviation	Share of tariff lines with duties more than three times the average	Share of tariff lines with duties above 15%
North America									
Canada	6261	99.6	34.5	0.1	0.3	5.2	5.0	5.8	5.8
United States	7872	100.0	39.4	0.0	4.2	3.9	5.6	7.5	3.5
Latin America									
Argentina	10530	100.0	0.0	0.0	N.A	31.0	6.7	0.0	99.7
Brazil	10860	100.0	0.5	0.0	0.0	30.0	7.4	0.0	97.4
Chile	5055	100.0	0.0	0.0	0.1	25.0	0.5	0.0	99.9
Colombia	6145	100.0	0.0	0.0	0.2	35.5	3.3	0.0	100.0
Costa Rica	1546	100.0	0.0	0.0	N.A	44.6	5.5	0.0	99.8
El Salvador	4922	100.0	0.0	0.0	0.0	36.9	8.1	0.0	100.0
Jamaica	3097	100.0	0.0	0.0	0.0	50.0	0.9	0.0	100.0
Mexico	11255	100.0	0.0	0.0	0.0	34.8	3.4	0.0	99.3
Peru	4545	100.0	0.0	0.0	N.A	30.0	0.0	0.6	100.0
Venezuela	5974	100.0	0.0	0.0	0.0	33.9	3.7	0.0	99.2
Western Europe									
European Union	7635	100.0	26.9	0.0	0.5	4.1	4.0	2.6	1.5
Iceland	5689	93.2	41.6	2.9	0.0	9.7	11.9	9.2	28.1
Norway	5326	100.0	46.5	0.0	2.6	3.4	6.2	10.6	0.3
Switzerland	6217	98.9	17.2	0.0	82.8	1.8	4.6	8.7	0.3
Turkey	15479	36.3	1.4	0.8	0.1	42.6	36.7	3.5	73.9
Eastern Europe									
Czech Republic	4354	100.0	14.0	0.0	0.0	4.3	3.1	1.2	0.9
Hungary	5896	95.4	10.4	0.2	0.1	7.4	5.4	2.0	3.1
Poland	4354	95.8	2.2	0.0	0.0	10.4	5.2	1.2	13.3
Romania	4602	100.0	5.8	0.0	0.0	30.8	9.8	0.0	90.1
Slovak Republic	4354	100.0	14.0	0.0	0.0	4.3	3.1	1.2	0.9
Asia									
Australia	5520	95.9	17.7	0.2	0.8	14.2	14.7	6.3	25.3
Hong Kong, China	5110	23.5	23.5	76.5	0.0	0.0	0.0	0.0	0.0
India	4354	61.6	0.0	0.4	1.1	58.7	33.3	0.1	97.8
Indonesia	7735	93.2	0.0	1.2	0.0	38.9	12.3	0.3	97.2
Japan	7339	99.2	47.4	0.4	3.5	3.5	6.0	5.2	1.8
Korea, Republic of	8882	90.4	11.6	0.0	0.2	11.7	9.6	1.4	19.1
Macau, China	5337	9.9	9.9	90.1	0.0	0.0	0.0	0.0	0.0
Malaysia	10832	61.8	1.6	2.8	3.2	17.2	13.4	0.4	58.3
New Zealand	5894	100.0	39.4	0.0	2.5	12.7	15.7	4.0	39.5
Philippines	5387	58.6	0.0	0.0	4.1	26.1	12.0	0.0	82.7
Singapore	4963	65.5	15.2	33.8	0.2	4.6	4.8	0.5	0.2
Sri Lanka	5933	8.0	0.1	1.4	22.4	28.1	24.1	0.2	52.0
Thailand	5244	67.9	0.0	1.2	19.7	27.5	10.6	0.1	87.1
Africa									
Cameroon	4721	0.1	0.0	0.0	0.0	17.6	9.4	0.0	45.8
Chad	4721	0.4	0.0	0.0	0.0	17.8	10.0	0.4	45.8
Gabon	4721	100.0	0.0	0.0	0.0	15.5	4.8	1.1	1.3
Senegal	2818	32.3	0.9	0.0	N.A	13.8	5.3	0.0	79.2
South Africa	11677	98.1	7.7	0.3	1.3	17.7	10.9	0.1	46.4
Tunisia	5087	46.3	0.0	1.0	0.0	34.0	15.0	0.0	98.4
Zimbabwe	1929	8.8	3.0	44.7	N.A	11.3	13.0	9.3	44.1

a Excluding petroleum, as defined in the technical notes at the end of this chapter

b All shares are expressed as a percentage of the total number of industrial tariff lines (column 1).

Source: WTO IDB, Loose Leaf Schedule and national custom tariffs. See Technical notes to this chapter for more details.

be, provided of course that the tariffs in question are *bound* at zero. The contribution of unbound duty-free tariffs to openness is harder to judge. It is also important not to neglect the contribution to openness of tariffs bound at very low rates.[11]

Table II.1 shows both the shares of bound and unbound duty-free lines in the total number of industrial tariff lines. Among the developed countries, the share of tariff lines bound duty-free varies between 17% for Switzerland and almost 50% for Japan. For transition countries, this share is between 2% for Poland and almost 14% for the Czech Republic and the Slovak Republic. Finally, except for five countries in our sample (Hong Kong, China; Republic of Korea; Macau, China; Singapore and South Africa), developing countries have no, or very few, lines bound duty-free. As noted above, Hong Kong, China, and Macau, China both have close to 100% duty-free tariffs, but only a relatively small proportion of them are bound.

Appendix Table II.2 shows the share of duty-free tariff lines in the total number of tariff lines by MTN industrial product category.[12] When looking at the average share of duty free lines across countries it is clear that it is lowest for textiles, clothing and leather products. Wood and fish products, in contrary, exhibit the highest share of duty-free tariff lines.

3. Non-*ad valorem* tariffs

Non-*ad valorem* tariffs include specific tariffs, and mixed and compound tariffs which combine features of specific and *ad valorem* duties. There is a widespread agreement among trade economists that *ad valorem* tariffs are preferable to specific or compound tariffs for at least three reasons. *First*, specific tariffs are less transparent than *ad valorem* tariffs. In particular, the protective impact of a given specific tariff is difficult to assess as it depends on the unit value of the imported product. This lack of transparency makes it easier for special interest groups to obtain governmental support for high levels of protection. *Second*, specific tariffs have a greater impact on cheap products than on expensive products falling under the same tariff line. *Third*, when prices change, the protective effect of specific tariffs also changes. During periods of inflation, for instance, governments wishing to maintain the same level of protection, or the same real tariff revenue, constantly need to increase specific tariffs. On the other hand, if prices of traded goods decline, and specific tariff rates are not reduced, the level of protection will increase.

It is evident from Table II.1 that a small number of countries have a significant share of non-*ad valorem* rates. Switzerland stands out with the highest share of 82.8%,[13] but the United States also has non-*ad valorem* rates on 4.2% of its industrial tariff lines, and Japan on 3.5%. Sri Lanka and Thailand have a share of 22.4 and 19.7%, respectively, of non-*ad valorem* tariff lines.[14]

In conclusion, except in the case of Switzerland—and to a lesser extent Sri Lanka and Thailand—non-*ad valorem* tariffs are not widespread in the industrial sector. However, in some countries they tend to be concentrated in a few industrial product categories. The examination of agricultural tariffs in section III will show that the issue of non-*ad valorem* tariffs is much more important in that sector.

4. Overall level of tariff protection

There are many different measures of a country's overall level of tariff protection. Because this study considers market access from the perspective of multilateral negotiations, the focus is on post-Uruguay Round *bound* tariffs—that is, on the bound rates that apply once a country has fully implemented its Uruguay Round tariff commitments. These are the tariff rates listed in WTO Members' schedules of tariff concessions. The rates that governments actually apply are not allowed to exceed these bound rates.

Implementation took place in five equal stages starting on 1 January 1995 and ending on 1 January 1999. The Agreement, however, also allowed for exceptions. Many Member countries made use of these exceptions and extended the implementation period for a number of tariff lines, which means that some tariff cuts have not yet been fully implemented. Furthermore, in order to calculate average bound rates that are comparable across countries, certain assumptions had to be made as to how to treat tariff lines that remain unbound after the Uruguay Round. Detailed information about the assumptions, as well as other technical aspects, can be found in the Technical Note to this section.

Applied tariff rates are the most-favoured-nation (MFN) duties currently applied by Members. They do not take into account preferential rates and exemptions.[15] In

[11] Very low rates of duty are sometimes referred to as "nuisance tariffs" and there are proposals to reduce them to zero. As pointed out by Laird (1999), however, it is important to bear in mind that zero tariffs do not, by themselves, eliminate the cost of customs procedures. Normal customs procedures and ancillary inspections are carried out, and any additional charges and indirect taxes are collected even with a zero rate.

[12] MTN stands for Multilateral Trade Negotiations and refers to the product classification defined during the Uruguay Round negotiations. More detailed information on this classification can be found in the Technical Note to this section.

[13] In its schedule of tariff concessions, Switzerland has indicated both a specific rate and its ad valorem equivalent at the time when the schedule was established, and the binding rate is the higher of the two rates. Note that the bound tariffs used in this study for Switzerland are the ad valorem levels indicated in the schedule which may sometimes not be equivalent to the corresponding specific rates.

[14] *Ad valorem* equivalents of non-*ad valorem* rates are only imperfect substitutes for proper *ad valorem* tariffs. In particular, the ad valorem equivalent of a specific tariff at a given date will remain equivalent only as long as prices and the quality of the imported goods remain unchanged.

[15] This study does not discuss "collected rates", defined as total tariff revenue divided by the value of imports. For information concerning collected rates, see WTO's Trade Policy Reviews which usually provide estimates of reviewed countries' collected tariff rate.

instances in which tariffs are bound at a relatively high level, it is not unusual for the applied rates to be below—often considerably below—the bound rates.[16]

Various weighting schemes are available to calculate tariff averages, each with its own advantages and drawbacks. This study works with simple tariff averages, which give equal weight to each tariff line and thus require no matching trade or production data. Tariff averages weighted according to import values reflect better the relative importance of various tariff lines, but they still contain a downward bias because products with higher tariff rates are imported in lower-than-otherwise quantities (a prohibitive tariff will have a zero weight). While production-weighted average tariffs avoid this problem, they introduce other distortions. For example, they do not give any weight to a tariff line if there is no domestic production of the product in question.

Table II.1 shows simple average bound tariffs for all countries in the sample.[17] Figures show that even among developed countries, the simple post-Uruguay Round bound average tariff rate for industrial products exhibits relatively large differences, ranging from 1.8% for Switzerland to 14.2% for Australia. Among the Quad countries—Canada, EU, Japan and the United States—Japan has the lowest average at 3.5% while Canada has the highest at 5.2%. Among East European countries, the average bound tariff on industrial products ranges between 4.3% for both the Czech Republic and the Slovak Republic and 30.1% for Romania. Finally, for developing countries, the average varies between zero per cent for Hong Kong, China and Macau, China, and almost 60% for India. Approximately half the developing countries in our sample have an average bound tariff ranging between 25 and 40%.

From Table II.2 it is evident that in many countries the bound tariffs differ significantly across product categories. In most industrialized countries tariffs are significantly higher in two categories: "textiles and clothing", and "leather, rubber, footwear and travel goods". To a lesser extent this is also the case for transport equipment. The European Union and Norway have moderate tariffs on leather products compared to other industrialized countries, but higher average tariffs on fish and fish products. The transition economies are characterized by high average tariffs on transport equipment, which is also the case for several Asian countries, for example Indonesia, the Republic of Korea, Malaysia and Thailand. African countries, instead, tend to have relatively high average tariffs on textiles and clothing, leather and leather products and in the fish and fish products category. In addition tariffs are relatively high in the "manufactured articles not elsewhere specified" category.[18]

5. Tariff dispersion

It is widely agreed among trade economists that a relatively uniform tariff structure is preferable to one exhibiting considerable dispersion (that is, a large number of tariff peaks and troughs). There are two reasons for this. First, the welfare cost (economic inefficiency) of a tariff regime increases as the degree of dispersion increases.[19] Second, the case for a uniform tariff structure receives strong support from political economy arguments.[20] Not only are uniform tariff rates more transparent and easier to administer than non-uniform tariffs, they are less likely to be determined by the relative political power of particular interest groups. The reasons for this are twofold. In order to increase a uniform tariff rate, tariffs need to be increased simultaneously across industries. The gain of such a uniform increase to each particular industry is relatively small and it is therefore unlikely that industries decide to collectively lobby in favour of the increase. Under non-uniform tariff rates, in contrast, it is in the interest of each individual industry to lobby for a tariff increase for its own industry, an effort other industries are unlikely to oppose because the losses they incur due to the tariff increase are minimal. It is on the contrary rather likely that the example incites other industries to demand tariff increases, too. Overall it is thus realistic to expect more pressure to increase tariffs under non-uniform than under uniform tariff rates. Uniform tariffs are also, needless to say, less likely to escalate than non-uniform tariff rates.

A useful measure of tariff dispersion is the absolute dispersion of tariff levels around their average value (that is, the standard deviation from the mean). From Table II.1 it is evident that the dispersion of tariffs differs significantly across countries. However, the interpretation of the levels of standard deviation in the table depends on the underlying tariff structure.

Not surprisingly Hong Kong, China and Macau, China show zero dispersion, as all their tariff lines, both bound and unbound, are duty free. Latin American countries are also characterized by low tariff dispersion (Peru shows a standard deviation of zero and Jamaica of 0.9). It has been noted before that most countries in Latin America have bound a large share of their tariffs at a uniform ceiling level, which explains the low values of standard devi-

[16] See Francois and Martin (1995) for an analysis of why the binding of a tariff, even at a level well above the applied rate, has a positive impact on a country's economic welfare.

[17] Concerning the method for calculating bound tariff rates, see the Technical Note to this section.

[18] This category contains a large group of very different products, including products related to musical instruments, watches and clocks, meters, optical instruments like microscopes, spectacles and cameras and also sound or image producing devices like answering machines and magnetic tapes.

[19] This can be shown graphically, using a simple textbook diagram, by comparing two situations in which the average tariff on two products is the same, but the degree of dispersion differs. The area of the triangles which measure the deadweight loss will be larger in the example with the higher dispersion. See, for example, de Melo and Grether (1997).

[20] See Thomas, et al. (1991).

Table II.2. Bound tariffs on industrial products. Simple averages by country and MTN category
(Percentage)

Import markets	1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
North America											
Canada	1.3	12.4	7.6	2.8	4.5	6.8	3.6	5.2	3.1	4.2	1.8
United States	0.6	8.9	8.4	1.8	3.7	2.7	1.2	2.1	3.3	3.0	2.2
Latin America											
Argentina	29.4	35.0	35.0	34.4	23.5	34.6	34.9	34.7	32.8	33.7	34.5
Brazil	27.7	34.9	34.7	33.4	22.7	33.6	32.6	31.9	33.5	33.5	33.4
Chile	25.0	25.0	25.0	25.0	25.0	24.9	25.0	25.0	24.9	25.0	25.0
Colombia	35.0	36.8	35.2	35.0	35.0	35.8	35.0	35.0	35.1	35.0	47.7
Costa Rica	44.2	45.1	45.9	44.5	43.5	49.6	44.2	43.3	44.6	44.7	46.3
El Salvador	35.3	38.6	40.8	35.0	37.7	35.8	32.6	34.6	37.7	38.2	45.0
Jamaica	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.6
Mexico	34.0	35.0	34.8	34.7	35.2	35.8	35.0	34.1	34.4	34.6	35.0
Peru	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
Venezuela	33.7	34.9	34.5	33.6	34.1	33.6	33.2	33.9	34.1	33.4	33.8
Western Europe											
European Union	0.7	7.9	4.8	1.6	4.8	4.7	1.8	3.3	2.4	2.7	11.8
Iceland	11.9	9.7	13.8	6.8	2.8	17.1	7.0	19.4	11.5	21.9	3.6
Norway	0.4	8.5	2.2	1.1	3.0	3.3	2.7	2.7	0.7	2.2	7.3
Switzerland	2.1	4.6	2.0	1.1	1.5	2.2	0.6	0.7	1.5	1.3	0.5
Turkey	40.5	80.3	79.9	30.4	29.0	25.8	23.7	26.6	39.4	43.3	26.2
Eastern Europe											
Czech Republic	5.5	6.2	3.8	3.8	4.0	6.2	3.8	4.2	3.4	3.6	0.2
Hungary	5.4	8.1	6.7	4.9	5.5	15.9	8.4	9.5	5.0	7.8	17.1
Poland	8.0	13.1	11.9	9.9	8.7	16.1	8.9	9.7	6.9	11.6	16.3
Romania	31.4	32.9	30.7	31.7	30.6	32.1	29.5	27.3	32.2	29.3	28.1
Slovak Republic	5.5	6.2	3.8	3.8	4.0	6.2	3.8	4.2	3.4	3.6	0.2
Asia											
Australia	7.0	28.8	17.5	4.5	9.2	15.1	9.1	13.3	7.0	7.0	0.8
Hong Kong, China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
India	56.4	87.8	67.8	58.3	44.1	53.9	36.2	44.8	47.2	72.4	68.6
Indonesia	39.6	39.9	39.6	36.4	37.4	58.5	36.6	38.7	39.2	36.9	40.0
Japan	1.2	6.8	15.7	0.9	2.4	0.0	0.0	0.2	1.0	1.1	6.2
Korea, Republic of	4.8	18.2	16.7	7.7	6.7	24.6	11.1	16.1	10.4	11.4	19.1
Macau, China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malaysia	19.8	20.7	19.1	14.2	15.4	29.8	10.9	14.1	14.7	12.6	14.5
New Zealand	4.5	21.9	19.1	11.2	6.1	17.0	15.1	16.1	7.6	11.7	2.8
Philippines	31.8	27.7	32.7	22.9	22.6	26.1	22.0	26.2	28.5	29.5	29.4
Singapore	3.1	7.8	3.4	3.2	5.0	4.4	4.3	4.9	1.2	1.2	9.8
Sri Lanka	32.6	45.0	43.0	16.6	15.8	18.3	12.8	20.4	26.2	27.1	49.2
Thailand	21.3	29.2	34.1	25.6	29.3	38.5	23.4	30.5	25.9	29.5	12.5
Africa											
Cameroon	21.8	22.8	21.2	15.9	11.6	14.9	12.2	16.8	18.5	22.9	23.8
Chad	21.8	22.7	21.2	15.9	11.6	20.2	12.2	16.8	18.5	22.9	23.8
Gabon	15.5	15.1	15.0	15.2	15.2	15.0	15.2	15.0	16.1	18.5	15.0
Senegal	17.6	16.1	16.3	15.1	15.2	14.1	6.7	7.2	15.1	15.0	12.9
South Africa	9.2	27.7	23.1	14.1	13.9	23.3	12.0	17.4	11.5	14.8	22.5
Tunisia	34.2	56.3	36.1	25.6	26.5	25.5	25.2	29.1	28.9	32.5	41.2
Zimbabwe	12.6	21.4	13.1	9.1	5.5	10.1	6.3	12.3	7.6	15.5	3.1

Source: WTO IDB, Loose Leaf Schedule and national custom tariffs. See Technical notes to this chapter for more details.

ation. However, where ceiling levels are relatively high, the standard deviation of the bound tariffs offers little or no insight into the dispersion of the *applied* tariffs. Higher standard deviations can be found among the African and Asian countries, which do not rely on uniform ceiling bindings across tariff lines (Gabon being an exception). With the partial exception of Australia and New Zealand, the standard deviation for most developed countries is relatively low.

Tariff dispersion is partly caused by tariff differences between broad product categories, as can be seen when comparing average tariffs across the product categories in Table II.2. In most industrialized countries, for instance, the average bound tariffs on textiles and clothing are significantly higher than for other categories, which tends to increase the degree of dispersion. But as Appendix Table II.3 shows, tariffs can also differ significantly within categories. In the industrialized countries, significant "within-category" dispersion is found in the textiles and clothing and leather categories.

Another indicator of tariff dispersion is the prevalence of tariff peaks. Tariff peaks are tariffs that exceed a selected reference level. The OECD establishes a distinction between national peaks where the reference level is three times the national mean tariff, and international peaks, where the reference level is 15%.[21] Table II.1 provides information on both measures. Not surprisingly, in countries where the average tariff level is low, the prevalence of tariff peaks is higher in relation to the national reference level than in relation to the international reference level. This is the case in the European Union, Japan and the United States, for instance. Within this group, the European Union shows less tariff dispersion than Japan and the United States, even though all three have very similar average tariff levels.

International peaks are more frequent than national ones in the Asian countries with relatively high average tariffs, such as Malaysia and Thailand, as well as in the African countries in Table II.1.[22] While there are no national tariff peaks in the Latin American countries that apply a uniform ceiling level across most tariff lines, all the tariff lines exceed the 15% international reference level.

Appendix Table II.4 shows the spread of international peaks across product categories for the different countries. In most industrialized countries, including Poland, the largest share of peaks can be found in textiles and clothing, leather and, to a lesser extent, transport equipment categories. The European Union and Norway are exceptions, with no tariff peaks in the textile and clothing sector, but a high concentration of peaks in the fish and fish products category. Transition economies show a high concentration of tariff peaks in transport equipment, although Hungary and Poland also show a high frequency of peaks in the fish and fish products category. No clear pattern emerges from the analysis of tariff peaks across product categories in developing countries. They tend to be frequent across all categories, although several countries, including South Africa, Zimbabwe, Sri Lanka and Malaysia, have a relatively high frequency of tariff peaks in the textile and clothing category.

6. Tariff escalation

Tariffs escalate when they increase with the level of processing, as when they are fixed at a higher level on semi-processed and processed products than on unprocessed products and raw materials.[23] As a consequence, the size of the protected processed industry increases in the importing country, while foreign suppliers of unprocessed products and raw materials find diversifying their production by moving to higher stages of processing more difficult. A long-standing complaint of developing countries is that developed-country "tariff escalation" biases developing country production towards less processed products, thereby creating a major impediment to their industrialization.[24]

In order to analyze tariff escalation, countries' nominal tariffs are typically grouped by stages of processing to reveal the change in tariffs along the production chain.[25] This has been done for 19 WTO Members in Table II.3 where three production stages are distinguished; raw materials, semi-manufactured products and finished products. As the table shows, tariff escalation differs greatly across countries. Tariffs in the European Union appear to de-escalate, while Japan's and Switzerland's tariff structures escalate between raw materials and semi-manufactured products, but de-escalate between semi-finished

[21] See OECD (1999). The reference level of 15% for international peaks is only one of several options. Levels of 10 or 20% have for instance been used in other studies.

[22] It should however be noted that many of the relevant countries are characterised by a rather high share of unbound tariff lines. As explained in the Technical Note, applied tariffs in the Uruguay Round base period have been used for the unbound tariff lines in the calculations for the average bound rate. Currently applied rates may be significantly lower than tariffs in the base period and it is probable that the number of international peaks represented in table II.1 is over-estimated.

[23] See for instance OECD (1999) and WTO document WT/CTE/W/25, 22 March 1996.

[24] Developed country and transition economy exporters of raw materials and semi-finished products have also been complaining about tariff escalation in major importing countries. It should be noted that while tariff escalation can be measured, there is no consensus on the precise (quantitative) relationship between a given degree of tariff escalation and the resulting bias in the structure of production.

[25] The OECD (1999) presented in its recent Review of Tariffs a different approach in which it took a closer look at tariffs on different levels of processing for 13 product groups. The data used in that analysis are represented in Appendix Table III.2 to the section on agriculture. They suggest that escalating tariffs are quite common. The processing chains of cocoa, coffee, cotton, leather and soybeans, for instance, reflect escalating tariffs in all QUAD countries as well as in most, if not in all, other OECD countries.

The concept of the effective rate of protection of value added (ERP), which also distinguishes between tariff rates on different stages of processing, is related to the discussion in this section (see, for example, UNCTAD (1997)). Because the relationship between ERPs and escalation of nominal tariff rates is ambiguous, this section focuses on nominal tariffs.

and finished products. The tariff structures in Canada, Australia, New Zealand, Turkey and Norway are characterized by increases in tariffs at each production stage. In the United States, tariffs increase significantly only between raw materials and semi-manufactured goods, while in Iceland and the Republic of Korea the biggest tariff increase takes place between semi-manufactured and finished products. The trade regimes of the Czech Republic, Hungary, Poland and the Slovak Republic exhibit varying degrees of tariff escalation at both stages.

The picture in the developing world is also very diverse. For obvious reasons, Latin American countries with a uniform ceiling binding across several product categories do not show any evidence of tariff escalation in their bound rates. Brazil's tariff structure shows de-escalating tariffs between stage one and two but escalation between two and three.[26] This is also the case in Cameroon and Chad. No tariff escalation takes place in Hong Kong, China; Indonesia; Macau, China; Malaysia and Singapore. In India, tariffs increase by more than 10% along the production chain and the Philippines and Thailand are also characterized by escalating tariffs, though to a lesser extent. The same can be said of South Africa and Tunisia.

Appendix Table II.5 shows average nominal tariffs by stage of processing for different product categories. It is clear from this table that certain product categories are characterized by a high degree of tariff escalation, even in countries where the overall tariff structure exhibits little or no escalation. This is the case, for instance, for the textiles and clothing, and leather and leather products categories, where tariff escalation is present in all stages in most of the countries in our sample, and particularly so in the European Union and Japan.[27]

7. Bound tariffs and applied tariffs

So far our analysis has focused on post-Uruguay Round bound tariff rates. The next step is to consider applied tariffs, which are relevant to this study in two ways. First, as mentioned above, many Member countries made use of exceptions to the five-year implementation period for tariff reductions, which means that some of the 1998-1999 applied tariff rates can be *above* the future bound rates.[28] Second, and more importantly, a number of countries have bound a portion—in some instances a very large portion—of their tariffs at levels well above the currently applied tariff rates, which means that they have considerable scope for increasing tariffs.

Table II.4 gives a more detailed picture of the situation. It shows average bound tariff rates and average applied MFN rates.[29] The reference year for applied rates differs between countries and is indicated in the table. The table shows that the Czech Republic, the European Union, Hungary, Japan, the Slovak Republic and the United States have bound their tariffs at levels that are, on average, lower than their mean applied MFN tariff, though the differences are not large. For this group of countries, applied tariffs will be lower when implementation is complete. All the other countries have bound their tariffs at levels above the corresponding applied MFN rate, although for some countries—Canada, the Republic of Korea, Norway, Singapore and Switzerland—the difference between applied and bound rates is not very high.

Australia and Iceland show relatively high differences between bound and applied rates. This difference is even more striking in the case of the Latin American countries, most of which apply a uniform ceiling level to most of their tariff lines. In Costa Rica, for instance, the average bound rate is close to 45%, while the average applied rate in 1998 was 6.4%. In Colombia, the difference between bound and applied rates is 24.3%. The Philippines and Turkey also show large differences in their bound and applied tariff rates, equal to 16.6% and 35.1% respectively.

When compared with Table II.1, Table II. 5 gives a more detailed picture of the different characteristics of applied and bound tariffs. Statistics for the two types of tariffs turn out not to differ very much for Japan, and the countries in North America and Europe included in both tables. The Latin American countries, however, have far fewer applied tariffs than bound tariffs above 15%. This indicates that applied tariffs are significantly below the bound tariffs, which can also be concluded from a comparison of average tariffs in both tables. The dispersion (standard deviation) of applied tariffs does not differ significantly from that of bound tariffs in most Latin American countries.

When looking at the difference between average bound and applied MFN rates at the level of product categories (Appendix Table II.6) it can be seen that the applied rates in force in 1998 in Canada, the Republic of Korea and Norway were still above their agreed final bound rates in some product groups.[30] In general, the distribution of gaps between applied and bound tariffs across product groups does not show any clear pattern. Several countries show relatively high differences in the transport equipment category, for instance Australia, Iceland, the Republic of Korea and Poland. In the textiles and clothing, and leather and leather products categories the gap between bound and applied tariffs tends to be relatively high, for example in Australia, the Republic of Korea, Poland and Turkey.

[26] Brazil applies more exceptions to the uniform ceiling level than other Latin American countries (see above).

[27] Excluding the countries with a tariff ceiling that, by definition, show more or less constant tariffs across production stages independent of the product group

[28] In the EU and the Republic of Korea, for instance, for many tariff lines the implementation period ranges between 8 and 15 years.

[29] This table includes fewer countries than the previous tables, as information on applied tariff rates is only available for a reduced set of countries.

[30] Recall that we are comparing applied and bound rates in force in different years. Applied rates are those in force in 1998, while the implementation period for the reduction of bound tariffs terminated in January 1999, with possible exceptions for certain product groups.

Table II.3. Bound tariffs on industrial products. Simple average tariff and standard deviation by stage of processing

Import markets	Stage of processing	Average rate	Standard deviation
North America			
Canada	Raw materials	1.6	3.0
	Semi-manufactures	4.8	4.5
	Finished products	5.7	5.3
United States	Raw materials	0.8	2.2
	Semi-manufactures	4.1	4.2
	Finished products	4.1	6.5
Latin America			
Brazil	Raw materials	33.3	5.9
	Semi-manufactures	26.6	8.1
	Finished products	32.3	5.8
Chile	Raw materials	24.9	1.2
	Semi-manufactures	25.0	0.0
	Finished products	25.0	0.5
Colombia	Raw materials	35.1	1.1
	Semi-manufactures	35.0	0.8
	Finished products	35.8	4.3
El Salvador	Raw materials	38.8	6.6
	Semi-manufactures	35.9	7.9
	Finished products	37.3	8.2
Jamaica	Raw materials	50.0	0.0
	Semi-manufactures	50.0	0.0
	Finished products	50.0	1.1
Mexico	Raw materials	33.8	5.8
	Semi-manufactures	34.8	3.0
	Finished products	34.9	3.5
Venezuela	Raw materials	34.0	4.0
	Semi-manufactures	33.9	3.7
	Finished products	33.9	3.7
Western Europe			
European Union	Raw materials	5.1	6.7
	Semi-manufactures	4.0	3.2
	Finished products	4.0	4.0
Iceland	Raw materials	1.7	6.1
	Semi-manufactures	2.7	4.8
	Finished products	15.4	12.6
Norway	Raw materials	0.1	0.6
	Semi-manufactures	3.0	4.1
	Finished products	4.0	7.3
Switzerland	Raw materials	1.0	7.3
	Semi-manufactures	2.0	6.6
	Finished products	1.8	2.5
Turkey	Raw materials	20.9	13.8
	Semi-manufactures	40.4	36.2
	Finished products	46.9	37.9

Table II.3 *(cont'd.)*

Import markets	Stage of processing	Average rate	Standard deviation
Eastern Europe			
Czech Republic	Raw materials	0.9	2.9
	Semi-manufactures	4.2	2.5
	Finished products	4.9	3.2
Hungary	Raw materials	5.3	6.4
	Semi-manufactures	5.4	3.6
	Finished products	8.9	5.8
Poland	Raw materials	6.2	8.4
	Semi-manufactures	9.3	2.7
	Finished products	11.6	5.4
Romania	Raw materials	31.2	8.2
	Semi-manufactures	31.9	8.4
	Finished products	30.1	10.6
Slovak Republic	Raw materials	0.9	2.9
	Semi-manufactures	4.2	2.5
	Finished products	4.9	3.2
Asia			
Australia	Raw materials	1.5	3.7
	Semi-manufactures	12.3	11.3
	Finished products	16.7	16.4
Hong Kong, China	Raw materials	0.0	0.0
	Semi-manufactures	0.0	0.0
	Finished products	0.0	0.0
India	Raw materials	41.3	14.7
	Semi-manufactures	52.4	30.2
	Finished products	65.1	35.3
Indonesia	Raw materials	39.5	3.3
	Semi-manufactures	38.0	6.1
	Finished products	39.5	15.6
Japan	Raw materials	2.2	3.2
	Semi-manufactures	4.0	3.6
	Finished products	3.4	7.6
Korea, Republic of	Raw materials	8.7	7.2
	Semi-manufactures	8.0	5.4
	Finished products	14.3	11.0
Macau, China	Raw materials	0.0	0.0
	Semi-manufactures	0.0	0.0
	Finished products	0.0	0.0
Malaysia	Raw materials	16.6	8.1
	Semi-manufactures	16.9	10.7
	Finished products	17.8	16.9
New Zealand	Raw materials	1.6	4.3
	Semi-manufactures	6.8	8.9
	Finished products	17.3	17.7
Philippines	Raw materials	19.0	11.5
	Semi-manufactures	23.4	9.5
	Finished products	29.1	12.8

Table II.3 *(cont'd.)*

Import markets	Stage of processing	Average rate	Standard deviation
Sri Lanka	Raw materials	25.0	22.3
	Semi-manufactures	25.7	23.4
	Finished products	30.5	24.6
Singapore	Raw materials	4.7	5.0
	Semi-manufactures	4.6	4.1
	Finished products	4.5	5.1
Thailand	Raw materials	17.9	13.4
	Semi-manufactures	26.9	8.0
	Finished products	29.3	10.7
Africa			
Cameroon	Raw materials	17.1	9.1
	Semi-manufactures	14.5	7.7
	Finished products	19.7	9.9
Chad	Raw materials	17.0	17.0
	Semi-manufactures	14.4	14.4
	Finished products	20.0	20.0
Gabon	Raw materials	15.0	0.0
	Semi-manufactures	15.1	2.4
	Finished products	15.9	6.1
South Africa	Raw materials	7.8	16.6
	Semi-manufactures	16.1	7.6
	Finished products	19.8	12.1
Tunisia	Raw materials	29.1	16.2
	Semi-manufactures	32.5	15.4
	Finished products	35.5	14.4

Source: WTO IDB, Loose Leaf Schedule and national custom tariffs. See Technical notes to this chapter for more details.

It should be kept in mind that the extensive use of preferential tariff arrangements means that the applied MFN rates should be viewed as an upper limit to the estimated level of overall tariff protection. Trade flows between members of free trade areas and customs unions, as well as flows entering under GSP, Lomé and other one-way preferential arrangements, can account for a significant share of imports from all sources.

8. The Information Technology Agreement

After the end of the Uruguay Round, negotiations took place aimed at establishing duty-free trade on a sectoral basis for information technology (IT) products. The Information Technology Agreement (ITA) was signed in April 1997 by 40 countries, which together accounted for more than 92% of world trade in the relevant IT products.[31] These products fall into six product groups; computers, telecom equipment, semiconductors, semiconductor manufacturing and testing equipment, software, and scientific instruments.[32] ITA participants must respect three basic principles:

- all products listed in the agreement must be covered
- all tariffs must be bound at zero
- all other duties and charges must be bound at zero.

There are no exceptions to product coverage. However, extended implementation periods are possible for sensitive items. Because the commitments undertaken by ITA Members are necessarily on an MFN basis, the benefits accrue to *all* other WTO Members.

The first stage of tariff reductions occurred in July 1997 and the remaining implementation of ITA commitments took place in three further stages with equal tariff reductions; the second began on 1 January 1998; the third on 1 January 1999; and duties were completely eliminated on 1 January 2000. A number of countries, mostly developing countries, have requested and received ex-

[31] As of 1999, this group has increased to 48 countries.

[32] While the ITA provides for the review of non-tariff barriers, such measures are not subject to any binding commitments.

Table II.4. Bound and applied tariffs on industrial products. Simple averages

Import markets	End of implementation period	Average bound	Average applied		Difference[a]
North America					
Canada	2000	5.2	4.8	(1998)	0.4
United States	2000	3.9	4.3	(1999)	-0.3
Latin America					
Argentina	2005	31.0	13.7	(1998)	17.3
Chile	2005	25.0	10.9	(1997)	14.1
Colombia	2005	35.5	11.2	(1998)	24.3
Costa Rica	2005	44.6	6.4	(1998)	38.2
Mexico	2005	34.8	12.6	(1998)	22.3
Peru	2005	30.0	13.0	(1998)	17.0
Western Europe					
European Union [b]	2000	4.1	5.0	(1998)	-0.9
Iceland	2000	9.7	2.5	(1998)	7.2
Norway	2000	3.4	3.3	(1998)	0.1
Switzerland	2000	1.8	0.0	(1998)	1.8
Turkey	2000	42.6	7.5	(1996)	35.1
Eastern Europe					
Czech Republic	2000	4.3	4.8	(1998)	-0.5
Hungary	2000	7.4	9.0	(1996)	-1.7
Slovak Republic	2000	4.3	4.9	(1998)	-0.6
Asia					
Australia	2000	14.2	5.8	(1998)	8.3
Hong Kong, China	2005	0.0	0.0	(1998)	0.0
Japan	2000	3.5	4.2	(1998)	-0.6
Korea, Republic of	2005	11.7	7.9	(1998)	3.8
Macau, China	2005	0.0	0.0	(1997)	0.0
Philippines	2005	26.1	9.5	(1998)	16.6
Singapore	2005	4.6	0.0	(1996)	4.6
Africa					
Cameroon	2005	17.6	17.6	(1999)	0.0
Chad	2005	17.6	17.6	(1999)	0.0
Gabon	2005	15.5	17.6	(1999)	-2.1

a Caution should be taken when interpreting these results. Not only the year to which unbound duties refer are different, but nomenclatures too. For bound duties, most of the countries were using Harmonized System 1988 or 1992, or still CCCN nomenclature. For applied duties, the HS 1996 is used for the majority of the countries. See Technical Note for details.

b EC 12 for bound duties; EC 15 for applied duties.

Source: WTO, Integrated Data Base.

tended staging periods for at least some products in their schedule. In no case does the implementation period extend beyond 2005.

The ITA tariff reductions have not yet been incorporated in the figures for bound tariffs in the WTO Integrated Database. It is possible, however, to provide an assessment of the approximate impact of the ITA on the overall tariff regime of participating countries. This has been done by the OECD which gives estimates of the upper limits of the impact on countries' tariff structure.[33] According to the estimates, the effect of ITA on the overall mean tariff is greatest in the Republic of Korea with a reduction in the average post-Uruguay Round bound mean from 18 to 17%, with a similar result reported for Turkey. The ITA has had no discernible impact on tariff averages in countries where the relevant product groups already faced very low tariffs, for example, Japan and Switzerland.[34]

B. Other trade policy measures

1. Non-tariff barriers

One of the motivations behind the decision to launch the Uruguay Round was the GATT contracting parties' awareness that non-tariff barriers (NTBs) continued to be prevalent, especially in the areas of agriculture, textiles and clothing. During the Uruguay Round, agreement was reached on new disciplines on NTBs which have led to a substantial reduction in the use of such measures over the past five years.

As noted above, all NTBs affecting trade in agricultural products have been replaced by "equivalent" tariffs. With regard to industrial products, the Uruguay Round Agreement also broke new ground. First, a certain number of measures were prohibited outright. In particular, Article 11 of the Uruguay Round Agreement on Safeguards prohibits so called "grey-area" measures, including voluntary export restraints, orderly marketing arrangements, and other similar measures both on the export and import sides. All such measures in effect on the date of the Agreement had to be phased out, or brought into conformity before the end of 1998, with the exception that each country was allowed to keep one NTB in place until 31 December 1999.

Second, other measures were submitted to disciplines aimed at eliminating their trade-distortive effects. The Agreement on Import Licensing Procedures imposes strict disciplines on import licensing. The Agreement on Technical Barriers to Trade tries to ensure that regulations, standards, testing and certification procedures do not create unnecessary obstacles to trade. Other agreements regulate customs valuation procedures, pre-shipment inspection, rules of origin and trade-related investment measures.

This section provides a brief survey of remaining NTBs. Such barriers are notoriously difficult to measure and available measures are difficult to interpret. The following survey relies on frequency ratios, which provide an indication of the pervasiveness of non-tariff measures by country, and enable identification of the sectors where NTBs are concentrated. They do not, however, provide a measure of the protective effect of the barriers.[35] Given that hundreds of NTBs have been identified, and that these measures differ significantly with regard to their trade restrictiveness, a distinction is often made between core NTBs—considered to have clearly protective effects—and other NTBs.[36]

Table II.6 shows the pervasiveness of core NTBs in both the agricultural and the industrial sectors for a sample of countries.[37] The figures show a clear decline in the use of core NTBs in a majority of countries between the early 90s and the years following the entry into force of the WTO Agreement.[38] The figures also show that, at the aggregate level, the Quad countries and Mexico have higher frequency ratios than other OECD countries and that, while there has been a great deal of progress, a certain number of developing countries still apply NTBs to a relatively wide range of products.[39]

Table II.7 shows the pervasiveness of core NTBs affecting the manufacturing sector in OECD countries. Textiles and clothing sectors are most affected by core NTBs in the majority of OECD countries. This is not surprising given that the figures refer to 1996 when the phasing out of MFA quotas was just beginning. With regard to developing countries, Michalopoulos (1999) shows that the industrial products most subject to overall controls are fuels and mineral products, rubber products, machinery—especially electrical machinery—and precious stones and met-

[33] See OECD (1999.

[34] If weighted tariff averages were used, it is possible that taking into account the ITA would have a larger impact on certain countries' average tariff level.

[35] Concerning the advantages and limitations of frequency ratios, see OECD (1997).

[36] As defined in OECD (1997), core NTBs include: export price restraints, variable charges, anti-dumping and countervailing actions, non-automatic licensing, export restraints and other quantitative restrictions. The definition used in WTO TPRs, on which the frequency ratios in Michalopoulos (1999) are based, is different.

[37] There are differences between Michalopoulos (1999) and OECD (1997) estimates. In the case of Turkey for instance, Michalopoulos' estimates (5.2% for 1989-94 and 19.8% for 1995-98) are much higher than OECD estimates. Note that for Turkey, the 1996 OECD frequency ratio corresponding to all NTBs (and not only core NTBs) is also 0.4.

[38] See OECD (1997) and Michalopoulos (1999).

[39] Michalopoulos (1999) notes that some of the countries, e.g. Republic of Korea and India, have already made commitments (not reflected in the data) to further liberalization of non-tariff measures affecting their imports.

Table II.5. Applied tariffs on industrial products. Duty free-lines, simple averages, standard deviation and tariff peaks.[a]

Import markets	Total number of tariff lines	Number of applied duty-free tariff lines	Simple average applied tariff	Standard deviation	Share of tariff lines with applied duties over three times the average	Share of tariff lines with applied duties above 15%
North America						
Canada	6708	3097	4.8	6.0	11.1	10.5
United States	8420	3128	4.3	5.4	7.2	4.3
Latin America						
Argentina	8350	349	13.7	6.9	0.0	44.4
Chile	5086	49	10.9	1.1	0.0	0.0
Colombia	6145	426	11.2	6.3	0.2	20.7
Costa Rica	6445	2045	6.4	7.3	0.8	19.1
Mexico	10196	1528	12.6	7.8	0.0	20.2
Western Europe						
European Union	8255	983	4.6	4.3	3.0	1.7
Iceland	6045	4459	2.5	4.6	17.2	0.0
Norway	5628	3687	3.3	5.6	14.2	7.7
Switzerland	6107	528	...[a]	...[a]	...[a]	...[a]
Eastern Europe						
Czech Republic	8413	1213	4.8	3.6	1.7	1.2
Hungary	10788	901	8.2	5.6	2.1	6.3
Slovak Republic	8411	1131	4.9	3.7	1.4	1.4
Asia						
Australia	5163	1873	5.8	7.6	11.9	11.9
Hong Kong, China	5490	5490	0.0	0.0	0.0	0.0
Japan	7290	3072	4.2	5.2	7.0	3.3
Korea, Republic of	9460	223	7.9	3.1	0.1	2.6
Macau, China	5179	5179	0.0	0.0	0.0	0.0
Philippines	4491	9	9.5	8.2	0.6	22.2
Singapore	4977	4977	0.0	0.0	0.0	0.0
Africa						
Cameroon	4721	4721	17.6	9.4	0.0	45.7
Chad	4721	4721	17.6	10.0	0.4	45.8
Gabon	4721	4721	17.6	4.8	1.1	1.3

[a] Data are for 1996, 1997, 1998 or 1999, depending on the economy.

Source: WTO, Integrated Data Base.

Table II.6. Frequency of core non-tariff barriers of selected countries[a]

(Percentage of tariff lines affected)

(a) Developed countries			(b) Developing countries		
	1993	1996		1989-1994	1995-1998
Australia	0.7	0.7	Argentina	3.1	2.1
Canada	8.3	7.3	Brazil	16.5	21.6
European Union	22.1	13.0	Chile	5.2	5.2
Iceland	3.0	0.5	Colombia	55.2	10.3
Japan	11.4	9.9	Hong Kong, China	2.1	2.1
Mexico	2.0	14.1	India	99	93.8
New Zealand	0.4	0.8	Indonesia	53.6	31.3
Norway	5.9	2.6	Korea, Rep. of	50.0	25.0
Switzerland	3.6	0.2	Malaysia	56.3	19.6
Turkey	0.4	0.6	Morocco	58.3	13.4
United States	23.0	16.7	Nigeria	14.4	11.5
			Singapore	1.0	2.1
			South Africa	36.5	8.3
			Thailand	36.5	17.5
			Uruguay	32.3	0.0

a The definition of core non-tariff barriers used in Michalopoulos (1999) is similar to the une used in OECD (1997). The main difference is that Michalopoulos does not include anti-dumping measures and countervailing actions.

Sources: (a), OECD (1997); (b), Michalopoulos (1999).

als. His data also show that, of those NTBs which remain in use, non-automatic licensing is by far the most prevalent in developing countries, with prohibitions of various kinds ranking second.[40]

2. Textiles and clothing: dismantling the MFA

For more than 30 years, an important part of world trade in textiles and clothing was governed by special regimes which provided for waivers from GATT rules. The Uruguay Round's Agreement on Textiles and Clothing (ATC), however, requires that this sector be fully integrated into WTO rules by 31 December 2004. This will involve the elimination of the network of bilateral quotas maintained by Canada, the European Union, Norway and the United States on trade with up to 30 developing countries and countries in transition. This is being achieved through a process of product integration, whereby textile and clothing products are progressively removed from the ATC and brought fully under WTO rules, with the quotas, in consequence, being eliminated.

The transition involves a ten-year, three-stage programme. At the outset in 1995, Members brought products representing not less than 16% of their total imports of textile and clothing products (by volume) fully under WTO rules. In 1998, a further 17% was integrated. In 2002, a further 18% will be integrated. At the end of the decade-long transition on 31 December 2004, the final amount, up to 49% will be integrated and the ATC will be terminated.

At each stage the quotas must be eliminated for those products being integrated. Also at each stage, the growth rates applicable to the remaining quotas are to be increased by a pre-set factor and applied annually (i.e. the growth rates applicable under the former MFA, advanced by a factor of 16% in 1995; further advanced by 25% in 1998; and yet further advanced by 27% in 2002), causing the remaining quotas to grow at an increasing rate during the three stages. The importing Member decides which products it will integrate at each stage to achieve the designated percentage thresholds. The only requirement is that the list of products at each stage in the integration process must include products from each of four groups; tops and yarns, fabrics, made-up textile products and clothing.

The ATC also provides for a special safeguard mechanism that Members can use during the transition period to deal with surges in imports of products not yet covered by WTO rules. This safeguard allows bilateral quotas for limited time periods under very specific rules and procedures. All actions taken under the Agreement are supervised by the Textiles Monitoring Body (TMB) to ensure that

40 Efforts were made to exclude from consideration in the calculations the large number of products which are subject to licensing to ensure public health, safety, environmental and other standards, as these are frequently justified by reference to GATT Article XX.

Table II.7. Pervasiveness of core non-tariff barriers affecting the manufacturing sector[a]

(Percentage of tariff lines affected)

	Australia	Canada	European Union	Iceland	Japan	Mexico
Food, beverages and tobacco	6.2	0.4	17.2	0.1	5.9	3.8
Textiles and apparel	0.0	42.9	75.2	0.0	31.9	65.9
Wood and wood products	0.0	3.2	0.0	0.0	0.0	0.0
Paper and paper products	0.0	0.4	0.7	0.0	0.0	0.0
Chemicals, petroleum products	0.8	0.6	2.9	0.0	0.9	2.4
Non-metallic mineral products	1.2	0.0	0.0	0.0	0.0	0.7
Basic metal industries	0.0	1.7	0.6	0.0	5.1	34.4
Fabricated metal products	0.3	2.2	0.0	2.9	0.0	9.0
Other manufacturing	0.0	0.9	0.0	1.0	0.0	30.5
Manufacturing	0.7	7.8	13.4	0.5	10.3	14.6

	New Zealand	Norway	Switzerland	Turkey	United States
Food, beverages and tobacco	0.6	0.0	1.0	0.0	2.8
Textiles and apparel	2.1	14.6	0.0	0.0	67.5
Wood and wood products	0.0	0.0	0.0	0.0	0.6
Paper and paper products	0.0	0.0	0.0	0.3	1.1
Chemicals, petroleum products	1.4	1.7	0.0	0.1	3.3
Non-metallic mineral products	0.7	0.0	0.0	12.4	3.6
Basic metal industries	0.0	0.0	0.0	0.1	30.4
Fabricated metal products	0.3	0.0	0.0	0.6	5.9
Other manufacturing	0.2	0.3	0.0	0.0	1.7
Manufacturing	0.8	3.0	0.2	0.7	17.9

[a] The definition of core NTBs used in OECD (1997) includes: export price restraints, variable charges, anti-dumping and countervailing actions, non-automatic licensing, export restraints and other quantitative restrictions.

Source: OECD (1997).

they are consistent with countries' obligations. The Committee on Trade in Goods (CTG) reviews the implementation of the ATC at the end of each stage.

When examining the potential trade effects of the first and second stages of integration, the TMB noted that, in terms of products integrated, the emphasis had been on the less value-added range of products. This was possible because the ATC defines the liberalization requirements in terms of the volume of trade rather than the value of trade.[41] As for the list of products to be liberalized, as set out in the Annex to the ATC, it covers all textile and clothing products subject to restraints in at least one importing Member on 31 December 1994. For individual Members, the product coverage in the Annex includes both products that were under restraints and products that were not subject to restraints in 1995. The TMB examination found that those Members which maintain quotas have included an important share of those "unrestrained" products in the first stages of integration and a very small percentage of restrained products. Norway is an exception, having unilaterally removed all quotas over four years using ATC Article 2.15, while not integrating the products involved.

It is apparent that the integration programmes of the major importing Members have begun the shift to WTO rules by focusing on the least sensitive textile and clothing products. Consequently, few quotas on products of export interest to developing countries have been removed. In later stages (2002 and 2005) more products will be integrated and ultimately all quotas will be removed. How-

[41] This choice of definition was probably based on the fact that existing quotas tend to be expressed in volumes and not values.

ever, most of the products of actual or potential importance to developing countries will remain under quota, though with increasing growth rates, up to the end of the transition period. Many developing-country Members are concerned about the implications of the failure to spread the removal of quotas on products of commercial interest to them over the total phase-out period, and the resulting "backloading" of the adjustment process in the importing countries to the end of the process.

It should be recalled that tariff reductions are not part of the ATC, and that tariffs on textiles and clothing products continue to be considerably higher than for other industrial products. Moreover, this gap has widened as a result of tariff reductions for textile and clothing products in the Uruguay Round that were only half those of other industrial products.[42] For the developed countries as a group, they average 12%, three times the average for all industrial products. Clearly there is considerable scope for tariff reductions in these two product groups in future negotiations.

3. Anti-dumping

As can be seen in Chart II.1, initiations of anti-dumping investigations have steadily and significantly increased since 1995, reaching an all time high of 340 in 1999. It is also evident that the number of investigations launched by developing and transition countries has followed the same rising path as the number of investigations initiated by developed countries.

Figures in Appendix Table II.7 reveal that while developed countries accounted for most of the initiations in the late 1980s, "new users" have played an increasingly important role in the 1990s.[43] Mexico, the Republic of Korea and Brazil began initiating investigations in the 1980s, followed by Argentina, India, and South Africa in the early 1990s. Turkey, Peru, the Philippines and Venezuela have also initiated an increasing number of investigations in recent years.

Table II.8 shows a breakdown of investigations initiated between 1995 and 1999 by both reporting and affected countries, classified by level of development. It shows that one half of all investigations initiated by developed countries between 1995 and 1999 were targeted at developing countries, while 25% were targeted at other developed countries and 25% at transition economies. Among the investigations initiated by developing countries during the same period, roughly an equal proportion were targeted on each of the three groups of countries.

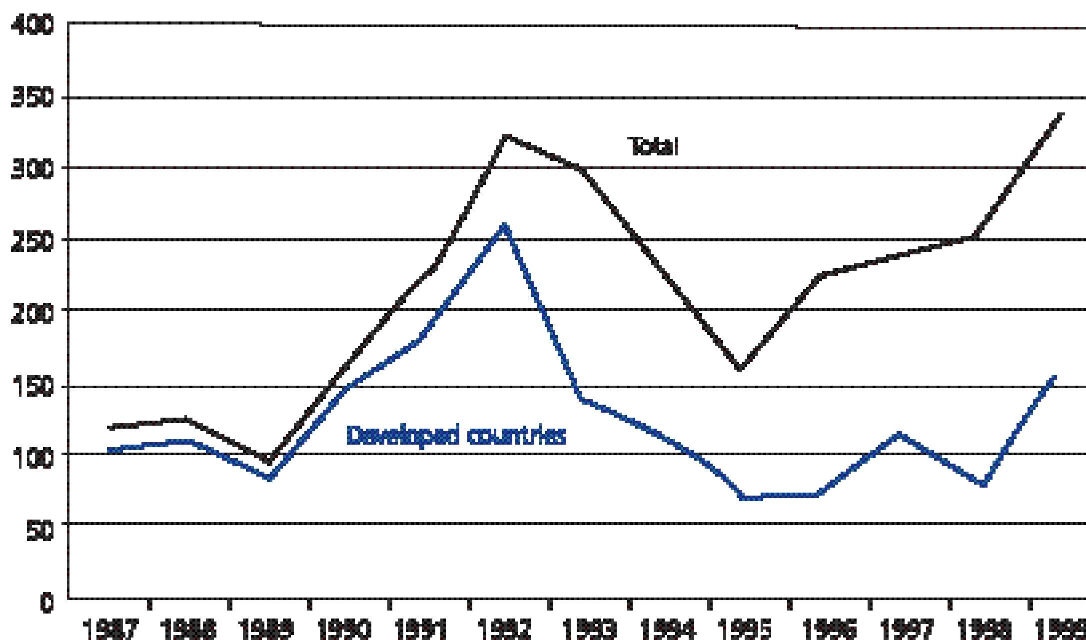
Finally, as the breakdown by sector provided in Appendix Table II.9 shows, base metals clearly stand out as the sector in which anti-dumping investigations are most frequent for the 1987-99 period as a whole, with almost twice as many as for the chemicals sector which ranks second. The increase between 1998 and 1999, in contrast, was particularly sharp for chemicals, machinery and electrical equipment, and pulp and paper.

Given that the 1990s, in particular their second half, have been characterized by significant trade liberalization, this increase in the use of anti-dumping has revived the fear that contingent protection instruments could be used to restrict the effect of tariff reductions or other liberalization measures on market access.

[42] See Table II.3 in GATT(1994).

[43] Miranda et al. (1998) define "traditional" users of anti-dumping as those countries engaged in the conduct of investigations since at least the 1970s. Traditional users include Australia, Canada, the EC, New Zealand and the United States. "New" users include Mexico, Argentina, Brazil, South Africa, India and the Republic of Korea.

Chart II.1. Initiation of anti-dumping investigations, 1987-1999



Source: WTO secretariat

Table II.8. Initiation of anti-dumping investigations by level of development of reporting and affected economies, 1995-99

Initiating economies	**Affected economies**			
	Developed countries	Developing countries	Transition economies	Total
A. Number of investigations				
Developed countries	126	244	129	499
Developing countries	252	258	201	711
Transition economies	4	0	4	8
All members	**382**	**502**	**334**	**1218**
B. Distribution				
Developed countries	25	49	26	100
Developing countries	35	36	28	100
Transition economies	50	0	50	100
All members	**31**	**41**	**27**	**100**

Note: In this table China is classified as a transition economy and Turkey is included with developing economies.
Source: WTO Secretariat, Rules Division Anti-dumping Measures Database.

Technical note to section II

1. Sources of industrial tariff data

a. MFN bound duties

The information on bound duties for all countries—except Cameroon, Chad and Gabon—shown in Tables II.1 to II.7, as well as in Appendix Tables II.1 to II.6 has been extracted from the Multilateral Trade Negotiations (MTN) Files of the Uruguay Round which are part of the WTO Integrated Data Base (IDB).

The MTN Files contain data at the tariff-line level on pre- and post-Uruguay Round commitments. The base year for the data on tariffs is 1986, except for countries which acceded to the GATT during the course of the Uruguay Round. The post-Uruguay Round duty rates are those that will apply after the final stage of implementation. Exceptions to the general rule for the implementation of the Uruguay Round concessions are noted in each country's Schedule, annexed to the Marrakesh Protocol to the GATT 1994. The files, as submitted for the Uruguay Round evaluation, were revised in July 1997 to include corrections as well as the Rectifications to the Uruguay Round Schedules.

As is customary, products for which no concessions were made have been included in the statistics on bound rates. For these products the post-Uruguay Round duties have been taken as equal to the base duty.[44]

The following table indicates the nomenclature and the relevant base year for the 40 participants (the 12 Member States of the European Union being counted as one) in our sample.

For Cameroon, Chad and Gabon, the bound duties have been extracted from their Schedules of Concessions as published in the Marrakesh Agreement.[45] For unbound items the applied duties of the most recent tariff available have been used.

Table 1. Bound tariffs. Base year and nomenclature of MTN files

	Year	Nomenclature		Year	Nomenclature
Argentina	1986	CCCN	Mexico	1988	HS
Australia	1988	HS	New Zealand	1991	HS
Brazil	1989	HS	Norway	1988	HS
Canada	1988	HS	Peru	1986	CCCN
Chile	1986	CCCN	Philippines	1991	HS
Colombia	1991	HS	Poland	1989	HS
Costa Rica	1988	CCCN	Romania	1991	HS
Czech Republic	1990	HS	Senegal	1989	CCCN
El Salvador	1995	HS	Singapore	1989	HS
EU	1988	HS	Slovak Rep.	1990	HS
Hong Kong, China	1992	HS	South Africa	1988	HS
Hungary	1991	HS	Sri Lanka.	1991	HS
Iceland	1988	HS	Switzerland	1988	HS
India	1988	HS	Thailand	1988	HS
Indonesia	1989	HS	Tunisia	1989	HS
Jamaica	1991	HS	Turkey	1989	HS
Japan	1988	HS	United States	1989	HS
Korea, Rep. of	1988	HS	Venezuela	1990	HS
Macau, China	1991	HS	Zimbabwe	1987	CCCN
Malaysia	1988	HS			

Source: Government submissions to IDB, for MTN Uruguay Round evaluations.

[44] The base duties for the industrial sector were the existing bound duties, and, for unbound duties, the duties normally applied in September 1986. For many countries the tariff information recorded in the files refers to the year 1987 or to more recent years, i.e. one to five years after the date to which the base rates generally refer. Changes in the nomenclatures made after September 1986 often imply that several duties had to be attached to one tariff item. This problem is, of course, more acute for countries that have implemented the HS. For countries that have specified the level of unbound duties as of September 1986, the Secretariat recorded the information as submitted. For countries that did not specify the unbound duties as of September 1986, the Secretariat recorded unbound base duties for the year to which refer the import statistics, thus the year in the list.

[45] This information has been converted from the HS 92 nomenclature into the HS 96 following the national nomenclature of each of the three countries.

b. MFN applied duties

Applied duties are MFN current applied duties, submitted by Members to the IDB, starting in 1996.

2. Definition of MTN categories

See Table 4

3. Information concerning the sample countries

See Table 5

Table 2. Base year and nomenclature of concession schedules of Cameroon, Chad and Gabon

	Loose-leaf schedules	**National customs tariffs**	
	Nomenclature	**Year**	**Nomenclature**
Cameroon	HS 92	1999	HS 96
Chad	HS 92	1999	HS 96
Gabon	HS 92	1999	HS 96

Source: Loose-leaf Schedules on Goods (LLS) and national customs tariffs.

Table 3. Applied tariffs. Reference year for current applied MFN duties

Canada	1998	Czech Republic	1998
United States	1999	Hungary	1996
Argentina	1998	Slovak Republic	1998
Chile	1997	Australia	1998
Colombia	1998	Hong Kong, China	1998
Costa Rica	1998	Japan	1998
Mexico	1998	Korea, Republic of	1998
Peru	1998	Macau, China	1997
European Union	1998	Philippines	1998
Iceland	1998	Singapore	1996
Norway	1998	Cameroon	1999
Switzerland	1998	Chad	1999
Turkey	1996	Gabon	1999

Source: WTO, Integrated Data Base.

Table 4. Definition of multilateral trade negotiations (MTN) industrial product categories

Category		Harmonized system nomenclature HS 1996
Number	Description	
01	Wood, pulp, paper and furniture	Ch. 44, 45, 47, 4801-14, 4816-23, Ch. 49, 9401-04.
02	Textiles and clothing	3005, 3306, 3921, 4202, Ch. 50-63 (except 5001-03, 5101-03, 5201-02, 5301- 02), 6405-06, 6501-05, 6601, 7019, 8708, 8804, 9113, 9502, 9612.
03	Leather, rubber, footwear and travel goods	Ch. 40, 41 (except 4101-03), 4201, 4203- 05, Ch. 43 (except 4301), Ch. 64, 9605.
04	Metals	2601-17, 2620, Ch. 72, 7301-20,7323-26, Ch. 74-76, 78-82, 8301-03, 8306-11 .
05	Chemicals and photographic supplies	2705, Ch. 28-30 (except 3005), Ch. 32- 33 (except 3301 and 3306), 3401-02, 3404-05, 3407, 3506-07, 3601-04 and Ch. 37-39 (except 3823 and 3921).
06	Transport equipment	8601-07, 8609, 8701-07, 8711-14, 8716, 8801-03, 8901-08.
07	Non-electric machinery	7321-22, Ch. 84, 8608, 8709.
08	Electric machinery	8501-18 and 8525-48.
09	Mineral products and precious stones and precious metals	Ch. 25, 2618-19, 2621, 2701-04, 2706- 08, 2711-15, Ch. 31, 3403, 6801-06, 6808- 15, Ch. 69-71 (except 7019).
10	Manufactured articles not elsewhere specified	2716, 3406, 3605-06, 4206, 4601-02, 4815, 6506-07, 6602-03, 6701-04, 6807, 8304-05, 8519-24, 8710, 8715, 8805, Ch. 90, 9101-12, 9114, Ch. 92-93, 9405-06 and Ch. 95-97 (except 9502, 9605 and 9612).
11	Fish and fish products	Ch. 03, 0509, 1504, 1603-05, 2301.
97	Petroleum	2709-10.

Table 5. Share in regional imports of industrial products,[a] 1997

(Million dollars and percentages)

Import Countries	Value	Share in regional imports
North America	**887.8**	**100.0**
Total sample	**887.8**	**100.0**
Canada	167.2	**18.8**
United States	720.6	**81.2**
Latin America	**239.3**	**100.0**
Total sample	**221.8**	**92.7**
Argentina	27.3	11.4
Brazil	49.9	20.9
Costa Rica[b]	0.0	0.0
El Salvador	2.0	0.8
Chile	14.6	6.1
Colombia	12.5	5.2
Jamaica	2.1	0.9
Mexico	96.1	40.2
Peru	6.3	2.6
Venezuela	11.0	4.6
Western Europe	**1708.6**	**100.0**
Total sample	**1708.6**	**100.0**
European Union	1552.7	90.9
Iceland	1.6	0.1
Norway	31.0	1.8
Switzerland	66.3	3.9
Turkey	37.3	2.2
Eastern Europe[c]	**89.1**	**100.0**
Total sample	**89.1**	**100.0**
Czech Republic	22.4	25.1
Hungary	17.5	19.7
Poland	33.9	38.1
Romania	8.0	9.0
Slovak Republic	7.2	8.1
Africa	**83.8**	**100.0**
Total sample	**30.1**	**36.0**
Cameroon	0.8	1.0
Gabon	0.7	0.8
Senegal	n.a.	n.a.
South Africa	20.0	23.9
Tunisia	6.2	7.4
Zimbabwe	2.4	2.9
Asia	**958.8**	**100.0**
Total sample	**864.4**	**90.1**
Australia	53.4	5.6
Honk Kong, China	189.0	19.7
India	23.2	2.4
Indonesia	31.9	3.3
Japan	203.2	21.2
Korea, Republic of	96.3	10.0
Macau, China	1.6	0.2
Malaysia	67.7	7.1
New Zealand	12.3	1.3
Philippines	24.4	2.5
Singapore	111.3	11.6
Sri Lanka	n.a.	n.a.
Thailand	50.2	5.2

a Excluding petroleum.
b 1996 data.
c Excluding Bulgaria.
Source: WTO Secretariat

Appendix to Section II

Appendix Table II.1. Bound tariffs on industrial products. Scope of bindings by country and MTN category

Imports markets	1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
North America											
Canada	100.0	100.0	100.0	100.0	100.0	93.7	100.0	100.0	98.2	100.0	100.0
United States	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Latin America											
Argentina	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Brazil	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Chile	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Colombia	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Costa Rica	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
El Salvador	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Jamaica	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mexico	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Peru	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Venezuela	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Western Europe											
European Union	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Iceland	95.0	93.1	93.8	99.6	99.0	29.7	96.6	93.8	91.7	94.5	97.5
Norway	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Switzerland	100.0	100.0	100.0	100.0	95.2	100.0	100.0	100.0	93.0	100.0	100.0
Turkey	33.7	11.3	29.8	18.5	56.1	61.2	60.2	57.6	24.3	41.1	13.1
Eastern Europe											
Czech Republic	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Hungary	99.5	98.7	100.0	100.0	96.2	72.5	98.6	90.8	97.6	95.4	38.3
Poland	100.0	99.4	100.0	100.0	99.6	57.4	99.4	100.0	99.4	95.7	4.7
Romania	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Slovak Republic	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Appendix Table II.1 *(cont'd.)*

Imports markets	1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photographic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
Asia/Pacific											
Hong Kong, China	93.2	2.4	24.0	54.2	5.8	5.1	16.8	4.2	39.7	20.9	100.0
India	61.5	26.0	48.6	56.5	88.8	70.5	92.4	87.3	71.6	39.3	13.1
Indonesia	98.8	99.6	99.3	93.7	96.7	32.8	92.5	91.6	97.0	81.9	100.0
Japan	92.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	87.0
Korea, Rep. of	92.2	99.7	82.3	99.3	95.5	62.7	94.6	64.4	92.0	95.3	35.8
Macau, China	9.1	1.7	56.0	17.3	0.0	0.0	0.0	1.4	4.7	20.3	100.0
Malaysia	20.0	94.8	87.0	49.8	72.9	39.5	89.0	77.5	65.1	84.0	43.0
New Zealand	100.0	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Philippines	45.9	97.1	39.9	28.4	68.4	34.9	71.6	60.3	36.7	53.9	4.7
Singapore	96.0	78.0	33.5	64.1	98.7	11.6	62.0	53.2	14.6	27.2	98.5
Sri Lanka	9.1	0.4	6.1	4.6	4.5	4.0	13.1	11.6	7.7	17.9	95.7
Thailand	85.9	94.4	45.6	54.3	54.6	24.3	88.2	57.0	43.8	68.7	92.3
Africa											
Cameroon	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chad	0.0	0.0	0.0	0.0	0.0	11.2	0.0	0.0	0.0	0.0	0.0
Senegal	17.0	35.6	25.8	1.0	3.0	72.5	85.2	97.5	5.9	1.8	43.9
South Africa	99.2	99.8	97.7	99.8	99.7	99.7	100.0	99.6	93.9	97.9	15.6
Tunisia	35.2	93.3	40.0	25.4	37.7	48.8	52.2	45.2	10.7	43.9	4.2
Zimbabwe	13.3	6.8	20.0	5.6	6.1	19.2	20.2	1.0	2.7	7.0	33.3
Average Share*	**77.4**	**78.3**	**75.7**	**74.3**	**77.0**	**68.8**	**80.8**	**77.4**	**72.3**	**74.7**	73.0

*Average of the countries for each sector

Source: See technical note at the end of this chapter.

Appendix Table II.2. Bound tariffs on industrial products. Share of duty-free tariff lines by country and MTN category

(Percentage of total number of tariff lines in each category)

	1	2	3	4	5	6	7	8	9	10	11
Imports markets	Wood, pulp, paper and furniture	Textiles and clothing	Leather, rubber, footwear and travel goods	Metals	Chemicals and photo-graphic supplies	Transport equipment	Non-electric machinery	Electric machinery	Mineral products and precious stones and precious metals	Manufactured articles not elsewhere specified	Fish and fish products
North America											
Canada	79.6	6.5	22.5	41.7	26.6	26.3	43.5	22.8	53.0	34.4	65.1
United States	88.8	11.3	28.1	57.6	20.1	53.1	65.5	38.0	52.1	40.4	67.4
Latin America											
Brazil	1.5	0.0	0.0	0.0	0.4	0.0	0.3	2.3	0.8	0.2	2.8
Chile	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Mexico	1.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Venezuela	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Western Europe											
European Union	85.3	2.1	22.8	57.9	17.5	17.3	23.0	13.7	39.9	21.2	6.2
Iceland	35.6	35.3	24.9	51.1	72.1	27.9	47.9	18.1	45.7	12.0	71.0
Norway	85.1	12.8	66.8	73.4	51.6	33.7	29.1	27.3	86.8	29.5	92.0
Switzerland	24.0	1.4	9.6	14.5	26.6	10.2	26.3	19.9	19.0	16.1	66.4
Turkey	5.9	0.1	0.0	0.2	7.3	0.2	0.0	0.0	4.0	1.7	0.0
Eastern Europe											
Czech Republic	17.8	3.6	17.1	18.2	16.7	2.5	1.8	2.1	40.1	2.4	96.3
Hungary	21.3	6.8	3.1	14.7	18.8	2.1	0.7	2.8	22.6	5.8	5.5
Poland	3.6	1.2	3.6	3.1	0.6	2.5	0.0	0.0	11.4	1.7	1.9
Romania	3.6	0.0	6.0	6.3	1.1	8.3	13.5	19.9	1.2	9.5	0.0
Slovak Republic	17.8	3.6	17.1	18.2	16.7	2.5	1.8	2.1	40.1	2.4	96.3

Appendix Table II.2 *(cont'd.)*

Imports markets	1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
Asia/Pacific											
Australia	26.4	7.3	9.2	55.6	7.9	10.9	10.9	5.5	15.8	26.4	80.4
Hong Kong, China	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
India	1.6	0.7	0.0	3.8	2.8	0.0	0.0	0.0	1.5	1.7	0.0
Indonesia	0.0	0.3	0.0	0.4	0.4	15.3	0.8	0.3	0.7	3.4	0.0
Japan	77.3	2.8	32.0	71.6	33.8	100.0	100.0	96.0	72.3	76.3	3.5
Korea, Rep. of	54.2	0.8	0.0	30.0	6.6	12.7	15.1	7.9	0.7	11.6	0.0
Macau, China	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Malaysia	1.4	0.1	0.3	11.2	8.7	7.4	10.1	10.3	7.6	11.9	42.5
New Zealand	70.8	21.5	21.5	33.2	66.3	30.4	26.2	25.7	52.1	38.5	78.8
Singapore	69.1	22.1	66.5	67.7	19.5	76.8	57.3	50.6	85.4	87.4	2.2
Sri Lanka	8.8	0.1	1.9	0.0	1.1	13.8	0.0	0.0	8.0	2.1	0.0
Thailand	2.3	0.1	4.8	4.1	2.4	0.0	0.0	0.0	7.0	2.5	0.0
Africa											
Senegal	0.0	0.0	0.0	0.0	0.0	0.5	4.4	0.0	0.0	0.0	12.2
South Africa	11.2	1.2	1.5	2.0	5.1	7.5	22.9	3.6	30.7	17.9	54.4
Tunisia	3.2	0.0	0.0	0.0	0.3	1.2	0.0	0.0	5.9	2.1	0.0
Zimbabwe	48.9	22.9	15.4	42.0	71.4	47.9	65.7	38.6	61.7	35.7	77.8
Average Share*	**32.7**	**11.4**	**18.0**	**27.5**	**22.0**	**22.2**	**24.0**	**19.0**	**30.2**	**21.7**	**35.1**

*Average of the countries for each sector.

Source: WTO IDB, Loose Leaf Schedule and national custom tariffs. See Technical Note to this section for more details.

Appendix Table II.3. Bound tariffs on industrial products. Standard deviation of tariff rates by country and MTN category

Imports markets	1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
North America											
Canada	2.7	5.1	5.9	2.9	2.8	6.0	3.3	3.1	3.7	3.8	2.8
United States	1.9	6.6	13.0	2.6	2.3	5.1	1.8	2.2	5.1	5.5	4.4
Latin America											
Argentina	8.2	0.0	0.0	2.7	6.5	3.6	1.0	1.6	6.1	3.5	3.7
Brazil	9.0	1.2	1.9	4.5	6.7	3.9	5.0	6.5	5.7	4.4	6.4
Chile	0.0	0.0	0.0	0.0	0.0	1.5	0.1	0.0	1.3	0.5	0.0
Colombia	0.3	2.4	1.3	0.0	1.0	1.8	0.0	0.0	0.9	0.2	26.6
Costa Rica	6.3	3.0	6.6	3.8	5.8	16.8	4.1	4.8	3.5	2.6	4.2
El Salvador	9.5	5.0	11.6	8.7	6.4	10.3	9.6	8.8	6.4	5.8	8.2
Jamaica	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6
Mexico	5.8	1.6	2.0	3.3	2.6	7.2	3.3	3.7	4.6	2.7	1.9
Peru	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Venezuela	4.2	1.0	2.6	3.7	3.6	5.3	4.7	3.6	3.7	4.5	3.9
Western Europe											
European Union	1.8	3.2	5.0	2.2	2.4	5.1	1.4	2.8	2.8	2.0	6.3
Iceland	11.5	9.4	10.4	10.5	5.6	19.0	9.5	12.3	13.1	12.5	7.4
Norway	1.1	4.5	3.8	1.9	3.1	2.7	1.9	2.4	2.1	1.9	25.6
Switzerland	2.1	3.1	2.4	1.5	9.7	2.6	1.0	0.9	7.0	1.5	1.3
Turkey	25.1	37.2	49.8	16.2	34.1	19.1	16.1	15.7	32.9	33.5	15.4
Eastern Europe											
Czech Republic	4.2	3.4	3.3	2.3	2.1	4.3	1.5	1.9	4.1	2.8	1.1
Hungary	3.3	3.3	3.2	2.8	4.2	14.9	2.2	3.8	3.3	3.6	10.5
Poland	2.9	4.7	5.1	3.1	2.6	11.4	1.4	3.1	5.2	5.3	12.7
Romania	9.5	4.4	9.9	9.1	9.8	9.7	12.2	14.1	7.9	11.1	7.6
Slovak Republic	4.2	3.4	3.3	2.3	2.1	4.3	1.5	1.9	4.1	2.8	1.1

Appendix Table II.3 *(cont'd.)*

Imports markets	1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
Asia/Pacific											
Australia	5.6	17.8	13.4	6.9	3.6	13.8	7.8	6.2	7.1	7.5	2.0
Hong Kong, China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
India	31.0	33.8	33.3	34.9	18.5	36.1	22.8	21.0	22.5	30.9	23.9
Indonesia	2.0	2.5	3.1	7.8	6.8	54.8	7.0	5.8	4.2	9.5	0.0
Japan	2.3	2.7	20.1	1.6	1.9	0.0	0.0	0.9	1.7	2.1	3.6
Korea, Rep. of	7.2	9.4	9.7	6.8	4.6	25.0	5.9	7.5	6.3	6.3	5.5
Macau, China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malaysia	4.7	8.2	13.3	12.7	12.9	41.9	10.9	10.8	14.2	12.7	18.4
New Zealand	7.9	24.0	15.6	10.2	13.8	13.9	10.4	11.4	9.8	11.5	6.0
Philippines	12.4	6.8	14.0	11.3	9.7	14.6	8.4	11.5	16.2	15.7	16.1
Singapore	4.6	4.2	4.7	4.7	2.5	9.6	5.0	5.0	3.0	3.3	1.5
Sri Lanka	23.5	21.2	21.7	18.9	20.3	17.9	16.0	20.2	24.0	21.7	5.3
Thailand	10.7	5.8	14.3	10.7	6.1	26.3	6.4	6.0	12.5	9.5	12.2
Africa											
Cameroon	10.6	8.8	10.1	8.0	6.3	8.7	5.6	7.7	10.5	9.7	5.3
Chad	10.6	8.7	10.1	8.0	6.3	20.8	5.6	7.7	10.5	9.7	5.3
Gabon	4.8	1.5	0.0	2.6	2.6	0.0	2.1	0.0	7.1	12.1	0.0
Senegal	5.6	3.2	4.5	1.3	1.7	7.1	4.4	1.3	2.4	1.0	7.2
South Africa	7.3	10.0	7.1	6.4	5.9	17.2	8.9	6.7	10.4	9.8	9.5
Tunisia	12.0	9.9	10.0	8.9	7.6	10.4	7.2	7.0	12.7	11.0	15.0
Zimbabwe	13.6	13.2	11.9	11.4	9.6	11.9	9.9	12.1	12.5	12.4	6.4

Source: WTO IDB, Loose Leaf Schedule and national custom tariffs. See Technical Note to this section for more details.

Appendix Table II.4. Bound tariffs on industrial products. Tariff peaks (Share of tariff lines above 15% by country and MTN category)

(Percentage of total tariff lines in each category)

Imports markets	1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
North America											
Canada	0.5	30.6	17.1	0.0	0.0	7.9	0.0	0.0	1.1	1.6	0.0
United States	0.0	13.0	14.9	0.2	0.0	3.1	0.0	0.0	2.4	1.2	1.1
Latin America											
Argentina	92.3	100.0	100.0	100.0	100.0	98.6	100.0	100.0	100.0	99.9	98.5
Brazil	91.1	100.0	100.0	98.5	96.8	99.3	82.8	97.5	93.6	99.2	97.2
Chile	100.0	99.8	100.0	100.0	99.9	99.5	100.0	100.0	99.7	99.8	100.0
Colombia	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Costa Rica	99.2	100.0	100.0	100.0	99.4	100.0	100.0	100.0	100.0	100.0	100.0
El Salvador	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Jamaica	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mexico	96.0	99.8	100.0	99.3	99.8	96.2	100.0	99.4	97.4	99.6	100.0
Peru	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Venezuela	99.0	100.0	99.5	99.7	99.3	97.5	98.8	99.3	98.0	99.3	100.0
Western Europe											
European Union	0.0	0.0	11.2	0.0	0.0	3.9	0.0	0.0	0.0	0.1	21.8
Iceland	38.3	33.3	45.9	15.1	2.7	34.1	18.3	62.3	38.7	71.5	2.5
Norway	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
Switzerland	0.0	0.7	0.0	0.1	0.8	0.5	0.0	0.0	0.3	0.0	0.0
Turkey	81.6	94.5	88.5	78.5	50.6	77.1	68.1	62.7	72.5	72.5	99.0
Eastern Europe											
Czech Republic	2.4	0.9	0.0	0.0	0.0	12.3	0.0	0.0	2.4	1.0	0.0
Hungary	0.5	0.2	1.3	0.0	3.6	23.8	0.1	3.2	0.2	2.0	47.7
Poland	0.0	42.2	32.9	0.2	1.7	26.2	0.0	7.2	6.9	15.5	36.4
Romania	88.1	98.9	89.9	93.3	86.7	91.7	84.5	78.0	91.4	88.6	99.1
Slovak Republic	2.4	0.9	0.0	0.0	0.0	12.3	0.0	0.0	2.4	1.0	0.0

Appendix Table II.4 *(cont'd.)*

Imports markets	1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
Asia/Pacific											
Australia	1.0	73.3	37.2	4.2	0.2	14.8	8.4	20.2	5.7	4.4	0.0
Hong Kong, China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
India	98.4	99.3	99.3	95.9	97.1	95.1	98.8	100.0	94.9	98.3	100.0
Indonesia	100.0	99.7	99.3	95.3	97.0	82.4	97.0	97.2	99.1	93.8	100.0
Japan	0.0	0.3	39.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Korea, Rep. of	5.5	37.2	35.8	6.6	4.7	40.3	8.1	42.6	14.9	13.4	82.5
Macau, China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malaysia	92.2	80.4	53.3	35.8	43.8	58.5	27.1	36.8	31.7	31.9	29.0
New Zealand	16.7	53.4	50.7	38.8	21.7	53.7	57.6	59.8	22.0	35.0	9.6
Philippines	88.3	96.8	89.4	67.8	83.2	68.4	89.8	88.4	70.4	77.3	66.9
Singapore	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0
Sri Lanka	68.3	83.9	79.0	25.3	27.0	30.4	21.4	38.4	51.0	51.1	99.1
Thailand	68.8	93.0	94.7	82.0	96.0	72.9	98.9	97.6	68.3	88.6	31.0
Africa											
Cameroon	64.3	73.5	58.0	40.0	11.2	39.8	16.6	48.8	46.0	71.7	98.4
Chad	64.3	73.1	58.0	40.0	11.2	41.0	16.6	48.8	46.0	71.7	98.4
Gabon	1.2	0.1	0.0	0.8	0.3	0.0	0.9	0.0	2.5	7.8	0.0
Senegal	100.0	98.5	90.6	99.7	100.0	69.2	18.1	2.5	97.8	99.1	65.9
South Africa	17.9	97.1	70.5	23.3	23.3	43.4	20.8	40.0	25.4	42.0	45.0
Tunisia	96.8	100.0	100.0	100.0	99.0	88.9	100.0	100.0	92.8	97.9	100.0
Zimbabwe	46.7	76.8	47.7	30.2	26.4	38.4	25.8	59.4	36.6	63.7	11.1

Source: WTO IDB, Loose Leaf Schedule and national custom tariffs. See Technical Note to this section for more details.

Appendix Table II.5. Bound tariffs on industrial products. Simple average by stage of processing and by MTN category

Imports markets		1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
North America												
Canada	Raw materials	0.2	2.5	0.3	0.1					2.7		0.6
	Semi-manufactures	0.9	11.1	5.7	1.7	4.7				1.0		0.3
	Finished products	1.9	14.5	10.3	5.2	3.9	6.8	3.6	5.2	4.4	4.2	4.6
United States	Raw materials	0.0	2.8	0.0	0.8					0.6		0.7
	Semi-manufactures	0.7	9.1	2.3	1.1	4.1				1.3		1.7
	Finished products	0.7	9.1	11.7	2.9	2.3	2.7	1.2	2.1	5.3	3.0	4.0
Latin America												
Brazil	Raw materials	20.2	35.0	34.3	35.0					34.3		35.0
	Semi-manufactures	25.8	34.8	34.4	33.3	21.6				29.4		25.6
	Finished products	31.1	34.9	35.0	33.4	26.2	33.6	32.6	31.9	34.8	33.5	34.5
Chile	Raw materials	25.0	25.0	25.0	25.0					24.8		25.0
	Semi-manufactures	25.0	25.0	25.0	25.0	25.0				25.0		25.0
	Finished products	25.0	25.0	25.0	25.0	25.0	24.9	25.0	25.0	25.0	25.0	25.0
Colombia	Raw materials	35.0	35.3	34.6	35.0					35.1		35.0
	Semi-manufactures	35.0	35.0	35.0	35.0	35.0				35.0		35.0
	Finished products	35.0	38.8	35.5	35.0	35.0	35.8	35.0	35.0	35.1	35.0	63.8
El Salvador	Raw materials	36.4	40.0	40.0	26.3					39.1		42.4
	Semi-manufactures	30.0	37.1	38.5	32.8	38.0				32.6		48.3
	Finished products	39.7	40.0	42.4	39.9	36.7	35.8	32.6	34.6	39.2	38.2	55.2
Jamaica	Raw materials	50.0	50.0	50.0	50.0					50.0		50.0
	Semi-manufactures	50.0	50.0	50.0	50.0	50.0				50.0		50.0
	Finished products	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	52.4
Mexico	Raw materials	30.1	34.2	34.8	34.1					33.7		35.0
	Semi-manufactures	34.1	35.1	34.7	34.4	35.1				33.6		33.0
	Finished products	34.6	35.0	34.9	35.0	35.4	35.8	35.0	34.1	35.0	34.6	36.0
Venezuela	Raw materials	31.8	34.7	34.9	35.0					33.8		33.4
	Semi-manufactures	32.8	35.0	33.9	32.8	34.0				33.8		34.8
	Finished products	34.6	34.9	34.6	34.4	34.3	33.6	33.2	33.9	34.6	33.4	33.5
Western Europe												
European Union	Raw materials	0.0	2.6	0.1	0.0					0.4		11.2
	Semi-manufactures	1.0	6.6	2.4	1.2	5.2				2.4		13.3
	Finished products	0.5	9.7	7.0	2.8	3.4	4.7	1.8	3.3	3.7	2.7	14.1

Appendix Table II.5 *(cont'd.)*

Imports markets		1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
Iceland	Raw materials	1.9	1.1	0.3	1.6					2.3		1.5
	Semi-manufactures	6.1	3.4	8.4	2.1	1.2				5.5		0.0
	Finished products	18.1	18.2	19.1	15.3	6.5	17.1	7.0	19.4	20.9	21.9	10.4
Norway	Raw materials	0.0	0.1	0.0	0.0					0.2		0.0
	Semi-manufactures	0.2	7.8		0.3	3.0				0.0		0.0
	Finished products	0.6	9.5	4.4	2.5	2.9	3.3	2.7	2.7	1.3	2.2	30.9
Switzerland	Raw materials	1.2	1.6	0.1	0.0					1.7		0.3
	Semi-manufactures	2.9	3.9	0.8	1.1	1.5				1.5		0.2
	Finished products	1.7	5.5	3.2	1.3	1.2	2.2	0.6	0.7	1.4	1.3	1.1
Turkey	Raw materials	15.7	27.3	18.1	6.0					26.3		21.2
	Semi-manufactures	39.2	74.2	87.6	24.5	27.0				35.8		25.0
	Finished products	52.8	89.8	87.3	47.9	35.6	25.8	23.7	26.6	49.7	43.3	58.8
Eastern Europe												
Czech Republic	Raw materials	2.3	3.3	0.6	0.1					0.4		0.2
	Semi-manufactures	6.2	4.8	2.2	3.7	4.1				3.6		0.0
	Finished products	6.0	7.8	5.7	4.6	3.8	6.2	3.8	4.2	5.8	3.6	0.0
Hungary	Raw materials	1.6	3.1	4.6	1.4					3.2		13.9
	Semi-manufactures	5.4	7.1	6.9	3.9	5.0				4.6		22.9
	Finished products	6.6	9.6	7.2	8.0	7.2	15.9	8.4	9.5	6.6	7.8	23.6
Poland	Raw materials	3.1	5.7	7.4	2.5					2.8		14.3
	Semi-manufactures	9.0	10.1	11.2	10.2	8.6				6.3		10.8
	Finished products	8.8	16.7	13.6	10.5	9.1	16.1	8.9	9.7	10.5	11.6	27.9
Romania	Raw materials	34.0	33.4	35.0	35.0					30.4		27.1
	Semi-manufactures	30.5	32.5	30.3	32.5	31.2				35.0		28.3
	Finished products	31.3	33.1	29.7	30.0	28.7	32.1	29.5	27.3	32.0	29.3	31.8
Slovak Republic	Raw materials	2.3	3.3	0.6	0.1					0.4		0.2
	Semi-manufactures	6.2	4.8	2.2	3.7	4.1				3.6		0.0
	Finished products	6.0	7.8	5.7	4.6	3.8	6.2	3.8	4.2	5.8	3.6	0.0
Asia/Pacific												
Australia	Raw materials	0.3	1.5	4.2	0.6					2.4		0.4
	Semi-manufactures	7.0	22.9	11.5	0.8	9.8				6.0		0.0
	Finished products	8.9	35.7	22.0	11.8	7.6	15.1	9.1	13.3	11.1	7.0	3.2
Hong Kong,	Raw materials	0.0	0.0	0.0	0.0					0.0		0.0
China	Semi-manufactures	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0
	Finished products	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix Table II.5 *(cont'd.)*

Imports markets		1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
India	Raw materials	25.1	39.1	37.0	29.0					38.5		60.5
	Semi-manufactures	40.4	86.5	33.7	47.1	39.4				40.6		60.0
	Finished products	81.1	93.8	96.3	82.1	61.1	53.9	36.2	44.8	58.0	72.4	106.6
Indonesia	Raw materials	38.3	40.0	39.0	40.0					39.5		40.0
	Semi-manufactures	39.8	40.0	40.0	35.1	37.5				37.1		40.0
	Finished products	39.9	39.8	39.8	38.7	37.2	58.5	36.6	38.7	40.0	36.9	40.0
Japan	Raw materials	0.1	2.6	0.1	0.0					0.2		5.2
	Semi-manufactures	1.9	5.9	10.4	1.0	2.9				0.5		10.4
	Finished products	0.6	8.3	20.7	0.9	1.0	0.0	0.0	0.2	1.8	1.1	7.9
Korea, Rep. of	Raw materials	2.1	8.1	9.4	1.2					5.6		17.8
	Semi-manufactures	7.1	14.0	11.1	4.5	6.0				8.6		20.0
	Finished products	3.6	24.5	19.8	13.2	8.2	24.6	11.1	16.1	14.9	11.4	22.5
Macau, China	Raw materials	0.0	0.0	0.0	0.0					0.0		0.0
	Semi-manufactures	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0
	Finished products	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malaysia	Raw materials	19.7	5.2	10.2	5.8					5.4		9.8
	Semi-manufactures	19.7	19.6	21.1	12.0	14.7				13.3		20.4
	Finished products	20.5	23.5	24.4	19.5	16.8	29.8	10.9	14.1	21.4	12.6	22.9
New Zealand	Raw materials	0.0	0.0	5.9	0.0					2.1		1.1
	Semi-manufactures	4.6	9.2	14.8	9.4	4.1				1.6		0.0
	Finished products	5.6	34.4	23.1	15.2	11.4	17.0	15.1	16.1	13.1	11.7	6.6
Philippines	Raw materials	13.7	14.4	20.6	10.6					17.8		24.9
	Semi-manufactures	32.5	25.7	27.1	18.8	20.8				30.3		50.0
	Finished products	37.2	31.2	40.3	33.6	28.4	26.1	22.0	26.2	35.6	29.5	41.9
Sri Lanka	Raw materials	13.1	22.6	29.6	5.0					18.9		50.1
	Semi-manufactures	31.9	40.2	43.8	9.1	11.3				11.9		50.0
	Finished products	41.9	56.7	47.8	31.4	28.4	18.3	12.8	20.4	39.0	27.1	45.8
Singapore	Raw materials	4.2	6.8	6.3	0.0					0.3		10.0
	Semi-manufactures	4.2	5.1	1.2	4.1	5.2				2.2		10.0
	Finished products	1.8	9.6	3.0	2.1	4.6	4.4	4.3	4.9	1.4	1.2	8.8
Thailand	Raw materials	8.3	29.3	28.6	28.8					17.4		8.8
	Semi-manufactures	22.3	27.6	34.7	21.4	29.7				27.9		6.9
	Finished products	24.8	30.4	35.8	31.9	28.1	38.5	23.4	30.5	33.0	29.5	27.0

Appendix Table II.5. *(cont'd.)*

Imports markets		1 Wood, pulp, paper and furniture	2 Textiles and clothing	3 Leather, rubber, footwear and travel goods	4 Metals	5 Chemicals and photo-graphic supplies	6 Transport equipment	7 Non-electric machinery	8 Electric machinery	9 Mineral products and precious stones and precious metals	10 Manufactured articles not elsewhere specified	11 Fish and fish products
Africa												
Cameroon	Raw materials	24.1	12.6	10.0	10.0					12.6		24.3
	Semi-manufactures	20.6	18.8	17.8	13.2	10.3				17.5		20.0
	Finished products	21.9	27.7	25.9	20.9	15.6	14.9	12.2	16.8	23.7	22.9	27.6
Chad	Raw materials	24.1	11.6	10.0	10.0					12.6		24.3
	Semi-manufactures	20.6	18.6	17.8	13.2	10.3				17.5		20.0
	Finished products	21.9	27.7	25.9	20.9	15.6	20.2	12.2	16.8	23.7	22.9	27.6
Gabon	Raw materials	15.0	15.0	15.0	15.0					15.0		15.0
	Semi-manufactures	15.0	15.0	15.0	15.0	15.1				16.6		15.0
	Finished products	16.5	15.1	15.0	15.6	15.2	15.0	15.2	15.0	16.8	18.5	15.0
South Africa	Raw materials	1.2	12.5	12.7	0.0					4.3		22.7
	Semi-manufactures	6.7	23.9	16.3	10.8	13.0				6.7		25.0
	Finished products	15.5	36.6	27.0	20.0	16.7	23.3	12.0	17.4	16.8	14.8	21.4
Tunisia	Raw materials	18.2	55.5	25.2	17.0					20.4		39.4
	Semi-manufactures	36.2	55.2	35.4	22.6	24.9				26.9		43.0
	Finished products	36.9	57.3	39.1	32.0	30.7	25.5	25.2	29.1	35.3	32.5	47.0

Source: WTO IDB, Loose Leaf Schedule and national custom tariffs. See Technical Note to this section for more details.

Appendix Table II.6. Difference between simple average bound tariffs and simple average applied tariffs for industrial products by MTN category

	1	2	3	4	5	6	7	8	9	10	11
Imports markets	Wood, pulp, paper and furniture	Textiles and clothing	Leather, rubber, footwear and travel goods	Metals	Chemicals and photo-graphic supplies	Transport equipment	Non-electric machinery	Electric machinery	Mineral products and precious stones and precious metals	Manufactured articles not elsewhere specified	Fish and fish products
North America											
Canada	-1.3	0.7	0.7	-0.2	0.8	1.4	1.8	2.5	1.0	1.2	0.2
United States	-0.6	-1.0	1.9	-0.9	-0.5	0.0	-0.2	-0.1	-0.2	0.7	0.0
Latin America											
Argentina	14.7	14.5	17.9	19.1	13.0	17.8	22.1	20.4	22.4	16.9	21.6
Chile	14.2	14.0	14.0	14.0	14.0	14.6	14.2	14.7	13.9	14.0	14.0
Colombia	22.2	18.6	22.5	25.0	27.7	22.5	25.8	24.9	25.0	24.3	29.4
Costa Rica	36.8	31.6	36.1	40.9	40.9	38.5	41.4	39.4	38.1	37.0	34.7
Mexico	22.2	13.3	16.7	22.2	26.2	22.0	24.9	21.2	22.6	21.3	16.2
Western Europe											
European Union	-2.2	-1.1	-0.1	-1.2	0.0	0.0	0.1	0.3	0.1	0.1	-0.3
Iceland	9.3	5.2	7.2	5.7	1.4	15.9	6.1	17.1	9.5	17.5	1.9
Norway	0.1	-2.5	-0.7	-0.2	-0.6	3.0	2.2	0.8	0.1	0.0	7.3
Switzerland	2.1	4.6	2.0	1.1	1.5	2.2	0.6	0.7	1.5	1.3	0.5
Turkey	36.2	70.3	69.8	25.1	23.6	18.5	20.9	22.0	36.1	39.4	-23.7
Eastern Europe											
Poland	8.0	13.1	11.9	9.9	8.7	16.1	8.9	9.7	6.9	11.6	16.3
Romania	31.4	32.9	30.7	31.7	30.6	32.1	29.5	27.3	32.2	29.3	28.1
Slovak Republic	-0.4	-1.3	-1.2	-0.8	-0.3	-1.1	-0.5	-0.2	-1.3	-0.5	0.1
Asia/Pacific											
Australia	3.3	13.4	9.6	0.8	6.9	9.7	5.3	8.5	4.7	4.4	0.8
Hong Kong, China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Japan	-1.1	-2.0	3.5	-1.1	-0.2	0.0	0.0	-0.1	-0.1	-0.2	-0.1
Korea, Republic of	-1.3	8.4	7.9	1.0	-0.8	18.6	3.7	8.7	4.4	3.9	2.2
Macau, China	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Philippines	19.9	10.3	20.9	14.2	17.5	13.8	17.3	18.9	20.5	20.5	17.4
Singapore	3.1	7.8	3.4	3.2	5.0	4.4	4.3	4.9	1.2	1.2	9.8
Africa											
Cameroon	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chad	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gabon	0.0	-7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total average*	**6.9**	**8.4**	**9.6**	**6.8**	**7.0**	**8.4**	**7.9**	**8.5**	**7.9**	**8.2**	**5.38**

*Average of the countries for each sector.

Source: WTO, Integrated Data Base.

Appendix Table II.7. List of participants in the ITA

Members of the WTO

Australia	Israel	Panama
Canada	Japan	Philippines
Costa Rica	Jordan	Poland[a]
Czech Republic[a]	Latvia	Romania[b]
El Salvador	Korea, Rep. of	Singapore
Estonia	Kyrgyz Republic	Slovak Republic[a]
European Union	Macau, China	Switzerland[b]
Hong Kong, China	Malaysia[a]	Thailand[a]
Iceland	Mauritius	Turkey
India	New Zealand	United States
Indonesia	Norway	

States or separate customs territories in the process of accession

Albania	Chinese Taipei	Lithuania
Croatia	Georgia	

a First rate reduction occurred on 1 January 1998.

b First rate reduction occurred on 31 December 1997.

Note: Cut-off date: 1 June 2000.

Appendix Table II.8. Initiation of anti-dumping investigations by reporting Member, 1987-1999

Reporting country	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total 1987-99	Percentage of investigations
United States	15	40	24	34	63	82	32	48	14	22	15	36	45	470	16.7
European Union	28	27	18	48	29	42	21	43	33	25	41	22	66	443	15.8
Australia	22	16	21	47	68	71	59	15	5	17	42	13	23	419	14.9
Canada	31	15	13	15	11	46	25	2	11	5	14	8	18	214	7.6
Mexico	18	11	7	11	9	26	71	22	4	4	6	12	11	212	7.5
Argentina					1	14	28	17	27	22	15	8	24	156	5.5
India						8		7	6	21	13	33	67	155	5.5
South Africa								16	16	33	23	41	16	145	5.2
Brazil		1	1	2	7	9	34	15	5	18	11	18	16	137	4.9
New Zealand		9	1	1	9	14		6	10	4	5	1	4	64	2.3
Korea, Rep. of	1		1	5		5	5	4	4	13	15	3	6	62	2.2
Turkey							7	21			4	1	6	39	1.4
Venezuela							3		3	2	6	8	7	29	1.0
Colombia					2	3	6	3	4	1	1	6	2	28	1.0
Poland					24						1		3	28	1.0
Peru								3	2	7	2	3	8	25	0.9
Israel							1	2	5	6	3	7		24	0.9
Indonesia										11	5	8		24	0.9
Egypt											7	9	5	21	0.7
Philippines							1	7		1	2	3	6	20	0.7
Malaysia									3	2	8	1	2	16	0.6
Finland	5	5	2		1			-	-	-	-	-	-	13	0.5
Sweden			8	2	1			-	-	-	-	-	-	11	0.4
Chile							1	1	4	3		2		11	0.4
Austria						5	4	-	-	-	-	-	-	9	0.3
Trinidad and Tobago										1		4	3	8	0.3
Thailand							3			1	3			7	0.2
Costa Rica										4	1	1		6	0.2

Appendix Table II.8 *(cont'd.)*

Reporting country	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total 1987-99	Percentage of investigations
Japan					3			1						4	0.1
Czech Republic												2	1	3	0.1
Nicaragua												2		2	0.1
Panama												2		2	0.1
Singapore								2						2	0.1
Ecuador												1		1	0.0
Guatemala										1				1	0.0
Slovenia													1	1	0.0
Total	120	124	96	165	228	325	301	235	156	224	243	255	340	2812	100.0

[a] Percentages are based on data in WTO (2000). Note that imports from Austria, Finland and Sweden are included in the EU in this column, whereas the number of investigations are listed separately for them.

Source: WTO Secretariat, Rules Division Anti-dumping Measures Database, May 2000.

Appendix Table II.9. Initiation of anti-dumping investigations by sector, 1987-1999

HS Section	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total 1987-99	Percentage
Base metals	20	22	6	42	36	135	78	83	41	39	62	103	107	774	27.5
Chemicals	32	16	19	35	27	52	64	34	31	38	22	26	68	464	16.5
Machinery and electrical equipment	24	37	18	20	41	28	20	13	26	34	34	10	25	330	11.7
Plastics	6	13	13	27	28	40	21	19	19	25	36	30	38	315	11.2
Textiles	6	2	12	17	8	11	30	34	1	23	8	31	34	217	7.7
Pulp and paper	20	2	1	4	14	3	13	4	3	14	34	4	18	134	4.8
Glass and ceramics	2		2	1	4	16	18	7	3	11	11	12	8	95	3.4
Prepared foodstuffs		9	1	4	18	4	2	1	13	5	4	8	3	72	2.6
Other manufactures	2	7	1	4	1	3	17	4	6	5	4	5	10	69	2.5
Minerals	1	4	6	3	17	6	2	4	1	4	3	4	9	64	2.3
Instruments	2	6	2	2	4	2	5	3	1	4	9	5	2	47	1.7
Vegetables		2			1	2	10	13		5	2	4	1	40	1.4
Animal products		1		2	12	1	2	3	1	2	2	6	8	40	1.4
Vehicles	2	2	6	1	3	3	5	6	3	2	1		4	38	1.4
Footwear			6			12	6	2	6	1		2	2	37	1.3
Wood	2		2	2	1		1		1	4	10	3	1	27	1.0
Fats and oils					12	2	2	1						17	0.6
Leather						4	1	1		3				9	0.3
Arms							3							3	0.1
Unallocated	1	1	1	1	1	1	1	3		5	1	2	2	20	0.7
Total	120	124	96	165	228	325	301	235	156	224	243	255	340	2812	100.0

Source: WTO Secretariat, Rules Division Antidumping Measures Database.

III. Agricultural Products[46]

A. The Agreement on Agriculture's origins

The volume of world agricultural exports has expanded substantially over recent decades, with an increasing diversification of products and markets. As in most other sectors of world merchandise trade, the rate of growth of agricultural trade continues to outstrip growth in world agricultural production with the result that an increasing proportion of world agricultural production is now traded. This phenomenon/trend is less pronounced in the agriculture sector reflecting, amongst other factors, the lower rate of growth of world agricultural trade relative to that of more price-elastic traded products.

This has resulted in a steady decline in agriculture's share in world merchandise trade which, in 1998, accounted for 10.1% of total merchandise trade compared to 14.5% at the beginning of the 1980's. Nevertheless, agriculture's current share of world merchandise trade is not far behind that of office and telecommunications equipment (12.9%), and ahead of sectors such as automotive products (10%), chemicals (9.5%), textiles and clothing (6.3%), and iron and steel (2.7%).

Among the agricultural goods traded internationally, food products make up almost 80% of the total. The other main category of agricultural products is raw materials. The share of the traditional bulk agricultural products in world agricultural trade—such as cereals, oilseeds, cotton and unprocessed tropical products—has continued to decline from about 35% in the early 1980's to about 22% in 1997; with the share of semi-processed intermediate agricultural products, such as vegetable oils, flour and refined sugar, having remained steady at about 25%.

Since the mid-1980's there has been a rather dramatic acceleration in the growth of world exports of high-value and processed agricultural products. The share of this dynamic product category in world agricultural trade has increased from 39% in the early 1980's to 52% on average in 1995-1997.[47]

Agricultural trade remains, in many countries, an important part of overall economic activity. It continues to play a major role in domestic agricultural production and employment, particularly in the developing countries. Trade also plays a fundamentally important role in global food security, for example by ensuring that temporary, or protracted, food deficits arising from adverse climatic and other conditions in one country or region can be met from world markets.

Although agriculture has always been covered by the GATT, prior to the WTO the rules that applied to agricultural primary products deviated from the general rules. The GATT 1947 allowed countries to use export subsidies on agricultural primary products, whereas the use of export subsidies by developed countries on industrial products was prohibited. The only conditions were that agricultural export subsidies should not be used to capture more than an "equitable share" of world exports of the product concerned (Article XVI:3 of GATT). The GATT rules also allowed countries to resort to non-tariff import restrictions (e.g. quantitative import restrictions) under certain conditions, notably when these restrictions were necessary to enforce measures to effectively limit domestic production (Article XI:2(c) of GATT). This exception was also conditional on the maintenance of a minimum proportion of imports relative to domestic production.

In actual practice, many non-tariff border restrictions were applied to imports without any effective counterpart limitations on domestic production, and without maintaining minimum import access. In some cases this was achieved through the use of measures not specifically provided for under Article XI. In other cases this reflected exceptions and country-specific derogations such as grandfather clauses, waivers and protocols of accession. In still other cases non-tariff import restrictions were maintained without any apparent justification.

The result of all this was a proliferation of impediments to agricultural trade including, by means of import bans, quotas setting the maximum level of imports, variable import levies, minimum import prices and non-tariff measures maintained by state trading enterprises. Major agricultural products—such as cereals, meat, dairy products, sugar and a range of fruits and vegetables—have faced barriers to trade on a scale uncommon in other merchandise sectors.

In part, this insulation of domestic markets was the result of measures originally introduced following the collapse of commodity prices in the 1930s Depression. Furthermore, in the aftermath of the Second World War, many governments were concerned with increasing domestic agricultural production so as to feed their growing populations. With this objective in mind, and in order to maintain a certain balance between the development of rural and urban incomes, many countries, particularly in the developed world, resorted to market price support: farm prices were administratively raised; while import access barriers ensured that domestic production could con-

46 Agricultural products are defined in the same manner as was set out in Annex 1 of the Uruguay Round Agreement on Agriculture; i.e., it includes HS 10-24, excluding 03, plus 290543, 290544, 3301, 3501-3505, 380910, 382460, 4101-4103, 4301, 5001-5003, 5101-5103, 5201-5203, 5301, 5302. For international trade flows of agricultural products, the WTO Annual Report data are used which defines agricultural products as comprising SITC sections 0,1,2,4 with the exception of SITC divisions 27 and 28. The major differences between this definition and the standard definition in the trade data is the inclusion of fish and fish products as well as forestry products of the UR Agreement on Agriculture.

47 Source: Economic Research Service, USDA.

tinue to be sold. In response to these measures, and as a result of productivity gains, self-sufficiency rates rapidly increased.

In a number of cases, expanding domestic production of certain agricultural products not only replaced imports completely but resulted in structural surpluses. Export subsidies were increasingly used to dump surpluses onto the world market, thus depressing world market prices. This factor—plus the effects of overvalued exchange rates, low food price policies in favour of urban consumers and certain other domestic measures—reduced the incentive for farmers in a number of developing countries to increase, or even maintain, their agricultural production levels.

B. Trade policies under the Agriculture Agreement

It became increasingly evident in the lead-up to the Uruguay Round negotiations, that the causes of disarray in world agriculture went beyond import access problems, the traditional focus of GATT negotiations. To get to the root of the problem, disciplines with regard to all measures affecting trade in agriculture, including domestic agricultural policies and the subsidization of agricultural exports, were considered to be essential. The Uruguay Round reform program comprised specific commitments to reduce support and protection in the areas of domestic support, export subsidies and market access. It also strengthened, and made more operationally effective, rules and disciplines in each of these areas, including export prohibitions and restrictions. Clearer rules for sanitary and phytosanitary measures were also considered to be required, both in their own right and to prevent circumvention of stricter rules on import access through unjustified, protectionist use of food safety, as well as animal and plant health measures. This section provides a description of the post-Uruguay Round landscape.

1. Market access

The Uruguay Round resulted in a key systemic change on the market access side: the switch from a situation where a myriad of non-tariff measures impeded agricultural trade flows to a regime of bound tariff-only protection plus reduction commitments. The effects of this fundamental change have been to stimulate investment, production and trade in agriculture by: (i) making agricultural market access conditions more transparent, predictable and competitive; (ii) establishing or strengthening the link between national and international agricultural markets, and thus; (iii) relying more prominently on the market for guiding scarce resources into their most productive uses, both within the agricultural sector and economy wide.

In many cases, tariffs were the only form of protection for agricultural products before the Uruguay Round—which led to the "binding" in the WTO of a maximum level for these tariffs. For many other products, however, market-access restrictions involved non-tariff barriers. This was frequently, though not only, the case for major temperate zone agricultural products. The Uruguay Round negotiations aimed to remove such barriers.

For this purpose, a "tariffication" package was agreed which, amongst other things, provided for the replacement of agriculture-specific non-tariff measures with a tariff which afforded an equivalent level of protection. The tariffs resulting from the tariffication process account, on average for developed country "Members" (WTO member countries), for around one fifth of the total number of agricultural tariff lines. For developing country Members, this share is considerably smaller. Following the entry into force of the Agreement on Agriculture, there is now a prohibition on agriculture-specific non-tariff measures, and the tariffs on virtually all agricultural products traded internationally are bound in the WTO.

a. Tariffs

The tariff schedules negotiated during the Uruguay Round list the base rate of duty in relation to which reductions in the first and subsequent years of the 1995-2000 implementation period are calculated, as well as the final bound rate of duty valid at the end of the six year implementation period. The base rates were established in different ways depending on the situation prevailing before the Uruguay Round. Developing countries were able to offer "ceiling bindings" for all previously unbound tariffs, and many developing countries availed themselves of this option.[48] Where non-tariff measures had to be converted into tariffs, the base rate is the result of the tariffication exercise. In this case, the base rate was calculated by the countries themselves—in accordance with the tariffication modalities—as the difference between the internal and the external price for the product concerned in the reference period (1986-1990). The agreement required a reduction by an un-weighted average of 36%, with the only constraint being that reduction rates needed to be at least 15%. Where developing countries had to reduce their tariff rates, they were required to reduce them by an un-weighted average of 24%, subject to a minimum cut of 10% per product, with flexibility to implement their reductions over a period of 10 years instead of six years. Table III.1 summarizes all combinations.

The analysis of agricultural tariff statistics is complicated by the prevalence of non-*ad valorem* tariffs. Some Members have bound all their agricultural tariffs in *ad valorem* terms, but others have bound many of their agricultural tariffs in other forms including specific, mixed (*ad valorem* or specific), compound (*ad valorem* plus specific), or technical tariff rates (for example based on alcohol or sugar content). Table III.2 lists the countries with non-*ad*

48 See Modalities for the establishment of specific binding commitments under the reform programme, (WTO document MTN.GNG/MA/W/24).

Table III.1. Uruguay Round Agreement on Agriculture. Base rates and rates of reduction

	Developed countries		Developing countries	
Pre-Uruguay Round situation	Base rate	Reduction	Base rate	Reduction
Bound rate	Bound rate	36% unweighted average cut, with minimum 15% per tariff line	Bound rate	24% unweighted average cut, with minimum 10% per tariff line
Unbound rate	Applied rate in September 1986	36% unweighted average cut, with minimum 15% per tariff line	Ceiling binding	No reduction
Bound rate cum non-tariff measures	Tariffication	36% unweighted average cut, with minimum 15% per tariff line	Tariffication	24% unweighted average cut, with minimum 10% per tariff line
Unbound rate cum non-tariff measures	Tariffication	36% unweighted average cut, with minimum 15% per tariff line	Tariffication	24% unweighted average cut, with minimum 10% per tariff line
				or
			Ceiling binding	No reduction

valorem tariffs in the agricultural section of their schedules.[49]

Non-*ad valorem* tariffs do not only have protective effects which differ from the effect of *ad valorem* tariffs, they are also far less transparent.[50] To conduct our analysis of post-Uruguay Round bound tariff rates, tariffs must be aggregated and averages need to be calculated. Non *ad valorem* tariffs however cannot be aggregated and *ad valorem* equivalents (AVE) need to be calculated. AVEs of specific and other non-*ad valorem* tariffs are usually calculated either by comparing collected custom revenue to the value of imports or by comparing unit values of traded products with the applied non-*ad valorem* tariff. Only few sources for AVEs of WTO bound tariff rates are available.

Because the availability of AVEs from WTO sources is currently limited, we present agricultural tariff statistics calculated by the OECD Secretariat[51] and we compare them to those established by the World Bank.[52] It is important to keep in mind that estimates of AVEs of specific rates must be interpreted with caution. AVEs depend on prices which tend to fluctuate. Moreover, there are many cases where the price information needed to calculate AVEs is simply not available. This is the case, in particular, for the wide range of high value and processed agricultural products which now account for more than half of world trade in agricultural products.

Table III.3 shows basic statistics describing post-Uruguay Round bound tariffs for a sample of countries. The tariff statistics for industrial products are provided for the sake of comparison. The proportion of agricultural tariff lines that are bound duty free varies significantly between countries. Developing countries in the OECD sample generally have only very few lines bound duty free. Among OECD countries, the share ranges between zero per cent for Turkey and 50% for New Zealand. One group of countries, which includes the EU and Canada, has a higher share of duty-free lines for agricultural products than for industrial products while another group, which includes the United States and Japan, exhibits the opposite situation. Table III.3 also shows two different estimates of simple average post-UR bound rates for agricultural and industrial products. Despite differences, which are mainly accounted for by differences in the techniques used to calculate the *ad valorem* equivalents, the two series are relatively well correlated. For most industrial countries, as well as for some developing countries, average

49 The information in Table III.3 is based on the Uruguay Round Schedules It does not include those tariff bindings made prior to the Uruguay Round which are not shown in the Uruguay Round schedules of the Members concerned, but are still in force.

50 The impact of specific tariffs, for instance, varies with prices.

51 See OECD (1999).

52 For technical reasons, AVEs are not yet available from the Integrated Data Base (IDB), but this may change as the IDB requires WTO members to provide AVEs of non-*ad valorem* tariffs. The other main potential source of AVEs are the TPR reports. However, only a limited number of country studies include AVEs. Note that both OECD (1999) and Finger et al. (1996) from the World Bank, drew their information on Uruguay Round tariff commitments from the IDB.

Table III.2. Non-*ad valorem* tariff bindings as a percentage of all bound agricultural tariffs

Members with non-*ad valorem* bindings accounting for less than 20% of all bound agricultural tariffs	Members with non-*ad valorem* bindings accounting for 20 to 50% of all bound agricultural tariffs	Members with non-*ad valorem* bindings accounting for more than 50% of all bound agricultural tariff
Australia	Canada	Malta
Brunei Darussalam	Cyprus	Norway
Bulgaria	European Union	Switzerland
Egypt	Iceland	
India	Poland	
Israel	Slovenia	
Japan	Thailand	
Korea, Rep. of	United States	
Malaysia		
Mexico		
New Zealand		
Papua New Guinea		
Singapore		
Solomon Islands		

Source: WTO Secretariat.

bound tariff levels on agricultural products are a multiple of those on industrial products. The OECD average is 36% which compares with 14% for industrial products. Among the Quad countries,[53] the EU has the highest average at 20% and Canada has the lowest at 5%, followed by the United States at 6%.

The dispersion of tariffs is another important dimension of a country's tariff schedule. The higher the dispersion of tariffs, the higher the cost of tariff protection in terms of economic welfare. Table III.3 shows the standard deviation which is an indicator of the dispersion of tariffs. As can be seen, the standard deviation is much higher for agricultural products than for industrial products, indicating that the differences between the tariffs on different agricultural products are significantly higher than the differences between the tariffs on different industrial products. It is interesting to note that the four WTO members with the highest standard deviation in the sample of countries reviewed by the OECD, i.e. Norway, Republic of Korea, Switzerland, and Iceland, are all OECD countries.

Another related problem is the very high tariffs, the so-called tariff "peaks" or tariff "spikes", on many basic agricultural products. As shown in Table III.3, in most countries of the OECD study sample, the share of agricultural tariff lines at tariff rates bound above 15% is larger than 10%. Seven out of the 28 countries in the sample have even more than 95% of their tariff lines at rates above 15%. Among the Quad countries, the European Union stands out with more than one third of its tariff lines at rates above 15%, followed by Japan with 16.5% peak tariffs. Table III. 3 even shows that tariff peaks above 100% apply for a non-negligible share of both OECD and non-OECD countries' agricultural imports. Bangladesh, India, Tunisia and Norway, for instance, have more than 40% of their agricultural tariff lines at peak rates above 100%. Among the products most affected by tariffs higher than 15% are dairy products, meat, cereal flour and sugar.[54] Many tariff equivalents that emerged from the tariffication process are among the very high tariffs. Some of these tariffs are so high that they discourage the importation of even minimum quantities.[55]

[53] Quad countries are Canada, the European Union, Japan and the United States.

[54] OECD (1999) provides information concerning the distribution of peaks at the 3-digit HS line level.

[55] See Carson (1998).

Table III.3. Bound tariffs on imports of agricultural and industrial products. Scope of bindings, simple averages, standard deviation, and tariff peaks

	Agriculture							Industry					
	Share of bound tariff lines*	Share of duty free tarif lines*	Simple average post-UR bound rate OECD estimate	Simple average post-UR bound rate World Bank estimate	Standard deviation	Share of tariff lines with duties above 15%*	Share of tariff lines with duties above 100%*	Share of bound tariff lines**	Share of duty free tariff lines**	Simple average post-UR bound rate OECD estimate	Simple average post-UR bound rate World Bank estimate	Standard deviation	Share of tariff lines with duties above 15%**
North America													
Canada	100	42.1	4.6	8.8	4.7	1.2	0	99.5	28.6	5.3	6.4	5.2	7.2
United States	100	27.9	5.5	9	5.5	2.6	0	99.9	37.2	3.8	4.6	4.2	2
Latin America													
Argentina	100	0.1	32.8	32.5	5.9	97.3	0	100	0	30.6	30.9	6.3	98.5
Brazil	100	2	35.3	35.2	10.1	96.4	0	100	0.3	29.7	29.5	6.9	97.3
Colombia	99.7	0	88.3	105.6	32.3	100	22.9	99.7	0	36.1	35.5	9.8	100
Mexico	100	0.1	42.9	25.1	35.2	96.2	4.9	100	0.2	34.8	34.7	3.1	99.6
Venezuela	100	0	55.4	67.7	33.3	99.4	14.5	100	0	33.8	33.3	4.2	99.4
Western Europe													
EU-15	100	26.5	19.5	20	22.1	33.9	0.9	100	22.2	4.1	4.1	3.6	0.6
Iceland	99.6	21.1	48.4	72.1	85.7	58.9	8.1	93.7	42.7	10	14.4	12.1	30
Norway	100	23.4	123.7	50.4	147.6	61.1	44.2	100	44.1	3.4	4.1	5.5	0.2
Switzerland	99.1	28.2	51.1	46.9	96.1	16.5	6.9	98.7	17.3	1.9	2.2	3.4	0.3
Turkey	100	0	63.9	74.3	55.4	86.7	16.8	35	1.2	40.7	16.6	34.2	77.3
Eastern Europe													
Czech Republic	100	30.5	13.3	18.9	19.2	23.4	0.9	100	13.4	4.5	4.8	3.3	1
Hungary	91	8.4	22.2	6.7	19.1	47.5	0.6	96.7	13.4	6.8	7.4	4	1.4
Poland	97.4	2.9	52.8	38.3	44.6	74.7	8.1	96.1	2.2	10.6	9.8	5.2	12.9
Romania	100	0	98.6	130.2	84	97.5	39.6	100	0	34.4	32.7	7.1	98.9
Asia/Pacific													
Australia	99.9	32.6	3.3	2.5	4.6	3	0	95.8	18.7	10.6	13	10.8	15.9
Bangladesh	100	0	83.8		25.9	NA	69	100	0	83.5		23	

Table III.3 *(cont'd.)*

	Agriculture							Industry					
	Share of bound tariff lines*	Share of duty free tarif lines*	Simple average post-UR bound rate		Standard deviation	Share of tariff lines with duties above 15%*	Share of tariff lines with duties above 100%*	Share of bound tariff lines**	Share of duty free tariff lines**	Simple average post-UR bound rate		Standard deviation	Share of tariff lines with duties above 15%**
			OECD estimate	World Bank estimate						OECD estimate	World Bank estimate		
India	97.5	1.6	124.3	101	51	99.4	44.7	62	0.4	59	37.5	33.5	97.9
Indonesia	100	0	47.2	59.9	21.7	98.3	3.2	91.9	0.6	38.6	38.5	8.6	98.9
Japan	99.5	31	11.7	29.7	12.6	17.5	0.3	98.7	53.8	3.6	3	3.8	0.6
Korea, Rep. of	96.3	2.2	62.2	39.6	108.8	74.1	10.1	90.5	13.5	11.4	10.3	9	18.9
Malaysia	98.8	14.2	13.6	39	20.5	18.9	1.5	62.4	5.6	16.4	16.7	10.7	41.8
New Zealand	100	50.6	8.7	0.7	7.3	12.6	0.1	100	41.2	13.8	14.9	14.7	33.9
Philippines	97.4	0	35.3	46.9	10.9	91.8	0	57.5	0	25.1	23.2	10.2	88.3
Sri Lanka	100	0	50	50	0	100	0	8	0	50	26.8	0	100
Thailand	98.5	0.7	34.6	43.2	22.1	91.4	2.1	69.9	0.4	28.4	26.5	9.6	89.1
Africa													
Tunisia	97.1	0	116.7	15.1	40.4	100	50.3	46.3	0	41.2	36.8	16.7	100

Sources: OECD (1999) and Finger et al. (1996)

* Percentage of all agricultural tariff lines.

** Percentage of all industrial tariff lines.

Table III.4: Bound tariffs on imports of agricultural products. Simple averages by stage of processing and by country

Member		Post-Uruguay Bound Rate (simple average)	Tariff lines excl. from average (%)
Australia	unprocessed	1	0
	other, processed	6	0
Brazil	unprocessed	34	0
	other, processed	36	0
Canada	unprocessed	2	2
	other, processed	6	16
Chile	unprocessed	25	0
	other, processed	26	0
Colombia	unprocessed	84	0
	other, processed	95	0
European Union	unprocessed	4	18
	other, processed	11	53
Hong Kong, China	unprocessed	0	0
	other, processed	0	0
India	unprocessed	97	1
	other, processed	139	0
Indonesia	unprocessed	44	0
	other, processed	52	0
Japan	unprocessed	4	7
	other, processed	15	15
Korea, Rep. of	unprocessed	72	0
	other, processed	55	0
Malaysia	unprocessed	9	4
	other, processed	15	23
Mexico	unprocessed	32	0
	other, processed	50	0
New Zealand	unprocessed	2	0
	other, processed	10	1
Philippines	unprocessed	31	0
	other, processed	30	0
Singapore	unprocessed	10	0
	other, processed	9	7
Sri Lanka	unprocessed	50	0
	other, processed	47	0
Thailand	unprocessed	38	2
	other, processed	36	6
United States	unprocessed	4	2
	other, processed	5	12
Venezuela	unprocessed	51	0
	other, processed	64	0

Source: WTO Secretariat.

As already mentioned in Section I, tariff peaks and dispersion are closely linked with tariff escalation, a feature of tariff structures that is of particular concern to developing countries. Tariff escalation also exists in the area of non-agricultural products. The same production process can involve both agricultural products in the first stages and industrial products in the last stages. In this section, the focus is on escalation involving agricultural products.

There is ample evidence that, in many cases, bound tariffs tend to be higher for processed products than for unprocessed products. Table III.4, for instance, which shows simple averages of bound rates for unprocessed and processed products, suggests that at the aggregate level, there are signs of escalation in many countries.[56] Data are from the WTO IDB which does not provide *ad valorem* equivalents. Tariff lines affected by non-*ad valorem* tariffs were thus excluded, but the proportion of tariff lines excluded from the averages is indicated. In its review of tariffs, the OECD Secretariat computed bound tariff rates (including AVEs for non-*ad valorem* tariffs) by stage of production for 13 product groups, seven of which are mainly agricultural products. Most processing chains that are reported show escalating tariffs. The processing chain of cocoa, for instance, exhibits escalation in more than three quarters of the 27 examined countries (See Appendix Table III.2). In the Quad countries, the processing chains of coffee, cotton and soybeans also have significant escalation.

However, sugar and a few other product chains are subject to de-escalating tariffs. De-escalation occurs when the agricultural raw material that is at the beginning of the chain is heavily protected. Non-OECD countries also exhibit escalation on some products. The processing chain of tobacco, for instance, shows substantial escalation in Malaysia and in most central and East European countries. In the case of wheat, the intermediate product is often subject to very high tariffs.[57]

b. Bound vs applied tariff rates

Available evidence suggests that for industrial countries the gap between bound and applied tariff rates on agricultural products is not important, but that for some developing countries it is quite significant. Table III.5 provides estimates of this gap for a sample of countries.[58]

c. Tariff quotas

Two types of tariff quotas were introduced as part of the tariffication process.[59] First, tariff quotas had to be set up to establish minimum access opportunities where there had been no significant imports in the base period. The size of the quotas were to increase from 3% of the 1986-1988 base period domestic consumption in 1995 to

56 See also Appendix Table III.1 that provides the same information disaggregated by product category.

57 Other sources of information concerning tariff escalation include Michalopoulos' (1999) survey of Trade Policy Review Reports, which focuses on tariff escalation in developing countries and UNCTAD (1997) which we discuss below.

58 Similar results can also be found in Finger et al. (1996).

59 See Modalities, (WTO document MTN.GNG/MA/W/24).

Table III.5. Average applied and bound tariff rates for agriculture

Countries	HS/WTO[a] definition	Simple average MFN applied tariff		Simple average bound tariff[b]
		Rate	Year	Final rate
		Developed countries		
Australia	HS	1.2	1998	3.3
Canada	WTO	24.7	1998	?
Japan	WTO	26.3	1996	25.3
Poland	WTO	34.2	1999	55.5
United States	WTO	10.7	1999	8.2
		Developing countries		
Bangladesh	HS	25.1	1999/2000	188.3
Bolivia	HS	10.0	1998	40.0
Egypt	WTO	64.9	1998	84.1
Indonesia	HS	8.6	1998	47.3
Israel	HS	21.9	1999	74.9
Jamaica	HS	20.2	1997	100.0
Kenya	WTO	16.7	1999	100.0
Mali	HS	28.7	1997	60.0
Papua New Guinea	HS	22.0	1999	45.0
Peru	WTO	17.8	1999	31.1
Romania	HS	32.3	1999	112.0
Singapore	HS	0.0	1999	9.6
Trinidad and Tobago	HS /WTO	19.1(HS)	1998	100 (WTO)
Thailand	HS	32.1	1999	32.0
Uruguay	HS	13.0	1998	35.2

[a] Sectoral tariff averages vary with the definition used. The HS definition of agriculture (HS 01-24) includes fishing and forestry, while the definition of agricultural products used for the purpose of the Uruguay Round negotiations (WTO definition) excludes fish and fishing products (HS 03 and parts of HS 16) and includes items regarded as agricultural from HS 29, 33, 35, 38, 41, 43, 50, 51, 52 and 53 (Annex 1 of the Agreement).

[b] Developed-country Members have to implement reduction commitments over a six-year period commencing in 1995 while developing-country Members have the flexibility to implement reduction commitments over a period of up to 10 years commencing in 1995. Least-developed country Members are not required to undertake reduction commitments.

5% at the end of the implementation period. In-quota tariff rates were required to be "low or minimal".[60] Second, tariff quotas were constituted to maintain current access opportunities, where the process of tariffication would otherwise have resulted in a deterioration of market access conditions. In this second case, tariff quotas had to be equal to quantities imported during the base period. Both quota volumes and in-quota tariff rates are specified in the countries' schedules of commitments.

The distribution of tariff quotas among Members and product groups reflects the incidence of tariffication.[61] More than 80% of all tariff quotas are concentrated in five of the 12 product groups concerned by tariff quotas. More than one quarter of all tariff quotas apply to fruits and vegetables alone; the four other groups most affected by tariff quotas being meat, cereals, dairy products and oilseeds. The six Members with the highest number of tariff quotas are located in Europe. Norway ranks first with 232 quotas, followed by Poland with 109, Iceland 90, the EU 87, Bulgaria 73, and Hungary 70. But countries in other regions have also made use of tariff quotas. Republic of Korea and Colombia for instance occupy the seventh rank with 67 quotas, followed by Venezuela (61), the United States (54) and South Africa (53).

Table III. 6 summarizes the information concerning the fill rates of tariff quotas. It shows that the average fill rate

[60] See paragraph 14 in Annex 3 of the Modalities.

[61] See appendix Table III.3.

Box III. 1. Economic impact of tariff quotas

With the tariffication of agricultural quotas after the Uruguay Round, tariff rate quotas (TRQs) have become increasingly important to global trade. Unlike standard tariffs, the trade restrictiveness of a tariff quota depends on complex relationships between various economic and bureaucratic factors.[1]

A tariff quota is a two-tiered tariff. During a designated period, a lower, in-quota tariff is applied to a designated quantity of imports, and all subsequent imports are subjected to a higher, out-quota tariff. The difference between these two rates can be substantial: for OECD countries, in-quota rates on agricultural products average 36%, while average out-quota rates are 120%.

From a legal perspective, tariff quotas are not quantitative restrictions since goods may be imported beyond the quota limit by paying the out-quota tariff. Imports can exceed the in-quota volume when the difference between the domestic price and the international price exceeds the out-of-quota tariff. If, however, out-quota tariffs are prohibitive under normal market conditions, access to the market is effectively limited to the in-quota volume.

Tariff quotas, like standard tariffs, restrict trade by raising the price of imported goods. The precise economic effect of a tariff quota, however, depends on world prices, on domestic excess demand, on the size of the tariff quota, and on the gap between the in-quota and out-quota tariff rates. The table below describes the effect of a given tariff quota for increasing levels of excess demand for imports.

Price level	Quota fill	TRQ impact
Domestic price is lower than world price plus in-quota tariff.	No trade occurs.	If domestic price is below world price, the tariff quota has no . effect If domestic price is higher than world price, the tariff quota has the same effect as a prohibitive tariff.
Domestic price is equal to world price plus in-quota tariff.	Tariff quota is partly filled. In-quota tariff is paid.	Same impact on market as a standard applied tariff at in-quota tariff level: Consumers lose, producers and taxpayers gain but the net effect is a welfare loss.
Domestic price is higher than world price plus in-quota tariff but lower than world price plus out-quota tariff	Tariff quota is binding —in-quota tariff is paid on imports - quota fills and no imports arrive at out-quota rates	Imports are restricted to the size of the tariff quota. The government collects in-quota tariff on imported units. Rationing gives rise to a rent by pushing price above world price plus in-quota tariff. Rent is equal to the difference between domestic price and world price com in-quota times the volume of the quota
Domestic price is equal to world price plus out-quota tariff.	Tariff quota is no longer binding—quota fills, and importers pay the in-quota tariff for the volume of the quota and the out-quota tariff for the rest of the imported volume.	Same impact as a standard applied tariff at out-quota tariff level except that the rationing problem remains for the volume within the quota. Rent is equal to the difference between in- and out-quota tariff times the volume of the quota.

The scarcity rent that arises because of the tariff quota can be collected by domestic producers, foreign importers, or a government. The distribution of this rent is one of the main concerns of tariff quota administrators. Certain administrative systems (particularly auctions) allow the entire rent to be claimed by the government in the form of permit fees; most methods grant the excess profits to those suppliers who receive in-quota import permits. Some systems—particularly discretionary systems that grant permit rights to state trading organizations—are similar to VERs in allocating the rent to a foreign government.

1 See Skully (1999).

was only 66% in 1995 before it slightly decreased to reach 62% in 1998.[62] As can be seen in Appendix Table III.4, however, the fill rate for certain product groups such as egg and egg products, or agricultural fibres, was far below average for all years for which data are available. On the other hand, it was significantly above average for tobacco, sugar, and fruits and vegetables, also in each of the four years. Detailed information displayed in Appendix Table III.5 shows that differences between countries' fill rates are also significant. Among the Members with more than 20 quotas, Switzerland achieved an average fill rate of 90% in 1995, 1996, 1997 and 1998 while sever-

62 For reasons of consistency among Members, the fill rates in this study are calculated only up to 100%. Moreover, all averages are simple averages.

Table III.6. Tariff quotas. Simple average fill rates, 1995-1998

(Percentage)

1995	1996	1997	1998
66	63	62	62

Source: WTO Secretariat (G/AG/NG/S/7).

al countries had average fill rates below 50% in each of the four years.

Tariff quotas may not be filled for various reasons. One reason could be that the in-quota tariff rates are too high. Another reason might be that the tariff quota administration methods that are employed do not facilitate access to the tariff quotas. A third possibility could be that economic conditions have changed since the reference period. For the time being, the role of each of these, or other, factors is not clear. To assess the impact of changes in prices on fill rates is a difficult task that has not been seriously undertaken so far.

Similarly, given the difficulties associated with the calculation of AVEs for non-*ad valorem* tariffs, the role of in-quota tariffs has not yet been thoroughly analyzed. The OECD review of tariffs contains information about mean in-quota tariff rates.[63] It shows that the average in-quota tariff rate is 36% for OECD countries and 59% for non-OECD countries, with averages above 100% for countries like Norway (216) or Colombia (120). This information, however, must be interpreted with caution.[64] A proper assessment of the role of tariffs would require a careful analysis of the correlation between the level of in-quota tariffs and the level of the fill-rates, properly controlling for the effect of all other relevant factors. To our knowledge, no such study is available.

Table III.7. Tariff quotas by administration method, 1995-1999

Principal administration method	**Number of tariff quotas**				
	1995	**1996**	**1997**	**1998**	**1999**
Applied tariffs	650	637	668	649	643
First-come, first-served	102	104	148	148	147
Licences on demand	314	323	325	326	337
Auctioning	32	30	50	56	56
Historical importers	47	61	66	75	75
Imports undertaken by state trading enterprises	22	22	21	20	21
Producer groups or associations	8	8	8	8	9
Other	20	21	15	15	15
Mixed allocation methods	55	57	60	61	59
Non-specified	9	10	6	6	6
Total of the above (1)	**1259**	**1273**	**1367**	**1364**	**1368**
Tariff quotas excluded (2)	**112**	**98**	**4**	**7**	**3**
Total number of tariff quotas in schedules (1) + (2)	**1371**	**1371**	**1371**	**1371**	**1371**

Source: WTO Secretariat (G/AG/NG/S/8).

62 For reasons of consistency among Members, the fill rates in this study are calculated only up to 100%. Moreover, all averages are simple averages.

63 See OECD (1999).

64 Problems relate in particular to the treatment of non-*ad valorem* tariffs.

Box III.2. Tariff quota administration system[1]

The administration of tariff quotas is governed by Article XIII of the GATT.[2] Skully (1999) has established two criteria for judging whether quotas are properly administered: non-discrimination of distribution and quota fill. In other words, good administration methods are those which reduce economic distortion to a minimum by insuring that quotas are not under-filled and that the most efficient suppliers have access to the quotas.

There are 7 major modes of TRQ administration, ranging from those with effects similar to a free market to highly arbitrary systems which create significant market distortions. The table below summarizes the impact of administration methods.

Method	Market distortion (Risk of under-fill/ Risk of bias)	Market impact
Market Allocation		
Applied Tariff	None/None	Acts as normal tariff, but reserves the right to apply out-quota tariffs at a later date.
Auction	Low/Least	The most efficient importers receive licenses. The govern-nment collects rent caused by the opportunity to import.
Quasi-Market Allocation		
License on Demand	Low/Moderate	Importers' planning is made more difficult. The most efficient producers do not necessarily receive sufficient licenses.
First-come, First-served	Low/Moderate	Importers cannot know in advance whether they will receive in- or out-quota rates. Inefficient producers will arrive early. Causes price volatility.
Historical	Moderate/Very high	Base-period volumes are not calculated frequently. Inefficient importers are protected.
Discretionary Allocation		
State Trading	Low/High	Varying impacts. Vulnerable to political pressure. Influential importers get licenses, not necessarily efficient ones.
Producer Groups	Low/High	Tendency to under-fill the quota, raising prices. Efficiency is not a criteria for import licensing.

Applied tariffs are the most efficient means of administering trade to ensure minimal market distortion. It does this by allowing the market to decide the amount of imports to flow into a country while applying the same tariff to every producer without discrimination. However because applied tariffs are not TRQ, it is not a feasible option when rationing producers in a quota system.

Besides applied tariffs, auctions for in-quota permits cause the least economic distortion. There are many different ways to administer an auction, one that maximizes efficiency is a sealed-bid uniform price auction. Here consumers submit sealed bids for imports, and a price is reached that is somewhere between the domestic price and the world price plus the tariff. The highest losing bid then becomes the price at which all of the winning bids are charged. Producers are chosen without discrimination and are paired with consumers who are willing to buy, ensuring quota fill.

Although auctions simulate a market situation, there are some weaknesses to using this system to administer TRQ. The transaction costs of an auction must remain low in order to ensure that the risk of under-fill of a quota is minimal. Also, if a certain product lacks a relative level of liquidity or if there is a lack of sufficient suppliers, an auction may prove to be ineffective-in this case licence programs may be more efficient. Furthermore, since an auction allows for market mechanisms to chose producers, government control over imports is greatly reduced. This may explain why auctions are not widely used.

Quasi-market allocation tends to have an increased risk for market distortion compared to market driven allocation. In methods such as license on demand, there are weaknesses that lead to quota under-fill and discrimination in distribution. For example, licencing programs may request producers to predict the amount imported when applying for a licence. Importers tend to over-estimate their production in order to ensure they will not have to pay out-quota rates if they over-produce. This may lead to quota under-fill as countries fill the quota according to licence agreements, which are over-estimated.

Along with quota under-fill, licence on demand programs also run the risk of discrimination. A licence system can be thought of as a periodic drawing in which those producers who request a licence or a permit are given an equal chance at receive rights to import at the in-quota price. However, licences are distributed based on a random drawing of producers-not necessarily ensuring that the most efficient producer will be drawn.

It should be noted, as well, that the inefficiencies cause by the allocation of permits can be reduced by allowing permits to be traded. Tradeable permits replicate the auction system, with the most efficient suppliers eventually obtaining the import licenses, though at the government's expense.

An increased risk for market distortion also occurs in the First Come First Served method of TRQ. Difficulties arise at the border or at customs, because producers do not know exactly when the quota will be filled. When producers ship their products they are unsure of whether they will pay in-quota or out-quota rates. Sometimes even customs agents are unsure of precisely when a quota is filled, so shipments that may have been above the quota are sold for the in-quota price. To guard against receiving a higher tariff, importers attempt to have their shipments arrive early, which in turn increases the number of imports at a given time, causing price volatility.

Similarly to the licence on demand allocation, First Come First Served does not ensure that the most efficient producers will fill the quota. The distribution of the quota is decided by the ability of importers to produce quickly, not necessarily by the efficiency of the producer to maximize welfare.

Historical allocation encourages more market distortion because the allocation of licences happens significantly less frequently than other systems of administration. Selection of importers is based on a one-time drawing and is maintained through historical ties-not influenced by market conditions. This system has a very high occurrence of bias distribution.

Discretionary allocation also has characteristics that would lead to market distortion. In this form of administration either a government bureau or a Producer Group would make the decision on the import rights of producers. State Trading and Producer Groups tend to be responsive to consumer demand and quota rates are often filled. However, these systems do run the risk of discrimination as a number of other influences besides the market play a large role in the selection of importers. Political influence may increase the risk for selecting inefficient producers.

In summation, the use of market allocation methods in TRQ administration seems to be the most advantageous in discouraging market distortion, auctions have an increased chance of selecting efficient producers and ensuring a filled quota. Other methods such as licence on demand and First Come First Served allocation do not necessarily guarantee the efficiency of production and may contribute to quota under-fill. Historical and discretionary allocation provide for an increased risk of discrimination of producers because of the influence of other factors besides market mechanisms.

1 The following is largely based on Skully (1999).

2 For details concerning tariff quota administration and country allocation in particular, see Panel and Appellate Body decisions on EC-Bananas.

The other possible reason for the low fill-rates of tariff quotas involves administration methods which can influence not only the distribution of rents, but also the total level of market protection. (See Box 2). In order to facilitate the analysis of countries' notifications regarding administration methods, the WTO Secretariat has defined 10 principal categories of tariff quota administration methods and five categories of additional conditions. Appendix Table III.6 describes the categories of administration methods while Appendix Table III.7 gives a description of categories of additional conditions. Each tariff quota notified by Members was classified using these categories.[65]

As shown in Table III.7, in each of the five years for which information is available, the "applied tariff" administration method is used in approximately half the cases. With this administration method, tariff quotas are actually not used. All imports are only subject to a tariff at or below the in-quota rate. The second most common method is the allocation of licences on demand which is used for one quarter of the tariff quotas. The third method, by order of importance, and one which is increasingly used, is the allocation of quotas on a first-come, first-served at the point of entry basis. This method, while simple from the importer's point of view, requires the customs authority to be adequately equipped with infrastructure. Most other systems involve the allocation of licences on the basis of some criterion. In many cases, tariff quotas are allocated on a country basis. Table III.7 also shows that, overall, Members only rarely changed their administration methods between 1995 and 1999.

Table III.8 shows average fill rates by administration method.[66] The figures are very difficult to interpret but they certainly reflect the fact that administration methods have only a limited influence on the fill rates of quotas. Even where the simplest and most transparent methods—that is the "applied tariffs" and the "first come, first served" methods—are used, fill rates can be relatively low. However, this should not be taken to mean that the simpler methods could not improve the fill rates if they were used more extensively to administer tariff quotas. Appendix Table III.8 shows the distribution of quotas by

65 The administration methods and additional conditions of tariff quotas as described in the notifications may not always perfectly match the description of the categories to which they are assigned.

66 Skully (1999) examines the economics of tariff quota administration and compares different methods. However, he does not attempt to empirically assess the impact of administration methods on fill rates.

Table III.8. Tariff quotas. Simple average fill rates by administration method, 1995-1999

Principal administration method	Simple average fill rates (per cent)					Number of tariff quotas included				
	1995	1996	1997	1998	1999	1995	1996	1997	1998	1999
Applied tariffs	72	66	66	69	58	453	434	468	323	6
First-come, first-served	56	61	47	51	71	87	96	145	142	18
Licences on demand	59	57	55	53	41	287	313	299	259	138
Auctioning	30	38	60	51	n.a.	30	27	46	17	-
Historical importers	91	80	75	65	89	46	57	61	60	2
Imports undertaken by state trading enterprises	81	83	90	86	n.a.	22	22	21	20	-
Producer groups or associations	74	53	75	80	n.a.	8	8	8	8	-
Other 37	38	39	91	99	18	19	13	5	3	
Mixed allocation methods	75	84	85	84	78	45	47	45	44	21
Non-specified	100	44	57	44	41	1	7	6	5	5
Simple average fill rate	**66**	**63**	**62**	**62**	**50**	**997**	**1030**	**1112**	**883**	**193**

Source: WTO Secretariat (G/AG/NG/S/8)

administration methods and product group. The shares of the simplest administration methods suggest that for beverages, dairy products, meat products, and eggs, administration methods may play a more important role than for fruits and vegetables, sugar, agricultural fibres, or oilseeds products.

As can be seen in Appendix Table III.9, additional conditions concern less than 20% of the tariff quotas, so that their role in explaining the low fill rates is generally unlikely to be very significant. In any event, a cursory examination of the combined impact of additional conditions and administration methods on fill rates suggests that additional conditions only play a limited role. Some quotas are filled despite additional conditions, while others are under-filled in their absence.[67]

d. *Special safeguard*

The special safeguard provision represents the third element of the tariffication package. Article 5 of the Agreement on Agriculture states that for products whose non-tariff restrictions have been converted to tariffs, governments can impose additional duties if the volume of imports of that product increases above a certain threshold, or if the price of imports of that product falls below a trigger price. Article 5 also specifies that the special safeguard can only be used where countries concerned have explicitly reserved the right to invoke this clause by designating the products in their schedules. This special safeguard cannot be applied to in-quota imports. Unlike the Article XIX safeguard mechanism, the Special Agricultural Safeguard does not require the complainant to show that imports caused injury. Appendix Table III.10 lists the Members who have reserved the right to apply the Special Safeguard. It also provides information on the share of agricultural tariff lines for which these Members have reserved that right. Hungary, Poland and Switzerland stand out as having the largest scope for the use of the Special Safeguard. The actual use of the Special Safeguard has been limited to date. As can be seen in Appendix Table III.11, the Special Safeguard was only used by eight countries between 1995 and 1999. However, the Special Safeguard was triggered where only minimal quantities of (non-tariff quota) imports were taking place.[68]

2. Domestic support

The agricultural package of the Uruguay Round has fundamentally changed the way domestic support in favour of agricultural producers was treated under the GATT 1947. A key objective has been to discipline and reduce domestic support while, at the same time, leaving considerable scope for governments to design domestic agricultural policies in the face of, and in response to, the wide variety of specific circumstances in individual countries and in individual agricultural sectors. The approach

67 For instance, when "first come, first served" is applied without additional conditions its average quota fill rate is 53%, whereas it is 100% in those cases where limits are set to the tariff quota shares per allocation.

68 See Carson (1998). Some Japanese trigger levels for the volume-based Special Safeguard are very low , while the price-based Special Safeguard was used by the United States for very small quantities (less than 10 kgs for certain types of cheese).

Table III.9. Domestic support. Total aggregate measurement of support commitments by Member, 1995-98

Member	Currency	1995		1996		1997		1998	
		Total AMS commitment level	Current Total AMS AMS	Total AMS commitment level	Current Total AMS AMS	Total AMS commitment level	Current Total AMS AMS	Total AMS commitment level	Current Total AMS AMS
Argentina	USD million	85	122	84	84	83		82	
Australia	AUD million	570	151	551	144	531	132	511	
Brazil	USD million	1039	295	1025	363	1011	307	997	
Bulgaria	ECU million	n.r.	n.r.	650	n.r.	635		520	
Canada	CAD million	5197	777	5017	619	4838		4659	
Colombia	USD million	392	581	387	4	382	14	377	
Costa Rica	USD million	18	0	18	0	177	0	17	
Cyprus	CYP million	58	37	57	36	56	26	55	22
Czech Republic	CZK million	16447	1152	15880	1689	15313	1054	14746	1013
EU	ECU billion	78670	50030	76370	51000	74070		71760	
Hungary	HUF million	40851	20949	39443		38034		36625	
Iceland	SDR million	157	124	152	108	146	109	141	250
Israel	USD million	645	461	637	501	628	524	620	
Japan	¥ billion	4801	3508	4635	3330	4470	3171	4304	
Jordan	Jordanian Dinar	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.
Korea, Rep. of	KRW billion	2183	2075	2106	1967	2029	1937	1952	1563
Mexico	Mex$ 1991 million	28622	1365	28238		27853		27469	
Morocco	MAD million	779	94	769	250	758	91	748	
New Zealand	NZD million	348	0	336	0	324	0	312	0
Norway	NOK million	13834	9786	13357	10529	12880	10526	12403	10886
Papua New Guinea	USD million	389	n.r.	38		38		37	
Poland	USD million	4022	255	3883	227	3745	296	3606	301
Slovak Republic	SKK million	12253	7111	11830	6982	11408	8290	10985	7710
Slovenia	ECU million	75	70	72	70	70	70	67	66
South Africa	ZAF million	2435	1640	2351	1938	2267	2198	2183	
Switzerland	CHF million	5143	4287	4966	3663	4789	3445	4611	3273
Thailand	THB million	21816	15773	21507	12932	21197	16757	20887	16402
Tunisia	TND million	67	59	67	51	66	53	65	
United States	USD million	23083	6214	22287	5898	21491	6238	20695	
Venezuela	USD million	1287	542	1270	331	1252		1235	

Source: WTO Secretariat (G/AG/NG/S/1 and Corr.1).

Notes: With respect to Argentina's Current Total AMS figure of 1995, see G/AG/N/ARG/4 and WT/Let/292. With respect to Iceland's Current Total AMS figure for 1998, see G/AG/N/ISL/14 regarding the unadjusted and adjusted Current Total AMS for 1998. The above figure represents the unadjusted Current Total AMS.

agreed upon was also aimed at ensuring that the specific binding commitments in the areas of market access and export competition would not be undermined through domestic support measures.

The main conceptual consideration is that there are basically two categories of domestic support: support with no, or minimal, distortive effect on trade (often referred to as "Green Box" measures); and trade-distorting support (often referred to as "Amber Box" measures). For example, government-provided agricultural research or training is considered to be of the former type, while government buying-in at a guaranteed price ("market price support") falls into the latter category.

Under the Agreement on Agriculture, all domestic support in favour of agricultural producers is subject to rules. In addition, the aggregate monetary value of Amber Box measures is, with certain exceptions, subject to reduction commitments as specified in the schedule of each Member providing such support.

Measures that have no, or at most minimal, trade-distorting effects or effects on production, that are provided through a publicly-funded government programme not involving transfers from consumers, and that do not provide price support to producers, can be placed in the so-called "Green Box".[69] Measures in the Green Box are exempt from reduction commitments and can even be increased without any financial limitation under the WTO. The Green Box covers two main categories of measures: government service programmes; and direct payments to producers not linked to production decisions.

Annex 2 of the Agreement on Agriculture lists government services programmes that would fit into the Green Box. The list includes domestic food aid programmes; public stockholding programmes for food security purposes; agricultural research programmes, both general and product specific; training programmes; pest and disease control programmes; inspection for health, safety, grading, or standardization services; infrastructural services; marketing and promotion services, etc. Direct payments can be placed in the Green Box if the amount of such payments is "decoupled" from production, prices or factors of production and if they fulfill specific criteria applying to individual types of direct payments. Various types of direct payments are listed in Annex 2: decoupled income support measures; income insurance and safety net programmes; some structural adjustment programmes; and certain payments under environmental programmes and under regional assistance programmes.

Apart from the measures covered by the Green Box, Article 6 of the Agreement on Agriculture provides for the exemption of three other categories of measures from reduction commitments.

The first category includes developmental measures in developing countries. These are measures of assistance, whether direct or indirect, designed to encourage agricultural and rural development.

The second category relates to the so-called "*de minimis*" levels of support. This provision allows measures—such as market price support, direct production subsidies, or input subsidies—to be exempted if, in any year, the aggregate value of product specific support does not exceed 5% (10% for developing countries) of the total value of production of that agricultural product. For non-product-specific support, e.g. generally available input subsidies, the support is less than 5% of the value of total agricultural production.

The third category includes some direct payments under production-limiting programmes, the so-called "Blue-Box" measures. Blue Box measures are partially-decoupled in the sense that they relate to production but not to current production. They include direct payments under production limiting programmes made on fixed areas and yield, a fixed number of livestock, or on 85% or less of production in the base period.

All other forms of domestic support are submitted to reduction commitments which are expressed in terms of a "Total Aggregate Measurement of Support", the so-called Total AMS. This includes three elements; market price support, non-exempt direct payments, and other subsidies not exempted from reduction commitments.[70] It covers both product specific and non-product-specific support in one figure. Developed country Members with a Total AMS commitment are required to reduce base period support by 20% over six years; and by 13% over 10 years for developing country Members. In any year of the implementation period, the Current Total AMS should not exceed the limit as specified in the schedule for that year.

Of the current 136 Members (April 2000), 30 have Total AMS reduction commitments.[71] Table III.9 shows that in the period 1995 to 1998, in the cases notified, the AMS commitments have not been binding for most Members. As can be seen from Appendix Table III.12, however, the composition of Members' domestic support has changed. Green Box support has increased for several countries. This may be partly due to the constraints of their Total AMS commitments which are in nominal terms. As intended, the constraints on domestic support appear to have contributed to what is sometimes termed the "re-instrumentation" of domestic support programs, away

69 The basis for exemptions from the reduction commitments is spelled out in Annex 2 of the Agreement on Agriculture.

70 The Modalities paper describes the method for calculating Total AMS.

71 Members with no scheduled commitments must maintain any non-exempted support within the relevant "product-specific" and "non-product-specific" *de minimis* levels.

from the most trade restrictive measures towards the less trade restrictive ones.

The Total AMS reduction commitments are sector-wide so that governments have a certain flexibility to increase their support to individual products, so long as they respect their commitments with regard to the reduction of the Total AMS.[72] A cursory look at Members' notifications shows that some of them have increased their support to certain specific products; though the total number of cases where increases have been notified is limited.

3. Export subsidies

The proliferation of export subsidies in the years leading to the Uruguay Round was one of the key issues that were addressed in the agricultural negotiations. While export subsidies for industrial products have been prohibited all along under the GATT 1947, in the case of agricultural primary products such subsidies were only subject to limited disciplines (Article XVI of GATT) which, moreover, did not prove to be operational.

The right to use export subsidies is now limited to four situations: (i) export subsidies subject to product-specific reduction commitments within the limits specified in the schedule of the WTO member concerned; (ii) any excess of budgetary outlays for export subsidies, or subsidized export volume, over the limits specified in the schedule which is covered by the temporary "downstream flexibility" provisions of Article 9.2 (b) of the Agreement on Agriculture; (iii) certain marketing-cost reduction and transportation subsidies consistent with the temporary special and differential treatment provisions for developing country members (Article 9.4 of the Agreement); and (iv) export subsidies other than those subject to reduction commitments, provided that they are in conformity with the anti-circumvention disciplines of Article 10 of the Agreement on Agriculture. In all other cases, the use of export subsidies for agricultural products is prohibited (Articles 3.3, 8 and 10 of the Agreement).

The Agreement on Agriculture defines export subsidies as subsidies contingent on export performance, explicitly listing those falling under reduction commitments (Article 9). The list includes a number of subsidies typical in agriculture such as: the sale for export by governments of stocks at prices below the domestic market price; subsidies on incorporated products, i.e. subsidies on agricultural products such as sugar or wheat contingent on their incorporation in export products such as biscuits; or cost reduction measures such as subsidies to reduce the cost of marketing goods for export.

For each of the six categories of export subsidies listed in Article 9, Members' schedules contain the base period (average over the period 1986-1990) levels of both quantities[73] exported with subsidies and expenditure on these subsidies, as well as the annual and final bound commitment levels for each year of the implementation period.

Developed-country Members are required to reduce, in equal steps over a period of six years, the base period volume of subsidized exports by 21%, and the corresponding budgetary outlays for export subsidies by 36%. Developing country Members are required to cut volumes by 14% and outlays by 24% over 10 years.[74] The scheduled ceilings must be respected in each year of the implementation period although, as noted above, some flexibility for coping with year-to-year market fluctuations (downstream flexibility) is provided by allowing countries to exceed their commitments somewhat during the second to fifth years of the implementation period. Total cumulative outlays and quantities must not be in excess of the corresponding commitment levels and, in the last year of the implementation period, Members must be within their final export subsidy ceilings.

Finally, concerning subsidies not subject to a reduction commitment, Article 10 of the Agreement on Agriculture states that they shall not be applied in a manner which results in, or which threatens to lead to, circumvention of export subsidy commitments.

Of the WTO's 136 Members (April 2000), 25 have scheduled export subsidy reduction commitments. Table III.10 shows, for each Member, the number of product groups concerned, as well as the scheduled commitment on budgetary outlays for agricultural export subsidies at the end of the implementation period.[75] Table III.11 shows the commitments and the actual use of subsidies by product group, as well as the level of world exports in 1995. Data suggest that agricultural markets were significantly affected by subsidized exports and that, even if the use of subsidies has been limited during certain years, their potential impact is still significant. For products such as wheat or some dairy products, existing commitments would still allow a large share of world exports to be affected.

Appendix Table III.13 shows the use of export subsidies by Members. It gives an indication of the use of export subsidies in relation to annual commitments. Both budgetary commitments and volume commitments are taken into account. The simple average column reflects the simple average use of each export subsidy commitment for which a notification has been received, but excludes zero use notifications. The number of non-zero use

[72] There are limits to this flexibility in terms of the Peace Clause of the Agreement on Agriculture (Article 13). This clause exempts under certain conditions trade distorting support from action under GATT Articles II in conjunction with XXIII, VI and XVI and the Subsidies Agreement.

[73] In the case of the sixth category, "incorporated products", the reduction commitments are on a budgetary-outlay basis only.

[74] Under the special and differential treatment provision, developing countries are allowed to grant certain marketing-cost reduction and transport subsidies, provided that these are not applied in a manner that would circumvent reduction commitments.

[75] Note that because some countries have made commitments at the product rather than the product group level, the total number of commitments by Member can be higher than the number of product groups affected.

Table III.10. Agricultural export subsidies. Number of product groups affected by export subsidy reduction commitments and post Uruguay Round outlay commitment level by Member

Countries	Number of product groups	Final (post UR) budgetary outlay commitments (national currency/USD)			Exchange rate[b]	Last year of implementation period
		as schedule[a] (million)		dollars[b] (million)		
Australia	5	88.1	AUD	65.3	1.35	2000/01
Brazil	12	73.1	USD	73.1	-	2004
Bulgaria	13	102.6	ECU	135.0	0.76	2000
Canada	11	421.9	CAD	307.9	1.37	2000
Colombia	7	286.6	USD	286.6	-	2004
Cyprus	8	6.6	CYP	14.7	0.45	2004
Czech Republic	13	4342.3	CSK	163.6	26.54	2000
EU	19	6761.3	ECU	8896.4	0.76	2000
Hungary	13	13004.3	HUF	103.5	125.68	2000
Iceland	2	11.9	ISK	18.3	0.65	2000
Indonesia	1	21.5	USD	21.5	-	2004
Israel	3	42.6	USD	42.6	-	2004
Mexico	4	553.1	USD	553.1	-	2004
New Zealand	1	0		0	-	2000
Norway	11	493.1	NOK	77.8	6.34	2000
Panama	1	0		0	-	2003
Poland	10	499.6	USD	499.6	-	2000
Romania[c]	12	2203.8	ROL	146.9[c]	15.00[c]	2004
Slovak Republic	13	1656.2	SKK	55.7	29.71	2000
South Africa	19	620.1	ZAR	170.8	3.63	2000
Switzerland[d]	4	440.4	CHF	373.2	1.18	2000
Turkey	13	105.3	USD	105.3	-	2004
United States	13	594.4	USD	594.4	-	2000
Uruguay	3	1.4	USD	1.4	-	2004
Venezuela	6	26.7	USD	26.7	-	2004
All Members	**217**	**-**		**12733.4**		**-**

[a] Commitments are made in either national currency or in dollars.

[b] Commitments are converted into dollars by using the 1995 average exchange rate.

[c] Commitments of Romania are made at constant 1986-89 prices and are converted into dollars at the average exchange rate of that period.

[d] Including Liechtenstein.

Source: WTO Secretariat; Members' schedules; IMF, IFS May 1999.

Table III.11. Agricultural export subsidies. Commitments and notifications regarding subsidized volumes by product group, 1995-1998

(Thousands of metric tons and percentage)

	World exports in 1995	1995 Commitment levels	1995 Notified subsidized exports	1995 Share of outstanding notif.	1996 Commitment levels	1996 Notified subsidized exports	1996 Share of outstanding notif.	1997 Commitment levels	1997 Notified subsidized exports	1997 Share of outstanding notif.	1998 Commitment levels	1998 Notified subsidized exports	1998 Share of outst. notif.
Wheat and wheat flour	116 000[2]	59 452	4 350	0	55 463	14 410	1/10	51 871	13 038	2/11	48 277	14 023	2/11
Coarse grains	90 000[3]	28 156	7 666	0	23 471	11 845	2/18	22 301	8 826	4/18	21 129	15 311	4/18
Rice	21 000	803	99	0	745	227	0	686	155	0	628	144	4/9
Oilseeds	46 000[4]	2 799	5	0	2 697	4	0	2 596	0	1/7	2 491	0	2/7
Vegetable oils	32 000	1 821	202	1/15	1 703	140	1/15	1 749	97	0	1 529	10	0
Oilcakes	...	360	0	0	329	0	0	319	0	0	308	0	0
Sugar	34 000	6 342	1 032	1/11	4 699	1 459	2/11	4 553	2 061	1/11	4 243	1 884	2/11
Butter and butter oil	800	631	155	0	602	288	0	573	187	0	529	167	1/9
Skim milk powder	1 000	754	399	0	720	361	0	683	295	0	646	380	0
Cheese	1 000	557	446	0	529	424	0	500	350	2/12	460	253	3/12
Other milk products	60 000[5]	1 563	1 267	0	1 471	1 248	0	1 405	1 227	0	1 342	1 060	4/17
Bovine meat	5 000	1 633	1 020	0	1 560	1 178	0	1 483	962	2/17	1 258	729	3/17
Pigmeat	2 000	679	381	0	654	296	0	630	225	1/9	605	748	2/9
Poultry meat	4 000	854	443	0	813	401	0	715	362	3/15	644	370	4/15
Sheepmeat	900[6]	29	2	0	29	1	0	28	1	2/9	26	1	3/9
Live animals	694 000	157	44	3/7	152	55	3/7	147	36	5/9	123	5	6/9
Eggs	1 000	130	97		125	70	3/6	119	106	4/7	114	116	4/7
Wine	5 000	557	81	4/8	538	184	4/8	519	85	5/9	485	7	6/9
Fruit and veg.	101 000[8]	8 057	1 923	0	7 679	2 619	3/93	7 460	2 686	30/121	6 904	2 407	79/121
Tobacco	3	278	25	4/10	260	13	4/10	239	4	5/11	222	7	5/11
Cotton	6[9]	95	.04	0	93	0	0	92	0	0	89	0	0

...data not available

1 Commitment levels relate only to export subsidy commitments for which a notification has been received for the year in question.

2 Wheat + wheat flour, wheat equivalent.

3 Crop year 1994/95.

4 Oilseeds-22.

5 Milk equivalent minus butter, skim milk product and cheese.

6 Sheep meat or ovine meat.

7 Heads. The number comprises: cattle, buffaloes, sheep, goats, pigs, chickens, ducks, gees, turkeys, horses, asses, mules, camels, and rabbits.

8 Fruits and vegetables-05.

9 Cotton lint.

Source: FAO, WTO (G/AG/NG/S/5).

notifications included in the simple average is specified for each member country. Where, for a particular Member, no export subsidies were used for any product, "00" is indicated in the simple average column. Figures show that between 1995 and 1998, the average use of commitments has decreased for some countries and increased for others. The use of export subsidies, apparent in both Tables III.11 and Appendix Table III.13, is partly related to the level of agricultural prices which were relatively high in 1995 and 1996. The higher the world market price, the smaller the gap between domestic and world prices and the smaller the need for export subsidies.

4. Other provisions

a. *Special and differential treatment*

Another essential element of the Agreement on Agriculture is the special and differential (S&D) treatment provided for developing countries (Article 15). There are a number of provisions relating to such treatment throughout the Agreement. The preamble, for instance, states that developed countries have agreed to take into account the special needs and conditions of developing countries in implementing their commitments on market access. They should achieve this by providing for a greater improvement of opportunities and terms of access for agricultural products of particular interest to developing countries. In addition, special and differential treatment provisions not explicitly stated in the Agreement are reflected in developing countries Schedules of commitments. With a longer implementation period they also have more time to meet these reduced commitments.

As discussed above on market access, many developing countries did not tariffy all of their non tariff measures—instead they opted for ceiling bindings which allow them to charge tariffs up to their bound ceiling.[76] In addition, least-developed countries did not have to make any market access commitments. With regard to domestic support, developing countries have made use of S&D provisions which allow them to use some types of investment and input subsidies under certain conditions, as well as to exclude support amounting to less than 10% (rather than 5%) of output value from AMS under the *de minimis* provision.[77] Also, for those developing countries with a Total AMS in their schedules, the reduction commitment is of 13.3% over 10 years (20% over six years for developed countries). Least-developed countries were not required to undertake any domestic support reduction commitment. Finally, also with regard to export subsidies, developing countries have taken into account the S&D provisions in the establishment of their schedules.

Agreement on the Application of Sanitary and Phytosanitary Measures

The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) affirms the right of WTO Members to restrict international trade when necessary to protect human, animal or plant life, or health from food-borne risks or animal-and plant-carried diseases. The Agreement builds on previous GATT rules and requires sanitary and phytosanitary measures to be based on science. SPS measures may be applied only to the extent necessary to protect human, animal or plant life, or health, and they may not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail.

The Agreement allows countries scope to establish their own levels of health protection, yet provides grounds for improved market access for agricultural products. To quantify market access opportunities resulting from the implementation of the SPS Agreement is not an easy task. However, discussions in the SPS Committee meetings, including recent discussions relating to the review of the operation and implementation of the Agreement,[78] suggest that trade relationships with regard to SPS measures are improving. Moreover, the significant number of market access related concerns discussed in the Committee illustrate the importance of this new tool.

Critical for market access is the requirement for transparency, according to which Members are required to notify in advance new or changed SPS measures which affect trade, and to set up enquiry points to respond to requests for information. To date, about 1,400 notifications have been received and circulated to all Members. International harmonization offers Members, and in particular developing country Members, the possibility to meet the requirements of the Agreement without having to go through the more demanding risk assessment procedures otherwise required. It also helps to shield developing countries' exports from more stringent import requirements.

Equivalency, the recognition that different SPS measures may meet an importing country's level of health protection, is a concept whose application is progressing. It results in a significant reduction of routine checks, control and inspection measures, while facilitating trade and improving market access conditions. Similarly, the adaptation of SPS measures to *regional conditions*, including the recognition of pest or disease-free areas, is recognized as a concept of significant importance for trade in agricultural products.

The SPS Agreement is a new tool, partly aimed at preventing circumvention of stricter rules on trade in agricul-

[76] Like all other Members, developing countries had to remove, however, all existing agriculture-specific non-tariff measures. Such measures are now banned by virtue of Article 4.2 of the Agreement on Agriculture. This does not apply however for non-agriculture-specific WTO rules, with the balance-of-payments provisions of the GATT being a particularly relevant example in the case of developing countries.

[77] See WTO Secretariat document WT/COMTD/W/35 for details concerning the implementation of special and differential treatment provisions.

[78] WTO document G/SPS/12.

Table III.12. Exports of agricultural products[a] of selected regions and countries (excluding intra-EU trade). Growth rates, 1990-1998

(Percentages)

Average annual growth	1990-94	1994-97	1994-98	1995	1996	1997	1998
North America	3.8	5.1	1.3	18.5	0.9	-2.7	-9.5
Latin America	5.3	11.9	7.8	20.3	5.8	10.1	-3.8
Western Europe	4.3	5.9	3.4	15.1	1.2	2.0	-3.6
European Union (15)	4.6	6.0	3.5	16.4	0.3	2.0	-3.7
Transition economies [b]	-	-	-	20.3	-	-5.9	-10.0
Africa	1.9	7.2	4.4	19.5	4.8	-1.6	-3.5
Middle East	5.6	4.1	1.7	8.4	6.4	-2.3	-5.2
Asia	7.4	4.5	0.9	13.2	2.6	-1.8	-9.3
Japan	5.8	2.9	-0.2	12.8	-6.3	3.0	-8.9
Australia/New Zealand	5.5	7.5	2.4	5.7	14.4	2.8	-11.6
Developing Asia	8.2	3.6	0.5	15.6	-0.2	-3.5	-8.5
World	**5.2**	**6.8**	**3.2**	**16.6**	**4.4**	**0.1**	**-7.1**
Memorandum items:							
Developed countries	4.2	5.6	2.2	15.7	2.3	-0.3	-7.6
Developing countries	6.2	7.1	3.7	17.4	2.8	1.7	-5.9
Developing countries, excl. China	5.8	7.6	4.2	19.3	3.0	1.4	-5.6

[a] Agricultural products including fish and forestry products.

[b] Break in time series as intra-CIS trade is included only from 1996 onwards.

Note: Due to the change in trade coverage for the transition economies, the comparison of shares before and after 1996 is somewhat distorted.

Source: WTO, Annual Report 1999.

tural products. Its implementation constitutes a significant challenge for all Members, in particular developing country Members. Almost five years after its entry into force, most of these countries are still faced with significant shortcomings with regard to the practical application of several of its provisions. Moreover, the Agreement applies to least-developed countries only as from 1 January 2000. Little information is available on the extent to which the special and differential treatment provisions contained in the Agreement have been used so far. However, it seems clear that a "proper" implementation of the Agreement by developing country Members will be heavily dependent on the technical assistance and cooperation that they can get from other Members and international organizations.

C. Trends in trade and continuation of the reform process

1. Trends in trade

Before concluding, it seems appropriate to analyze the performance of world agriculture exports during the first implementation years of the Agreement on Agriculture which, along with all other WTO agreements and the WTO Agreement itself, entered into force on 1 January 1995.[79] To this end Table III.12 presents a comparison of average annual growth of world agricultural exports, in-

[79] For the purpose of implementing the reduction commitments in the three areas of market access, domestic supports and export subsidies, Members had the options to chose the calendar, financial or marketing year. Argentina, for example, like many other Members, has chosen the calendar year. Japan implements its market access commitments on the basis of its fiscal year (1 April). The EC and the US use a mixture of marketing years and fiscal years, depending on the area and product concerned. For details see the Secretariat document G/AG/W/2/Rev.4, dated 28 March 1996.

cluding a breakdown by major region, during the pre-WTO phase (1990–94) and the phase following the entry into force of the WTO (1994-97 and 1994-98, respectively). Further supplementary information is presented in the Appendix to this paper (Appendix Tables III.14 to 19), including, for purposes of reference, data on the evolution of total merchandise exports for the period under consideration.

In examining the tables it needs to be kept in mind that the figures include two product groups – fish and forestry products – which are *not* covered by the Agreement on Agriculture (Annex 1 to the Agreement). Nevertheless, for convenience, quotations of the data are termed "agricultural exports" as they represent the vast majority of the trade flows under consideration.

Key features of the information presented in the tables include:

- The value of world agricultural exports increased from US$280 billion in 1990 to reach a record US$424 billion in 1997 before dropping to US$394 billion in 1998.
- In the first three years of the implementation of the Uruguay Round results world agricultural exports growth was stronger than in the pre-WTO phase (annual increase of 6.8% for 1994-97 versus 5.2% for 1990-94).
- Since 1994, the developing countries recorded in each year a stronger export growth than the developed countries. Above average growth in the 1994-97 period was recorded for Latin America and the Caribbean and Africa. The growth of agricultural exports from developing Asia, particularly China, and the Middle East lagged behind.
- Average annual agricultural imports of developed countries from least-developed countries rose by 3% in the 1994-98 period and thereby faster than from all other origins. The average increase of imports from the LDCs in the post-WTO period was also somewhat larger than in the 1990-94 period but year to year variations remained strong. (The limited product diversification of agricultural exports from the LDCs and the substantial price fluctuations for their major products (coffee and cotton) are important factors behind these annual variations.)
- Overall, agricultural exports from developing countries (excluding China) thus expanded faster than agricultural exports from other origins, with the differences in the rates of growth being more marked in the period following the entry into effect of the WTO. As a result, the share of developing countries in world agricultural exports, which had increased from 35.8 to 36.5% between 1990 and 1994, reached 38% (adjusted 38.4%) in 1998.
- North America is the largest agricultural exporter with the value of its exports amounting to US$99 billion in 1998, followed by developing Asia (US$71 billion), Latin America and the Caribbean (US$66 billion), and the EC (US$62 billion). Africa exports slightly less than Australia and New Zealand combined (US$ 21 versus 24 billion).
- Among the major developed regions, Western Europe is the most important market for agricultural exports from developing countries, although its share in total agricultural exports from developing countries declined from 30.5% in 1990 to 27.5% in 1998. North America's share rose slightly from nearly 15 to 16.1% over the same period. The share of Japan was rising between 1990 and 1994 but under the impact of the domestic recession fell to 11.2% in 1998, about 2.5% less than the share recorded in 1990.
- The markets of the developing countries themselves are becoming increasingly important for their own agricultural exports. In 1998, trade among the developing countries accounted for 39.6%, sharply up from 30.5% in 1990. Developing countries' exports to Latin America and Asia recorded particularly strong growth.
- The higher growth of agricultural exports in the 1994-97 period, as compared to the pre-WTO phase, abruptly came to an end when the impact of the financial crises in Asia, Russia and Brazil hit world agricultural markets, beginning in the second half of 1997 and deepening in 1998. In 1998, world agricultural exports dropped by 7%, with Australia/New Zealand (-11.6%), the transition economies (-10%), North America (-9.5%) and developing Asia (-8.5%) carrying the brunt of the adjustment burden.

It is evident that the trade flows reported above do not permit firm conclusions about the success—in terms of the stimulation of trade, and economic growth and employment—of the agricultural package of the Uruguay Round. First, implementation of the reduction commitments in the areas of market access, domestic support and export subsidies is still going on – until the year 2000 inclusive for developed country Members, and until 2004 for developing country Members. Second, trade flows are determined by a variety of factors, including the vagaries of the weather and autonomous agricultural reforms, such as the US Federal Agricultural Improvement and Reform (FAIR) Act of 1996 and the EC´s Agenda 2000. Third, economic changes beyond the agricultural sector – for instance, financial crises—also have an impact on agricultural trade flows.

While a definite, comprehensive evaluation of the Agreement on Agriculture is not yet possible, trade developments since 1994 shed some light on two important aspects of the impact of trade liberalization in agriculture.

First, the value data reported above indicate that developing countries have fully participated in the expansion of world agricultural exports since the conclusion of the Uruguay Round.

Second, the sharp decline in the prices of internationally traded bulk food commodities, following the price hike in 1996, should alleviate the concerns expressed by many net-food importing countries that reduced export subsidies would trigger off sustained price increases. In 1998 (and in the first nine months of 1999) food prices remained below the level prevailing in 1994.[80]

These developments, as well as signs of recovery in Asia, augur well for the future expansion of agricultural trade, and the possibility for all Members to benefit from reduced trade distortions, increased transparency, stability and predictability brought about by the Agreement on Agriculture.

2. Continuation of the reform process

The Uruguay Round Agreement on Agriculture has established a basis for initiating a process of reform of trade in agriculture. As stated in the preamble to the Agreement, the long-term objective of the ongoing process is to establish a fair and market-oriented agricultural trading system, notably through substantial progressive reductions in agricultural support and protection sustained over an agreed period of time, resulting in fundamental reform.

As this study shows, Member countries were required to establish specific binding commitments in each of the following areas: market access; domestic support; and export competition. Particular needs and conditions of developing country Members have also been taken into account in implementing their commitments on market access, as well as the possible negative effects of the implementation of the reform programme on least-developed and net food-importing developing countries.

While much has been achieved in the agricultural sector, much remains to be done. With regard to market access, the conversion of all non-tariff barriers into tariffs, as well as the binding of all tariffs, signified major progress. However, as shown above, tariffs on agricultural imports are still higher than those on industrial products. They are also more dispersed, with very high peaks and, in many cases, tariffs increase with the level of processing. Also, the frequency of non-*ad valorem* tariffs is relatively high for agricultural products, including formulas which severely restrict transparency.

The fill rates of the tariff quotas that were introduced to improve market access conditions are surprisingly low. Similarly, the new constraints on export subsidies are almost unanimously considered to be effective but they are far from having completely eliminated the distortions associated with such subsidies. In the domestic support area, the Agreement has contributed to the re-instrumentalization of agricultural policies through the reduction of trade-distorting measures. But while reduced, such measures have not been eliminated and domestic subsidies still distort the markets for agricultural products.

WTO Members have already agreed to continue the reform process of trade in agricultural products undertaken in the Uruguay Round. Article 20 of the Agreement on Agriculture provides for negotiations in this area to be initiated one year before the end of the implementation period of Uruguay Round reduction commitments. Article 20 also states that, in this new round of negotiations, due account should be taken of the experience derived from the implementation of Uruguay Round commitments; of the effects of Uruguay Round reductions on world trade in agriculture; as well as of non-trade concerns, special and differential treatment to developing countries and the overall objective of establishing a fair and market oriented agricultural trading system.

3. State of play in the agriculture negotiations

The negotiations on the continuation of the WTO reform process for trade in agriculture are being conducted in Special Sessions of the Committee on Agriculture, the body which regularly oversees the implementation of the Uruguay Round agricultural commitments. All WTO Members are participants in these negotiations, as are observer governments in the process of accession. At the first Special Session meeting in March 2000 a programme was adopted for the first phase of the negotiations under which negotiating proposals and other submissions are being presented and examined. Following Special Session meetings in June, September and November 2000, 17 negotiating proposals and three other submissions sponsored by about 80 Members, either individually or in various groupings, have undergone multilateral examination. Further negotiating proposals have been or are in the process of being submitted and more are expected early in 2001 under the flexible deadlines established by the Special Session. Following an additional meeting in early February, a stock-taking exercise is to be undertaken covering all the negotiating proposals submitted at a meeting scheduled towards the end of March 2001. This meeting will also focus on mapping out the second phase of the negotiations to continue the reform process.

On the basis of the proposals so far submitted one of the main issues in the area of market access is whether further reductions in tariffs are to be accomplished through a comprehensive formula approach, as was the case in the Uruguay Round, or through sectoral and product-by-product negotiation methods. Several of the proposals that have been tabled call for substantial further reductions in tariffs on a formula basis, as well as in one case substantial initial reductions, or "down-payments". Other elements proposed include the elimination of tariff peaks and the simplification of tariff structures, particularly as regards complex non-*ad valorem* tariffs. Proposals

[80] Average dollar prices in 1998 for wheat, maize and sugar were five to 10% below the 1994 average. Vegetable oils experienced short lived price increases in both 1995 and 1998, followed each time by a marked price decline entirely wiping out the price increases. In the first half of 1999, the prices of palm and groundnut oil were therefore again somewhat below the price levels recorded in 1994.

by a number of developing country groupings call for substantial liberalization of trade in products of interest to developing countries, including also full liberalization for processed tropical products and the elimination of tariff escalation. Some other proposals are less specific or less ambitious at this stage about the size of further reductions. Improvements in access under tariff quotas and in the administration of tariff quotas feature in most of the proposals which deal with market access. The continued maintenance of the special agricultural safeguard mechanism, which can be used in the case of sudden import surges or sharp declines in import prices but only in respect of products "tariffied" in the Uruguay Round, is another key issue. Some developing country proposals call for an end to the use of this mechanism by developed countries, while making it available to developing countries generally. The discussions in the market access area also include some new or non-traditional issues, such as fair competition opportunities for products whose quality and reputation are linked to their geographical origin. This is a matter which some participants consider should be dealt with as appropriate in other WTO bodies.

The reduction commitments and disciplines on domestic support are unique to the agricultural sector. At present the Green Box exempts a wide range of domestic support measures from reduction commitments provided certain non-distortion criteria are met. A number of the proposals tabled so far call for a tightening up of the Green Box criteria, as well as for specific provision to be made for dealing with a wider range of non-trade concerns, such as, for example, environmental and natural resource protection, rural development, poverty alleviation, and protection of animal welfare. The legitimacy of the non-trade or multifunctional concerns that are being raised in this context are not as such being challenged in the debate. The key issue for the negotiation is whether such concerns are to be addressed in ways that are targeted, transparent and non-trade distorting. A number of developing country proposals call for Green box exemptions which are more responsive to the specific needs and special situations of developing countries, especially with respect to food security. One such proposal calls for the creation of a "Food Security/Development Box" to enable developing countries greater scope to protect and enhance , through domestic support and other measures, their food production capacity, particularly in basic staples. Another category of exemptions from the domestic support reduction commitments are direct payments under production-limiting programmes, or Blue Box payments. These payments are considered by participants using such measures to be significantly less trade distorting than market price support measures. A number of the proposals tabled call for the elimination of the Blue Box, essentially on the grounds that such payments are not subject to non-trade-distortion criteria. There are also proposals that certain forms of "Amber" trade-distorting support, such as variable price-related ("deficiency") payments, should be subject to specific disciplines, in addition to the existing reduction commitments. The proposals so far tabled on the reduction of Amber or trade-distorting support range from elimination of such support to further progressive reduction, including on a product-specific basis, rather than on a global basis as is presently the case.

In the area of export competition one of the main issues relates to whether export subsidies are to be eliminated over an agreed period or are to be subject to a further programme of progressive reductions. In the proposals so far tabled on export competition, one condition to further reductions is that other forms of export subsidization or potential circumvention of commitments, such as export credits and related facilities, certain food aid transactions, as well as the operations of state trading export enterprises, should be treated on an equal footing. Several of the developing country proposals call for the immediate elimination of export subsidies, as well as for the continuation of special and differential provisions under which developing countries are able to use certain marketing and transportation subsidies in order to assist them in the development of their exports. Export restrictions and taxes also feature in the proposals tabled in the context of export competition and food security, as do proposals relating to the possible negative effects of further reform on least-developed and net food-importing developing countries.

Under the Agreement on Agriculture a "Peace Clause", which expires at the end of 2003, conditionally protects agricultural export subsidies and domestic support from actionability under the WTO Agreement on Subsidies and Countervailing Duties and related GATT provisions. A key issue arising from the proposals tabled to date is whether or not the Peace Clause should be extended and, if so, under what conditions.

Special and differential treatment for developing countries was an integral element of the Uruguay Round Agreement on Agriculture, in relation to the commitments negotiated and their implementation, as well as under the rules relating to domestic support, export subsidies and export restrictions. Least-developed countries were not required to make reductions commitments and lower reduction targets and longer implementation timeframes were applicable to developing countries. In addition many developing countries opted ceiling tariff bindings in lieu of across-the-board reductions. As indicated above, special and differential and differential treatment, and taking account of the particular situations and needs of developing countries, are important elements in the proposals tabled so far by many developing country, as well as of other negotiating proposals.

Appendix Table III.1. Bound tariffs on agricultural products by stage of processing and by agricultural product category

Member		Cereals and cereal preparations		Coffee, tea maté, cocoa and preparations		Dairy products		Fruits and vegetables		Oilseeds, fats and oils	
		Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %
Australia	unprocessed	1	0	0	0	0	0	2	0	1	0
	semi-processed	0	0	0	0	11	0	8	0	4	0
	prepared or preserved	5	0	11	0						
Brazil	unprocessed	46	0	35	0	55	0	33	0	33	0
	semi-processed	53	0	35	0	50	0	36	0	35	0
	prepared or preserved	35	0	31	0						
Canada	unprocessed	1	15	0	0	0	0	4	0	1	0
	semi-processed	2	48	2	0	11	95	7	0	5	3
	prepared or preserved	7	44	3	18						
Chile	unprocessed	27	0	25	0	25	0	25	0	30	0
	semi-processed	27	0	25	0	31	0	25	0	27	0
	prepared or preserved	25	0	25	0						
Colombia	unprocessed	124	0	70	0	159	0	71	0	133	0
	semi-processed	142	0	70	0	137	0	71	0	130	0
	prepared or preserved	86	0	70	0						
European Union	unprocessed	4	79	3	0	0	100	7	24	0	0
	semi-processed	0	100	9	0	8	98	16	18	5	8
	prepared or preserved	9	78	10	79						
Hong Kong, China	unprocessed	0	0	0	0	0	0	0	0	0	0
	semi-processed	0	0	0	0	0	0	0	0	0	0
	prepared or preserved	0	0	0	0						
India	unprocessed	47	0	133	0	100	0	103	2	106	0
	semi-processed	150	0	113	0	130	0	140	0	202	0
	prepared or preserved	134	0	150	0						
Indonesia	unprocessed	74	0	46	0	40	0	46	0	38	0
	semi-processed	35	0	40	0	106	0	47	0	41	0
	prepared or preserved	41	0	45	0						
Japan	unprocessed	13	24	8	0	0	100	6	6	0	10
	semi-processed	18	44	7	0	30	75	14	0	4	6
	prepared or preserved	18	41	20	0						
Korea, Rep. of	unprocessed	186	0	112	0	36	0	126	0	97	0
	semi-processed	310	0	20	0	82	0	56	0	24	0
	prepared or preserved	77	0	32	0						

Appendix Table III.1 *(cont'd.)*

		Cereals and cereal preparations		Coffee, tea maté, cocoa and preparations		Dairy products		Fruits and vegetables		Oilseeds, fats and oils	
		Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %
Member											
Malaysia	unprocessed	17	0	22	0	30	0	13	68	4	9
	semi-processed	10	4	15	0	8	50	14	36	7	12
	prepared or preserved	13	6	15	8						
Mexico	unprocessed	55	0	44	0	38	0	39	0	31	0
	semi-processed	42	0	37	0	68	0	39	0	45	0
	prepared or preserved	49	0	106	0						
New Zealand	unprocessed	1	0	3	0	8	0	2	0	0	0
	semi-processed	11	0	10	0	12	0	13	0	4	0
	prepared or preserved	15	0	16	0						
Philippines	unprocessed	35	0	40	0	18	0	39	0	39	0
	semi-processed	40	0	40	0	27	0	40	0	37	0
	prepared or preserved	36	0	43	0						
Singapore	unprocessed	10	0	10	0	10	0	10	0	10	0
	semi-processed	10	0	10	0	6	0	9	0	10	0
	prepared or preserved	9	0	10	0						
Sri Lanka	unprocessed	50	0	50	0	55	0	51	0	65	0
	semi-processed	50	0	50	0	47	0	50	0	50	0
	prepared or preserved	50	0	50	0						
Thailand	unprocessed	50	10	80	0	41	0	42	0	36	0
	semi-processed	30	0	27	0	38	0	36	0	36	19
	prepared or preserved	32	4	40	0						
United States	unprocessed	2	0	0	0	1	33	5	0	16	0
	semi-processed	3	0	0	0	5	74	6	0	4	5
	prepared or preserved	3	20	2	55						
Venezuela	unprocessed	101	0	33	0	117	0	35	0	110	0
	semi-processed	118	0	25	0	95	0	39	0	79	0
	prepared or preserved	67	0	31	0						

Appendix Table III.1 *(cont'd.)*

Member		Sugar and sugar confectionary: Bound Rate	Sugar and sugar confectionary: Tariff lines excluded from average %	Beverages and spirits: Bound Rate	Beverages and spirits: Tariff lines excluded from average %	Cut flowers, plants and vegetable materials: Bound Rate	Cut flowers, plants and vegetable materials: Tariff lines excluded from average %	Meat and meat preparations: Bound Rate	Meat and meat preparations: Tariff lines excluded from average %	Other agricultural products: Bound Rate	Other agricultural products: Tariff lines excluded from average %
Australia	unprocessed	15	0	10	0	1	0	2	0	1	0
	semi-processed	15	0							6	0
	prepared or preserved										
Brazil	unprocessed	35	0	40	0	34	0	43	0	32	0
	semi-processed	34	0							23	0
	prepared or preserved										
Canada	unprocessed	8	14	8	3	2	0	5	23	1	0
	semi-processed	8	0							4	8
	prepared or preserved										
Chile	unprocessed	27	0	25	0	25	0	25	0	25	0
	semi-processed	25	0							25	0
	prepared or preserved										
Colombia	unprocessed	106	0	91	0	72	0	104	0	77	0
	semi-processed	90	0							65	0
	prepared or preserved										
European Union	unprocessed	10	94	17	58	5	0	6	71	1	3
	semi-processed	17	57							4	36
	prepared or preserved										
Hong Kong, China	unprocessed	0	0	0	0	0	0	0	0	0	0
	semi-processed	0	0							0	0
	prepared or preserved										
India	unprocessed	131	0	150	0	103	0	113	0	90	0
	semi-processed	150	0							96	0
	prepared or preserved										
Indonesia	unprocessed	60	0	98	0	41	0	44	0	40	0
	semi-processed	40	0							40	0
	prepared or preserved										
Japan	unprocessed	51	7	25	1	2	0	12	15	1	5
	semi-processed	20	0							4	2
	prepared or preserved										
Korea, Rep. of	unprocessed	34	0	39	0	95	0	31	0	13	0
	semi-processed	20	0							32	0
	prepared or preserved										
Malaysia	unprocessed	16	64	14	58	5	7	40	1	4	6
	semi-processed	30	0							9	0
	prepared or preserved										

Appendix Table III.1 *(cont'd.)*

		Sugar and sugar confectionary		Beverages and spirits		Cut flowers, plants and vegetable materials		Meat and meat preparations		Other agricultural products	
		Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %	Bound Rate	Tariff lines excluded from average %
Member											
Mexico	unprocessed	132	0	41	0	27	0	66	0	25	0
	semi-processed	62	0							33	0
	prepared or preserved				New						
Zealand	unprocessed	3	0	13	2	1	0	9	0	1	0
	semi-processed	13	0							3	3
	prepared or preserved										
Philippines	unprocessed	38	0	45	0	29	0	39	0	22	0
	semi-processed	48	0							19	0
	prepared or preserved										
Singapore	unprocessed	10	0	10	63	10	0	9	0	10	0
	semi-processed	10	0							7	0
	prepared or preserved										
Sri Lanka	unprocessed	50	0	50	0	na	na	50	0	26	0
	semi-processed	50	0							50	0
	prepared or preserved										
Thailand	unprocessed	58	8	48	13	25	3	35	0	29	1
	semi-processed	40	0							26	6
	prepared or preserved										
United States	unprocessed	4	42	6	1	2	0	6	0	1	4
	semi-processed	5	40							3	1
	prepared or preserved										
Venezuela	unprocessed	103	0	40	0	35	0	74	0	40	0
	semi-processed	29	0							44	0
	prepared or preserved										

Note: Bound rates are post-Uruguay, simple average.

Source: WTO Secretariat.

Appendix Table III.2. Bound tariff rates for selected products by stage of processing

	Argentina			Australia			Bangladesh			Brazil		
Product	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
Bovine meat	31	31	35	1	0	0	83	83	100	44	44	35
Cocoa	35	35	28	1	0	14	100	100	100	35	35	29
Coffee	35		35	1		2	100		100	35		35
Cotton	35	35	35	0	2	29	45	64	100	55	35	35
Iron	35	35	35	1	4	0	15	30	82	35	35	34
Leather	35	35	35	0	8	21	100	100	100	35	35	35
Paper	35		35	0		8	60		102	28		32
Petroleum	35			0		0				35		
Soybeans	35		35	1		7	60		73	47		35
Sugar	35	35	33	23	21	10	100	100	100	35	35	33
Tobacco	34		33	16		9	77		83	37		42
Wheat	35	35	35	0	0	4	30	30	100	32	50	35
Wood	12	22	20	0	3	4	100	100	100	12	22	207

	Canada			Colombia			Czech Republic			EU		
Product	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3
Bovine meat	0	13	0	93	93	108	42	36	30	38	107	28
Cocoa	0	2	6	70	70	70	0	7	13	0	9	21
Coffee	0		1	70		70	2		6	4		11
Cotton	2	8	11	89	35	35	1	7	6	0	4	8
Iron	0	0	0	35	35	35	0	0	5	0	1	0
Leather	0	6	14	70	35	41	0	1	6	0	4	6
Paper	0		0	35		35	0		7	0		0
Petroleum	0		6	35			0		5	0		4
Soybeans	0		5	142		75	0		0	0		6
Sugar	30	8	9	53	56	85	64	61	13	53	49	17
Tobacco	6		10	81		84	6		37	27		40
Wheat	32	2	2	124	169		14	20	6	69	41	14
Wood	0	0	4		35	35	0	2	5	0	1	2

	Hungary			Iceland			India			Indonesia		
Product	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3
Bovine meat	37	71	39	229	32	32	100	100	150	46	46	50
Cocoa	3	13	19	0	2	29	100	117	150	40	40	40
Coffee	26		5	0		46	125		150	45		60
Cotton	3	5	6	0	0	2	125	25	155	34	40	40
Iron	0	0	4	0	0	1	25	25	40	40	40	31
Leather	1	5	9	5	7	19	25	26	106	40	40	49
Paper	0		7	0		12	25		60	30		40
Petroleum	0		5	0		9	0		45	40		
Soybeans	0		39	0		7	83			149		35

Appendix Table III.2 *(cont'd.)*

	Japan			Korea, Rep. of			Malaysia			Mexico		
Product	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
Sugar	6	6	5	0	2	30	44	120	150	44	74	40
Tobacco	6		12	15		19	100		123	46		43
Wheat	25	38	5	88	88	28	75	150	150	27	37	40
Wood	3	4	6	7	15	14	25	38	51	40	40	40
Bovine meat	4	50	16	58	40	27	9	9	15	24	45	45
Cocoa	0	9	20	16	20	24	10	15	15	37	37	88
Coffee	0		13	54		46	37		16	36		106
Cotton	0	4	5	2	13	13	3	10	20	41	35	35
Iron	0	0	0	1	2	0	2	5	11	35	35	31
Leather	0	13	29	5	10	15	5	14	28	9	34	35
Paper	0		0	0		0	5		11	19		34
Petroleum	NO		3	5		11	3		5	50		35
Soybeans	0		9	487		11	7			33		45
Sugar	126	67	19	18	85	25	15	22	25	156	156	54
Tobacco	0		10	54		63	14		120	45		56
Wheat	n.a.	n.a.	9	7	195	23	2	32	8	67	45	36
Wood	0	1	3	3	11	14	20	21	19	35	35	35

	New Zealand			Norway			Philippines			Poland		
Product	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3
Bovine meat	0	0	13	344	344	344	34	34	40	6	19	22
Cocoa	0	13	18	0	0	160	40	40	41	5	11	75
Coffee	0		17	0		1	40		47	15		19
Cotton	0	0	7	0	4	I0	10	20	30	0	9	13
Iron	0	0	7	0	0	0		10	20	0	3	12
Leather	0	10	26	0	0	7	5	22	50	12	9	15
Paper	0		0	0		1	10		30	3		9
Petroleum	0		6	0		0				0		23
Soybeans	0		7	104		92	20		29	3		51
Sugar	0	0	12	42	41	82	28	50	41	96	96	57
Tobacco	3		12	0		15	39		42	105		202
Wheat	0	16	22	347	376	171	25	40	40	45	16	77
Wood	0	6	10	0	0	0	20	30	28	3	9	9

Appendix Table III.2 *(cont'd.)*

Product	Romania			Switzerland			Thailand			Tunisia		
	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3
Bovine meat	271	271	128	…	…	…	42	42	50	98	98	180
Cocoa	25	25	206	0	7	0	27	27	29	75	75	104
Coffee	50		40	9		12	90		46	75		75
Cotton	35	35	25	0	3	6	5	15	30	62	60	60
Iron	35	0	35	0	0	1	30	6	28			22
Leather	173	35	55	0	1	4	26	26	35	93	43	100
Paper	29		34	2		3	10		31	17		37
Petroleum	35		160	1		45	25					
Soybeans	94			…			42		146	63		17
Sugar	57	93	75	…	8	2	33	51	32	50	100	138
Tobacco	42		220	170		20	37		43	112		106
Wheat	208	170	200	0	150		27	30	40	90	150	150
Wood	35	33	33	1	2	3	5	11	17		22	41

Product	Turkey			United States			Venezuela		
	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3	Stage1	Stage2	Stage3
Bovine meat	9	225	114	0	4	0	23	23	90
Cocoa	25	61	87	0	0	6	25		31
Coffee	50		65	0		4	40		40
Cotton	9	47	73	2	7	8	40	35	35
Iron	5	10	26	0	0	0	35	35	31
Leather	23	94	114	0	3	5	40	35	42
Paper	12		51	0		0	28		33
Petroleum	…		…	1		2			
Soybeans	15		26	0		13	106		75
Sugar	135	135	103	6	8	6	45	63	37
Tobacco	45		148	39		7	28		42
Wheat	180	70	51	3	1	0	117	116	
Wood	15	41	39	0	0	1		35	35

Source: OECD (1999).

Appendix Table III.3. Tariff quotas. Distribution by Member and by product category
(Number of tariff quotas)

Member	Product category												
	Cereals	Oilseeds	Sugar	Dairy	Meat	Eggs	Beverages	Fruit & vegetables	Tobacco	Fibres	Coffee, etc	Other	All
Australia	-	-	-	1	-	-	-	-	1	-	-	-	2
Barbados	1	1	1	2	4	1	1	25	-	-	-	-	36
Brazil	1	-	-	-	-	-	-	1	-	-	-	-	2
Bulgaria	6	2	4	6	26	-	5	15	2	-	7	-	73
Canada	4	1	-	11	4	1	-	-	-	-	-	-	21
Colombia	13	20	4	5	17	-	-	4	-	2	-	2	67
Costa Rica	3	-	1	13	6	1	-	1	1	1	-	-	27
Czech Republic	2	5	1	4	5	-	4	2	-	-	-	1	24
Ecuador	6	2	3	1	2	-	-	-	-	-	-	-	14
El Salvador	1	-	1	4	4	-	-	-	-	1	-	-	11
E U	15	-	3	12	28	3	1	25	-	-	-	-	87
Guatemala	6	7	1	1	3	-	-	3	1	-	-	-	22
Hungary	7	4	2	4	8	1	4	33	1	-	6	-	70
Iceland	17	22	3	4	13	1	1	18	-	-	5	6	90
Indonesia	1	-	-	1	-	-		-	-	-	-	-	2
Israel	1	-	-	4	3	-	-	4	-	-	-	-	12
Japan	4	1	-	12	-	-	-	1	-	1	-	1	20
Korea, Rep. of	15	5	2	5	7	1	1	20	-	2	4	5	67
Latvia	3	-	1	-	-	-	-	-	-	-	-	-	4
Malaysia	1	-	1	2	10	2	-	1	1	-	1	-	19
Mexico	3	-	1	2	2	-	-	2	-	-	1	-	11
Morocco	5	6	1	1	3	-	-	-	-	-	-	-	16
New Zealand	-	-	-	-	-	-	-	2	-	-	-	1	3
Nicaragua	3	1	1	1	2	-	-	1	-	-	-	-	9
Norway	37	2	2	14	32	3	1	116	-	-	3	22	232
Panama	2	-	-	11	2	-	-	4	-	-	-	-	19
Philippines	2	-	1	-	9	-	-	1	-	-	1	-	14
Poland	12	4	2	8	14	3	5	37	1	3	11	9	109
Romania	1	-	-	3	1	-	4	1	1	-	1	-	12
Slovak Rep.	2	5	1	4	5	-	4	2	-	-	-	1	24
Slovenia	4	1	-	2	12	-	-	1	-	-	-	-	20
South Africa	11	8	3	6	5	1	1	12	1	1	4	-	53
Switzerland	3	-	-	2	6	3	3	9	-	-	-	2	28
Thailand	2	6	1	2	-	-	-	5	1	1	4	1	23
Tunisia	3	-	1	3	3	-	-	3	-	-	-	-	13
United States	1	2	6	24	1	-	-	5	1	7	7	-	54
Venezuela	19	19	3	6	10	-	-	1	-	-	1	2	61
All members	**217**	**124**	**51**	**181**	**247**	**21**	**35**	**355**	**13**	**18**	**56**	**53**	**1371**

Source: WTO Secretariat (G/AG/NG/S/7).

Appendix Table III.4. Tariff quotas. Simple average fill rates by product category, 1995-1999

	1995			1996			1997			1998			1999		
	Simple average fill rate (%)	Number of tariff quotas included	Number of tariff quotas excluded	Simple average fill rate (%)	Number of tariff quotas included	Number of tariff quotas excluded	Simple average fill rate (%)	Number of tariff quotas included	Number of tariff quotas excluded	Simple average fill rate (%)	Number of tariff quotas included	Number of tariff quotas excluded	Simple average fill rate (%)	Number of tariff quotas included	Number of tariff quotas excluded
Cereal	65	165	35	64	172	34	62	179	35	65	136	78	46	22	195
Oilseeds products	67	110	10	64	110	12	64	112	12	67	71	53	39	12	112
Sugar and sugar products	76	34	9	72	35	11	70	38	12	67	29	21	62	6	45
Dairy products	65	132	31	63	134	30	65	148	33	64	113	68	71	41	140
Meat products	59	175	42	56	185	34	55	204	43	58	154	91	38	35	210
Eggs and egg products	41	17	4	43	17	4	40	15	6	53	11	10	0	2	19
Beverages	58	22	7	63	21	8	36	29	6	40	24	11	24	9	26
Fruit and vegetables	73	241	94	70	254	81	69	277	78	66	249	105	49	48	306
Tobacco	85	7	4	79	8	3	66	9	4	67	9	4	53	3	10
Agricultural fibres	45	12	6	40	11	7	32	12	6	42	12	6	n.a.	-	18
Coffee, tea, spices and processed agricultural products from mixed ingredients	61	37	12	56	38	11	59	44	12	51	38	18	50	12	44
Other agricultural products	69	45	8	54	45	8	65	45	8	56	37	16	49	3	50
Total all products	**66**	**997**	**262**	**63**	**1030**	**243**	**62**	**1112**	**255**	**62**	**883**	**481**	**50**	**193**	**1175**

Source: WTO Secretariat. (G/AG/NG/S/7)

Appendix Table III.5. Tariff quotas. Simple average fill rates by Member 1995-1999

	Simple average fill rate %	Number of tariff quotas included	Number of tariff quotas excluded	Simple average fill rate %	Number of tariff quotas included	Number of tarif quotas excluded	Simple average fill rate %	Number of tariff quotas included	Number of tarif quotas excluded
	1995			1996			1997		
Australia	99	2	-	98	2	-	90	2	-
Barbados	n.a.	-	36	n.a.	-	36	n.a.	-	36
Brazil	100	2	-	100	2	-	100	2	-
Bulgaria							35	73	-
Canada	78	21	-	85	21	-	82	20	1
Colombia	85	57	10	80	57	10	80	57	10
Costa Rica	14	8	19	5	8	19	5	8	19
Czech Republic	44	24	-	50	24	-	47	24	-
Ecuador				n.a.	-	14	n.a.	-	14
El Salvador	n.a.	-	11	n.a.	-	11	n.a.	-	11
European Union	76	53	32	72	80	5	71	85	2
Guatemala	69	22	-	67	22	-	66	22	-
Hungary	55	66	4	51	68	2	45	67	3
Iceland	65	88	2	67	87	3	70	87	3
Indonesia	100	2	-	100	2	-	100	2	-
Israel	86	12	-	78	12	-	89	12	-
Japan	69	18	2	71	18	2	70	18	2
Korea, Rep. of	78	67	-	76	67	-	76	67	-
Latvia									
Malaysia	28	19	-	54	17	2	n.a.	-	19
Mexico	80	11	-	n.a.	-	11	n.a.	-	11
Morocco	81	14	2	88	14	2	75	14	2
New Zealand	62	3	-	40	3	-	33	3	-
Nicaragua	n.a.	-	9	n.a.	-	9	n.a.	-	9
Norway	68	224	8	64	222	10	62	221	11
Panama							89	19	-
Philippines	54	14	-	58	14	-	45	14	-
Poland	47	10	99	52	13	96	56	15	94
Romania	47	4	8	48	4	8	6	7	5
Slovak Republic	37	24	-	47	24	-	46	24	-
Slovenia	51	20	-	18	20	-	26	20	-
South Africa	75	53	-	62	53	-	76	53	-
Switzerland	92	28	-	92	27	1	89	27	1
Thailand	40	23	-	43	23	-	45	23	-
Tunisia	n.a.	-	13	57	13	-	58	13	-
United States	45	47	7	53	52	2	55	53	1
Venezuela	66	61	-	49	61	-	58	60	1
All Members	**66**	**997**	**262**	**63**	**1030**	**243**	**62**	**1112**	**255**

Appendix Table III.5 *(cont'd.)*

	1998			1999		
	Simple average fill rate %	Number of tariff quotas included	Number of tariff quotas excluded	Simple average fill rate %	Number of tariff quotas included	Number of tarif quotas excluded
Australia	91	2	-	89	2	-
Barbados	n.a.	-	36	n.a.	-	36
Brazil	100	1	1	n.a.	-	2
Bulgaria	40	73	-	n.a.	-	73
Canada	85	20	1	n.a.	-	21
Colombia	79	57	10	n.a.	-	67
Costa Rica	n.a.	-	27	n.a.	-	27
Czech Republic	45	24	-	n.a.	-	24
Ecuador	n.a.	-	14	n.a.	-	14
El Salvador	n.a.	-	11	n.a.	-	11
European Union	66	42	45	n.a.	-	87
Guatemala	84	22	-	91	8	14
Hungary	43	67	3	41	65	5
Iceland	n.a.	-	90	n.a.	-	90
Indonesia	100	2	-	n.a.	-	2
Israel	88	12	-	91	12	-
Japan	67	18	2	n.a.	-	20
Korea, Rep. of	70	64	-	n.a.	-	64
Latvia				n.a.	-	4
Malaysia	n.a.	-	19	n.a.	-	19
Mexico	n.a.	-	11	n.a.	-	11
Morocco	88	14	2	n.a.	-	16
New Zealand	27	3	-	50	3	-
Nicaragua	n.a.	-	9	n.a.	-	9
Norway	65	221	11	n.a.	-	232
Panama	n.a.	-	19	n.a.	-	19
Philippines	50	14	-	n.a.	-	14
Poland	41	14	95	31	19	90
Romania	n.a.	-	12	n.a.	-	12
Slovak Republic	43	24	-	44	24	-
Slovenia	38	20	-	10	20	-
South Africa	71	53	-	n.a.	-	53
Switzerland	90	27	1	n.a.	-	28
Thailand	48	23	-	n.a.	-	23
Tunisia	31	13	-	n.a.	-	13
United States	66	53	1	73	40	14
Venezuela	n.a.	-	61	n.a.	-	61
All Members	**62**	**883**	**481**	**50**	**193**	**1175**

Source: WTO Secretariat. (G/AG/NG/S/7)

Appendix Table III.6. Tariff quotas. Categories of administration method

Code	Description
applied tariffs	No shares are allocated to importers. Imports of the products concerned are allowed into the territory of the Member in unlimited quantities at the in-quota tariff rate or below.
first-come, first-served	No shares are allocated to importers. Imports are permitted entry at the in-quota tariff rates until such a time as the tariff quota is filled; then the higher tariff automatically applies. The physical importation of the good determines the order and hence the applicable tariff.
licences on demand	Importers' shares are generally allocated, or licences issued, in relation to quantities demanded and often prior to the commencement of the period during which the physical importation is to take place. This includes methods involving licences issued on a first-come, first-served basis and those systems where licence requests are reduced pro rata where they exceed available quantities.
auctioning	Importers' shares are allocated, or licences issued, largely on the basis of an auctioning or competitive bid system.
historical importers	Importers' shares are allocated, or licences issued, principally in relation to past imports of the product concerned.
imports undertaken by state trading entities	Import shares are allocated entirely or mainly to a state trading entity which imports (or has direct control of imports undertaken by intermediaries) the product concerned.
producer groups or associations	Import shares are allocated entirely or mainly to a producer group or association which imports (or has direct control of imports undertaken by members) the product concerned.
other	Administrations which do not clearly fall within any of the above categories.
mixed allocation methods	Administrations involving a combination of the methods as set out above with no one method being dominant.
non-specified	Tariff quotas for which no administration method has been notified.

Source: WTO Secretariat (G/AG/NG/S/8).

Appendix Table III.7. Tariff quotas. Categories of additional conditions

Code	Description
domestic purchase requirement	An additional condition requiring the purchase or absorption of domestic production of the product concerned in order to be eligible to secure a share of the tariff quota.
limits on tariff quota shares per allocation	An additional condition involving the specification of a maximum share or quantity of the tariff quota for each importer or shipment.
export certificates	An additional condition requiring the submission of an export certificate or licence issued by the exporting country concerned in order to be eligible to secure a share of the tariff quota.
past trading performance	An additional condition limiting eligibility to secure a share of the tariff quota to established importers of the product concerned although allocations are not made in proportion to past trade shares.
no other conditions	None of the above were identified.

Source: WTO Secretariat (G/AG/NG/S/8).

Appendix Table III.8. Tariff quotas. Distribution by administration method and product category, 1998

(In percentage)

Product Category	Applied tariffs	First-come; first-served	Licences on demand	Auctioning	Historical importers	State trading	Producer groups	Other	Mixed	Non-specified	Total
Cereals	50.9	8.9	27.6	1.4	5.1	3.3	0.5	…	1.9	0.5	100.0
Oilseeds products	59.7	10.5	21.8	…	1.6	1.6	1.6	…	3.2	…	100.0
Sugar and sugar products	44.0	26.0	14.0	6.0	6.0	2.0	…	…	2.0	…	100.0
Dairy products	29.8	8.8	26.0	9.9	7.2	1.1	…	5.5	11.6	…	100.0
Meat products	36.7	10.6	30.6	7.3	9.4	…	…	1.6	3.7	…	100.0
Eggs and egg products	33.3	…	52.4	9.5	…	…	…	…	4.8	…	100.0
Beverages	25.7	31.4	31.4	5.7	5.7	…	…	…	…	…	100.0
Fruit and vegetables	59.6	7.3	17.5	2.8	4.8	1.7	0.8	0.3	3.7	1.4	100.0
Tobacco	53.8	7.7	23.1	…	7.7	7.7	…	…	…	…	100.0
Agricultural fibres	38.9	38.9	11.1	…	5.6	…	…	…	5.6	…	100.0
Coffee, tea, spices and processed agricultural products from mixed ingredients	37.5	25.0	25.0	…	3.6	1.8	1.8	…	5.4	…	100.0
Other agricultural products	71.7	3.8	15.1	…	…	…	1.9	…	7.5	…	100.0
Total	**47.6**	**10.9**	**23.9**	**4.1**	**5.5**	**1.5**	**0.6**	**1.1**	**4.5**	**0.4**	**100.0**

… non-existing

Source: WTO Secretariat (G/AG/NG/S/8).

Appendix Table III.9. Tariff quotas. Distribution by additional conditions in connection with administration methods, 1995-1999

(Number of tariff quotas)

Additional conditions	Number of tariff quotas				
	1995	1996	1997	1998	1999
Domestic purchase requirement	50	50	50	49	48
Limits on tariff quota shares	102	113	119	115	119
Export certificates	25	25	25	25	24
Past trading performance	76	76	75	75	78
Past trading performance plus limits on tariff quota shares	3	3	3	3	3
Domestic purchase requirements plus past trading performance	-	-	2	2	-
Total of the above	256	267	274	269	273
Total number of principal tariff quotas*	1259	1273	1367	1364	1368

*Non-members in 1995 (Bulgaria, Ecuador, Latvia and Panama) and in 1996 (Bulgaria, Latvia and Panama) are excluded from the analysis.

Source: WTO Secretariat (G/AG/NG/S/8).

Appendix Table III.10. Scope of the Special Agricultural Safeguard

Member	Percentage of agricultural tariff lines covered by SSG
Australia	2
Barbados	n.a.
Botswana*	n.a.
Bulgaria	n.a.
Canada	10
Colombia	27
Costa Rica**	13
Czech Republic	13
Ecuador	n.a.
El Salvador**	10
European Union***	31
Guatemala	n.a.
Hungary	60
Iceland	40
Indonesia	1
Israel	n.a.
Japan	12
Korea, Rep. of	8
Malaysia	5
Mexico	29
Morocco	n.a.
Namibia	39
New Zealand	0
Nicaragua	n.a.
Norway	49
Panama	n.a.
Philippines	13
Poland	66
Romania	7
Slovak Republic	13
South Africa*	39
Swaziland*	39
Switzerland-Liechtenstein	59
Thailand	11
Tunisia	4
United States	9
Uruguay	0
Venezuela	31

* Member of the Southern African Customs Union (SACU).

** Customs Corporation Council Nomenclature (CCCN).

*** 12 Member States.

n.a. = not available.

Note: The information contained in this table is based on the Uruguay Round Trade Negotiation files in the WTO IDB (IDB D-ROM, Release 2). As evident from the Table, the information contained in those files does not cover all Members concerned. The percentages represent the number of agricultural tariff lines covered by the SW as a proportion of the number of all agricultural tariff lines of the Member concerned. Percentages are rounded; a percentage of 0 means less than 0.5 per cent.

Source: WTO Secretariat (G/AG/NG/S/9).

Appendix Table III.11. Special Agricultural Safeguard. Action by Member and product category, 1995-1999

A. Price-based Special Agricultural Safeguard actions.

(Number of tariff items)

	CE	OI	SG	DA	ME	EG	BV	FV	TO	FI	CO	OA	ALL
1995													
EU			10		1	1							12
Japan	1			2									3
Korea, Rep. of	1	2											3
United States	1	1	2	13			1				6		24
Total	**3**	**3**	**12**	**15**	**1**	**1**	**1**				**6**		**42**
1996													
EU			10		4								14
Japan								1					1
Korea, Rep. of	3	2											5
Poland												2	2
United States	4		7	24				2		1	11		49
Total	**7**	**2**	**17**	**24**	**4**			**3**		**1**	**11**	**2**	**71**
1997													
EU				10	4								14
Korea, Rep. of	1	2						2					5
Poland			1									2	3
United States	3	1	11	34				2			23		74
Total	**4**	**3**	**12**	**44**	**4**			**4**			**23**	**2**	**96**
1998													
EU			9		3								12
Japan	1										1		2
Korea, Rep. of	2	1						2					5
Poland	1											4	5
United States	5		11	35			1	2			20		74
Total	**9**	**1**	**20**	**35**	**3**		**1**	**4**			**21**	**4**	**98**
1999*													
Hungary			7										7
Japan	4			1				2			1		8
Poland	4		2		96							4	106
Switzerland					7								7
Total	**8**		**9**	**1**	**103**			**2**			**1**	**4**	**128**

* Some major users had not reported at the cut-off date (25 May 2000).

Source: WTO Secretariat (G/AG/NG/S/9)

Code	Product category	Code	Product category
CE	Cereals	FV	Fruit and vegetables
OI	Oil seeds, fats and oils and products	TO	Tobacco
SG	Sugar and confectionery	FI	Agricultural fibres
DA	Dairy productsf	CO	Coffee, tea, mate, cocoa and preparations; Spices and other food preparations
ME	Animals and products thereo	OA	Other agricultural products
EG	Eggs		
BV	Beverages and spirits		

Appendix Table III.11. *(cont'd.)*

B. Volume-based Special Agricultural Safeguard actions.
(Number of tariff items)

	CE	OI	SG	DA	ME	EG	BV	FV	TO	FI	CO	OA	ALL
1995													
Japan										5			5
Total										**5**			**5**
1996													
EU								47					47
Japan	1			14	41					5			61
Total	**1**			**14**	**41**			**47**		**5**			**108**
1997													
EU								46					46
Japan	1			4									5
Korea, Rep. of	2												2
Poland								1					1
Slovak Republic											1		1
Total	**3**			**4**				**47**			**1**		**55**
1998													
EU								27					27
Japan	1			2									2
Korea, Rep. of	1											1	2
Poland					1								1
United States					6								6
Total	**2**			**2**	**6**			**27**				**1**	**38**
1999													
Japan	1			2									3
Poland												1	1
Total	**1**			**2**								**1**	**4**

Source: WTO Secretariat (G/AG/NG/S/9).

Appendix Table III.12. Domestic support. Evolution of the composition by category of measure and Member, 1995-1998

(In millions of US$)

Countries	Green box				Blue box				Special and differential			
	95	96	97	98	95	96	97	98	95	96	97	98
Argentina	…	137.0	237.4	…	…	0.0	0.0	…	…	0.0	0.0	…
Australia	707.0	739.8	855.2	818.9	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.
Bahrain	…	0.5	…	…	…	0.0	…	…	…	2.5	…	…
Botswana	10.6	…	…	…	0.0	…	…	…	0.0	…	…	…
Brazil	4883.1	2600.3	3458.1	…	0.0	0.0	0.0	…	358.9	269.3	280.7	…
Canada	1539.2	1465.8	…	…	0.0	0.0	…	…	n.a.	n.a.	…	…
Chile	175.8	168.7	207.3	124.9	0.0	0.0	0.0	0.0	3.8	4.5	3.2	0.1
Colombia	317.8	577.8	350.4	…	0.0	0.0	0.0	…	132.3	141.2	75.8	…
Costa Rica	66.8	30.2	40.0	…	0.0	0.0	0.0	…	132.9	15.1	14.1	…
Cuba	907.5	1089.8	1200.8	1621.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cyprus	129.6	128.4	130.5	138.5	0.0	0.0	0.0	0.0	3.3	3.3	3.8	7.7
Czech Rep.	132.2	197.4	121.3	196.3	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.
Dominican Rep.	6.6	9.9	8.6	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Egypt	68.3	75.8	38.8	1.3	0.0	0.0	0.0	0.0	7.1	2.4	2.4	2.4
EU	24188.5	26579.7	…	…	26850.0	25847.6	…	…	n.a.	n.a.	…	…
Fiji	…	16.1	10.8	…	…	0.0	0.0	…	…	0.1	1.8	…
Gambia	n.r.	…	3.1	…	n.r.	…	0.0	…	n.r.	…	0.3	…
Guyana	…	…	16.2	…	…	…	0.0	…	…	…	0.0	…
Hungary	104.6	…	…	…	0.0	…	…	…	n.a.	…	…	…
Iceland	29.4	50.1	41.7	40.8	22.5	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.
India	2195.6	…	…	…	0.0	…	…	…	254.3	…	…	…
Indonesia	178.2	191.9	212.2	130.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Israel	291.9	414.2	338.3	…	0.0	0.0	0.0	…	0.0	0.0	0.0	0.0
Jamaica	…	7.2	7.9	8.1	…	0.0	0.0	0.0	…	0.0	0.0	0.0
Japan	32859.0	25019.8	21611.7	…	0.0	0.0	0.0	…	n.a.	n.a.	n.a.	…
Kenya	53.3	66.4	…	…	0.0	0.0	…	…	0.0	0.0	…	…
Korea, Rep. of	5173.5	6442.8	6093.0	3828.1	0.0	0.0	0.0	0.0	26.4	38.4	39.7	29.6
Kyrgyz Rep.				2.7				0.0				0.0
Malaysia	243.8	299.7	…	…	0.0	0.0	…	…	47.3	35.8	…	…
Malta	0.5	0.7	1.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mexico	1625.3	…	…	…	0.0	…	…	…	643.8	…	…	…
Mongolia			5.122	3329			0.0	0.0			n.a.	n.a.
Morocco	157.0	378.2	317.7	…	0.0	0.0	0.0	…	147.7	145.3	154.7	…
Namibia	49.6	n.a.	7.7	…	0.0	0.0	0.0	…	2.6	2.3	3.6	…
New Zealand	128.0	135.7	151.0	133.4	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.
Norway	647.4	638.2	519.5	515.4	1123.5	1123.5	1042.7	1044.4	n.a.	n.a.	n.a.	n.a.
Pakistan	439.9	392.4	312.5	…	0.0	0.0	0.0	…	1.0	0.0	0.0	…
Paraguay	23.0	8.6	21.9	19.2	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0
Peru	79.7	108.6	223.4	…	0.0	0.0	0.0	…	0.0	0.0	0.0	…
Philippines	136.3	282.2	515.1	185.1	0.0	0.0	0.0	0.0	243.6	53.2	71.5	47.3
Poland	436.1	549.3	890.2	847.0	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.
Romania	729.9	756.5	…	…	0.0	0.0	…	…	0.0	0.0	…	…
Slovak Republic	0.8	1.4	3.6	10.8	1.4	1.2	1.3	0.0	n.a.	n.a.	n.a.	n.a.
Slovenia	84.8	90.8	107.8	114.5	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.
South Africa	762.9	525.0	544.0	…	0.0	0.0	0.0	…	n.a.	n.a.	n.a.	…
Sri Lanka	148.7	159.9	70.1	…	0.0	0.0	0.0	…	26.6	34.7	25.9	…
Switzerland/ Liechtenstein	2299.4	2403.6	2127.5	2190.4	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.
Thailand	1341.1	1614.4	1170.5	1035.5	0.0	0.0	0.0	0.0	213.3	479.3	169.7	124.0
Trinidad and Tobago	60.9	97.8	58.4	…	0.0	0.0	0.0	…	0.0	0.0	0.0	…
Tunisia	29.5	38.9	43.1	54.8	0.0	0.0	0.0	…	30.6	32.4	29.7	45.8
United States	46041.0	51825.0	51246.0	…	7030.4	0.0	0.0	…	n.a.	n.a.	n.a.	…
Uruguay	18.3	32.8	37.3	39.1	0.0	0.0	0.0	0.0	5.1	14.4	6.9	7.8
Venezuela	538.6	618.4	612.5	…	0.0	0.0	0.0	…	178.2	38.1	62.9	…
Zambia	n.r.	111.5	n.r.	85.7	n.r.	0.0	n.r.	0.0	n.r.	0.0	n.r.	0.0
Zimbabwe	13.7	12.8	11.6	…	0.0	0.0	0.0	…	0.0	0.0	0.0	…

Appendix Table III.12 *(cont'd.)*

Countries	*De minimis* support				Current AMS				Total			
	95	96	97	98	95	96	97	98	95	96	97	98
Argentina	…	0.0	0.0	…	…	122.8	84.1	…	…	259.8	321.5	…
Australia	0.0	2.0	1.7	4.1	115.2	112.9	89.6	75.1	822.2	854.7	946.5	898.1
Bahrain	…	0.0	…	…	…	n.a.	…	…	…	3.1	…	…
Botswana	0.0	…	…	…	n.a.	…	…	…	10.6	…	…	…
Brazil	295.0	363.2	306.8	…	0.0	0.0	0.0	…	5537.1	3232.8	4045.7	…
Canada	921.5	921.5	…	…	570.4	454.7	…	…	3031.1	2842.0	…	…
Chile	0.3	0.3	15.3	17.7	n.a.	n.a.	n.a.	n.a.	179.9	173.4	225.8	142.7
Colombia	0.0	0.0	0.0	…	58.1	4.0	14.4	…	508.2	722.9	440.6	…
Costa Rica	0.0	0.0	0.0	…	0.0	0.0	0.0	…	199.7	45.3	54.1	…
Cuba	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.	907.5	1089.8	1200.8	1621.3
Cyprus	0.0	8.3	3.6	6.3	80.7	76.1	49.7	42.2	213.7	216.1	187.6	194.7
Czech Rep.	0.0	0.0	0.0	0.0	43.4	62.2	33.2	31.4	175.6	259.6	154.6	227.7
Dominican Rep.	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.	6.6	9.9	8.6	15.1
Egypt	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.	75.4	78.2	41.2	3.7
EU	1063.1	914.5	…	…	64436.0	61264.4	…	…	116537.7	114606.1	…	…
Fiji	…	0.0	0.0	…	…	n.a.	n.a.	…	…	16.2	12.5	…
Gambia	n.r.	…	0.0	…	n.r.	…	n.a.	…	n.r.	…	3.4	…
Guyana	…	…	0.0	…	…	…	n.a.	…	…	…	16.2	…
Hungary	166.7	…	…	…	0.0	…	…	…	271.3	…	…	…
Iceland	0.0	0.0	0.0	0.0	187.8	157.4	151.5	344.3	239.6	207.5	193.2	385.1
India	5956.1	…	…	…	n.a.	…	…	…	8406.0	…	…	…
Indonesia	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.	178.2	191.9	212.2	130.8
Israel	71.2	58.8	28.6	…	461.4	501.3	524.2	…	824.5	974.2	891.1	…
Jamaica	…	0.0	0.0	0.0	…	n.a.	n.a.	n.a.	…	7.2	7.9	8.1
Japan	379.5	331.2	294.2	…	36368.8	29561.9	25842.4	…	69607.3	54912.8	47748.3	…
Kenya	0.0	0.0	…	…	n.a.	n.a.	…	…	53.3	66.4	…	…
Korea, Rep. of	365.9	427.3	688.9	559.2	2690.9	2445.6	2036.1	1115.1	8256.8	9354.1	8857.7	5532.0
Kyrgyz Rep.				0.0				n.a.				2.7
Malaysia	0.0	0.0	…	…	n.a.	n.a.	…	…	291.1	335.5	…	…
Malta	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.	0.5	0.7	1.0	0.6
Mexico	0.0	…	…	…	452.1	…	…	…	2721.2	…	…	…
Mongolia			0.0	0.0			n.a.	n.a.			5.1	3.3
Morocco	0.0	0.0	0.0	…	11.0	28.7	9.6	…	315.7	552.1	482.0	…
Namibia	0.0	0.0	0.0	…	n.a.	n.a.	n.a.	…	52.2	2.3	11.3	…
New Zealand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.0	135.7	151.0	133.4
Norway	0.0	0.0	0.0	0.0	1544.7	1632.5	1488.1	1442.7	3315.5	3394.1	3050.2	3002.6
Pakistan	10.8	15.5	22.5	…	n.a.	n.a.	n.a.	…	451.7	407.9	335.0	…
Paraguay	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.	31.7	8.6	21.9	19.2
Peru	215.6	248.3	277.3	…	n.a.	n.a.	n.a.	…	295.3	356.9	500.7	…
Philippines	10.0	35.1	26.0	27.6	n.a.	n.a.	n.a.	n.a.	389.9	370.5	612.5	260.0
Poland	0.0	0.0	10.9	0.0	254.5	226.5	295.8	300.6	690.6	775.8	1196.9	1147.6
Romania	0.0	0.0	…	…	n.a.	n.a.	…	…	729.9	756.5	…	…
Slovak Republic	0.0	0.0	0.0	0.0	239.3	227.8	246.6	218.8	241.6	230.3	251.5	229.6
Slovenia	0.0	0.0	0.0	0.0	91.5	87.8	78.4	73.9	176.3	178.6	186.2	188.4
South Africa	165.1	203.0	65.2	…	452.2	450.8	477.1	…	1380.2	1178.8	1086.3	…
Sri Lanka	0.0	0.0	0.0	…	n.a.	n.a.	n.a.	…	175.3	194.5	95.9	…
Switzerland/ Liechtenstein	0.0	0.0	0.0	0.0	3625.0	2962.1	2373.8	2257.6	5924.4	5365.7	4501.3	4448.0
Thailand	0.0	45.2	0.0	3.4	627.4	507.4	412.1	396.6	2181.8	2646.3	1752.4	1559.6
Trinidad and Tobago	0.0	0.0	0.0	…	n.a.	n.a.	n.a.	…	60.9	97.8	58.4	…
Tunisia	0.0	0.0	7.2	6.3	62.0	52.4	48.2	53.7	122.0	123.7	128.3	160.5
United States	1640.8	1153.2	811.6	…	6213.9	5897.7	6238.1	…	60926.1	58875.9	58295.7	…
Uruguay	5.0	7.0	10.0	5.7	n.a.	n.a.	n.a.	n.a.	28.4	54.3	54.2	52.6
Venezuela	0.0	0.0	0.0	…	541.8	331.3	456.5	…	1258.6	987.8	1131.9	…
Zambia	n.r.	0.0	n.r.	0.0	n.r.	n.a.	n.r.	n.a.	n.r.	111.5	n.r.	85.7
Zimbabwe	0.0	0.0	0.0	…	n.a.	n.a.	n.a.	…	13.7	12.8	11.6	…

… notification outstanding

n.r. not required (least-developed countries should only notify every second year)

Source: WTO (G/AG/NG/S/2).

Appendix Table III.13. Export subsidy use by Member, 1995-1999

(In percentage)

Member	1995						1996						1997						1998						1999		
	Budgetary outlay commitments			Volume commitments			Budgetary outlay commitments			Volume commitments			Budgetary outlay commitments			Volume commitments			Budgetary outlay commitments			Volume commitments			Budgetary outlay commitments	Volume commitments	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	2	3																									
Australia	00	0	5	00	0	6	00	0	5	00	0	6	00	0	5	00	0	6	6	1	4	3	2	4			1
		1																									
Brazil	00	0	16	00	0	16	00	0	16	00	0	16	00	0	16	00	0	16	00	0	16	00	0	16			
Bulgaria	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.															
Canada	59	2	9	58	2	8	8	2	9	5	2	8	00	0	11	00	0	10	00	0	11	00	0	10			
Colombia	15	11	7	59	11	7	20	11	7	76	11	7	17	10	8	125	10	8	22	9	9	152	10	8			
Cyprus	164	3	6	86	3	6	50	4	5	44	4	5	46	4		129	4		75	3		98	3				
Czech Republic	28	2	14	51	2	14	32	2	14	34	2	14	38	4	12	34	4	12	38	4	12	33	4	12			
European Union	54	19	1	65	18	1	61	19	1	85	18	1	51	18	2	82	17	2	69	17	3	91	16	3			
Hungary	58	13	3	23	13	3	31	11	5	22	11	5	20	9	7	18	9	7	73	8	8	21	8	8			
Iceland	26	1	1	61	1	1	4	1	1	10	1	1	1	1	1	1	1	1									
Indonesia	00	0	1	00	0	1	00	0	1	00	0	1	00	0	1	00	0	1	00	0	1	00	0	1	00	0	1
00	0	1																									
Israel	44	4	2	69	4	2	31	4	2	63	4	2	13	4	2	20	4	2	9	1	5	15	1	5	13	1	5
33	1	5																									
Mexico	00	0	5	00	0	5																					
New Zealand	0.01	1	0	n.r.	n.r.	n.r.	00	0	1	n.r.	n.r.	n.r.	00	0	1	n.r.	n.r.	n.r.	00	0	1	n.r.	n.r.	n.r.	00	0	1
n.r.	n.r.	n.r.																									
Norway	68	9	2	69	8	2	44	7	4	45	6	4	83	7	4	94	6	4	65	7	1	78	6	1			
Panama	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.	n.r.				n.r.	n.r.	n.r.				n.r.	n.r.	n.r.			
n.r.	n.r.	n.r.																									

Appendix Table III.14 Exports value of agricultural products[a] of selected regions (excluding EU intra trade), 1990-98

(Million US dollars)

Values	1990	1991	1992	1993	1994	1995	1996	1997	1998
North America	81745	80234	86794	85867	94940	112465	113468	110360	99865
Latin America	39640	38225	39073	39389	48653	58544	61911	68173	65588
Western Europe	56850	56482	60889	59994	67341	77497	78397	79934	77082
European Union 15	45276	44209	48854	48479	54216	63114	63276	64548	62134
Transition Economies[b]	12624	12075	13870	14064	17709	21299	29506	27762	24988
Africa	16272	15762	15427	14519	17549	20968	21976	21623	20871
Middle East	4479	3872	4657	4708	5576	6047	6434	6283	5959
Asia	71960	75773	79995	81415	95849	108509	111373	109420	99268
Japan	3298	3527	3697	3773	4126	4654	4361	4491	4090
Australia/NZ	17550	17699	18052	18645	21739	22984	26283	27007	23867
Developing Asia	51112	54546	58246	58997	69983	80871	80729	77923	71311
World	**283570**	**282423**	**300705**	**299956**	**347617**	**405328**	**423064**	**423556**	**393621**
Memorandum items:									
Developed countries	159443	157943	169432	168278	188146	217600	222508	221792	204904
Developing countries	111504	112405	117403	117613	141762	166429	171049	174002	163729
Developing countries excl. China	101444	101643	106047	105951	126956	151502	156105	158271	149415

[a] Agricultural products including fish and forestry products.

[b] Break in time series as intra-CIS trade is included only from 1996 onwards.

Source: WTO, Annual Report 1999.

Appendix Table III.15: Share of agricultural products[a] in total merchandise exports of selected regions and countries, 1990-98

(Shares)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
North America	15.7	14.6	14.9	14.1	14.0	14.5	13.7	12.2	11.1
Latin America	27.2	26.6	26.0	24.8	26.2	25.9	24.4	24.4	23.8
Western Europe	8.6	9.0	9.0	8.9	8.8	8.4	8.1	8.1	7.9
European Union 15	8.6	8.8	9.1	8.8	8.7	8.3	7.9	7.9	7.6
Transition Economies[b]	12.0	13.0	13.9	13.1	14.3	13.4	13.8	12.5	11.7
Africa	15.9	16.2	16.1	16.2	18.8	19.8	17.8	17.1	19.5
Middle East	3.4	3.3	3.7	3.9	4.4	4.2	3.8	3.6	4.3
Asia	9.7	9.3	9.0	8.5	8.7	8.3	8.5	7.9	7.7
Japan	1.1	1.1	1.1	1.0	1.0	1.1	1.1	1.1	1.1
Australia/NZ	35.6	34.4	34.3	35.0	36.4	34.6	35.1	35.1	35.1
Developing Asia	12.7	12.1	11.7	10.9	10.8	10.2	9.8	8.8	8.5
NICS 4	5.4	5.4	5.1	4.8	4.7	4.4	4.1	3.5	3.2
China	16.2	15.0	13.4	12.7	12.2	10.0	9.9	8.6	7.8
Other Asia	23.3	22.0	21.0	19.2	19.1	19.1	18.0	16.5	16.2
World	**11.8**	**11.5**	**11.5**	**11.0**	**11.3**	**11.2**	**10.9**	**10.4**	**10.1**
Memorandum items:									
Developed countries	10.5	10.2	10.3	9.9	9.9	9.9	9.7	9.3	8.8
Developing countries	14.2	13.9	13.5	12.9	13.5	13.1	12.5	11.9	12.1
Developing countries excl. China	14.1	13.8	13.5	12.9	13.6	13.5	12.8	12.4	12.7

[a] Agricultural products including fish and forestry products.

[b] Break in time series as intra-CIS trade is included only from 1996 onwards.

Source: WTO, Annual Report 1999.

Appendix Table III.16. Growth of total merchandise exports of selected regions and countries (excluding intra-EU trade), 1990-98

(Annual percentage change)

	1990-94	1994-97	1990-98	1994-98	19941995	1996	1997	1998
North America	6.8	10.0	7.0	7.2	11.114.6	6.4	9.2	-0.7
Latin America	6.3	14.6	8.3	10.3	16.921.6	12.4	10.1	-1.5
Western Europe	3.9	8.8	5.1	6.4	13.120.1	5.7	1.4	-0.6
European Union 15	4.3	9.1	5.5	6.7	13.520.7	5.6	2.0	-0.1
Transition Economies[b]	-	-	-	-	15.428.9	33.9	4.3	-3.9
Africa	-2.3	10.5	0.5	3.4	4.513.4	16.5	2.0	-15.2
Middle East	-1.5	11.9	0.3	2.2	3.014.6	17.1	4.4	-22.2
Asia	10.5	7.7	7.2	4.0	15.417.8	0.7	5.3	-6.2
Japan	8.4	2.0	3.8	-0.6	9.611.6	-7.3	2.4	-7.8
Australia/NZ	4.9	8.8	4.1	3.3	12.111.2	12.8	2.8	-11.7
Developing Asia	12.6	10.9	9.6	6.7	19.622.3	4.2	6.9	-5.0
NICS 4	6.2	-0.7	7.3	4.6	16.622.4	3.4	3.0	-8.1
China	10.1	7.3	14.5	11.0	31.923.0	1.5	21.0	0.5
Other Asia	8.3	2.5	10.3	7.0	17.821.7	6.9	4.9	-4.0
World	**6.3**	**9.8**	**6.2**	**6.1**	**13.018.1**	**6.5**	**5.3**	**-4.2**
Memorandum items:								
Developed countries	5.8	7.9	5.5	5.3	11.616.1	3.6	4.5	-2.3
Developing countries	7.6	11.6	7.1	6.6	15.420.5	8.2	6.8	-7.3
Developing countries excl. China	6.6	11.2	6.3	6.0	13.520.1	9.0	5.0	-8.4

[a] Agricultural products including fish and forestry products.

[b] Break in time series as intra-CIS trade is included only from 1996 onwards.

- Not applicable

Source: WTO, Annual Report 1999.

Appendix Table III.17. Network of world merchandise trade by product and region, 1996-1998
(Billion dollars)

Destination	World[a]			North America			Latin America			Western Europe		
Origin	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**
World												
Agricultural products	592.8	582.4	552.7	66.4	71.3	71.1	30.8	32.1	33.5	269.5	258.2	256.8
Food	468.8	461.3	443.1	48.0	52.2	53.0	25.8	26.6	28.1	219.5	209.2	208.6
Raw materials	124.0	121.2	109.6	18.4	19.1	18.1	5.0	5.4	5.4	49.9	49.0	48.2
Mining products	610.4	626.6	501.9	108.4	111.3	91.7	24.8	26.8	22.9	222.4	218.6	183.9
Ores and other minerals	59.5	64.0	58.3	7.1	7.6	7.6	2.0	2.2	2.1	25.7	27.9	26.4
Fuels	450.9	455.5	343.7	84.5	85.4	65.8	19.7	20.9	16.9	151.9	143.1	110.5
Non-ferrous metals	99.9	107.1	99.9	16.7	18.3	18.3	3.1	3.7	3.9	44.8	47.5	47.0
Manufactures	3791.7	3986.7	4010.3	751.2	831.6	887.3	191.9	233.4	243.9	1599.6	1633.1	1734.1
Iron and steel	140.1	143.8	141.3	18.8	20.7	23.2	6.1	7.5	7.6	58.3	59.0	63.9
Chemicals	481.0	500.9	503.2	58.5	65.2	69.2	31.4	34.3	35.2	233.5	236.3	250.9
Other semi-manufactures	398.2	403.4	399.0	66.3	73.4	80.0	18.8	21.6	22.4	191.2	185.5	191.6
Machinery and transport equip.	2005.9	2127.1	2165.6	456.3	501.4	532.7	103.6	130.6	136.7	775.5	803.5	874.1
Automotive products	475.2	497.1	524.9	146.3	159.4	169.4	24.3	33.6	34.1	218.0	218.3	246.3
Office and telecom equip.	631.5	690.2	681.4	152.4	165.5	168.0	25.3	32.2	32.8	216.9	238.4	251.1
Other machinery and trans. equip.	899.2	939.8	959.3	157.6	176.4	195.2	53.9	64.8	69.8	340.6	346.7	376.8
Textiles	151.8	159.0	151.0	14.2	16.6	17.7	7.2	8.7	8.8	59.0	60.9	60.8
Clothing	165.4	181.3	179.6	41.7	47.5	51.2	6.7	8.7	9.7	79.2	84.2	81.1
Other consumer goods	449.3	471.2	470.6	95.4	106.8	113.3	18.0	21.9	23.4	202.9	203.7	211.7
Total merchandise exports[b]	5190.0	5370.0	5270.0	948.2	1038.3	1076.8	253.4	300.1	309.0	2176.1	2183.7	2282.1
North America												
Agricultural products	113.5	110.4	99.9	27.7	30.1	29.9	13.2	13.4	14.2	18.0	17.8	16.3
Food	78.9	76.2	70.0	15.5	17.0	17.7	10.8	10.5	11.0	12.6	12.2	11.0
Raw materials	34.5	34.2	29.9	12.2	13.1	12.2	2.5	3.0	3.2	5.5	5.6	5.3
Mining products	58.1	61.6	51.9	31.8	34.5	29.7	5.6	6.7	5.9	8.6	8.8	7.9
Ores and other minerals	10.4	10.9	9.1	3.2	3.4	3.1	0.7	0.8	0.7	2.9	3.2	2.8
Fuels	32.7	34.6	27.6	20.6	22.4	18.4	3.6	4.3	3.5	3.3	3.0	2.3
Non-ferrous metals	15.1	16.1	15.1	8.0	8.7	8.2	1.3	1.6	1.8	2.4	2.6	2.8
Manufactures	610.4	687.9	699.1	222.5	246.7	260.4	89.3	112.5	119.1	16.0	130.4	140.7
Iron and steel	8.4	9.3	9.2	5.1	5.9	5.8	1.4	1.7	1.7	0.6	0.6	0.6
Chemicals	74.4	83.5	81.4	20.6	23.1	23.6	12.8	14.8	15.3	17.0	19.9	21.1
Other semi-manufactures	55.1	59.6	60.7	27.1	29.4	32.1	8.7	9.9	10.4	7.3	8.0	7.9
Machinery and transport equip.	384.8	436.4	446.4	143.6	158.5	166.2	50.1	66.0	69.7	71.4	80.2	88.0
Automotive products	99.7	109.3	111.0	73.3	80.4	83.4	9.1	12.8	12.7	6.2	6.6	7.3
Office and telecom equip.	116.9	132.1	126.9	26.4	28.4	28.7	15.6	20.9	21.6	26.0	28.8	28.4
Other machinery and trans. equip.	168.2	194.9	208.5	44.0	49.7	54.1	25.4	32.3	35.5	39.2	44.8	52.3
Textiles	9.7	11.0	11.1	3.7	4.2	4.5	2.4	2.9	3.3	1.6	1.8	1.7
Clothing	8.7	10.2	10.5	1.7	2.1	2.4	4.9	6.2	6.7	0.7	0.7	0.6
Other consumer goods	69.3	77.9	79.8	20.7	23.5	25.9	8.9	11.0	12.0	17.3	19.2	20.8
Total merchandise exports[b]	827.1	903.5	897.2	297.5	327.3	337.5	112.4	138.1	145.7	154.5	167.7	175.4

Appendix Table III.17. *(cont'd.)*

Destination	World[a]			North America			Latin America			Western Europe		
Origin	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**
Latin America												
Agricultural products	61.9	68.2	65.6	15.1	16.6	16.7	11.4	12.4	13.1	19.4	21.5	20.0
Food	54.4	60.8	58.9	13.0	14.4	14.5	10.0	11.1	12.0	17.5	19.6	18.2
Raw materials	7.5	7.4	6.7	2.1	2.2	2.2	1.4	1.3	1.1	1.9	1.9	1.9
Mining products	62.5	62.4	50.5	31.7	30.1	23.7	12.7	13.2	10.4	8.9	9.0	9.0
Ores and other minerals	8.4	9.1	9.0	1.5	1.5	1.6	0.9	1.0	0.9	2.6	3.0	3.1
Fuels	44.0	42.2	32.2	27.9	26.1	19.7	10.5	10.7	8.0	3.2	2.9	2.5
Non-ferrous metals	10.1	11.1	9.3	2.3	2.5	2.3	1.3	1.6	1.5	3.1	3.2	3.4
Manufactures	127.9	147.5	157.7	82.7	96.1	107.6	27.4	33.9	33.0	9.1	9.2	10.3
Iron and steel	8.7	8.9	8.1	3.2	3.4	3.3	2.0	2.6	2.5	1.0	0.9	1.1
Chemicals	13.6	14.8	14.9	3.7	4.1	4.3	6.2	7.0	7.0	1.9	2.1	2.1
Other semi-manufactures	13.6	15.4	15.3	5.6	6.8	7.3	4.5	5.2	5.0	1.9	1.8	1.8
Machinery and transport equip.	65.6	77.6	87.0	50.8	58.5	67.4	10.3	14.1	13.4	2.6	2.7	3.9
Automotive products	24.5	28.7	31.0	17.6	18.8	20.6	5.5	8.2	7.9	0.8	1.0	1.8
Office and telecom equip.	15.5	19.2	22.9	14.0	17.1	20.6	0.8	1.0	0.9	0.3	0.4	0.4
Other machinery and trans. equip.	25.6	29.8	33.0	19.2	22.6	26.1	3.9	4.9	4.5	1.5	1.3	1.7
Textiles	3.8	4.3	4.2	1.4	1.9	2.1	1.7	1.8	1.6	0.4	0.4	0.3
Clothing	10.1	12.1	12.8	9.1	11.0	11.7	0.6	0.7	0.8	0.3	0.3	0.2
Other consumer goods	12.4	14.4	15.5	8.9	10.5	11.6	2.1	2.5	2.6	1.0	1.0	0.9
Total merchandise exports[b]	254.1	279.8	275.5	129.5	142.8	148.0	51.6	59.7	56.7	39.0	41.1	40.7
Western Europe												
Agricultural products	248.2	238.8	236.2	10.2	10.9	11.2	3.9	4.0	4.0	189.1	177.8	177.9
Food	211.6	203.4	200.9	9.3	9.9	10.2	3.5	3.7	3.7	159.9	149.8	150.1
Raw materials	36.6	35.5	35.3	0.9	1.0	1.1	0.4	0.3	0.3	29.2	28.0	27.8
Mining products	145.4	144.7	121.3	12.4	11.6	9.4	1.2	1.4	1.4	115.0	113.9	95.5
Ores and other minerals	15.5	16.8	14.7	0.4	0.5	0.5	0.1	0.1	0.1	12.5	13.2	11.9
Fuels	91.8	88.4	68.1	9.5	8.1	5.8	0.7	0.8	0.8	73.2	70.6	54.0
Non-ferrous metals	38.0	39.5	38.4	2.5	3.0	3.1	0.3	0.4	0.5	29.3	30.1	29.6
Manufactures	1796.0	1822.7	1883.0	149.2	166.0	184.8	44.2	50.3	54.1	1204.9	1201.3	1265.8
Iron and steel	70.1	68.7	69.6	5.6	5.3	5.1	1.3	1.5	1.6	50.2	49.9	52.6
Chemicals	283.3	287.3	299.1	22.3	25.1	28.3	8.8	9.2	9.5	193.2	192.2	204.3
Other semi-manufactures	216.3	211.0	212.6	13.8	14.9	16.4	3.7	4.4	4.7	151.9	144.4	148.8
Machinery and transport equip.	80.2	902.4	951.2	79.8	90.0	102.3	25.1	28.9	31.5	570.3	573.6	619.4
Automotive products	249.3	247.6	271.2	18.1	20.8	24.5	5.2	6.4	7.0	190.0	184.7	205.4
Office and telecom equip.	178.9	198.0	207.2	13.3	14.4	15.0	2.6	3.4	3.6	126.6	137.3	147.0
Other machinery and trans. equip.	452.1	456.7	472.8	48.4	54.8	62.8	17.3	19.2	20.9	253.7	251.7	266.9
Textiles	65.5	67.1	66.5	3.0	3.2	3.3	0.7	0.9	0.9	45.3	46.2	45.8
Clothing	59.7	64.7	60.5	3.1	3.3	3.6	0.3	0.4	0.5	46.2	50.6	46.5
Other consumer goods	220.7	221.6	223.5	21.6	24.2	25.8	4.2	5.0	5.4	147.8	144.3	148.4
Total merchandise exports[b]	2294.5	2280.7	2347.7	173.7	191.0	208.8	49.9	56.6	60.8	1570.1	1540.5	1616.4

Appendix Table III.17. *(cont'd.)*

Destination	World[a]			North America			Latin America			Western Europe		
Origin	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998
C./E. Europe/Baltic States/CIS [c]												
Agricultural products	29.5	27.8	25.0	0.7	0.6	0.6	0.2	0.2	0.2	11.8	10.9	10.1
Mining products	67.7	70.7	59.1	2.6	2.2	2.6	0.5	0.3	0.3	31.3	33.1	27.2
Manufactures	111.9	119.7	125.8	4.6	5.5	6.2	3.3	2.5	2.6	54.1	60.6	72.6
Total merchandise exports [b]	213.6	222.9	214.1	8.0	8.4	9.6	4.1	3.0	3.1	98.9	107.2	112.6
Africa												
Agricultural products	22.0	21.6	20.9	1.2	1.2	1.3	0.3	0.4	0.3	12.6	11.6	12.0
Mining products	60.6	61.3	44.7	14.8	15.9	11.7	1.9	2.4	2.1	30.5	27.0	21.0
Manufactures	32.4	34.1	33.7	2.6	2.9	3.3	0.6	0.6	0.5	18.6	19.1	19.9
Total merchandise exports [b]	123.6	126.1	106.9	18.7	20.2	16.3	2.9	3.4	3.0	65.7	62.4	56.9
Middle East												
Agricultural products	6.4	6.3	6.0	0.2	0.2	0.2	0.1	0.1	0.1	2.5	2.2	2.1
Mining products	125.9	130.1	91.4	10.6	11.8	9.1	2.3	2.2	1.3	22.8	21.1	16.2
Manufactures	35.6	37.7	38.0	7.1	8.0	9.3	0.6	0.9	0.9	10.0	11.0	12.0
Total merchandise exports [b]	169.0	176.4	137.2	18.3	20.8	19.3	3.0	3.1	2.3	35.5	34.6	30.5
Asia												
Agricultural products	111.4	109.4	99.3	11.4	11.8	11.1	1.6	1.7	1.7	16.0	16.4	18.2
Food	82.8	82.7	76.4	8.6	9.2	8.8	1.1	1.2	1.2	11.2	11.4	12.9
Raw materials	28.6	26.7	22.8	2.8	2.5	2.3	0.5	0.5	0.5	4.8	4.9	5.3
Mining products	90.1	95.8	83.1	4.4	5.1	5.5	0.6	0.7	1.4	5.3	5.8	7.0
Ores and other minerals	13.7	14.7	13.6	1.4	1.6	1.7	0.1	0.1	0.1	2.7	2.8	3.0
Fuels	60.4	63.0	52.8	2.0	2.2	2.4	0.5	0.6	1.3	1.6	1.9	2.7
Non-ferrous metals	16.0	18.2	16.6	1.0	1.2	1.4	0.0	0.1	0.1	1.0	1.1	1.3
Manufactures	1077.5	1137.0	1073.0	282.5	306.4	315.7	26.5	32.7	33.7	186.9	201.4	212.9
Iron and steel	30.8	33.2	31.9	3.3	3.7	6.3	0.6	0.8	1.0	1.3	1.4	2.8
Chemicals	74.8	81.3	76.3	9.2	10.3	10.3	1.3	1.6	1.8	10.6	11.4	12.7
Other semi-manufactures	79.6	83.4	76.8	16.3	18.3	19.7	1.6	2.0	2.1	12.2	13.2	14.3
Machinery and transport equip.	628.4	655.5	618.6	179.1	190.9	192.7	17.3	20.7	20.9	109.7	119.1	126.2
Automotive products	93.4	100.0	96.4	37.1	39.2	40.6	4.3	6.2	6.3	17.3	19.8	21.5
Office and telecom equip.	312.7	330.2	312.0	97.9	104.5	102.3	6.1	6.7	6.3	60.1	66.0	67.5
Other machinery and trans. equip.	222.3	225.3	210.3	44.0	47.2	49.7	6.8	7.7	8.2	32.2	33.3	37.2
Textiles	64.8	68.2	60.7	5.7	6.8	7.3	2.3	3.0	3.0	7.9	8.5	8.7
Clothing	69.9	77.4	77.0	26.0	29.3	31.2	0.8	1.4	1.6	18.3	19.2	18.6
Other consumer goods	129.1	138.0	131.6	43.0	47.1	48.3	2.6	3.3	3.3	26.9	28.5	29.7
Total merchandise exports [b]	1309.6	1378.8	1293.1	302.5	327.8	337.4	29.5	36.3	37.3	212.3	230.2	249.7

Appendix Table III.17. *(cont'd.)*

Destination	C./E.Europe/BS/CIS[c]			Africa			Middle East			Asia		
Origin	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**
World												
Agricultural products	34.5	34.8	30.0	19.3	19.8	20.1	19.9	20.3	19.5	149.3	142.5	118.2
Food	...	...	...	...	...	...	...	...	...	107.5	104.0	89.1
Raw materials	...	...	...	...	...	...	...	...	...	41.8	38.5	29.2
Mining products	33.9	35.7	30.2	11.2	11.6	9.7	9.0	9.5	8.2	184.4	196.9	146.5
Ores and other minerals	...	...	...	...	...	...	...	...	...	18.8	20.4	16.7
Fuels	...	...	...	...	...	...	...	...	...	136.7	145.6	105.4
Non-ferrous metals	...	...	...	...	...	...	...	...	...	28.8	30.8	24.4
Manufactures	144.9	162.5	163.6	80.5	81.7	85.5	102.8	110.2	114.5	895.9	907.6	752.8
Iron and steel	...	...	...	...	...	...	...	...	...	38.7	37.8	27.4
Chemicals	...	...	...	...	...	...	...	...	...	109.4	113.4	96.5
Other semi-manufactures	...	...	...	...	...	...	...	...	...	78.8	77.7	60.6
Machinery and transport equip.	...	...	...	...	...	...	...	...	...	498.8	505.8	423.9
Automotive products	...	...	...	...	...	...	...	...	...	50.2	45.9	31.7
Office and telecom equip.	...	...	...	...	...	...	...	...	...	209.3	223.5	196.9
Other machinery and trans. equip.	...	...	...	...	...	...	...	...	...	239.3	236.4	195.3
Textiles	...	...	...	...	...	...	...	...	...	48.4	48.8	39.4
Clothing	...	...	...	...	...	...	...	...	...	26.5	25.7	23.4
Other consumer goods	...	...	...	...	...	...	...	...	...	95.2	98.3	81.6
Total merchandise exports[b]	216.8	236.1	227.6	113.4	116.6	118.5	137.4	145.7	148.6	1259.5	1280.9	1045.9
North America												
Agricultural products	2.7	2.3	1.9	3.7	3.4	3.1	3.2	3.3	2.7	44.3	39.7	31.4
Food	2.7	2.2	1.9	3.3	3.1	2.8	2.9	3.1	2.4	30.6	27.8	22.8
Raw materials	0.1	0.1	0.1	0.4	0.3	0.3	0.2	0.2	0.2	13.7	11.9	8.6
Mining products	0.3	0.3	0.2	0.6	0.5	0.4	0.6	0.5	0.4	10.7	10.2	7.4
Ores and other minerals	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0	3.3	3.3	2.3
Fuels	0.2	0.2	0.1	0.4	0.3	0.3	0.2	0.2	0.2	4.3	4.2	3.0
Non-ferrous metals	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.3	0.2	3.0	2.8	2.1
Manufactures	4.5	5.4	5.6	6.8	7.9	8.0	14.8	16.9	19.9	156.6	168.1	145.3
Iron and steel	0.0	0.0	0.0	0.2	0.2	0.3	0.1	0.2	0.2	1.0	0.7	0.6
Chemicals	0.4	0.6	0.5	0.9	1.0	0.9	0.9	1.1	1.0	21.7	23.1	19.2
Other semi-manufactures	0.2	0.3	0.2	0.5	0.5	0.4	1.4	1.6	1.8	9.9	10.1	7.8
Machinery and transport equip.	3.1	3.8	4.1	4.6	5.6	5.7	10.6	12.3	15.2	101.3	110.0	97.4
Automotive products	0.4	0.4	0.3	0.5	0.5	0.5	2.5	1.9	1.8	7.7	6.7	4.9
Office and telecom equip.	0.7	0.9	1.0	0.6	0.7	0.8	1.7	2.0	1.9	46.0	50.4	44.5
Other machinery and trans. equip.	2.0	2.5	2.8	3.5	4.4	4.4	6.5	8.4	11.4	47.7	52.8	48.0
Textiles	0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.4	0.3	1.4	1.6	1.2
Clothing	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	1.2	1.0	0.7
Other consumer goods	0.5	0.6	0.7	0.5	0.7	0.6	1.2	1.3	1.4	20.0	21.5	18.4
Total merchandise exports[b]	7.9	8.4	8.1	11.7	12.8	12.3	21.4	22.5	24.7	218.3	224.8	190.6

Appendix Table III.17. *(cont'd.)*

Destination	C./E.Europe/BS/CIS[c]			Africa			Middle East			Asia		
Origin	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**	**1996**	**1997**	**1998**
Latin America												
Agricultural products	2.2	2.3	2.2	2.0	2.2	2.2	2.0	2.4	2.4	9.5	10.5	8.5
Food	2.2	2.3	2.2	2.0	2.2	2.1	1.9	2.3	2.4	7.6	8.7	7.2
Raw materials	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	1.9	1.8	1.3
Mining products	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.4	0.3	7.3	7.8	5.2
Ores and other minerals	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	2.9	3.0	2.7
Fuels	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	1.1	1.0	0.4
Non-ferrous metals	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	3.3	3.8	2.1
Manufactures	0.5	0.4	0.4	0.8	0.9	0.8	0.6	0.7	0.6	6.1	5.5	4.0
Iron and steel	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	2.0	1.6	0.9
Chemicals	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	1.0	1.0	0.8
Other semi-manufactures	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.1	1.3	1.2	0.8
Machinery and transport equip.	0.2	0.2	0.3	0.3	0.4	0.3	0.1	0.3	0.2	1.2	1.3	1.2
Automotive products	0.2	0.1	0.1	0.1	0.2	0.2	0.0	0.2	0.1	0.3	0.1	0.1
Office and telecom equip.	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.8
Other machinery and trans. equip.	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.6	0.5	0.3
Textiles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1
Clothing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other consumer goods	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.2
Total merchandise exports[b]	3.2	3.2	3.1	3.3	3.5	3.4	2.9	3.5	3.4	23.0	23.8	17.8
Western Europe												
Agricultural products	15.2	15.7	13.6	7.8	8.1	8.7	6.5	6.5	6.1	15.0	14.8	12.7
Food	13.7	14.3	12.1	6.6	6.8	7.4	6.0	6.0	5.7	12.1	12.0	10.4
Raw materials	1.4	1.4	1.5	1.2	1.2	1.3	0.5	0.5	0.5	2.9	2.8	2.3
Mining products	3.8	4.4	4.1	2.3	2.3	2.3	2.0	1.9	1.5	5.4	6.1	4.5
Ores and other minerals	0.5	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2	1.4	1.9	1.1
Fuels	2.2	2.6	2.3	1.6	1.6	1.5	0.8	0.7	0.6	1.1	1.2	0.7
Non-ferrous metals	1.1	1.3	1.4	0.5	0.5	0.6	1.0	1.0	0.8	3.0	3.1	2.6
Manufactures	93.5	107.0	113.7	48.8	48.2	51.3	50.6	54.2	51.3	195.9	188.5	152.1
Iron and steel	2.4	2.5	2.9	2.2	2.0	2.1	2.6	2.5	2.1	5.8	4.9	3.0
Chemicals	14.0	16.1	16.2	7.6	7.8	8.1	7.3	7.4	7.4	28.6	27.8	23.8
Other semi-manufactures	11.6	13.1	13.8	5.5	5.2	5.3	9.1	9.0	8.1	20.6	20.0	15.3
Machinery and transport equip.	43.4	50.9	55.9	24.8	24.5	26.3	22.9	25.7	24.5	108.2	104.9	84.8
Automotive products	9.5	11.6	13.6	5.0	4.9	5.2	3.7	3.9	4.1	17.6	15.3	11.3
Office and telecom equip.	7.3	9.5	10.1	3.6	3.8	5.0	2.7	2.9	3.6	22.1	26.0	22.1
Other machinery and trans. equip.	26.6	29.8	32.2	16.2	15.8	16.1	16.5	18.8	16.8	68.5	63.6	51.3
Textiles	6.6	7.1	7.5	3.3	3.3	3.7	1.6	1.6	1.5	4.6	4.4	3.4
Clothing	3.3	4.0	4.0	1.0	1.2	1.5	1.2	1.3	1.3	4.6	3.9	3.1
Other consumer goods	12.1	13.2	13.4	4.2	4.2	4.3	6.0	6.8	6.4	23.4	22.5	18.6
Total merchandise exports[b]	113.6	128.6	133.8	59.6	59.7	63.6	60.6	64.3	61.4	219.4	213.8	173.5

Appendix Table III.17. *(cont'd.)*

Destination	C./E.Europe/BS/CIS[c]			Africa			Middle East			Asia		
Origin	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998
C./E. Europe/Baltic States/CIS [c]												
Agricultural products	11.4	11.0	9.3	0.4	0.4	0.5	0.8	0.8	0.9	3.4	3.4	2.9
Mining products	27.9	29.5	24.6	0.1	0.2	0.2	0.5	0.5	0.6	4.1	4.2	3.1
Manufactures	33.6	35.9	31.5	1.9	1.7	1.7	2.9	3.2	3.0	9.9	8.9	6.9
Total merchandise exports [b]	74.8	77.5	66.2	2.5	2.3	2.5	4.4	4.6	4.6	17.9	16.9	13.1
Africa												
Agricultural products	0.6	0.7	0.8	2.3	2.4	2.4	0.5	0.6	0.6	4.0	3.9	3.4
Mining products	0.6	0.4	0.3	3.1	2.9	2.1	0.4	0.5	0.4	7.8	9.3	6.8
Manufactures	0.1	0.1	0.2	5.5	5.7	5.6	0.7	0.7	0.6	3.7	3.7	3.4
Total merchandise exports [b]	1.4	1.3	1.3	11.0	11.0	10.2	1.7	1.7	1.7	16.9	19.1	14.2
Middle East												
Agricultural products	0.3	0.2	0.2	0.3	0.3	0.3	2.1	2.3	2.4	0.6	0.6	0.5
Mining products	0.5	0.3	0.2	4.3	5.0	3.7	4.7	5.1	4.3	71.3	77.3	53.1
Manufactures	0.6	0.7	0.6	1.3	1.5	1.2	5.2	5.5	6.6	8.1	8.0	6.1
Total merchandise exports [b]	1.5	1.3	1.0	5.9	6.8	5.2	12.2	13.0	13.4	80.2	86.8	60.4
Asia												
Agricultural products	2.1	2.5	2.0	2.8	2.9	3.0	4.7	4.5	4.3	72.6	69.6	58.8
Food	1.9	2.3	1.8	2.5	2.6	2.7	4.3	4.1	4.0	53.0	51.7	44.9
Raw materials	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.3	19.6	17.9	13.9
Mining products	0.4	0.3	0.3	0.3	0.4	0.6	0.4	0.6	0.6	77.7	82.0	66.4
Ores and other minerals	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	9.2	9.9	8.5
Fuels	0.2	0.2	0.2	0.2	0.2	0.4	0.1	0.3	0.4	54.7	56.7	44.7
Non-ferrous metals	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	13.7	15.3	13.2
Manufactures	12.1	13.0	11.7	15.3	15.9	16.8	27.8	28.9	32.5	515.6	524.9	435.1
Iron and steel	0.2	0.1	0.1	0.5	0.6	0.8	1.0	1.1	1.4	24.1	25.2	19.2
Chemicals	0.5	0.7	0.6	1.1	1.3	1.4	1.2	1.4	1.5	50.5	53.9	46.8
Other semi-manufactures	0.4	0.5	0.5	1.5	1.8	1.8	3.2	3.4	3.3	44.2	43.9	34.8
Machinery and transport equip.	6.7	7.0	5.8	8.2	7.9	8.2	13.7	14.0	17.4	283.7	285.9	236.6
Automotive products	2.0	2.5	2.2	3.3	3.1	3.2	5.0	5.8	7.1	24.2	23.2	15.2
Office and telecom equip.	3.2	2.6	2.0	1.6	1.5	1.5	3.2	3.1	3.0	140.0	145.4	128.4
Other machinery and trans. equip.	1.4	1.9	1.6	3.2	3.4	3.5	5.5	5.1	7.3	119.5	117.3	93.1
Textiles	0.9	1.0	0.9	2.1	2.3	2.4	4.1	4.2	4.0	41.8	42.3	34.4
Clothing	1.8	2.2	2.3	0.6	0.7	0.8	1.8	1.7	1.8	20.5	20.7	19.6
Other consumer goods	1.6	1.6	1.6	1.4	1.4	1.4	2.9	3.1	3.1	50.7	53.0	43.7
Total merchandise exports [b]	14.6	16.0	14.2	19.3	20.4	21.4	34.2	36.2	39.5	683.9	695.7	576.3

[a] Includes unspecified destinations.

[b] Includes unspecified products.

[c] Includes the intra-trade of the Baltic States and the CIS.

Note: For sources and methods, see the Technical Notes.

Appendix Table III.18. Developed countries' imports of agricultural products by origin, 1990-1998

(Million US$)

	From all origins			From least-developed countries		
	Total agricultural products	Food	Agricultural raw materials	Total agricultural products	Food	Agricultural raw materials
1990	165,650	118,170	47,480	3,350	2,430	1,120
1991	165,640	122,890	42,740	3,120	2,290	840
1992	173,850	129,330	44,520	3,060	2.250	810
1993	172,870	128,870	44,000	2,920	2,230	690
1944	199,400	146,750	52,640	3,710	2,850	960
1995	223,540	160,080	63,450	4,600	3,640	970
1996	225,570	168,300	57,270	4,840	3.450	890
1997	224,130	168,040	56,090	4,460	3,520	940
1998	213,430	163,220	56,680	4,180	3,290	900

Note: Imports are valued f.o.b. excluding intra-EU trade.

Source: WTO Secretariat estimates.

Appendix Table III.19. Growth of developed countries' imports of agricultural products by origin, 1990-1994 and 1994-1998

(Percent)

	1990-94			1994-97			1994-98		
	Total agricultural products	Food	Agric. raw materials	Total	Food	Agric. raw materials	Total	Food	Agric. raw materials
From all origins	4.5	5.5	2.5	4.5	5	2.5	1.5	2.5	-1
From least-developed countries	1	4	-6.5	6.5	7.5	3	3	3.5	1

Notes: Average annual percentage changes based on value figures. Imports are valued f o.b.

Source: WTO Secretariat estimates.

IV. Services

A. The international services economy

The first two parts of this study have been concerned with market access, and international trade itself, in its traditional sense: exchanges of goods across borders, subject to whatever tariffs and other border measures are in force. In this context, market access can be assessed in terms of the incidence of border measures and other explicit trade restrictions, plus a limited range of domestic measures which may have distortive effects, such as subsidies. In the realm of trade in services the assessment of market access is a great deal more complex, for two reasons. First, the international exchange of services is vastly more complex than the movement of goods across frontiers. It is extremely difficult, sometimes impossible, to disconnect the production of services from their consumption. This means that either the producer or the consumer must move, which accounts for the definition of trade in services in the GATS as taking place under four different modes of supply, including the movement of capital and persons. Secondly, the production and consumption of services are subject to a vast range of policy interventions by governments-policies which have usually been developed without regard for their trade effects because they serve other objectives. The assessment of market access in services, therefore, must be concerned not only with measures applied at the border, which are easily identifiable but hardly significant in the services context, but with a much larger range of regulations and controls going far beyond trade policy as traditionally understood.

The objective of this part is to throw light on the degree of market access guaranteed by commitments under the GATS, on the relative importance of the different trading modes and of the main obstacles to trade for specific services. It also reflects upon some of the main policy and political challenges facing governments as we prepare for a new phase of the services negotiations. The analysis is essentially based on the GATS schedules of WTO Members and on a series of background papers covering the main sectors which were produced by the Secretariat to facilitate preparations for the new round of negotiations by the Council for Trade in Services. Because these papers are available from the WTO website (www.wto.org) the study does not contain descriptions of individual sectors: readers are invited to consult the background papers themselves.[81]

To understand the important place that services is coming to occupy in the multilateral trading system, it is first necessary to understand the increasingly central role that services now play in the global economy and the major technical and regulatory changes that are driving this transformation. Services production is a dominant economic activity in virtually all countries of the world, regardless of their level of development. The sector represents well over 60% of world GDP. There is, however, significant variation across different country groupings; available data suggest that the size of the services sector is strongly related to income. For example, in 1998 services were estimated to account for 38% of gross domestic product (GDP) in low income economies, 56% in middle income economies, and 65% in high income economies (for individual country data see Chart IV.1).[82] This pattern is consistent with expectations based on standard economic literature. The factors normally expected to contribute to this services/development link are: (i) high income elasticity of demand: as people grow richer, they tend to spend relatively more on services; (ii) increasing services content of many advanced industrial goods: sophisticated products tend to incorporate a wide range of tertiary sector inputs provided by specialized suppliers (design, development, marketing, distribution, insurance, finance, etc.); and (iii) favourable production conditions in higher-income countries, which are relatively better endowed with infrastructural and human capital, for many rapidly expanding services activities.

Services tend to be an even more important source of employment—and employment creation—than the above figures suggest. Many traditional services, such as distribution, construction, education, health and social services, are particularly labour-intensive; and it has generally proved more difficult in these areas to substitute equipment for human inputs than in manufacturing.

The expansion of the services sector in recent years has been driven mainly by income-related demand shifts, benefiting for example the hotel and tourist industries; the economic stimulus generated by new information and communication technologies; and the growing importance of basic infrastructural services, including communication and finance, for a wide range of user industries. It is particularly noteworthy that, while the services share in economic activity has increased world-wide, this growth has been particularly strong in developing countries. During the period from 1980 to 1998, the services share in world GDP has reportedly risen by five percentage points, and the corresponding increase for low and middle income countries has been estimated at nine percentage points.[83] Hong Kong, China is perhaps the most striking example of the switch from an economy strongly orient-

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81 See Annex 1 for list of WTO Secretariat sectoral background studies.

82 World Bank (1999).

A note of caution is necessary, however, as individual countries may depart significantly from such average estimates. For example, capitalizing on locational and/or natural advantages, various low-income economies have developed large tourism or maritime transport sectors.

83 World Bank, *op.cit.*

ed towards manufacturing to almost complete dependence on services. Service industries now account for 85% of Hong Kong, China's GDP and for 79% of employment.

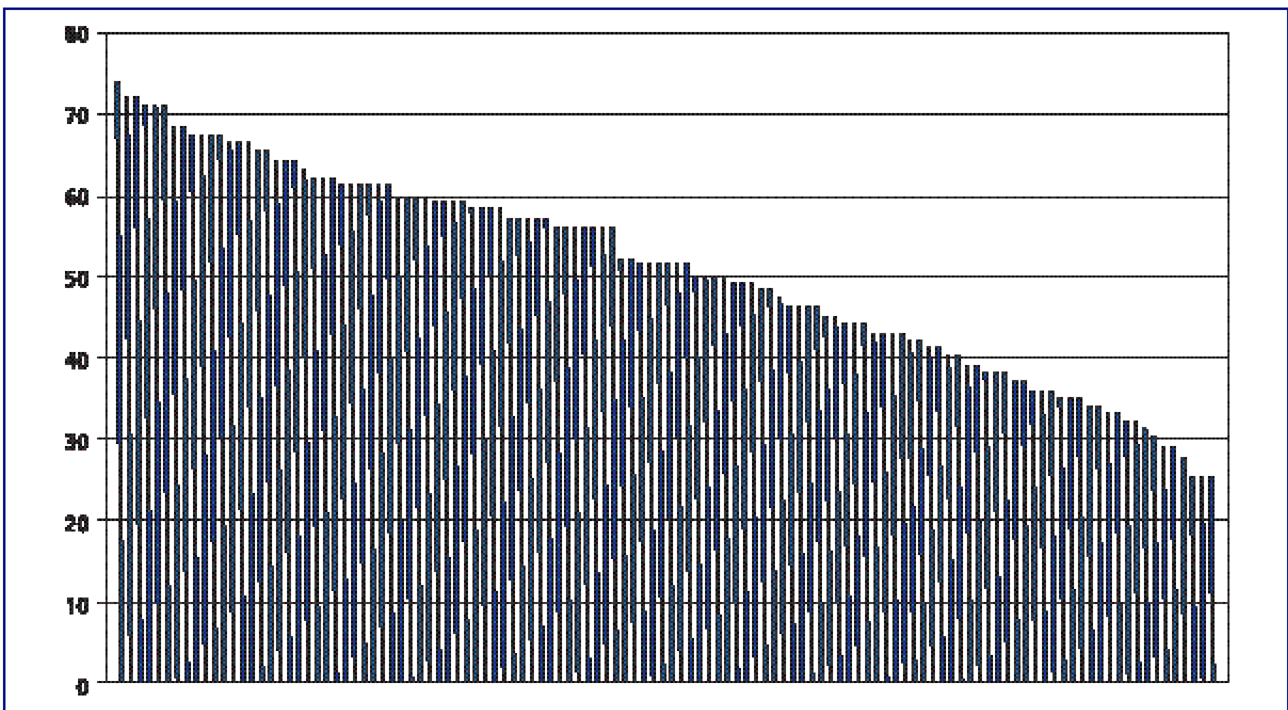
The strong and growing role of services in world production, however, is not reflected in its share of world trade. With some notable exceptions, such as maritime transport and segments of international finance, services have not historically been traded on a significant scale and most have been regarded as essentially domestic activities. Even today, services account for no more than one-fifth of total *cross-border* trade, though to this must be added the substantial volume of trade done through the other modes of supply covered by the GATS—in particular through establishment in the export market.

The non-tradability of a significant number of services has been due mainly to technical constraints, or in other words to the impossibility of disconnecting production from consumption and supplying customers at a distance. But new communication technologies are rapidly changing the situation in a variety of sectors; the advent of tele-health and tele-education services are cases in point. However, non-tradability has also been policy-induced. Many important markets, including rail transport, basic telecommunications and health insurance, have traditionally been reserved for monopoly suppliers or made subject to strict regulation and entry control, often for essential policy purposes, such as security of supply and protection of the public interest. Nevertheless, technical change is having an impact in these areas as well.

A number of recent market reforms have been driven by technology in the sense that governments have found it increasingly difficult to continue operating traditional regimes or to enforce them effectively against by-pass technologies. Examples include the proliferation of call-back and calling-card services in high-cost telecom markets, which have undermined the ability of monopoly suppliers to control prices. In a similar vein, new aircraft designs have helped to bring travel costs down to a point where international consumer mobility makes it possible in certain services, such as health, to replace domestic supply by consumption abroad. However, this is not to suggest that policy makers have operated predominantly in a reactive role, driven by developments they are unable to prevent. There is also ample evidence of governments recognizing the economy-wide benefits of efficient services and, with this in view, devising liberalization strategies. Efficiency, so the underlying tenet runs, depends on the spur of competition or, in other words, on the promise of profits (for innovation) and the threat of losses (for complacency).

As financial, telecommunications and transport services are the backbones of modern economies, it is no surprise that initial policy reforms in North America and Europe focused precisely on these areas. It would be misleading, however, to suggest that there is an automatic

Chart IV.1. Share of services in GDP of selected countries, 1998



Source: World Bank, World Development Indicators 2000

link between internal deregulation and improvement in market access for foreign suppliers. Despite the high potential benefits of competition and inward investment, governments very often find it difficult to liberalize autonomously: it helps to be able to point to matching "concessions" by trading partners. Autonomous liberalization runs counter to the striving for "reciprocity" which is one of the most deep-rooted, though economically dubious, compulsions in international trade policy-making. Nevertheless, the likelihood of autonomous liberalization, explicitly done to achieve more competitive markets and attract investment, appears greater in services, especially in the infrastructural services, than in agriculture or manufacturing, where mercantilist assumptions have a stronger hold. In the telecommunications sector, a number of developing countries have tabled commitments unilaterally —the first examples of the kind.

B. Market access in services

a. The scope of the GATS

The GATS covers all services with the exception of those provided in the exercise of governmental authority and the greater part of the air transport sector. The exclusion of services provided in the exercise of governmental authority ensures the ability of governments, notwithstanding their GATS obligations, to implement important objectives of public policy. It means for example that public health and education services which are supplied neither on a commercial basis nor in competition—this is the relevant definition—fall outside the scope of the GATS while the private services which may co-exist alongside them and are supplied on a competitive basis are covered by the Agreement.

The GATS also covers all measures by Members[84] affecting trade in services. The term "affecting" is unqualified, and has been interpreted in two dispute settlement cases to mean measures which not only directly but also indirectly affect services trade.

The most-favoured-nation (MFN) obligation in Article II of the Agreement requires Members to extend to all other Members the best treatment that they give to the services and service suppliers of any other country. The MFN principle is a powerful instrument of liberalization and guarantee of market access. However, the principle is not unqualified: Article II permits Members to maintain exemptions from the MFN principle, under which more favourable treatment is given to some trading partners than to others. Exemptions were permitted to be taken only on the entry into force of the Agreement, or, in the case of countries acceding to the WTO, on the date of their accession. Exemptions are subject to review and negotiation and should not in principle be maintained for more than 10 years (see Table IV.1).

Given the heavy regulation of most services, effective access also depends on accurate knowledge of the laws and regulations in force, that is on transparency. Article III requires Members to publish "all relevant measures of general application which pertain to or affect the operation of this Agreement" and to notify any changes in laws or regulations affecting sectors on which commitments have been made. The work so far done on the development of disciplines on domestic regulation under Article VI has also been heavily focussed on transparency.

b. Schedules of commitments

Its very comprehensive coverage would probably have made the Agreement unacceptable to many countries had it not provided at the same time a remarkable degree of flexibility. Members have great freedom in negotiations to specify and limit the extent to which they will guarantee access to their markets. Though every Member must maintain a national schedule of commitments, it is free to decide which service sectors will be included in the schedule and, within those sectors, to maintain specified limitations on the degree of market access and national treatment guaranteed to foreign suppliers. The Agreement prescribes no minimum coverage or threshold; a commitment in one sector is sufficient to meet the requirement that all WTO Members must have a GATS schedule. It is a basic principle of the Agreement that liberalization should take place with due respect for the level of development of individual Members, and in general there is a strong positive relationship between the level of development of Members and the coverage of their schedules—although this is much less true of the schedules negotiated by countries acceding to the WTO, which are commonly far more extensive than those submitted by countries at a similar level of development in the Uruguay Round.

The GATS defines trade in services as taking place under four different modes of supply:

- **Mode 1**: Cross-border supply, from the territory of one Member into that of another. (This corresponds to the traditional movement of goods across borders);
- **Mode 2**: consumption abroad, in which the service is supplied in the territory of one Member to the consumer of another;
- **Mode 3**: supply through commercial presence, in which the service supplier is legally established in the export market; and
- **Mode 4**: supply through the movement of natural persons, meaning the temporary presence of individuals without legal personality to supply services in a Member's market.

Member governments may make commitments guaranteeing the right to supply services under any or all of

[84] Measures by Members include those taken by all levels of government -national, regional and local -and by non-governmental bodies to which governmental powers have been delegated.

Box IV.1. Review of MFN exemptions

The GATS requires the Council for Trade in Services to review MFN exemptions listed by Members. Accordingly, a review process was started at the end of 1999 and concluded in the autumn of 2000. Its essential purpose was to examine whether the conditions which had created the need for an exemption still prevail. The Annex also indicates that exemptions will be subject to negotiations, effectively creating a separation between the review process and the negotiations.

Around two thirds of WTO Members have listed MFN exemptions. They are mainly concentrated in four sectors—transport (especially maritime), communication (mostly audiovisual), financial and business services. A significant number of other exemptions apply horizontally, to all sectors, such as those listed for mode 4 or mode 3-related discrimination. Exemptions are generally motivated by preferential regional arrangements which do not qualify as Article V Economic Integration Agreements, bilateral or plurilateral agreements, which usually reflect historical preferences, and by unilaterally imposed reciprocity provisions. In more than four-fifths of cases, no time limit has been attached to the measures listed, and the duration of the exemption is often "indefinite", in spite the Annex indicating that exemptions should, in principle, not exceed ten years.

An MFN exemption is a deviation only from the obligations in Article II, and cannot be used to escape obligations deriving from specific commitments undertaken under Articles XVI and XVII. In other words, the level of market access and national treatment bound in a schedule has to be granted as a minimum to all WTO Members and commitments cannot be undercut, e.g. by way of reciprocity conditions, through MFN exemptions. In turn, this means that the deeper the commitments in a given sector, the more limited the discrimination potential of an MFN exemption. Viewed in this light, the distortion potential of MFN exemptions is greatest in sectors such as audiovisual and transport services, where the number of exemptions is highest relative to the number of commitments. The MFN obligation, and the requirement to list MFN-inconsistent measures in the Annex, are suspended for maritime transport services, for those Members not having undertaken any commitments in the sector, until the conclusion of the—equally—suspended negotiations on maritime transport.

What scope is there for the elimination of MFN exemptions in the current round of negotiations? The review was essentially an exchange of information, in itself not aimed at reducing the number of exemptions, but it nonetheless provided a useful indication of what could reasonably be expected over the next few years. A first, welcome effect of the review has been the realization, on the part of a few Members, that some of their exemptions were no longer necessary, mainly as a result of progress in regional integration processes. Several Members have also indicated that they might consider reduction of the scope, if not outright removal, of some of their exemptions. Others, however, have stressed that the conditions which had created the need for their exemptions continue to prevail, thereby indicating little room for liberalization in this area.

It is therefore plausible that progress with respect to MFN exemptions will take place within the context of the negotiations on specific commitments, when the economic significance of the exemptions is likely to become fully apparent. However, many exemptions stand little chance of being removed before the expiry of the period of ten years, in principle, specified in the Annex, and it can be expected that even at that point it will be maintained that some of them continue to be necessary.

Table IV.1. Number of MFN-exemptions by sector, as of March 2000

Sector	Number of measures
Transport services	147
Maritime transport	63
Internal waterways transport	10
Air transport	22
Space transport	1
Rail transport	4
Road transport	45
Pipeline	1
Services auxiliary to all modes of transport	1
Communication services	98
Postal services	1
Telecommunication services	19
Audiovisual services	78
Financial services	51
Business services	22
Professional services	15
Other Business services	7
Recreational, cultural and sporting services	4
Distribution services	3
Construction and related engineering	2
Health-related and Social services	1
Tourism and Travel-related services	1
Non-sector specific	73

Notes: EC members counted as one.
Measures listed for more than one sector/sub-sector have been counted once only.
No indication about the sectoral coverage of the exemptions can be drawn from the table.

Source: WTO Secretariat.

these modes. For each service on which a commitment is made, the schedule must indicate, under each of the four modes, any limitations on market access or national treatment which it is intended to maintain; limitations not scheduled in this way become illegal. The entry "none" signifies full access—no limitations are maintained. "Unbound" indicates that no commitment is made on the mode of supply concerned; the Member remains free to introduce restrictions. Between these two extremes come all the entries listing specific limitations, which are partial commitments. The schedules are thus a combination of a "positive list" of covered services with a "negative list" of scheduled measures. They guarantee a minimum standard of access; countries are always free to grant higher levels of market access and national treatment than are specified in their schedules, on an MFN basis, and many do so. The absence of a commitment therefore does not mean that supply is not permitted. A country may maintain a very liberal regime while making no GATS commitments at all—but without commitments there is no guarantee that it will stay liberal. This means that as a guide to the degree of openness of individual markets the schedules must be used with great caution. They nevertheless throw useful light on three important issues: the degree of sensitivity, or of trade interest, of different sectors as revealed by the number of countries making commitments on them; the relative importance, or acceptability, of the different modes of supply from the view point of the scheduling country; and the prevalence of different types of trade barriers, as revealed by the limitations on market access and national treatment which governments have scheduled.

Sectoral commitments are presented in a four-column format. The first column defines the sector or sub-sector concerned, the second column indicates any limitations on market access and the third limitations on national treatment. The fourth column contains "additional commitments" made under Article XVIII on measures not subject to scheduling under Articles XVI or XVII. (The major example of the scheduling of additional commitments is

the regulatory principles subscribed by nearly all participants in the negotiations on basic telecommunications in 1997, which provide safeguards against abusive or anti-competitive behaviour by monopolies and dominant suppliers.) Commitments or limitations which relate to all sectors are recorded as "horizontal commitments" in the first part of the national schedule, in the same four-column format. It is also possible for Members to bind measures of liberalization to come into force at a future date, as some have done in the telecommunications negotiations, for example, and to make commitments applying to only part of their territory.

Article XVI lists six different types of limitations on market access which must be scheduled if they are to be maintained. It is to be noted that these access limitations must be scheduled whether or not they contain any element of discrimination against foreign services and service suppliers. They are set out, with typical examples, in Table IV.2

Article XVII, which contains the national treatment obligation, also permits Members to schedule and maintain limitations. In this it is very different from the unqualified national treatment obligation in the GATT. This must be seen as a natural corollary of the absence of tariff protection in services, which means that an unqualified market access and national treatment commitment would

Table IV.2. Article XVI: limitations on market access

Market-access limitations	Example
(a) Limitations on the number of service suppliers whether in the form of numerical quotas, monopolies, exclusive service suppliers or the requirements of an economic needs test;	Licences for new restaurants subject to economic needs test based on population density.
(b) Limitations on the total value of service transactions or assets in the form of numerical quotas or the requirement of an economic needs test;	Foreign bank subsidiaries limited to x per cent of total domestic assets of all banks.
(c) Limitations on the total number of service operations or on the total quantity of service output expressed in terms of designated numerical units in the form of quotas or the requirement of an economic needs test;[a]	Restrictions on the broadcasting time available for foreign films.
(d) Limitations on the total number of natural persons that may be employed in a particular service sector or that a service supplier may employ and who are necessary for, and directly related to, the supply of a specific service in the form of numerical quotas or the requirement of an economic needs test;	Foreign labour should not exceed x per cent of the work force and/or not account for more than y per cent of total wages.
(e) Measures which restrict or require specific types of legal entity or joint venture through which a service supplier may supply a service;	Commercial presence excludes representative offices.
(f) Limitations on the participation of foreign capital in terms of maximum percentage limit on foreign share-holding or the total value of individual or aggregate foreign investment.	Foreign equity participation in domestic insurance companies should not exceed x per cent.

[a] Subparagraph 2(c) does not cover measures of a Member which limit inputs for the supply of services.

amount to full free trade. Unlike Article XVI, Article XVII contains no closed list of measures subject to scheduling; any measure which affects conditions of competition to the detriment of foreign services or suppliers must be scheduled. Typical national treatment limitations included in schedules of commitments relate to nationality or residency requirements for executives and board members, requirements to invest a certain amount of assets in local currency, restrictions on the purchase of land by foreign service suppliers, special subsidy or tax privileges granted to domestic suppliers, differential capital requirements and special operational limits applying only to operations of foreign suppliers.

A scheduled commitment does not necessarily involve liberalization. The majority of commitments negotiated and scheduled in the Uruguay Round were in fact "standstill bindings", committing the country concerned only to maintain the current level of access; more liberalization took place in the 1997 negotiations on basic telecommunications and financial services. However, standstill bindings have value. They provide traders and investors with the assurance that the conditions on which their decisions are based will not be overturned by sudden policy changes. Nevertheless, trade liberalization is the essential purpose of the new round, to be achieved both by removing or reducing existing limitations and by extending the sectoral coverage of schedules.

It must also be understood that liberalization is not to be equated with deregulation. Many services are heavily regulated, for very good reasons, and regulations cannot be simply assimilated to trade restrictions. The preamble to the GATS recognizes the right of Members to regulate, and to introduce new regulations on, the supply of services to meet national policy objectives. Domestic regulations which do not fall under the six categories of limitation in Article XVI and which do not discriminate against foreign suppliers are not subject to scheduling. Most of them are subject to the disciplines of Article VI, which are explained in Part Four below. Some regulations, such as competition law, fall under none of these three Articles. A footnote to Article XVII makes it clear that there is no obligation to compensate for any competitive disadvantages which are inherent in the foreign character of foreign services or service suppliers—such as unfamiliarity with the local language or business culture, for example.

The commitments which governments have assumed under the GATS are thus specific to particular services and to the particular modes by which they are delivered. This "industry-specific" character of the Agreement renders it impossible to present a generalized picture of market access for "services" as a whole. Since there are significant differences between services in terms of their overall economic importance, their tradability and, in this context, the relative importance of the modes of supply, the value of an access commitment for a particular sector and mode can be assessed only in its sector context. There is also virtually unlimited variation between limitations in terms of their trade-restrictive effect, so that to assign a common weighting to partial commitments can give only the most crude impression of the economic quality of commitments.

C. The Uruguay Round and subsequent negotiations

1. Results of the Uruguay Round

Unlike previous trade rounds under the GATT, which essentially focused on trade liberalization within an established legal framework, the Uruguay Round broke new ground in integrating completely new areas—services and trade-related aspects of intellectual property rights—into the system. For services in particular a new legal architecture needed to be created and filled with substance. This was an enormous task, requiring negotiators to re-think and sometimes re-invent basic trade policy concepts and instruments. Apart from the EC's Single Market, there was little experience with comprehensive services trade agreements. Although tempting, it was impossible to simply re-apply basic GATT provisions—given important structural differences between merchandise and services trade—and retain the GATT's focus on measures affecting the sale of products across borders. This meant that a great deal of negotiating energy went into rule-making, partly at the expense of market-opening negotiations. Governments may also have been reluctant to take on liberalization commitments as the accompanying legal framework—governing for example quality standards, licensing requirements and regulatory supervision in a more open environment—had still to be created. And some participants might also have fallen victim to a traditional negotiating instinct, namely to wait for trading partners' requests, rather than actively using the Agreement to create more favourable trade and investment conditions by way of autonomous bindings which could lock in reform policies and thus create stability and predictability for traders and investors, domestic and foreign.

As a result, the levels of commitments undertaken in the Uruguay Round were generally rather modest, both in terms of the number of sectors included in many schedules and of the quality of bindings in relevant modes of supply. As stated above, most commitments appear to have been confined to binding the status quo, rather than expanding already existing access opportunities. In many cases, the level of access guaranteed by commitments was lower than that provided *de facto*. It has to be said that this assessment is based mainly on anecdotal evidence, since there is no comprehensive information in existence

on the trade and regulatory regimes of Members, either before or after the Uruguay Round.

a. Overview of current commitments

Research on trade restrictiveness indicators for services, while highly promising, is still at a relatively early stage.[85] Available estimates are limited in country and sector coverage, focusing in particular on banking and telecommunications, and are subject to methodological constraints. There are difficulties, for example, in distinguishing the price effects associated with trade barriers falling under Articles XVI and XVII of GATS (market access and national treatment), from those attributable to "non-protective" domestic regulations (prudential measures, quality standards, etc.), universal service obligations (e.g. requirements on banks or telecom operators to provide certain non-profitable services on regional or social policy grounds), and higher prices of local inputs (including wages, license fees, and user charges for basic infrastructural facilities). Thus, even if the Uruguay Round had resulted in sweeping liberalization across many sectors and countries, it might not have been (fully) reflected in currently existing indicators of trade restrictions, many of which use the price differentials in individual sectors between domestic and international markets. The absence of commitments on a particular sector or mode cannot be taken as indicating that there are market access or national treatment problems in that area. Of course, scheduled commitments will have more value for economic operators, in terms of transparency and predictability, the more closely they reflect the regimes in place.[86]

Given these constraints, the following overview of Uruguay Round results essentially remains confined to a description, from various angles, of the commitments undertaken by Members across sectors and modes. The commitments currently in force—undertaken mainly in the context of the Uruguay Round, recent accessions and the extended negotiations (movement of natural persons, maritime transport, basic telecommunications and financial services)—can be assessed in at least three ways: from the perspective of the Members involved, the sectors covered, and the modes bound. The schedules reveal significant variation, regardless of the perspective adopted.

b. Commitments by Members

The classification list (see Annex II) generally used for scheduling purposes divides all services into 11 broadly defined service sectors, and these are further divided into 160 sub-sectors. Of the latter, about one third of WTO Members have committed on 20 sectors or less, one-third on between 21 and 60, and the remaining third on between 81 and a maximum of 145 (Table IV.3). On average across all schedules, a "typical" WTO Member has undertaken commitments on slightly more than 25 subsectors, thus covering about 15% of the total. The only criterion used here is the inclusion of a sector in a Member's schedule; no attention is paid to the quality of the relevant commitment in terms of modal coverage or the existence and restrictiveness of limitations.

The composition of the three groups of Members only partly corroborates *a priori* assumptions suggesting that developing and transition economies might find it more difficult to undertake commitments than developed countries; the third group, those Members with commitments on the largest number of sectors, includes several developing and least developed economies —many but not all of them countries which have acceded to the WTO since 1995.

c. Commitments by sector

Among the 11 broad service sectors, tourism has drawn by far the highest number of bindings. More than 90% of WTO Members have included at least one subsector of tourism in their schedules. Financial and business services rank next, while health and education services, with 46 and 44 entries respectively, are the least commonly scheduled of the major sectors (Chart IV.2). It is however striking that the distribution sector —a major industry apparently subject to no particular political or cultural sensitivities —has been scheduled by only 52 Members. The high number of commitments in telecommunications and financial services reflects the results of the extended negotiations concluded in February 1997 on basic telecommunications and December 1997 on financial services (Part III.b).

In general, developed countries have made commitments in nearly all major sectors. There are notable exceptions, such as the omission of maritime transport services by the US and the EU, and of audiovisual services by Canada, the EU and Switzerland, but the only sectors in which significant numbers of developed countries have chosen not to make commitments are education and health and social services.[87] There is more variation among developing countries in the sectors they have chosen to schedule; given the high proportion of developing and least-developed countries among WTO Members, Chart IV.2 essentially reflects the scheduling preferences of these countries.

d. Commitments by mode

Although it is difficult to find adequate indicators reflecting the state of liberalization across modes, it is evident from Chart IV.3 that the bindings undertaken for mode 2 are significantly more liberal than those for other

[85] For an overview see, for example, the recent annual report by the Australian Productivity Commission (1999).

[86] See Kono *et al* (1997).

[87] Among the developed countries, Canada, Finland, Iceland and Sweden have not committed on education services, while the same countries plus Liechtenstein, New Zealand, Norway and Switzerland have not scheduled health and social services.

modes and that bindings on mode 4 are the least liberal of all. About 50%m of the entries made under market access for mode 2 are without limitation, while the share of unlimited commitments on mode 4 is close to nil (Chart IV.3). Governments may have felt it unnecessary to seek to restrain their nationals' consumption of services abroad—or may have judged it to be impracticable.[88] The apparent sensitivity of mode 4 trade is also reflected in a particularly high number of horizontal limitations that have been made in individual schedules to apply to all included sectors: slightly more than 20 such limitations for mode 2 compare with some 100 for mode 4. It is interesting to note in this context that the level of bindings for individual modes does not differ significantly between developed economies on the one hand and developing and transition economies on the other: though the movement of natural persons has often been presented as a north-south issue, there is no evidence that developing countries have found it easier to make commitments under this mode than their developed partners.

Cross-border supply (mode 1) and commercial presence (mode 3) are generally considered to be the economically most important modes. Subject to a variety of assumptions, it has been estimated that each currently accounts for some 40% of total world services trade, followed by mode 2 with 20%, while the value of mode 4 trade was found to be insignificant.[89] Chart IV.3 not only reveals more full commitments, but also a far higher share of non-bindings for mode 1 than for mode 3. The lower number of commitments on the former mode may be due to several factors which are not necessarily associated with restrictive policy intentions. In particular, Members may have preferred not to bind cross-border supplies in sectors such as hotel, restaurant or hospital services as they considered such supplies not to be technically feasible.

There may also be policy reasons, however, that have caused Members to prefer commitments for mode 3 (commercial presence) over those for mode 1 (cross-border trade). For example, it has been suggested that "regulatory precaution" has led to a more restrictive policy stance *vis-à-vis* mode 1; governments may not have wished to guarantee access for services over which they could exercise no regulatory control.[90] This hypothesis is not convincing in all cases, however, as measures could be developed to protect domestic users from sub-standard services supplied from across the border. Alternatively, the higher share of mode 3-commitments could also be attributed to governments' interest in attracting foreign direct investment. The "investment-promotion hypothesis" needs to be qualified as well, however. Sectors such as basic telecommunications, banking and insurance services reveal a significant number of—economically highly restrictive—mode 3 limitations. The economic impact in individual cases may be tantamount to a wholesale prohibition of new entry under this mode, possibly reflecting deeply rooted policy concerns about private market participation in areas of infrastructural or social importance.[91] (It is not always clear from the schedules whether a measure is maintained *vis-à-vis* all suppliers, regardless of nationality, or whether it is targeted at foreigners only.) For example, a high number of commitments undertaken on basic telecommunications are subject to restrictions on foreign equity participation, and many of the bindings scheduled for banking and other financial services provide for limitations on the number of suppliers. In other instances, however, limitations inserted under mode 3 merely reflect the existence of non-discriminatory regulation, including licensing and qualification requirements and other measures falling under Article VI (Domestic Regulation), which would not have required scheduling at all.

e. Expected benefits from GATS commitments

The economic rationale for services liberalization under GATS is not different in principle from the rationale that has driven the liberalization of merchandise trade under GATT since 1948. Open markets are expected to encourage quality improvement and product and process innovation; reduce the scope for wasteful resource use and rent-seeking; constrain the power of individual economic operators; increase a sector's resilience to exogenous shocks; and ensure users continued product availability on reasonable conditions. In infrastructural services an important additional factor enters the policy equation: liberalization of transport, communications and financial services has the potential to increase the productivity of the entire economy.[92]

Such considerations no doubt caused some developing and least-developed countries (Barbados, Cyprus, Kenya, Suriname and Uganda) which did not initially participate in the extended negotiations on basic telecommunications, to volunteer commitments after the end of the negotiations. There are few precedents, if any, in GATT/WTO history of developing countries assuming market access obligations in a non-negotiating context—simply because they consider them to be in their national

88 However, there are restrictions conceivable in individual sectors that would need to be scheduled under mode 2. Examples of national treatment limitations under this mode are exclusion of health treatment in a foreign country from coverage under national insurance schemes, the imposition of exit visa charges on residents travelling as tourists abroad, or the non-recognition of insurance contracts concluded by nationals abroad (e.g. motor vehicle liability insurance) by the competent home-country authorities.

89 Karsenty (2000).

90 Sauvé (2000).

91 It may be worth recalling that the existence of limitations must not be equated with the existence of access restrictions in individual cases; the scheduling country merely reserves the right, subject to the MFN requirement, to introduce the measures listed.

92 Hodge and Nordås (1999).

economic interest, and this is striking testimony to the potential for liberalization under GATS as an inducement to foreign direct investment. The fact that liberalization benefits in many services sectors are evident, and that these benefits do not essentially depend on a country's development status, may also explain why the relationship between income levels and the number of sectors committed under GATS is relatively weak (Chart IV.4).[93] One common feature, however, immediately emerges from Chart IV.4: all countries that have joined the WTO since 1995 have scheduled more sectors than their fellow Members at similar income levels.

Against this backdrop, it seems inappropriate to ask whether a country can "afford" policy bindings; one should rather ask whether it can afford *not* to commit. This is more than a rhetorical question. WTO Members may indeed have hesitated for understandable reasons, including lack of familiarity with the Agreement and fear of the impact of competition on long-protected domestic industries, to undertake wide and deep commitments in the Uruguay Round. But these hesitations can be expected to diminish over time. Members have now had several years to familiarize themselves with the GATS and with the benefits of the strong world-wide movement towards services liberalization, and international organizations in-

Table IV.3. Structure of commitments by Members, June 2000

Committed sectors	Number of Members	WTO Members
≤20	44	Angola; Bahrain; Bangladesh; Belize; Benin; Bolivia; Botswana; Burkina Faso; Cameroon; Central African Republic; Chad; Congo; Democratic Republic of Congo; Djibouti; Fiji; Gabon; Grenada; Guatemala; Guinea; Guinea-Bissau; Guyana; Haiti; Honduras; Madagascar; Maldives; Mali; Malta; Mauritania; Mozambique; Myanmar; Namibia; Niger; Paraguay; Rwanda; St. Kitts & Nevis; St. Lucia; St. Vincent & Grenadines; Suriname; Swaziland; Tanzania; Togo; Tunisia; Uganda; Zambia
21-60	47	Antigua & Barbuda; Argentina; Barbados; Brazil; Brunei Darussalam; Burundi; Chile; Colombia; Costa Rica; Côte d'Ivoire; Cuba; Cyprus; Dominica; Dominican Republic; Ecuador; Egypt; El Salvador; Ghana; India; Indonesia; Israel; Jamaica; Kenya; Kuwait; Macau, China; Malawi; Mauritius; Mongolia; Morocco; Nicaragua; Nigeria; Pakistan; Papua New Guinea; Peru; Philippines; Poland; Qatar; Romania; Senegal; Singapore; Solomon Islands; Sri Lanka; Trinidad & Tobago; United Arab Emirates; Uruguay; Venezuela; Zimbabwe
≥61	45	Australia; Bulgaria; Canada; Czech Republic; EC (15); Estonia; Georgia; Hong Kong, China; Hungary; Iceland; Japan; Jordan; Republic of Korea; Kyrgyz Republic; Latvia; Liechtenstein; Lesotho; Malaysia; Mexico; New Zealand; Norway; Panama; Sierra Leone; Slovak Republic; Slovenia; South Africa; Switzerland; Thailand; Gambia; Turkey; United States

[93] There is also considerable variation within regions. For example, of the Sub-Saharan African WTO Members, 26 committed on 20 sectors and less, nine on between 21 and 80 sectors, and three on more than 80 sectors (Gambia, Lesotho and South Africa).

Chart IV.2. Structure of WTO Member's commitments by sector, June 2000

(Maximum number 140)

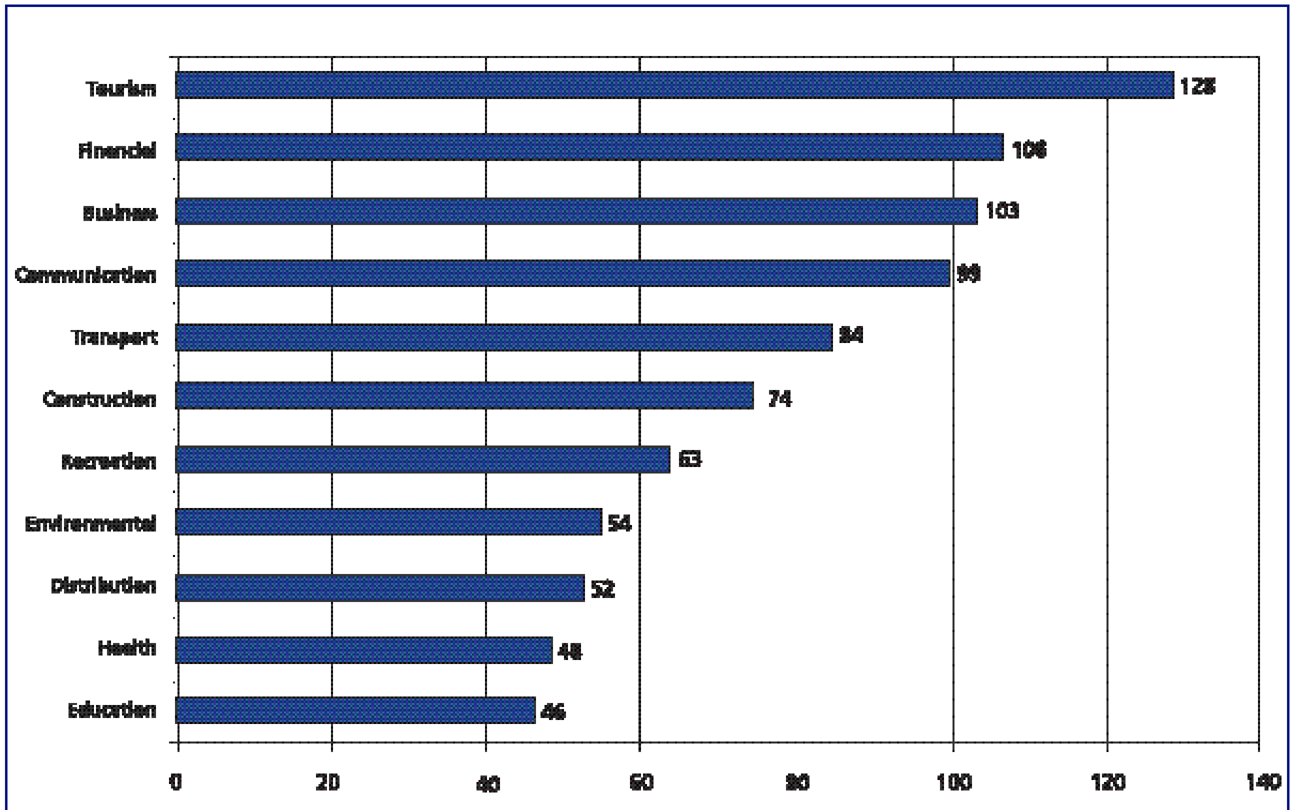
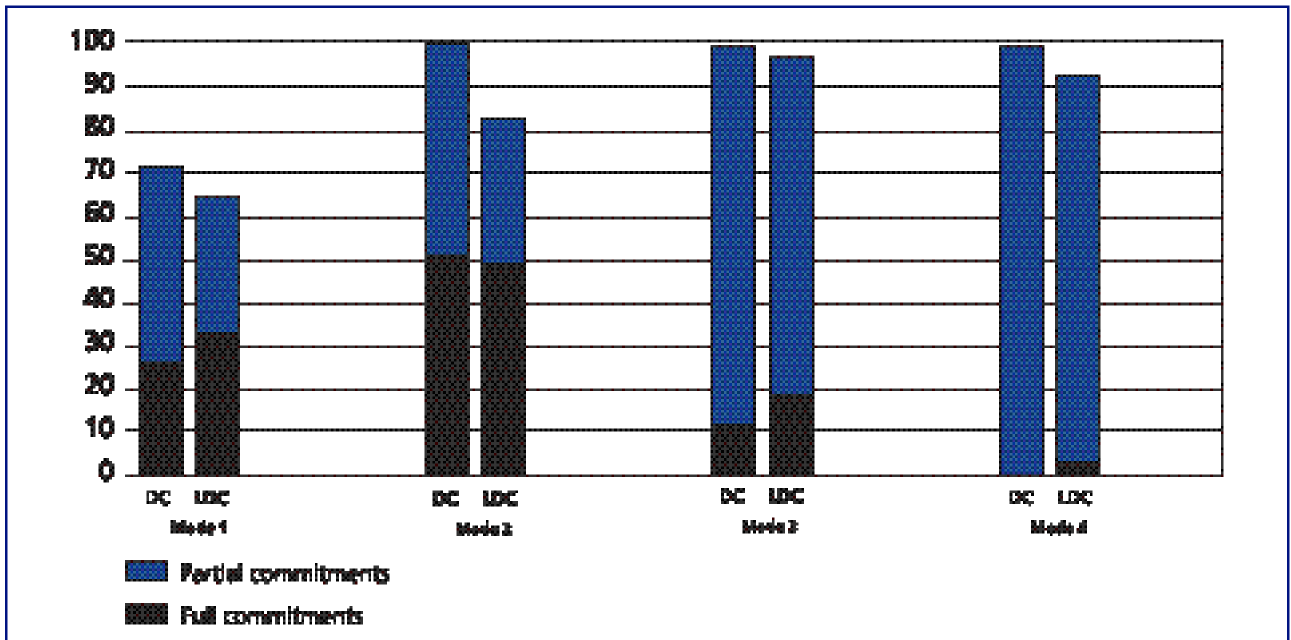


Chart IV.3. Structure of market access commitments by mode, June 2000[a]

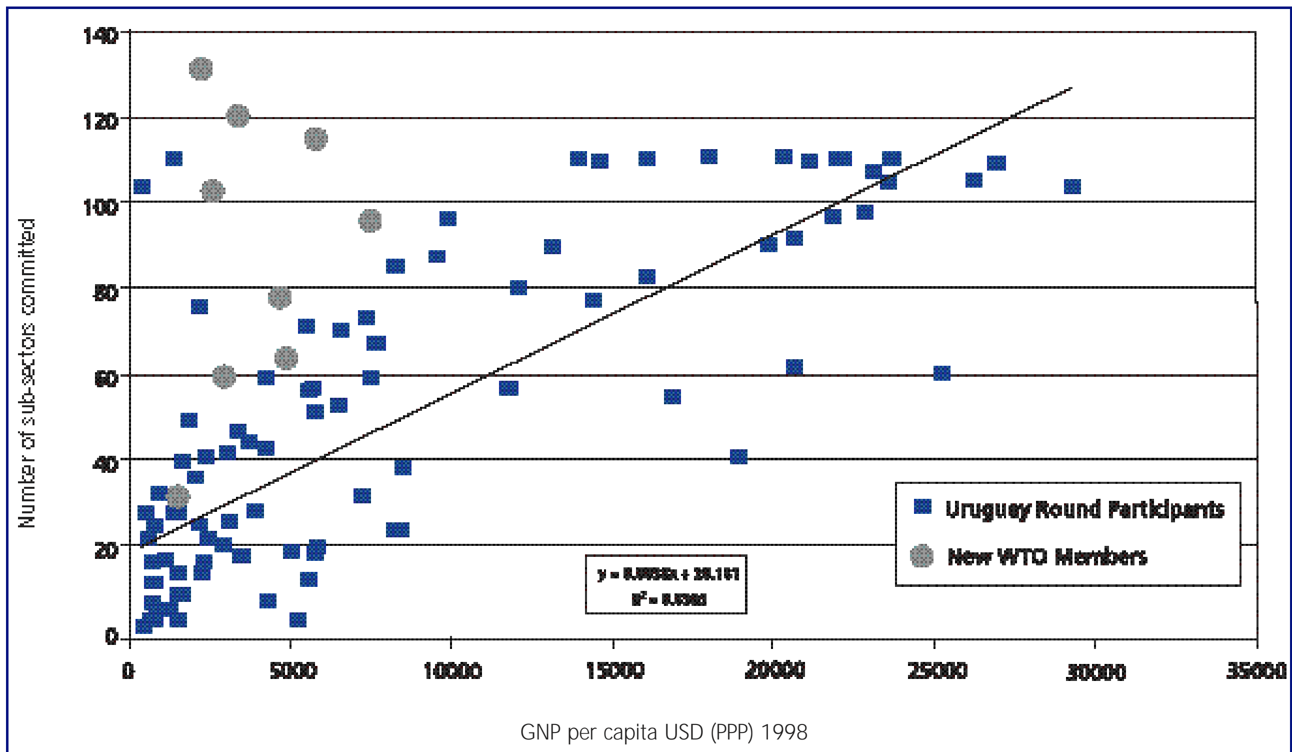
(Percentage of bindings)



a Calculated on the basis of a sample of 37 sectors deemed representative for variuos services areas (see WTO Document S/C/W/99, 2 March 1999).

DC = Developed countries
LDC = Developing and transition economies

Chart IV.4. Relationship between level of income and GATS commitments



cluding the World Bank and the International Telecommunication Union are helping developing countries to construct the regulatory frameworks necessary to master the challenge of liberalization and reap its benefits.

2. Extended negotiations

WTO Members have been negotiating on services continuously since the end of the Uruguay Round in December 1993. In addition to the negotiations on rule making directed towards completion of the framework of the GATS, which will be described in Part Four, there have been four discrete negotiations whose purpose was the expansion of market-access commitments—on financial services, maritime transport, movement of natural persons and basic telecommunications. The essential motivation for further negotiation in the first three cases was dissatisfaction, for different reasons, with the results achieved in these sectors in the Uruguay Round. The case of basic telecommunications, however was different. Negotiators had agreed during the Uruguay Round that the time was not ripe for substantive negotiations in that sector because of the profound economic and political transformation it was undergoing: in particular, the construction of the European Single Market in telecommunications, and the privatizations of public monopoly suppliers associated with it, were not complete. It was therefore agreed to open negotiations on basic telecoms in 1995; they were completed in February 1997.

Trade policy makers have often debated the question whether it is practicable to achieve significant liberalization in a self-contained or single-sector negotiation, or whether important results can only be expected in the context of a major round encompassing many subjects and therefore offering the possibility of trade-offs between them. The experience of the Uruguay Round certainly suggested that the sheer size of the undertaking and the extent of the interests involved in the end made failure unthinkable: but the length and complexity of the Round also caused some to believe that for the future more limited, even single-sector, negotiations would produce tangible results within short periods. The experience of the sectoral negotiations in services throws some light on this question. Whereas the results achieved in maritime transport and the movement of natural persons were frankly disappointing, the negotiations on financial services and basic telecoms were notably successful. The following short account of the extended negotiations draws attention to some of the factors which brought about such disparities in their results.

a. *Financial Services*

Of the post-Uruguay Round negotiations those on financial services were the most protracted but ultimately one of the most successful. Although 76 countries had made commitments on financial services in the Round, (Table IV.4) the United States in particular took the view that commitments by some important partners, and thus the overall package, were not adequate to justify a full MFN commitment on its own part. This was consistent with a long-held US position that since the existing, essentially bilateral, international regime in banking and related services worked reasonably well, to introduce a new system of multilateral obligations could only be justified if the overall level and quality of commitments were sufficiently high. WTO Members therefore decided to continue negotiations in the sector until 30 June 1995, a deadline which was later extended to 28 July 1995. The stated objective of the negotiation was to secure significant improvement of the commitments and to have them applied on an MFN basis. Failure to do so might have resulted in the withdrawal of commitments already made and called into question the inclusion of financial services in the Agreement, whose integrity would have been seriously compromised. At the deadline of July 1995 it proved impossible to reach agreement that an acceptable body of commitments—a "critical mass"—had been achieved, and the US extended to the insurance sector the MFN exemption it had already taken in relation to banking. The US made commitments regarding new activities by existing operators and entrance in its market. It was, however, agreed by participants (except the US, Colombia and Mauritius) that the offers made during this negotiation would be implemented on an MFN basis—they were incorporated in the GATS through the Second Protocol—and that negotiations would continue until December 1997. At that time, all Members would be free to modify or withdraw their commitments and would finalize their positions regarding MFN exemptions.

The further negotiations produced substantial improvements in scheduled commitments, notably by a large number of developing countries, and resulted in the full integration of financial services into the GATS: the threat of wholesale MFN exemptions, amounting to the virtual exclusion of the sector, was ended. It was notable that the concluding phases of the negotiation coincided with the peak of the Asian financial crisis in the latter months of 1997, and that the crisis had no apparent effect on the commitment of WTO Members to the process. No Member withdrew or wrote down any of the commitments it had offered. It was recognized that liberalization of financial services under the GATS in no way compromised the ability of governments to pursue strong regulatory policies or to take any measures necessary to safeguard the integrity of financial systems, and indeed that the introduction through liberalization of foreign equity capital and expertise might be expected to increase the sector's resilience to shocks. As a result, the number of Members making commitments in this sector rose to 102, second only to tourism. It has since risen to 106, due to commitments made by acceding countries.

One of the important issues arising in the negotiations was the difference, often substantial, between the level of access guaranteed in commitments and the actual level of access permitted, de facto, by existing policies. Negotiators sought commitments from their partners which would guarantee existing access conditions and which would in particular prevent the forced divestiture of existing equity positions—a concern frequently referred to as the "grandfathering" of acquired rights. Some Members did make commitments with this effect as a result. As in earlier negotiations, attention focused heavily upon securing more liberal bindings for the commercial presence mode of supply. Improvements were made, by eliminating or relaxing restrictions on types of juridical form of commercial presence, eliminating economic needs tests and raising or eliminating limits on the expansion of existing operations and on foreign equity participation in financial institutions.[94] At least six Members guaranteed foreign majority ownership for the first time in certain subsectors and three eliminated monopolies.[95] Five decided to schedule their commitments in accordance with the Understanding on Commitments in Financial Services. Three Members withdrew broad exemptions from MFN, one withdrew an exemption covering securities and four reduced the scope of their exemptions.

b. *Basic telecommunications*

Although a few Members made commitments on services falling within the definition of basic telecommunication services, they were for the most part deliberately left aside in the Uruguay Round. It was recognized that to postpone negotiations, so as to allow completion of the framework for the EU single market, would create far more propitious circumstances for a first negotiation in a sector of great technical and political complexity. It subsequently became clear that such an intense and time-consuming negotiation would in any case have been extremely difficult for most delegations to manage as part of a larger round. The negotiation was scheduled to end in April 1996, but at that point it was again impossible to reach agreement that a "critical mass" of commitments had been achieved, and the negotiations were prolonged until February 1997. At that time commitments undertaken by 69 Members were annexed to the Fourth Protocol

[94] Approximately 16% of participants liberalized in some form restrictions on the types of juridical persons; approximately 9% eliminated economic needs tests in relation to one or more activities; and approximately 13% raised or eliminated limits on operations or foreign equity participation in relation to one or more activities.

[95] The Czech Republic abolished a monopoly in compulsory air transport insurance, the Slovak Republic eliminated the monopoly in basic health insurance, and the Republic of Korea terminated a duopoly in fidelity and surety insurance.

Table IV.4. Participation in the extended negotiations on financial services

Members making commitments in Uruguay Round **76**	Antigua & Barbuda; Argentina; Australia; Austria; Bahrain; Barbados; Benin; Brazil;Brunei; Canada; Chile;Colombia; Cuba; Cyprus; Czech Republic; Dominica; Dominican Republic; Egypt; El Salvador; EC(12); Finland; Gabon; Ghana; Grenada; Guatemala; Guyana; Honduras; Hong Kong, China; Hungary; Iceland; India; Indonesia; Israel; Jamaica; Japan; Kenya; Republic of Korea; Liechtenstein; Macau, China; Malaysia; Malta; Mexico; Morocco; Mozambique; New Zealand; Nicaragua; Nigeria; Norway; Pakistan; Paraguay; Peru; Philippines; Poland; Romania; St Lucia; St. Vincent & Grenadines; Singapore; Slovak Republic; South Africa; Sweden; Switzerland; Thailand; Trinidad & Tobago; Tunisia; Turkey; Uruguay; United States; Venezuela; Zimbabwe
Members making commitments in Second Protocol **43**	Australia; Brazil*; Canada; Chile; Czech Republic; Dominican Republic; Egypt; EC(15); Hong Kong, China; Hungary; India; Indonesia; Japan; Republic of Korea; Kuwait; Malaysia; Mexico; Morocco; Norway; Pakistan; Philippines; Poland; Singapore; Slovak Republic; South Africa; Switzerland; Thailand; Turkey; Venezuela
Members making commitments in Fifth Protocol **70**	Australia; Bahrain; Bolivia*; Brazil*; Bulgaria; Canada; Chile; Colombia; Costa Rica; Cyprus; Czech Republic; Dominican Republic*; Ecuador; El Salvador; Egypt; EC(15); Ghana; Honduras; Hong Kong, China; Hungary; Iceland; India; Indonesia; Israel; Jamaica*; Japan; Kenya; Republic of Korea ; Kuwait; Macau, China; Malaysia; Malta; Mauritius; Mexico; Nicaragua; Nigeria; New Zealand; Norway; Pakistan; Peru; Philippines*; Poland*; Romania; Senegal; Singapore; Slovak Republic; Slovenia; South Africa; Sri Lanka; Switzerland; Thailand; Tunisia; Turkey; Uruguay*; United States; Venezuela

*The countries marked by asterisks are those which have not yet ratified and implemented the commitments attached to the second and fifth protocols.

to the GATS.[96] They entered into force on 5 February 1998. The markets of the participating countries accounted for more than 90% of global telecommunications revenues.[97]

The success of this negotiation clearly owed a great deal to the profound changes taking place at the time in world telecoms markets. Government monopolies were being privatized and subjected to competition, under the pressure of call-back and other technologies which made it possible to bypass high-cost monopoly suppliers and in response to growing demand of user industries for better and cheaper service. At the close of the Uruguay Round, it was very rare for fixed public telephony to be liberalized. Only a handful of governments had introduced competition in basic telecoms, and in most of these cases at least some networks or market segments remained under monopoly. Three years later, the situation had been transformed. Under the Fourth Protocol more than 60 governments permitted competitive supply[98] of fixed public voice telephony,[99] usually through the establishment of a commercial presence. Given that basic telecommunication services had until very recently been regarded everywhere as a "natural monopoly" in which the concept of

[96] Antigua & Barbuda, Argentina, Australia, Bangladesh, Belize, Bolivia, Brazil, Brunei Darussalam, Bulgaria, Canada, Chile, Colombia, Côte d'Ivoire, Czech Republic, Dominica, Dominican Republic, Ecuador, El Salvador, European Communities and its Member States, Ghana, Grenada, Guatemala, Hong Kong, Hungary, Iceland, India, Indonesia, Israel, Jamaica, Japan, Republic of Korea, Malaysia, Mauritius, Mexico, Morocco, New Zealand, Norway, Pakistan, Papua New Guinea, Peru, Philippines, Poland, Romania, Senegal, Singapore, Sri Lanka, Switzerland, Slovak Republic, South Africa, Thailand, Trinidad & Tobago, Tunisia, Turkey, United States and Venezuela. Four participants, Brazil, Guatemala, Papua New Guinea and the Philippines have not yet ratified the Protocol. Although Guatemala did not sign the 4th Protocol, it submitted commitments under the certification procedures used for "late" commitments, in which its regulatory commitments were somewhat modified.

[97] Under a very broad and essentially open-ended definition employed for the WTO negotiations, basic telecommunications were considered any telecommunications transport networks or services providing real-time transmission of customer-supplied information; the resulting schedules cover a wide variety of services fitting this definition. Some schedules also include services which fall outside the scope of this definition such as the so-called value-added or enhanced services.

[98] Defined here as permitting two or more suppliers to serve one or more market segments. Thus, for example, the figure includes participants that committed to set up a duopoly regime for fixed telephony, rather than full competition, at least initially.

[99] "Fixed" refers to wire-based telephone networks (as contrasted with radio-based or mobile networks) which can nevertheless have some radio or microwave components. The term "public" in the context of service provision commonly refers to obligations on operators to serve the general public (i.e. serve all "comers") (as compared with companies who may choose to serve only certain types of clients or market niches, e.g. businesses or financial institutions). It does *not* refer to nature of ownership, e.g. government versus private sector ownership, of the firms.

foreign competition seemed anomalous, this was a remarkable outcome.

Since it was clear that in many markets, monopolies or former monopolies would continue to be dominant for some time to come, it was necessary to take measures to prevent the nullification of negotiated commitments by the abuse of market power. The necessity arises in particular because the ability to provide public telephony depends on having access to the existing network, which in most cases continues to be owned or controlled by the former monopoly. If interconnection with the network were not to be available on reasonable commercial terms effective competition would be impossible. The participants therefore negotiated a set of regulatory principles including competition safeguards, interconnection guarantees, transparency in licensing, independence of regulators, competition-neutral universal service mechanisms and fairness in allocating scarce resources such as radio spectrum and rights of way. The principles are included in a "reference paper" which participants were free to include, in whole or in part, as legally binding additional commitment in their schedules. Fifty-seven Members assumed these obligations in full or with only minor modifications. Six chose to commit on a modified or scaled-down set of regulatory principles and a further six made no regulatory commitments.

As in the case of financial services, the level of participation by developing countries in this negotiation was striking. Forty-six developing countries and countries in transition, many of them very small, made commitments, in addition to all of the industrialized Members of the WTO. The strong emphasis on mode 3 commitments, as well as direct contacts with the governments concerned, made it clear that their participation was strongly motivated by the intention to induce foreign direct investment in the sector, and to put incumbent suppliers under competitive pressure. After the conclusion of the negotiation, five additional developing countries unilaterally submitted basic telecoms commitments, and three of the participants in the Fourth Protocol improved on the commitments they had negotiated. These bindings of unilateral liberalization by developing countries appear to be without precedent, and they testify to the recognition that efficient and competitive telecommunication systems are a necessity in modern economies. In addition, six developing countries have so far included commitments on basic telecommunications in their schedules of accession to the WTO.

c. Maritime transport

The decision to continue negotiation on maritime transport services was taken in the last days of the Uruguay Round following decisions by the United States and the European Union to make no commitments in this sector. Thirty-one other Members maintained the commitments which they had offered during the Round and it was agreed to prolong negotiations until 30 June 1996, at which time Members would be free to improve, maintain or withdraw their commitments and to finalize MFN exemptions.

It had been recognized throughout the Uruguay Round that this sector presented special political difficulties, particularly for the United States, and these difficulties did not diminish during the period of extended negotiations. Indeed, in this case there is some reason to believe that negotiators came closer to the achievement of a successful outcome in the Uruguay Round—in the sense of the tabling of commitments by the US and the EU, which would no doubt have stimulated further commitments by others—than was possible in the self-contained negotiations of 1996, which failed to produce significant results. Only two countries, Iceland and Norway, improved on the commitments they had made in the Uruguay Round. Canada and Malaysia modified their earlier commitments and Austria and the Dominican Republic decided to withdraw them. It was agreed to suspend the negotiations and to resume them at the commencement of the next comprehensive round. This is therefore the only sector on which a specific obligation to negotiate in the new round exists. It is also the only sector falling within the scope of the GATS in which the MFN principle is not fully applied: for those Members not making commitments on maritime transport, the MFN obligation was suspended until the end of the new round, though existing commitments are of course applied on an MFN basis. It should not be concluded from this that there is widespread protectionism in maritime transport, in which many formerly significant restrictions—for example, the strict implementation of the United Nations Code of Conduct for Liner Conferences, bilateral agreements with state trading countries, unilateral cargo reservations, public monopoly of harbour services—have greatly diminished in the past 20 years. Nonetheless, there are still serious obstacles to doing business which could be addressed in negotiations. Shipowners' associations have listed the following "negative factors": restricted or regulated access to ports and port services; preferential cargo allocation; restrictions on establishment of owned branch offices; discriminatory measures favouring the use of national carriers; cumbersome procedures and personal harassment during port calls; abusive tariffs for services; and unrealistic and unjustifiable liability claims by customers. Other problems noted by shipping professionals include the limited granting of freight agency or terminal operators' licences, the prohibition of trans-shipment, the blocking of amounts collected by shipping lines for containers demurrage and other unilateral actions with extraterritorial impact. All modes of supply are of great significance in this sector. Mode 1 is obviously important for in-

ternational shipping, but shipping activities frequently involve a complete service from factory to customer, not just the delivery of passengers or cargo from port to port. The need to establish a commercial presence to manage these operations makes mode 3 extremely relevant also, as it is for harbour services. Mode 2 is important for the repair and maintenance of vessels but also to ensure that shippers, the actual consumers of maritime transport services, have access to foreign-based service providers. Mode 4 is also important as it touches upon the possibility of hiring foreign crew members and officers, which is an essential parameter of the operating costs of this rather labour intensive industry.

Currently there are 39 Members with commitments in maritime transport. Of the limitations scheduled in this sector, the most significant are foreign equity ceilings, nationality requirements for ownership and registration of vessels under the national flag, requirements to appoint a local agent, limitations on government-owned cargoes, discriminatory taxation and discriminatory port charges. MFN exemptions have been taken by 37 Members, but only those of 25 Members are in force due to the suspension of the MFN obligation in all instances except where specific commitments have been taken. Of the exemptions listed, four cover measures taken under the UN Convention on a Code of Conduct on Liner Co nferences and give preferential treatment to other members of the Code. Four are specific to cabotage and are reciprocal and three to tax treatment, and are also reciprocal. The vast majority of exemptions taken are scheduled as having indefinite or unlimited duration.

d. Movement of Natural Persons

The extension of negotiations on the movement of natural persons was motivated by the dissatisfaction of developing countries with the level of commitments undertaken on mode 4, which were largely confined to business visitors and intra-corporate transfers of managers and technical staff. Very few Members have made liberal commitments in this mode, for which market access conditions tend to be significantly more restrictive than for any other. Negotiations on mode 4 were extended until 30 June 1995, the same as the original deadline for financial services, with the clear implication of a negotiating link between the two. Indeed, some countries made their participation in the extended financial services negotiations conditional on improved offers in mode 4. In that sense, the negotiations on mode 4 were not entirely "self-contained". Nevertheless, they produced no major breakthrough. Australia, Canada, the EU and its member States, India, Norway and Switzerland improved on the commitments they had made in the Uruguay Round, and these improvements were annexed to the Third Protocol to the GATS. The improvements mostly concern access

Box IV.2. Movement of natural persons

Mode 4 commitments are likely to draw considerable attention in the course of the new round of negotiations. The reasons are manifold. First, the level of bound liberalization is rather shallow, making for a low starting-point for the negotiations. Second, the lack of meaningful commitments could, at least partly, have resulted from sensitivities linked to the movement of persons and from inexperience with the operation of the Agreement. Third, and more importantly, interest for liberalization of mode 4 trade is increasingly coming from all quarters, and not just from developing countries, which had always been perceived as the "traditional"—and often sole—*demandeurs* for improved commitments in mode 4.

First, market access conditions tend to be significantly more restrictive for mode 4 than for any other mode. This is reflected in the very small number of Members having undertaken fully liberal commitments in this mode. It is also reflected in the nature of the commitments undertaken. In most cases, the "negative list" approach to scheduling limitations has been turned upside-down; schedules start with a general "unbound" which is then qualified by liberalization commitments, mostly limited to intra-corporate transfers of technicianas and managers and to business visitors. No significant differences exist between access conditions granted by developing and by developed countries; both groups seem to have been equally hesitant in opening up mode 4 trade.

Commitments are often exclusively governed by what is inscribed in the horizontal part of the schedule, so that identical access conditions apply to all scheduled sectors. Commitments are often based on functional or hierarchical criteria, related either to the type of person involved (e.g. executive, manager, specialist) or to the purpose of their movement (e.g. to establish business contacts, negotiate sales, set up a commercial presence). Besides, no generally agreed definitions or precise descriptions exist of the types of natural persons to which access is granted, which detracts from the predictability of entry conditions.

Box IV.2. *(cont'd.)*

Similarly, significant administrative discretion results from Members' schedules are mostly biased in favour of "intra-corporate transferees", hence making the economic value of such commitments dependent on access conditions for mode 3. They are also more open for highly skilled labour, where

developing countries tend to be net importers, as their comparative advantage lies with relatively unskilled labour-intensive services. It is also widely acknowledged that Members' mode 4 commitments do not generally reflect actual entry conditions for natural persons, as Members have bound less than the access granted in practice.

Why have several Members felt unable to bind at least the "status quo" with respect to mode 4? Part of the explanation might lie with governments' unwillingness to "tie their hands" and formally expose labour markets to the competition coming from foreign natural persons. Given an adequate regulatory framework, trade liberalization will result in increased competition in the liberalized domestic market. The "threat" to domestic jobs—and the consequent regulatory capture by domestic lobbies—is more apparent when labour enters the market directly, even though temporarily, rather than when it is embodied in a product. However, there is important complementarity between modes, and Members have increasingly realised that the efficient delivery of services even under modes 1 and 3 is often hindered by difficulty in moving staff temporarily into the relevant market.

Resistance to mode 4 liberalization might possibly, and perhaps frequently, have stemmed from the misleading equation between trade-related temporary mobility under the GATS and longer-term migration, or from the fear that mode 4 movement might result in a large amount of slippage from temporary to permanent migration. The sensitivity surrounding migration for employment and settlement purposes might have added to the confusion. However, the GATS does not apply to measures affecting natural persons seeking access to the employment market or to measures regarding citizenship, residence or employment on a permanent basis. In addition, it explicitly allows Members to apply measures to regulate the entry and temporary stay of natural persons in their territory, including those measures necessary to protect the integrity of, and ensure the orderly movement of natural persons across, their borders. The risk of some illegal leakage from temporary movement to permanent migration does exist, but it is likely to be limited, easier to control as generally based on a trade-related, pre-negotiated and time-bound arrangement, and liable to be further contained by appropriate policy and operational measures.

Available statistical information, though imperfect, suggests that, as a group, developing countries are net exporters of services through mode 4, and developed countries net importers. However, the overall picture is likely to hide significant sectoral variations, as well as the fact that movement of natural persons often complements and facilitates— and is therefore captured by—trade through other modes of supply, notably mode 3. At any rate, significant benefits can be expected from greater liberalization of this mode of supply, for exporting and importing countries alike. Exporting countries stand to gain from greater foreign exchange earnings, improved employment opportunities for their nationals and the skills and experience they gain abroad, which could contribute, upon return, to the development of human capital at home. A risk does exist that developing countries might lose scarce domestic skills and expertise, and the associated educational investment, but is somewhat mitigated by the temporary nature of the movement of natural persons under the GATS. Besides, the threat of the so-called "brain drain" rests on the assumption that the persons moving would alternatively have found similar employment opportunities in their home country. Importing countries are set to benefit from the easing of short-term labour shortages, from access to the skills and knowledge embodied in—cheaper—foreign personnel, and, consequently, from reduced pressure for wage inflation. In addition, the movement of natural persons under the GATS, being temporary and trade-related, might help to avoid the problems that destination countries often associate with permanent migration and, partially, substitute for it.

It is therefore not surprising that developed countries have manifested increasing interest in further liberalization of movement of natural persons. This points to Members directing considerable negotiating efforts at mode 4 and to a greater potential for opening up trade through this mode of supply. Whilst difficult to predict, it is likely that negotiations will be directed, on the one hand, at making existing commitments more predictable, for instance through agreed definitions, or by attaching conditions to economic needs tests, and, on the other, at further liberalization, with respect to categories, levels of skills, types of movements or lengths of stay, which is likely to be more easier if targeted at specific sectors, rather than uniformly applied.

opportunities for additional categories of service suppliers, usually independent foreign professionals in a number of business sectors, or the extension of their permitted duration of stay. The bias in most schedules in favour of natural persons who are "intra-corporate transferees" and of highly qualified personnel tends to diminish the economic value of these commitments for developing countries, for many of whom comparative advantage in mode 4 lies in relatively lower-skilled and labour intensive services. As in many other contexts, Members have very often bound less than the level of access granted in practice.

3. Commitments undertaken by acceding countries since 1995

Nine countries joined the WTO between January 1995, the date of entry into force of the WTO, and July 2000. Like existing WTO Members, these countries were required to submit a schedule of specific commitments on services. The scope and content of the schedule were to be negotiated in the accession process.

The nine new Members are low- and middle- income economies from various regions of the world, including six transition economies, which had long operated under state-trading regimes. While, from a trade policy perspective, there may not be many commonalties between these countries, one feature stands out: all have assumed higher levels of commitments, in terms of sectors included, than current Members at comparable levels of development (Chart IV.4). This applies especially in the case of the Kyrgyz Republic, which acceded in December 1998, and the four countries (Latvia, Estonia, Jordan and Georgia) that have joined since. While the first group—Ecuador, Mongolia, Bulgaria and Panama—committed on 63 sectors on average, the corresponding number for the latter group is 118 (Table IV.5).

All nine countries undertook commitments on accountancy, construction, distribution, insurance and banking services. Seven countries, including the five more recent Members (Kyrgyz Republic and following accessions), committed on basic telecommunication services. All countries in the latter group also scheduled courier services as well as various health and social services. A closer look further reveals that the commitments assumed by acceding countries are generally deeper, i.e. are subject to a smaller number of limitations, than the commitments undertaken by other comparable Members. For example, the share of full commitments on market access scheduled by acceding countries under mode 3 (commercial presence)—36%—is more than twice as high as the average for all Members and 3½ times as high as that for developed Members (Table IV.6).[100]

Why have the new Members undertaken more ambitious commitments than many participants in the Uruguay Round? Though no doubt they were due in part to the growing perception of the economic benefits of liberal access commitments, it is clear that the negotiating context in accession cases, which is quite different from that in ordinary trade rounds, played a major role. Terms of accession are agreed in detail between the applicant country and current WTO Members, while the majority of current country schedules have been negotiated in a more anonymous setting and, in particular, subject to tighter time and resource constraints. Few of the Uruguay Round schedules were subjected to detailed examination, still less negotiation, by trading partners.

As already noted, however, this does not imply that it would have been to the benefit of the acceding countries to undertake fewer commitments. Liberalization in the services sector, particularly in the infrastructural services, is likely to be an effective way to upgrade the efficiency of the economy as a whole, and the commitments which acceding countries have made can be expected to promote their basic developmental interests by creating attractive conditions for foreign investment and related inflows of skills and expertise. Commitments under mode 3 (commercial presence) are particularly relevant in this regard.

D. What can be expected in the new round?

1. Objectives and modalities

The purpose of the successive rounds of negotiations on services trade mandated by Article XIX of the GATS is to achieve a "progressively higher level of liberalization", meaning the improvement of market access by extending the sectoral coverage of schedules and reducing or eliminating the restrictive effects of scheduled measures. The success or failure of the new round which started in January 2000 will be judged mainly in terms of the resulting expansion and improvement of commitments on specific services. There is huge scope for improvement of the schedules: many Members have so far made minimal commitments and even the most comprehensive schedules contain a large number of restrictive limitations which will be a target for negotiating partners. The negotiations on new commitments will take place largely in the bilateral request/offer mode, but the Agreement makes it clear that other, plurilateral and multilateral, approaches may also be used. However, the negotiations will extend well beyond market access in this limited sense. There is already in progress a series of negotiating processes on the GATS framework of rules, whose results will almost certainly form part of the final package and which may be as important in securing effective access to markets as the negotiation of new commitments. Since the rule-making negotiations deal with the structure of the GATS itself they are necessarily multilateral processes.

In this subsection we first examine the objectives of the new round and the negotiating techniques and approaches which are available to Members. We then con-

[100] The comparison in Table IV.7 is confined to commitments for market access as these tend to be more important, in economic terms, than those for national treatment.

Table IV.5. Commitments scheduled by recently acceding Members

(Number of sub-sectors included)

	Ecuador	Bulgaria	Mongolia	Panama	Kyrgyz Republic	Latvia	Estonia	Jordan	Georgia
Business services [46][a]	16	27	6	23	39	37	28	35	41
Communication [24][a]	9	11	9	12	22	16	16	19	20
(Basic Telecom [7][a])	(1)	(7)	(0)	(0)	(7)	(7)	(7)	(7)	(7)
Construction, related engineering [5][a]	1	4	2	4	5	5	5	5	5
Distribution services [5][a]	1	4	2	3	3	4	4	4	4
Education services [5][a]	0	3	0	3	4	4	5	5	4
Environmental services [4][a]	4	4	0	1	4	4	2	2	4
Financial services[17]	14	14	10	13	14	16	16	16	16
Insurance [4][a]	(4)	(4)	(2)	(2)	(3)	(4)	(4)	(4)	(4)
Banking [12][a]	(10)	(9)	(8)	(11)	(11)	(12)	(12)	(12)	(12)
Health-related and social services [4][a]	1	1	0	1	4	2	4	3	3
Tourism and travel-related services. [4][a]	2	2	3	2	4	4	3	3	3
Recreation, cultural, sporting.services [5][a]	3	1	0	1	5	2	5	4	4
Transport services [35][a]	9	7	0	1	27	21	8	6	16
TOTAL [155][a]	**60**	**78**	**32**	**64**	**131**	**115**	**96**	**102**	**120**

[a] Total number of sub-sectors in the relevant category.

Note: The dates of entry into force are: Ecuador, 21 January 1996; Bulgaria, 1 December 1996; Mongolia, 29 January 1997; Panama, 6 September 1997; Kyrgyz Republic, 20 December 1998; Latvia, 10 February 1999; Estonia, 13 November 1999; Jordan, 5 April 2000; and Georgia, 14 June 2000.

Source: WTO Secretariat.

Table IV.6. Structure of commitments on market access—acceding countries versus "old" Members

(Percentages)

	Mode 1			Mode 2			Mode 3		
	Full	Partial	None	Full	Partial	None	Full	Partial	None
Acceding countries	52	24	24	71	24	5	36	61	3
Developed country Members	26	50	24	48	50	2	10	89	1
All Members	32	38	30	51	39	10	15	82	3

Note: The above shares are based on the commitments undertaken in 37 sectors, chosen from the relevant Classification List, which are deemed representative of the main services industries.
Source: WTO Secretariat.

sider the ongoing negotiations in the Working Party on GATS Rules, on emergency safeguard measures, subsidies and government procurement of services, and in the Working Party on Domestic Regulation. Although the work in these areas is not strictly speaking part of the new round, since it has been underway for several years and in the case of domestic regulation has already produced results in the form of disciplines for the accountancy sector, it is nevertheless clear that it has received added impetus from the new negotiations and that the results achieved in these working parties are likely to come into force as part of the final package of results.

The point has been made in subsection B above that the importance of the different modes of supply will vary as between one service and another according to the ways in which they are commonly supplied. However, it is widely expected that in the new round more attention will be paid than in the past to securing strong commitments under mode 1 (cross-border supply) because of the increasing importance of electronic commerce. The analysis of existing commitments in Part III shows the relative paucity of commitments on many services under mode 1. There are a number of reasons for this, including the concern of governments to exercise control over the standard of services rendered to the public and the desire of many to prioritize supply through mode 3, which brings with it the benefits of foreign direct investment in capital, technology and personnel, but the emphasis seems likely to change, even if increased interest in mode 1 will not diminish pressure for improved commitments under modes 3 and 4. The third mode of supply, commercial presence, has profoundly important implications for development, and we have seen in the negotiations on basic telecommunications and financial services the strong interest of developing countries in mode 3 commitments as an inducement to foreign direct investment. For many countries this will remain the greatest benefit of participation in the GATS, particularly where investment in the basic infrastructural services which condition the efficiency of entire economies is concerned. It also remains true, notwithstanding the expansion of electronic commerce, that for many service suppliers a legally established presence in the export market is indispensable, and that commitments establishing the terms on which such investments will be made have real economic significance.

The negotiation of commitments under mode 4, movement of natural persons, will be a higher priority for many countries in this round than in the Uruguay Round. Though this mode has been seen as a major interest of developing countries—and they have laid a great deal of emphasis on it throughout the preparations for the new round—it is now widely understood that impediments to the temporary movement of personnel can be a serious problem for service providers of all kinds, from the largest to the smallest, and that interest in their removal is by no means confined to developing countries. This is a healthy development. It was misleading and counterproductive that freedom of movement for natural persons should be seen as a north-south issue, and we may expect better results from negotiations on this mode now that it is recognized as a matter of common interest.

Although the basic technique for the negotiation of market-access commitments is likely to be the request/offer approach, the Agreement recognizes the legitimacy of alternative negotiating approaches, as mentioned above. Thought has been given to the possibility of developing "clusters" of services related to certain core activities, where it has been realized that effective liberalization of

the core activity will often be very difficult if the services on which it depends remain unliberalized. In the case of tourism, which is subject to relatively few direct restrictions, the growth of trade is most likely to be promoted by liberalization in related areas such as air transport. However, there has been no common understanding as yet of the meaning to be attached to the cluster concept. It could serve simply as a tool for negotiators, assisting them to make the linkages with services upstream and downstream from the core services which may be necessary to ensure effective liberalization. It could always be used in this role unilaterally, of course, but might also serve as an agreed basis for negotiations. In addition, a cluster could have the status of an agreed basis for the scheduling of commitments, like the model schedule developed in the negotiations on basic telecommunications. However, the "cluster" would differ from the earlier model schedules in that, whereas they itemized the coverage of homogenous sectors, the purpose of the cluster would be to bring together disparate activities linked by commercial and market realities but perhaps widely separated in terms of classification. It seems clear however that the use of clusters, whether they have been agreed on a multilateral basis or not, would be voluntary. Commitments resulting from any negotiations based on them would of course be applied on a multilateral basis.

There has also been some discussion, notably among academics, of possible "formula" approaches to the market-access negotiations, but these ideas have so far taken no concrete shape in discussions between negotiators, except to the extent that it is widely recognized that "model schedules" can have real value in the negotiation and drafting of commitments. Model schedules are simply agreed lists of the subsectors falling under a given sector: the development of a common list of the activities falling under the classification of basic telecommunications greatly improved the clarity and comparability of the commitments undertaken on that sector in 1997 (see Table IV.7). There may be a role for mechanisms, similar to tariff reduction formulae in merchandise trade, that would encourage broader and deeper commitments across countries, sectors and modes, though to be acceptable any such mechanism would no doubt need to allow for country-specific modifications. Their role would be to complement, rather than substitute for, traditional request-offer procedures and their main beneficiaries might well be smaller participants without strong leverage, which could harness synergies in negotiating common solutions to common problems.

In the financial sector a formula approach has already been adopted by some Members, who have made their commitments on the basis of the Understanding on Financial Services negotiated in the Uruguay Round. The understanding provides an alternative approach to scheduling to that provided in part III of the GATS. Its use is optional, and to date it has been employed by 31 Members.[101] If scheduled and implemented in full the understanding would provide an open "ideal" level of commitments on financial services, and it is generally seen as a method of ensuring a higher level of liberalization under the GATS. It provides for a binding of the status quo in relation to all the undertakings indicated in the text; it stipulates the granting of market access under all modes of supply; specifies certain national treatment obligations, including a binding on government procurement of financial services; and it contains other provisions pertaining to monopoly rights, new financial services and non-discriminatory measures.[102] However, commitments based on the understanding may also be subject to limitations on market access and national treatment; they do not necessarily reflect the understanding in its entirety.

In some sectors, model or formula approaches might also be used to define additional disciplines which would ensure the integrity or effectiveness of commitments, as in the case of the competition safeguards, interconnection rules and other regulatory disciplines developed and used—on a voluntary basis—in the negotiations on basic telecommunications.

Academic critics have also suggested on many occasions that the basic architecture of GATS commitments should have been modelled on the North American Free Trade Agreement or the Australia New Zealand Closer Economic Relations Trade Agreement. Both Agreements provide that, in the absence of limitations to the contrary, all sectors and modes of supply are automatically subject to market access and national treatment obligations. This is the "top-down" approach, which contrasts with the "bottom-up" approach of the GATS, under which committed sectors have to be specified. It is suggested that the top-down approach would lead to wider and deeper liberalization than is likely to be attained under existing procedures, where the content of a country schedule is largely determined in request-offer negotiations with interested trading partners. This may mean, for example, that while no trading partner might have sought to negotiate access to a small country's road transport industry in the Uruguay Round, it could be extremely beneficial for this country—in terms of the potential efficiency gains associated with foreign entry—nevertheless to bind access to this sector. In other words, it may be that the request-offer technique tends to perpetuate a mercantilist approach which is inappropriate in an agreement heavily concerned with inward investment, and to services whose liberalization is so clearly advantageous to the liberalizing country above all.

[101] Australia, Bulgaria, Canada, Czech Republic, European Communities (15), Hungary, Iceland, Japan, Liechtenstein, New Zealand, Nigeria, Norway, Slovak Republic, Sri Lanka (excluding insurance), Switzerland, Turkey, and the United States.

[102] Trebilcock, M.J. and R. Howse, (1999) state that the commitments contained in the Understanding, taken together, represent a very extensive degree of liberalization.

Table IV.7. Possible negotiating formulae for services

Formula	Basic principle	Example/model	References
Negative listing ("top down" approach)	*All sectors* are automatically subject to market access and national treatment obligations across all modes of supply. Exceptions must be listed in schedules.	Services Chapters of the North American Free Trade Agreement (NAFTA) and the Closer Economic Relations Agreement between Australia and New Zealand.	Hoekman B. (1996) Snape R. (1998)
Tariffication	Barriers to cross-border trade are replaced by tariff-like charges which, in turn, may be made subject to negotiated reductions.	Tariffication of border measures under the WTO Agreement on Agriculture.	Snape R. (1998)
Model schedule	Members undertake standardized commitments in individual sectors.	Understanding on Commitments in Financial Services; Draft Schedule on Maritime Transport Services; Model Schedule of Commitments on Basic Telecommunications.	WTO Secretariat Informal Note of 15.04.1996 (NGMTS, 1872) and WTO Website (www.wto.org/wto/services/services.htm)
Cluster approach	Commitments are not assumed for individual sectors but, where relevant, for clusters of related sectors.	Proposals to encourage complementary commitments on: courier and related transport services (e.g. road freight transport); various environmentally important services; health care and health insurance services; and multimodal transport services (maritime transport and related road and waterways transport).	WTO documents S/C/W39, 46, 50 and 62 (WTO Secretariat Notes on Postal and Courier Services; Environmental Services; Health and Social Services; and Maritime Transport Services); at: www.wto.org/wto/services/services.htm
Minimum sector coverage			
(i) "Qualitative" approach	Obligation to include certain economically important sectors in all schedules.	Proposals to achieve more comprehensive coverage of telecommunications and financial services and liberalize all services that are transmitted over telecom systems.	Feketekuty G. (1998)
(ii) "Quantitative" approach	Obligation to include a minimum number of sectors in all schedules.	Members could undertake to commit at least X sub-sectors out of the 11 large areas specified for scheduling purposes under GATS (Document MTN.GNS/W/120).	Adlung R. (2000)
Standard commitments			
(i) "Negative" approach	Members refrain from operating and/or scheduling measures considered to be particularly restrictive or distortive.	(i) Undertaking not to impose duties on electronic-transmissions; (ii) Proposals for the new round to exclude specified transactions from economic needs tests, and review the role and restrictiveness of nationality requirements, foreign equity ceilings, etc.	Ministerial Declaration on Global Electronic Commerce (25.05.1998) Communications from individual WTO Members in preparation for the 1999 Ministerial Conference
(ii) "Positive" approach	Members undertake additional disciplines in specified areas.	Competition disciplines in basic telecommunications ("Reference Paper").	Tuthill L. (1997)
(iii) "Standstill"-type commitments	Members bind their currently applied regimes in scheduled sectors (or across the board).	Understanding on Commitments in Financial Services.	Communications from individual WTO Members in preparation for the 1999 Ministerial Conference.

Source: Adlung R., (1999).

It should be made clear that the GATS approach is in fact a hybrid between "top down" and "bottom up" scheduling. Schedules are already "top-down" in the sense that where a sector has been committed, no limitations on access or national treatment may be maintained except those specifically scheduled. The effect of a full "top down" approach would be that all sectors would be included and all measures restricting access to them would be listed. On the basis of such listing all sectors would be bound across the board.

However, there has been no suggestion by any delegation that the basic architecture of the GATS should be changed/—on the contrary, delegations have shown a strong resolve to maintain the "bottom-up" approach to scheduling. This attitude may have been strengthened by the difficulty observed in the OECD negotiations for a multilateral agreement on investment, where the "top-down" approach to the scheduling of reservations from the basic disciplines produced very long and complex lists of reservations, which tend to undermine the claim that GATS schedules based on this approach would be "cleaner" and easier to understand than the current schedules. A "top-down" approach might not induce additional coverage, but rather the scheduling of hundreds of pages of exclusions and limitations—at the expense of the clarity and readability of schedules. Or, alternatively, Members might opt for a "solution" they have already used extensively for mode 4, where the initial concept—listing only of limitations—was turned on its head in most schedules. The prevailing entry for this mode, contained in the horizontal section, consists of an "unbound" which is then qualified by listing those categories of natural persons—usually managers and technicians associated with inward investments—who will be admitted. The binding or liberalization of any sectoral mode will always be the result of a policy decision, not of scheduling techniques.

2. GATS rules—safeguards, subsidies and government procurement

The GATS contains no specific rules on emergency safeguard measures, government procurement or subsidies for services. In part this reflects the time pressures under which the Uruguay Round negotiators were working; though they recognized the importance of these issues they accepted that it would not be possible to draft disciplines upon them within the time available. But it was more than a problem of time. In each case, there were conceptual problems and differences of approach which would have been difficult to reconcile in a much longer time scale (and which still persist). It was therefore agreed that negotiations on these matters should take place after the Uruguay Round and the respective mandates are contained in Articles X, XIII and XV of the GATS. In the work on these subjects under the auspices of the Working Party on GATS Rules particular attention has been given to the question of safeguards, and it is here that most progress has been made. Overall, however, progress has been slow, due in part to the priority given to extended sectoral negotiations but also to the absence—for a long time—of real "demandeurs" and to the complexity of the issues. However, the start of the new round of services negotiations has provided a new impetus to this rule-making activity, since it is foreseeable that any disciplines developed will enter into force as part of the overall package of results.

a. Negotiations on the question of emergency safeguard measures (GATS Article X)

GATS Article X mandates Members to "undertake multilateral negotiations on the question of emergency safeguard measures based on the principle of non-discrimination". There is an ambiguity in the Article in that it mandates negotiations "on the question" of safeguards, thus implying that it is not yet determined that there should be a safeguard discipline, but adds that the results of such negotiations "shall enter into effect" not later than the beginning of 1998. This deadline has since been extended, but the basic ambiguity has not yet been resolved. However, while not all Members are yet convinced that it is necessary or perhaps feasible to create an emergency safeguard mechanism, work on the content of such a mechanism is nevertheless proceeding, with a target date of 15 December 2000.

The GATS already contains several provisions which, under certain conditions, allow a Member government to depart from the commitments it has undertaken. These include the suspension of commitments for balance of payments reasons, the withdrawal and renegotiation of commitments under Article XXI and invocation of the exceptions provision in Article XIV. An emergency safeguard mechanism (ESM) under Article X would therefore be intended to respond to situations other than these and it is generally understood as serving the same purpose as GATT Article XIX *(Emergency Action on Imports of Particular Products*). It would allow a government to suspend a commitment and temporarily stop or limit the supply or consumption of a foreign service in order to relieve a domestic industry which is threatened with or suffering serious injury as a result of an unforeseen surge in supply of foreign services. It is in this sense that the Article X mandate is discussed below.

It is common ground that the case for and against the introduction of a safeguard mechanism should revolve around the effects it could be expected to have on the quality and stability of commitments. Supporters of the ESM contend that the existence of a safety valve would promote more liberal access commitments since it would help governments to overcome industry concerns about the possible negative effects of increased foreign competition, and may forestall recourse to "informal" or "grey-

area" measures which might otherwise be used in emergency trade situations. Sceptics reply that the GATS already provides sufficient flexibility—in particular through the scheduling approach—to allow Members to protect the interests of particular sectors and that to add the possibility of recourse to a safeguard would reduce the security of commitments without guaranteeing increased liberalization.

The case for an ESM would thus be strengthened if a credible link could be made between its introduction and improved commitments. It would be possible to envisage several approaches which would establish such a link. For instance, the introduction of a safeguard mechanism could be coupled with an understanding that economic needs tests which specify no criteria, and therefore confer a degree of discretion depriving the commitment of any real value, would be abolished. Alternatively—or in addition—Members might agree that a safeguard mechanism could be invoked only with respect to new commitments. Finally, the possibility under Article XVIII to schedule additional commitments might be used to forego the right to invoke a safeguard in a given sector, which in turn might be an additional and useful parameter to be considered in market access negotiations. These few examples suggest that the introduction of an ESM in the GATS is not necessarily a matter of "either …or", but that the existing framework provides sufficient flexibility to accommodate a variety of approaches and objectives.

Technical problems also require attention. While in goods trade the concept of a safeguard measure is relatively straightforward—in most cases, it will take the form of a quantitative import restriction or tariff increase applied at the border—its implementation in services trade raises a range of difficult conceptual and practical questions. The fact that a service can be supplied not only cross-border, but also through the establishment of a commercial presence, the temporary presence of natural persons in the market or through consumption abroad, gives new dimensions to the application of safeguard measures. While it might be easy to provide statistical support for a safeguard measure relating to a mode 4 commitment, it would be more difficult under modes 1 and 2. To apply a safeguard measure to service suppliers established in the market under a Mode 3 commitment might be still more problematical. Would the "domestic industry" be defined for the purposes of safeguard action as including only nationally-owned suppliers or all established suppliers?

In the Working Party on GATS Rules, two different types of safeguard measures have been under discussion. The first would be a generally available or "horizontal" measure, applicable to all services, which would be modelled on GATT Article XIX and the Agreement on Safeguards (AS) and which could be invoked in regard to any commitment. The second type, which has been referred to as a "sector-specific" safeguard, would be available only in sectors where the schedule explicitly reserved the right of invocation. Such indications would become an integral element of market access negotiations. "Sector-specific" safeguards of this kind would imply anticipation by the government in question of possible problems in a given sector, which would cast a rather different light on the concept of emergency measures. The choice between horizontal and sector-specific safeguards is likely to be ultimately guided by policy considerations rather than feasibility since the main conceptual and practical questions to be resolved are similar in both instances.

b Negotiations on government procurement under GATS Article XIII

Since the inception of a framework for international trade, governments have shown the desire to exempt their own purchases from multilateral trade rules in order to be able to favour national suppliers when awarding contracts. Government procurement of goods and services is subject to the WTO Agreement on Government Procurement (the GPA), which is a "plurilateral agreement" with 26 signatories, mostly developed countries. In 1996, at the first WTO Ministerial Conference, Members established a Working Group on Transparency in Government Procurement, whose task is to examine the current practice of governments in relation to transparency in procurement and, on this basis, to develop the elements for a multilateral agreement. It is against this background that the situation of government procurement in the GATS and in future services negotiations must be assessed.

Pursuant to GATS Article XIII, government procurement remains outside the scope of specific commitments under Articles XVI and XVII. Similarly, it is not subject to the MFN obligation, which means that signatories of the GPA need not extend to other WTO Members the benefits of the obligations they have assumed under it. There is one exception from this general exclusion of government procurement from GATS disciplines: the Understanding on Commitments in Financial Services stipulates that "each Member shall ensure that financial services suppliers of any other Member established in its territory are accorded most-favoured-nation treatment and national treatment as regards the purchase or acquisition of financial services by public entities of the Member in its territory". But the Understanding is assumed voluntarily by those Members wishing to do so: it is not a basic discipline of the GATS. In addition, if the scope of Economic Integration Agreement includes government procurement, its members are required by Article V:6 to extend its benefits to companies owned by third countries which are established in the integration area.

General disciplines therefore remain to be considered. In this case the Article specifies no terminal date for the

negotiations. Little progress has been achieved so far, in part because of the concurrent attempts to negotiate a framework for transparency in government procurement of both goods and services; Members have understandably hesitated to undertake overlapping work in two *fora*.

The question underlying work on government procurement of service—if any disciplines are developed—is whether and how far Members, most of whom currently have no obligations on the subject, would wish to go beyond procedural matters such as transparency and tendering procedures to substantive obligations, which would largely be based on the national treatment and most-favoured-nation concepts. Any future disciplines could be established on a horizontal basis, i.e. applicable to all services—but possibly with sectoral modifications, if needed. However, this would not necessarily oblige a Member to apply them to all sectors. A more flexible approach might be possible, whereby Members would have the possibility to undertake agreed horizontal disciplines in specifically selected sectors, similar to the telecommunication Reference Paper or the Understanding on Commitments on Financial Services. The launch of the new services round provides an opportunity for a new look at these questions.

c. Negotiations on subsidies under GATS Article XV

Article XV of the GATS mandates Members to enter into negotiations in order to develop the necessary multilateral disciplines to avoid possible trade distortive effects of subsidies. This provision also explicitly stipulates that negotiations will have to take due account of the role of subsidies in relation to development programmes of developing countries as well as the need, in particular for developing countries, for flexibility in this area. Unlike Article X, Article XV does not fix a deadline for completing the negotiations. So far, work has proceeded no further than conceptual discussions and examination of the very limited empirical information which is available on the prevalence and effects of subsidies in the services sector. No systematic information is available, which would allow Members to identify the kind of subsidies granted, the sectors mainly concerned and the potential trade-distortive effects. Available sources, including WTO Trade Policy Reviews, and limitations contained in Members' schedules of specific commitments, tend to indicate that subsidies play a particular role in sectors such as financial services, transport, audiovisual and tourism services.

Before considering new disciplines in this area, it appears necessary to assess the extent to which subsidies are already regulated under the existing GATS framework. In so far as subsidies are "measures affecting trade in services" within the meaning of GATS Article I, they are subject to the relevant general provisions of the Agreement. For instance, the most-favoured-nation obligation, applicable irrespective of whether specific commitments have been undertaken, would prohibit discriminatory allocation of subsidies to the nationals of one Member rather than others, and would be applicable even in the absence of specific commitments. Second, where they have undertaken commitments the national treatment obligation prevents governments from granting subsidies only to national suppliers and services, unless a limitation to this effect has been scheduled. A number of Members have in fact scheduled such limitations, either on a horizontal or on a sector-specific basis.

Besides its application only in scheduled sectors, the national treatment principle might not suffice to address all potential trade distortions arising from subsidies. It would not, for example, provide a legal basis for action or complaint against subsidies having the effect of export subsidies in third markets. Moreover, uncertainties remain concerning the reach of the principle across modes of supply, and the related question of the concept of "like service". For instance, while national treatment commitments under modes 3 and 4 ensure that locally-established foreign suppliers are eligible for any relevant subsidy programme, it is not clear that national treatment commitments under modes 1 and 2 would ensure that such subsidies do not disadvantage the same services when imported from, or consumed abroad.

As in safeguards, the relevance of existing goods models, and in particular the Agreement on Subsidies and Countervailing Measures, may provide guidance for negotiators. But, again, the specificities of services trade, including the existence of four modes of supply and the fact that national treatment is subject to negotiations, create a far more complex scenario. As mandated in Article XV, consideration has also to be given to "the appropriateness of countervailing procedures" but preliminary reactions from Members tend to question the feasibility of such measures in the services context; examination of other forms of remedy, or *ex ante* control of certain forms of subsidy, may be warranted. It can be anticipated that much attention would be paid to the treatment of subsidy programmes with social or cultural policy objectives. It must be recalled, however, that services provided in the exercise of governmental authority are completely outside the scope of the GATS (subsection E.1).

In the Working Party on GATS Rules, the issue of subsidies has attracted less attention so far than safeguards. This is not surprising since the questions involved are difficult to address outside the scope of a services round and conceivable solutions are liable to affect the legal scope and economic value of current commitments. A new round, with the resulting trade liberalization, may render the need for clearer disciplines more pressing, and may also provide Member governments with more leeway for finding solutions.

3. Domestic regulation

The GATS specifically recognizes "the right of Members to regulate, and to introduce new regulations on, the supply of services within their territories in order to meet national policy objectives and, given asymmetries existing with respect to the degree of development of services regulations in different countries, the particular need of developing countries to exercise this right". The right to regulate is one of the fundamental premises on which the Agreement is based, and it is easy to understand why. Many services, perhaps most, are very closely regulated, for good reasons, among which the protection of public health and safety, the rights of consumers and the quality of services provided are among the most obvious. No country can afford to allow unqualified doctors, accountants and lawyers to practice; proper safety standards must be enforced in all modes of transport; providers of water, energy, distribution and catering services must meet environmental and health standards. The list is endless. All WTO Members attach great importance to the regulation of services and work on this subject to date has shown no disposition on the part of any Member to compromise the right to regulate in any degree.

The objective of the GATS is liberalization of services trade, not the deregulation of services. The right to supply services under a GATS commitment is a right to supply subject to whatever domestic regulations are in force and there is no implication whatever that standards or other regulations will be modified to facilitate foreign competition. Domestic regulations are not characterized as barriers to market access and they are therefore not subject to scheduling or to negotiations on market access. The WTO does not and will not set standards for the regulation of services, nor is there the slightest likelihood that Members would seek or agree to set limits on their powers to regulate. The suggestion that health standards might be endangered by liberalization in this sector, for example, is simply false. The protection of health is explicitly recognized as a policy concern of overriding importance; under Article XIV the need to act to protect health would override all GATS obligations, including specific commitments.

Article VI of the GATS does however contain certain disciplines on domestic regulation and mandates further work on the subject, which is taking place in the Working Party on Domestic Regulation. The basic philosophy of Article VI is that regulations should be administered in an objective and impartial manner. This includes the need for transparency and due administrative process. It is implicitly recognized, though not stated, that regulations may be unnecessarily burdensome or obscure and that they may have the effect, whether intended or not, of discriminating against foreign suppliers. The first two paragraphs of the Article therefore call for reasonable, objective and impartial administration and for impartial review, on request, of administrative decisions.

Article VI also mandates further work on measures relating to qualification requirements and procedures, technical standards and licensing requirements. Members are working to develop "any necessary disciplines" to ensure that such measures "do not constitute unnecessary barriers to trade in services." Paragraph (b) of Article VI:4 further specifies that such disciplines shall aim to ensure that regulatory measures are "not more burdensome than necessary to ensure the quality of the service". It is important to note that the Agreement establishes a relationship between a regulatory measure and the intended objective—ensuring the quality of the service—but in no way limits Members' scope in defining any such objective.

It was decided by Ministers at the conclusion of the Uruguay Round that this work should begin with priority given to accountancy services, largely in response to the strong interest manifested by the industry itself. Work on the accountancy sector was completed in December 1998, when its results, the "Disciplines on Domestic Regulation in the Accountancy Sector", were adopted. They are not yet in force; they would become legally binding on those Members who have scheduled specific commitments on accountancy at the end of the current negotiations, when they will form part of the overall package of results. Meanwhile, all members have agreed a "standstill" provision to the effect that they will not take new measures in the accountancy sector which would be in violation of the disciplines. The Working Party is considering whether these or similar disciplines could be applicable to other professions, or to services generally.

The accountancy disciplines therefore provide a useful indication of the focus and possible outcome of the ongoing work on domestic regulations. It is made explicit that they do not address market access and national treatment restrictions which should be scheduled under Articles XVI and XVII: domestic regulations serve to ensure the quality of services rendered to the public, not to protect national suppliers, and in principle do not discriminate against foreign suppliers. The disciplines say nothing about the level of qualifications to be required of accountants and auditors, though it is said that they may include education, examination, practical training and language skills. Nor do they specify the content of technical standards of any kind. It was never envisaged that the WTO would enter upon the business of setting standards or qualification requirements, and it was clear throughout that national legislators and regulators would retain all their prerogatives in these areas. A large part of the disciplines is devoted to the need to ensure transparenc —for the publication of all relevant information about regulations, entry qualifications and technical standards. Members are also required to explain upon request the ratio-

nale behind regulatory measures in the accountancy sector and to provide an opportunity for trading partners to comment on proposed new measures affecting the sector before their adoption.

The most important element of the disciplines is the creation of a necessity test, which is a requirement that measures relating to licencing, technical standards and qualifications should not be more trade-restrictive than necessary to fulfill a legitimate objective. In relation to standards, for example, the disciplines require that they should be prepared, adopted and applied only to fulfill legitimate objectives, which are stated to include the protection of consumers, including all users of accounting services and the public generally, the quality of the service, professional competence and the integrity of the profession. It should be noted that this is not a closed list of "legitimate objectives". This does not mean that all regulatory measures will be reviewed against the necessity test: it simply provides the opportunity for trading partners to question requirements which they believe are unnecessarily burdensome or restrictive.

As stated, the Working Party is now considering the possibility of applying similar disciplines to other services. The value of doing so may be particularly apparent for those countries with large reserves of skilled personnel who may now find it very difficult to find their way through complex and forbidding procedures to employment in foreign markets. In many services, to obtain market access and national treatment commitments under Mode 4 would not be sufficient: it would still be necessary to satisfy the licencing and qualification requirements imposed in the importing country. There is good reason to believe that such impediments weigh more heavily on potential suppliers from developing countries.

The idea that liberalization may entail a degree of deregulation has also been raised with reference to the financial sector. During the negotiations on financial services which ended in December 1997, it was sometimes suggested in the press—though never in the negotiations themselves—that liberalization in the GATS context might weaken the power of governments to regulate this critically important sector: the fact that the end of the negotiations coincided with the financial crisis in Asia appeared to some to give particular force to such fears. However, they were clearly not shared by the negotiating governments. As stated in Part III above, the crisis had no impact whatever on the commitments offered in the negotiations. Governments recognized that international competition was not the cause of the crisis in any of the affected countries, and might well help to resolve it. As a result, the financial services sector now has 106 governments making commitments, the second highest number after tourism.

Because of the strategic importance of financial stability, the GATS contains specific provisions which preserve and emphasize the right of governments to intervene in the management of the sector. First, the activities of central banks and other monetary authorities in the pursuit of monetary or exchange rate policies, and macro-economic policy management in general, are excluded from the scope of the Agreement. The same applies to activities forming part of a statutory system of social security or public retirement plans. Secondly, and directly related to the area of domestic regulation, there is an overriding right to take measures which are necessary for prudential reasons. Paragraph 2 (a) of the Annex on Financial Services states that:

"Notwithstanding other provisions of the Agreement, a Member shall not be prevented from taking measures for prudential reasons, including for the protection of investors, depositors, policy holders or persons to whom a fiduciary duty is owed by a financial service supplier, or to ensure the integrity and stability of the financial system."

This means that even specific market-access commitments may be set aside if a government considers it necessary to take such measures, though they must not of course be used simply as a means of escaping commitments or other obligations under the Agreement.

Regulatory interventions by governments which are not made for prudential reasons and which affect conditions of competition in financial markets would fall within the ambit of Article VI, as described above, unless their effect is to restrict market access or national treatment, when they would need to be consistent with the country's commitments under Articles XVI and XVII. It is measures of the latter kind—those aimed at restricting the supply of financial services by foreign suppliers—which are the subject of trade liberalization under the GATS.

E. Issues arising in negotiations

This final subsection examines several of the general or systemic issues underlying the negotiations in the new round, where appropriate with special reference to the services to which these issues are particularly relevant. We deal successively with the status of services supplied in the exercise of governmental authority, questions arising from the need for access to networks, the importance of electronic commerce for the supply of services and the development dimension.

1. Governmental services

In a number of Member countries concerns have been raised about the possible impact of services liberalization on social, environmental and other public policy objectives. Such concerns may be particularly acute in the services sector because some vital services have long been, and still are, provided by public authorities for non-com-

mercial reasons. Health and education are obvious cases in point The supply of health and education services is generally understood, by all governments, to be among their prime responsibilities, above all because of the direct impact of these services on social welfare and justice. Their infrastructural roles and their effects on overall economic performance are also vital—increasingly so, as economies develop—but the social role is predominant. They are seen so much as socially-motivated rather than economic activities that the promotion of international trade in them is a concept foreign to the thinking of most regulators, even though in both sectors the existence of private, commercial provision has been familiar for so many centuries. The perception that health and education services are essentially the business of government probably accounts, at least in part, for the surprisingly small number of WTO Members who have chosen to make commitments on these sectors; 48 countries have made commitments on health and 46 on education (Chart IV.2). A number of developed countries and the great majority of developing countries have not included any of the relevant sub-sectors in their schedules, though as in many other areas, Members recently acceding to the WTO have undertaken broad and deep commitments in these sectors as well (Table IV.5).[103]

It would be wrong to suggest that this reticence is entirely due to concern about the status of public services in a more open market environment but it has certainly played a part. It is therefore worthwhile to stress that *services supplied in the exercise of governmental authority are not subject to the GATS*. Article I of the Agreement provides a complete exemption from coverage for all such services, which are defined as any service supplied "neither on a commercial basis nor in competition with one or more service suppliers". This means that such services are not subject to negotiation under the Agreement, that they will not be subject to commitments in national schedules and that such general disciplines as the MFN and transparency obligations do not apply to them. Any disciplines which may be developed on the subsidization of services would not apply to the subsidization of governmental services—even if financial transfers within the public sector (e.g. from the Treasury to Health and Education Ministries and their subordinate agencies) could be regarded as subsidies, which seems very doubtful. A government wishing to maintain a given service as a public service or monopoly is entirely free to do so.

Of course, not all monopolies provide services in the exercise of governmental authority. Many operate commercially, and are thus subject to the general GATS obligations, notably the MFN principle. Article VIII of the GATS, which deals with monopolies and exclusive service suppliers, contains disciplines intended to ensure that such a supplier does not abuse its monopoly position or act in a way that would undermine the country's non-discrimination and market access obligations on other services which the monopoly may be in a position to influence. But nothing in Article VIII overrides the basic point that services supplied in the exercise of governmental authority are outside the scope of the Agreement.

It is perfectly possible for governmental services to coexist in the same jurisdiction with private services. In the health and education sectors this is so common as to be virtually the norm. Although there has never been a dispute or any other occasion requiring the interpretation of Article I:3 it seems clear that the existence of private health services, for example, in parallel with public services could not be held to invalidate the status of the latter as "governmental services": this would void the exclusion of governmental services of most of its significance. This provision was of political importance to all negotiating governments and there is no reason to believe that they would agree to compromise or undermine it now. Nevertheless, if it were thought desirable, since the issue has been raised in the press—though never in the GATS—to take further steps to make it clear that the liberalization of services trade is not a threat to the autonomy of governmental services, it would be possible to use the opportunity provided by the new round to make it clear that the co-existence of governmental and private services in the same industry does not mean that they are in competition in the sense of Article I.3c and therefore does not invalidate the exclusion from the GATS of the public sector. Commitments under the GATS do not call in question the maintenance of state-funded public services.

It is also important to emphasize that even in services which are covered by GATS, no WTO Member is obliged to allow foreign supply. Health services which are not provided in the exercise of governmental authority are covered by the GATS, but a government which wishes to make no commitments in the health sector is free to prohibit foreign supply of health services altogether. Furthermore, if it chooses to make commitments, it may subject them to any specified limitations.

Questions have also been raised about the indirect effects on public services of market-access commitments in the private sector. It has been suggested that private suppliers (and by implication foreign suppliers in particular since the arguments are posed in terms of international trade) may fall below basic performance standards, thus provoking a "race to the bottom", or that they may cream off wealthier clientele and highly qualified staff, thus impoverishing the public sector. Fears have also been expressed, especially in relation to education, about possible impacts on cultural values and national identity, and some perceive a conflict between market efficiency and equity—between the profit motive and the universal availability of basic services.

[103] For example, market access and national treatment for hospital services under mode 3 have been fully committed by the Kyrgyz Republic, Ecuador and Estonia (the latter commitment is subject only to a relatively minor national treatment limitation).

There is nothing in the GATS that would require governments in committed sectors to compromise existing quality standards and licensing conditions, or to refrain from tightening them in response to public demand or new challenges. These are perfectly legitimate aims of domestic regulation, and the right to regulate is specifically safeguarded in the GATS, as explained above.In the same way, governments are free, even in completely liberalized sectors, to operate universal service obligations, and many do so, usually on regional or social policy grounds. Nothing would proscribe, for example, the use of requirements on private hospitals or schools to combine profitable undertakings in agglomerations with non-profitable services in remote areas or to train a certain percentage of staff beyond their own needs. Nor would governments be prevented from taxing private suppliers, patients or students and using the funds raised to cross-subsidize unprofitable services for other groups. From that perspective, rather than undermining public policy objectives, liberal access bindings might even be used—within an appropriate regulatory framework—to further such objectives in certain segments of the health and education sectors.

Moreover, liberalization under GATS would not entail the risk of foreigners crowding out domestic patients or students. Members remain free in any of the sectors covered by their schedules to reserve capacity for resident users; nothing would prevent them, for example, from restricting inflows of foreigners seeking hospital treatment or university education in their territory. Mode 2 commitments apply only to measures affecting the ability of residents of the scheduling country to consume services abroad, not to measures the authorities may want to use to attract or deter foreign residents. Neither under mode 2 nor mode 4 is there anything to prevent a Member, for example through visa or deposit requirements, from discouraging its own doctors or teachers from moving abroad in order to capitalize on taxpayers' investment in their education. (On the other hand, liberalization of foreign commercial presence under mode 3, and the creation of attractive domestic working conditions, might be a less restrictive and more efficient way to stem the "brain drain".)

2. Electronic commerce and internet access provision

The status of electronic commerce under the GATS is a systemic issue of fundamental importance which will permeate the negotiations on market-access commitments in most sectors. The purpose of this section is to make that status clear. The WTO is a system of legal obligations between its Members, and in relation to electronic commerce, as in all other contexts of trade relations between Members, the essential question to consider is "What relevant obligations have Members assumed, and what further obligations may they wish to assume?".

As far as trade in services is concerned, electronic commerce consists of transactions of three different kinds: the first is the electronic delivery of services directly to customers in the form of digitized information flows; the second is the use of the Internet as a channel for distribution services, retail and wholesale, by which goods and services are purchased over the net and delivered to the customer subsequently in non-electronic form; the third is the provision of Internet access services themselves. GATS obligations and specific commitments relate to all of these, because they provide the legal framework for services trade in *all* its other forms, including electronic supply.

Services of many kinds are already traded electronically on a huge scale. In some sectors, such as financial services, it has become virtually impossible to conceive of trade being conducted without recourse to computers. It was the revolution in computer technology which caused many services previously regarded as essentially non-tradeable to be recognized as eminently tradeable, and cross-border trade in particular has been greatly facilitated by the ease with which services products can be converted into digital information flows.The GATS makes no distinction between the different technological means by which a service may be delivered—whether in person, by mail, by telephone, across the Internet or in any other way. It would be possible for a country, in making commitments on a particular service, to define it in such a way that electronic supply would be excluded (though such commitments would no doubt be seen by trading partners as having very little value) but failing this the supply of services through electronic means is covered by commitments in the same way as all other means of delivery.

The general disciplines of the GATS also apply to electronic delivery: measures affecting the electronic delivery of services are "measures affecting trade in services" in the sense of Article 1 of the GATS, just as they would be if imposed on delivery by any other means. (A tariff imposed on imports of services supplied electronically would be a "measure affecting trade in services" and could not be imposed if it increased the level of protection stipulated in the schedule). As is the case throughout the WTO system, the legal regime which governs a given transaction is determined by the nature of the product which is traded, not by the technique of production or delivery. This is in fact an important legal principle; it has been confirmed in many dispute settlement cases that market-access commitments on a given product cannot be invalidated by reference to production or process methods. This is why the question "Is electronic commerce trade in goods or trade in services?" makes little sense: electronic commerce is simply a way of doing business. It involves the sale of goods and services in the form of Internet retailing and wholesaling—a process similar to selling through mail-order catalogues —and the sale and delivery

of services in electronic form. In both cases the legal rights of the seller to do international business in this way are those provided by the GATS: the right to offer and sell goods and services over the net is covered by commitments on distribution services, and the right to deliver services electronically and otherwise is covered by commitments on the services in question. Where market access and national treatment commitments exist, restrictions on electronic supply would be subject to challenge as nullifying or impairing the value of the commitment.

There is an on-going debate as to whether some products, even when delivered electronically, should be classified as goods rather than services and subject to the rules of GATT. The classical example is computer software, which from the consumer's point of view is identical whether it is purchased on a hard carrier from a shop or downloaded from a computer; it can reasonably be asked whether the legal regime applying to the two forms should not be the same. If in such cases—books have been suggested as a further example—Members could agree that the rules of GATT rather than GATS should apply, or that both Agreements are relevant, no systemic harm would be done. But it should be clear that what is in question is the classification of certain products whose electronic and physical forms are virtually identical, not that of electronic commerce *per se*. To decide that *because* these or any other products are supplied electronically they are not services would void the GATS obligations, and the bulk of the commitments governments have assumed under it, of most of their substance. Commitments on the supply of financial services, for example, would be valueless if it could be argued that they did not guarantee the right to use computer networks in doing the business. Indeed, the GATS Annex on Telecommunications contains an obligation on all Members to ensure that service suppliers of any other Member have access on reasonable terms to any public telecommunications network or service which is necessary for the supply of their service. This is of course critically important for providers of Internet access services, who must have access to telecommunications networks, usually by way of leased circuits, and for the many service providers now using the Internet and other electronic networks to do business.

Though it is natural to think of electronic commerce primarily in terms of cross-border trade, it is important to bear in mind that commitments under Modes 3 and 4 also cover the right to deliver the service electronically. A bank established under Mode 3 or a consultant working abroad on the basis of a Mode 4 commitment must be guaranteed the right to use computers to deliver their services.

It can be expected that in negotiations on market access the growing facility of electronic supply will increase interest in securing commitments in many professional services, including accountancy and all forms of consultancy, but also in sectors like education and health where cross-border supply is a relatively new and important concept. The potential benefits of distance learning and telemedicine, especially in thinly-populated areas and developing countries, are obvious.

3. Access to networks and competition safeguards

Telecommunications, energy services, postal delivery services and many transport services share long antecedents as domains reserved to government monopolies. Traditionally, the rationale for monopolies was that such industries were characterized by "natural" monopoly features, such as prohibitively high costs of building extensive network infrastructure, as well as features attributed to "public goods", such as promoting social and economic cohesion, that market mechanisms might not capture. As a consequence, the notion prevailed that the public interest would be best served through the maintenance of sole providers that were, originally, the governments themselves and often, later, government-run corporations or private entities closely monitored by and directly responsible to governments. As a host of technologies used in these industries has advanced and become less costly, natural monopoly assumptions have been revisited and often found to be outdated.

Unless provided in the exercise of governmental authority (see above) such services fall within the ambit of the GATS. However, only telecommunications has thus far been subject to extensive market-access commitments by governments. Perhaps this is in large part because new technologies have had most impact in telecommunications, providing support for a case for freer markets. Changes in other sectors are, however, beginning to take hold. As these sectors are converted by governments from monopoly to competitive regimes, they give rise to negotiating problems that rarely arise in sectors where competition is the norm. The challenges stem from a need to devise mechanisms to facilitate transition from monopoly to market-based regimes more consonant with GATS commitments. As governments introduce liberalization, the straightforward disciplines regarding monopoly behaviour of GATS Article VIII become at first inadequate and, later, obsolete.[104]

It is first worth noting, however, that GATS Members have moved into the realm of access issues and competition policy purely to ensure the effective value of GATS obligations and commitments. Whatever the merits of competition policy for its own sake, this is not the vantage

[104] GATS Article VIII requires each WTO Member to ensure that "any monopoly supplier of a service in its territory does not, in the supply of the monopoly service in the relevant market, act in a manner inconsistent with that Member's obligations" under Most-favoured-nation treatment and specific commitments" and where a monopoly supplier competes, either directly or through an affiliate, in a service outside the scope of its monopoly rights which is "subject to that Member's specific commitments, the Member shall ensure that such a supplier does not abuse its monopoly position ... in a manner inconsistent with such commitments."

Box IV.3. WTO Work Programme on Electronic Commerce

The WTO Ministerial meeting of 1998 took two decisions relating to electronic commerce. The first was to adopt a political understanding that customs duties would not be applied to "electronic transmissions". The status of this understanding, which was to be reviewed at the Seattle Ministerial meeting, is now unclear. It does however demonstrate the disposition of governments to avoid creating barriers to electronic trade. As is said above, a tariff on imports of services would be a measure covered by the GATS and could not be applied to a committed service if it had the effect of diminishing the level of access bound in the schedule.

The second Ministerial decision was to set up a work programme on electronic commerce. This was the first systematic examination of the subject in the WTO. The Councils for Goods, Services and Intellectual Property and the Committee on Trade and Development were mandated to examine and report on subjects arising in their areas of responsibility and it was agreed that the General Council would consider any trade-related issues of a cross-cutting nature. The work programme has not been completed, but in the services context it has thrown light on some important issues. In two reports[1] to the General Council, an "interim" report of March 1999 and a "progress" report of July 1999, although final positions could not be taken owing to the status of the reports, a number of issues on which a common understanding appear to be emerging were stated. The first was that the electronic delivery of services falls within the scope of the GATS and that electronic delivery can take place under any of the four modes of supply. Measures affecting the electronic delivery of services are measures affecting trade in services and would therefore be covered by GATS obligations. Secondly, the technological neutrality of the Agreement would also mean that electronic supply is permitted by specific commitments unless the schedule states otherwise. Thirdly, all GATS provisions, whether relating to general obligations or specific commitments are applicable to the supply of services through electronic means.

A number of issues were identified as requiring further consideration. They included the need to clarify the distinction between modes 1 and 2 in the context of electronic delivery and the question whether certain products delivered electronically might be classified as goods and therefore subject to GATT disciplines rather than as services. The need to clarify the classification and improve the scheduling of Internet access and other related services, and to clarify their relationship with telecommunications commitments and the obligations in the Annex on Telecommunications was also noted.

The purpose of the work programme as a whole can be said to be to provide answers to three questions: first, how do existing WTO Agreements impact on e-commerce; second, are there any weaknesses or lacunae in the existing law which need to be remedied; and third, are there any new issues, not now covered by the WTO system, on which Members would wish to negotiate new disciplines. As far as services is concerned, the first two questions have been substantially addressed in the reports referred to above, and it has become clear that WTO Agreements are important not only for electronic commerce itself but also for the *facilitation* of electronic commerce. As to the third question, no delegation has yet suggested the negotiation of disciplines on any new issue.

A further important element of the work programme, which is relevant to the work on goods, services and intellectual property, is the examination by the Committee on Trade and Development of the development implications of electronic commerce. A major issue here is to find ways of enhancing the participation of developing countries in electronic commerce, in particular as exporters of electronically-delivered products. The role of improved access to infrastructure and transport technology, and of movement of natural persons, is also under study. Many of these considerations are directly relevant to the GATS, which has already contributed to the adoption of economic reforms which will facilitate participation in electronic commerce in a truly sustainable manner. Effective participation in electronic commerce is inescapably dependent on making access to the Internet available to the broadest possible spectrum of companies and individuals. This requires access to computers and related equipment and to efficient telecommunications services at affordable prices. Those countries which have participated in the elimination of customs duties under the Information Technology Agreement have already taken an important step towards reducing the cost of hardware. Those which have made commitments under the GATS permitting the competitive supply of telecommunications services done much to facilitate internet access. Competition in telecoms supply permits internet access providers a range of new alternatives, both for transmission capacity and for consumer access conduits, such as mobile internet access, all at lower costs. It has already become apparent that by liberalizing telecom network infrastructure and capacity across a variety of technologies (including cable, mobile and satellite) the cost of access to the internet and therefore of participation in electronic commerce can be reduced dramatically, both for businesses and individual consumers. Together with the promotion of technical training, such policies may be the most effective means within the control of developing country governments to narrow the "digital divide". Many governments are considering ways to relax certain controls, such as licensing or certification regimes requiring residency, that may have applied to the supply of services by traditional means. Wishing to avoid stifling the growth of legitimate electronic commerce governments are enacting digital signature laws and other enabling legislation to facilitate participation in the digital economy. Such positive approaches may be especially important for those developing countries whose nationals and businesses already face a host of barriers to effective participation.

[1] These reports by the Services Council (S/C/8 and S/L/74 respectively) are available on the WTO website.

point from which GATS discussions have broached these issues. Second, initial efforts in this area have addressed a sector, telecoms, in which there is no prior experience with competition, and will probably continue to focus on sectors with similar features. By contrast, general competition policy is usually applied to achieve occasional intervention in market that are normally competitive. In recognizing the need for special provisions to preserve the value of commitments in newly liberalized sectors, negotiators recognized that there is an imbalance in market forces to reckon with from the outset.

These issues first became apparent in the context of telecommunications. The need for guarantees of reasonable access by service suppliers of all kinds to public telecoms networks and services was recognized in the Telecom Annex at the inception of the GATS. As governments contemplated market-access commitments for telecoms, a need was identified for disciplines over interconnection among networks (particularly with the network of a dominant, usually former-monopoly operator), for more general safeguards against anti-competitive behaviour by the dominant providers of telecoms, and for achieving universal service objectives through novel, competition-neutral approaches. These issues are addressed in the Reference Paper on regulatory principles for telecommunications which has thus far been undertaken as "additional commitments" in the schedules of 68 WTO Member governments. GATS Article VIII could only address concerns related to monopoly providers; its disciplines would not apply to dominant providers. Moreover, the GATS Annex on Telecommunications was considered insufficient, in both level of detail and level of discipline, to deal with network access and competition issues in situations where the access would involve direct competitors to a network operator.

a. Access to networks and "bottleneck" facilities

One of the most compelling reasons for negotiating safeguards on access and competition for telecommunications under the GATS also exists in other industries with a history of monopoly provision. This is that effective competition with a dominant incumbent supplier, at least in the early years of liberalization, is impossible without access on commercially reasonable terms to a network owned by the dominant supplier itself. This is true for many segments of the energy distribution and transport sectors. In such sectors, if new entrants must first build entirely new networks, including ones that duplicate existing networks, in order to begin serving customers, the advent of competition and its benefits to consumers can be deferred indefinitely. The regulatory concept of "bottleneck" facilities has been applied by various governments undertaking sector reforms. It is based on the idea that, until competition has generated alternative facilities, new market entrants need access to facilities controlled by the incumbent. Such issues are common in transport industries in which, for example, landing slots, port facilities and rail tracks can exhibit bottleneck characteristics. The telecommunications Reference Paper uses the term "essential" facilities to denote this regulatory concept.[105]

In telecommunications, the need for access to networks is especially acute because even when a service provider has developed its own network infrastructure, the service it provides to its customers frequently involves transmitting their call or fax to a customer of another network. As a result, the interconnection disciplines in the Reference paper are among the strongest and most detailed provisions developed in the GATS to date. They include, for example, a commitment to ensure that dominant or so-called "major" suppliers must charge cost-oriented interconnection rates.

Having decided to dismantle monopoly structures, policy makers have also sought means to shorten the time necessary to secure the economic and social benefits of competition. In telecommunications, and where reforms have been introduced in energy and transport services, this has often involved opening up the network infrastructure using both market-based and regulatory mechanisms. Sometimes, governments have elected to open markets for non-facilities supply of the services, in which the incumbent supplier is required to allow competing suppliers to use its rail or telecom network or energy grid to provide their own customers with services identical to that of the incumbent. In telecommunications, this form of service is referred to as simple resale. Although the idea fell out of favour in telecoms, another approach which has had an appeal in the energy sector and rail transport is to segment the industry into infrastructure vs. services, or generation vs. transmission and distribution services. Under this approach, the infrastructure providers or generators (in the case of energy) are not permitted to participate in retail supply of the service. Another means to kick-start competition has been to break up existing infrastructure and allocate it among a number of companies operating in competition with one another. Then, as new entrants join the market, they are perhaps at less of a disadvantage *vis-à-vis* the smaller network operators than they would have been in the face of a single large entity.

Regulatory options used to facilitate competition in a networked environment are equally varied. They can include requirements that operators must allow "co-location" of facilities such as switches or cables in ways that enhance network access. Also common are requirements on a dominant operator to "unbundle" access to its network so that competitors can access, and consequently only pay for, the portions of the network they really need. The Reference Paper includes certain of these regulatory approaches, e.g. requiring unbundled access, in its provi-

[105] In the Reference Paper, essential facilities are defined as "facilities of a public telecommunications transport network or service that (a) are exclusively or predominantly provided by a single or limited number of suppliers; and (b) cannot feasibly be economically or technically substituted in order to provide a service".

sions on interconnection. In the energy sector, it has also been noted that those countries that have "ended the monopoly of vertically integrated public utilities, have had to introduce new complex regulation in order to ensure the creation of a competitive market" particularly in relation to electricity and gas.[106] GATS commitments to market access and regulatory disciplines in telecoms, and in other sectors as commitments become more common, can accommodate a fairly wide variety of the different market-based and regulatory approaches used to facilitate the transition to competition.

b. Competition safeguards

As mentioned earlier, the telecoms Reference Paper goes beyond the issue of network access alone; it addresses the need for competition safeguards more generally with respect to market power. In service sectors characterized by a history of monopolies, there is an inherent risk that former monopolies will exert their dominance to frustrate newcomers in ways other than control over network infrastructure. Accordingly, some of the principles in the Reference Paper take on relevance also to sectors, such as postal services, where physical network "bottlenecks" are not the main impediment to market access. The Reference Paper defines a "major" supplier as one that "has the ability to materially affect the terms of participation (having regard to price and supply) in the relevant market for basic telecommunications services as a result of: (a) control over essential facilities; *or* (b) use of its position in the market" (emphasis added). Furthermore, its general proviso on the prevention of anti-competitive practices calls for the maintenance of "appropriate measures" … "for the purpose of preventing suppliers who, alone or together, are a major supplier from engaging in or continuing anti-competitive practices". It thereby recognizes the need to safeguard against anti-competitive behaviour of suppliers acting together. In an age of large mergers and alliances in many service industries, this concept may also be found to have importance beyond the telecom sector.

In the postal and express mail sector, GATS Article VIII injunctions against practices by monopolies that interfere with most-favoured nation obligations or scheduled commitments may continue to have wide validity so long as the sector remains segmented into delivery services reserved to postal monopolies and those which may be provided in competition with others. While some issues have emerged regarding anti-competitive practices and arrangements among postal administrations that may adversely affect the competitive services,[107] none of these has yet been raised in WTO dispute settlement. Some industry observers suspect, however, that even if GATS Article VIII were to remain broadly applicable for the sector, it might still be beneficial to develop Reference Paper or Annex type provisions that spell out more clearly, and in greater detail, the Article's applicability to the postal/express mail sector. While it is unlikely in the near term that many postal monopolies will be dismantled, the trend in the sector is nevertheless to move an increasing number of services into the competitive realm. This may lead to the advent of service areas in which market dominance by postal administrations, rather than their monopoly position *per se*, is at the root of competition problems. At such a juncture, Article VIII would no longer be directly relevant.

c. Competition and "private" network access: tourism and electronic commerce

Because of the merging of computer and communications technologies and increasing availability and openness of transmission networks, industries today have greater access to better communications networks than ever before. This allows businesses and consumers to communicate much more effectively and widely with other businesses and consumers, but some concerns related to anti-competitive behaviour regarding access to networks have arisen.

In sectors such as Tourism, such concerns are not new. Developing countries have argued for many years that networked services such as computer reservation systems (CRS) for airlines and the more broadly-based global distribution systems (GDS)[108] which also include hotels and car rentals joined together large suppliers from industrialized countries at the expense of smaller suppliers, many from developing countries. They have complained that their suppliers either were not fully admitted or, when they were, obtained less visibility in the systems. Most such electronic transactions were and continue to be operated over private networks, set up by and dedicated to the activities of the participants concerned. In other words, these networks are not usually considered part of the "public" network or infrastructure upon which governments typically impose universal access obligations. Increasingly, such systems are being linked with the Internet resulting in broader accessibility by consumers. But this trend may not remedy the concerns of smaller suppliers and new market entrants. At the same time, Internet has made it easier for small companies and developing countries to set up websites or portals of their own for on-line reservations and purchasing.

Somewhat newer concerns of a similar nature have arisen in relation to electronic commerce. Large companies in industries such as airlines, auto-making and computer manufacturing, that are normally competitors, have begun to join together in business-to-business (B2B) Internet portals to conduct procurement, distribution and

[106] "Energy Services", Background Note by the Secretariat, S/C/W/52, WTO, 9 September 1998, p. 16.

[107] See, for example, mention of such issues in "Postal and Courier Services", Background Note by the Secretariat, S/C/W/39, WTO, 12 June 1998.

[108] See further discussion of GDS networks in "Tourism Services," Background Note by the Secretariat, S/C/W/51, WTO, September 1998.

other transactions. B2B electronic transactions have taken place for many years over private, intracorporate networks similar to those described above. It might appear at first sight that moving such activities to an open network like the Internet would guarantee enhanced accessibility. But Internet sites can also be restricted to a select community of participants as well as users through password-protected access.

While such distribution networks and portals may not be inherently anti-competitive, there may be a fine line between constructive cooperation and actual collusion that can leave small players at an unfair disadvantage and discourage new market entry. Differences in perspective between developed and developing countries on these issues may be a matter of degree. Often, the industries concerned tend to be ones in which a relatively healthy competitive environment exists, such that competition policy authorities would be wary of unnecessary intervention. A large player is not necessarily dominant under the legal definitions which apply. While concerns about possible dominance and anti-competitive practices are understandable, the activities have rarely triggered action under traditional competition policy standards. One example is action that a number of governments and industry self-regulatory organizations have taken regarding CRS networks. Government regulatory measures and industry codes of conduct have included requirements for non-discrimination in screen displays, standards for the presentation of information, and, in some instances, controls on pricing of reservation bookings.[109] In relation to electronic commerce, competition authorities in some industrialized countries appear to be aware of and monitoring the development of B2B Internet portals shared by large competitors.

The GATS provides few disciplines regarding anti-competitive practices by suppliers who are neither monopolies nor dominant. GATS Article IX on "Business Practices" requires only consultations on business practices that "may restrain competition and thereby restrict trade in services".

d. Universal service and competition safeguards

Another distinguishing feature of most of the service sectors currently or formerly subject to monopoly supply is their status as "public" services or services upon which governments, explicitly or implicitly, confer obligations to provide access to the general public as broadly as possible. These are variously referred to as public service, universal service, or universal access obligations. Even after privatization or competition has been introduced, governments continue require that services like electricity, telecommunications, and mail delivery are available to as many consumers as possible, including those with low incomes or in remote areas. This is also true of privatized systems for public transportation services such as buses, subways and railways.

Nothing in the GATS prohibits governments from imposing universal service obligations on any suppliers of services, public or private. In this sense, the provision in the telecommunications Reference Paper on universal service may be somewhat redundant.[110] But it does help to reiterate the idea of the importance of safeguarding competition and fostering competitive forces, even in relation to achieving important policy objectives. It may prove useful that the Reference Paper *explicitly* calls for the implementation of universal service policies and mechanisms in a "competitively neutral" manner. In telecoms, as well as other sectors subject to such requirements, it may encourage governments to re-examine traditional approaches and explore new ones to ensure that they do not offer unfair competitive advantages to incumbents. Otherwise, the potential for the widest possible cross-section of the public to benefit from market forces in basic services of all kinds can be undermined.

4. Development dimension

The debate about the inclusion of services in the agenda of the Uruguay Round in the early and middle 1980's had a strong flavour of North-South confrontation: a number of developing countries and lobbies opposed the negotiation of multilateral disciplines on services trade on the grounds that their service industries were too underdeveloped to enter into competition with those of the industrialized world. That controversy is now long past. The freedom to designate in GATS schedules those services on which commitments will be undertaken, and the basic GATS principle of progressive liberalization, have dispelled fears of the imposition of an unacceptable level of foreign competition. Services is now far from being a controversial issue—indeed, during preparations to the Seattle Conference, it was the least controversial issue on the agenda.

Nevertheless, there are important and worthwhile questions to consider relating to development. At several points in this study we have laid emphasis on the value of GATS commitments as an inducement to foreign direct investment, and on the role of competition in raising the efficiency of the national services sector. There is good evidence that developing countries are deliberately encouraging foreign competition in key sectors to upgrade their own services infrastructure. However, developing countries are not merely importers of services. Their increasing

[109] See WTO Secretariat notes "Air Transport Services", S/C/W/59, November 1998 and "Developments in the Air Transport Sector since the Conclusion of the Uruguay Round", S/C/W/163, August 2000.

[110] It says "Any Member has the right to define the kind of universal service obligation it wishes to maintain. Such obligations will not be regarded as anti-competitive *per se*, provided they are administered in a transparent, non-discriminatory and competitively neutral manner and are not more burdensome than necessary for the kind of universal service defined by the Member."

participation in services trade and the expansion of their services exports are important objectives of the Agreement; Article IV contains provisions intended to promote these objectives and in the new round the negotiators of developing countries will certainly stress the common commitment in Article IV:1(c) to liberalization in sectors and modes of export interest to them. The importance attached to commitments under mode 4 is well known and has been discussed in subsection C above. It is important that developing countries should also identify the sectors which are of export interest to them, and the barriers which their exporters are confronted with in major markets.

Before turning to tourism, which is the industry generating the greatest export revenues for developing countries, it is necessary to underline once more that efficiency in the export of goods of all kinds depends critically upon the quality and cost of available services. Exporters of agricultural and other basic commodities all over the world suffer disabilities as a result of inefficient or expensive banking, insurance, telecoms and transport services. The export of services themselves may likewise be impeded: high telephone and interconnection charges are a serious obstacle to the growth of computer services in developing countries, though they may be extremely competitive in this field.

The case of tourism illustrates some of these issues, though its growth is also hindered by a number of factors over which developing countries have little control. Tourism is one of the largest and fastest-growing services sectors, accounting for over 35% of total world-wide services exports.[111] Highly labour-intensive, it is a critically important generator of employment, especially in remote and rural areas. International tourism has a very substantial impact on trade levels, as well on foreign exchange earnings. For developing countries, it is one area where they run consistent trade surpluses: in 1995, the net transfer from OECD to non-OECD countries was US$23.5 billion, as compared with US$6.2 billion in 1985. Tourism is a leading source of foreign exchange in many developing countries. Countries with the highest ratios of tourism receipts to GNP are typically small island nations. Although much of the gross tourism receipts (perhaps 50-70%) "leaks" out of these countries in order to pay for imported tourism inputs, the ratio of net receipts to GNP remains much higher than for most larger countries.

According to estimates of the World Travel and Tourism Council, tourism as a whole employs one in 10 workers world-wide, making it the world's largest employer. It is already a major employer in developing nations, and its importance is increasing, due to the high growth rate of the sector relative to the domestic economy as a whole. UNCTAD notes that the tourism trade has traditionally been concentrated in developed countries, but the share of developing countries has been rising gradually, and now accounts for about one third of the total. Least-developed-countries are enjoying strong increases in tourist growth, but their share of international arrivals and tourism receipts remains very small.

Interestingly, increasing exports of tourism services is essentially a process of *domestic* liberalization, rather than of persuading trading partners to open their markets. It is not an industry beset by protectionism. As of August 2000 117 WTO Members, more than in any other sector, have made commitments in Tourism under the GATS. Among the most common restrictions appearing in schedules, an economic needs test is frequently required for new bars or restaurants; citizenship requirements are sometimes imposed for liquor licenses and tourist guide licenses. In regard to commercial presence, market access is often guaranteed only to hotels in excess of a certain size, e.g. 50 or 100 rooms, with access for hotels below that size subject to an economic needs test. In some cases licences are required for commercial presence, and in other cases commercial presence is restricted to fixed equity limits. In general, however, restrictions on the supply of tourist services per se are not a serious problem. In 1990, An OECD study concluded that, by comparison with other service sectors, the tourism sector in the OECD countries was "remarkably free from protectionist and discriminatory practices". Many of the regulations affecting tourism, such as equity limitations on foreign direct investment (FDI), tended to be by-products of general economic, political and social concerns applying to a number of sectors. In some cases, restrictions might be imposed by both the services importer and the exporter. Such measures notably included immigration and security controls, together with documentation requirements, as well as any restrictions on currency movements which might be applied to individual tourists or tourism businesses.

Problems in the development of tourism therefore do not arise in any significant measure from restrictions applying to tourism *per se*—which in the GATS context, is divided into three main sub-sectors: hotels and restaurants; travel agencies and tour operators services; and tourist guides services. But the great bulk of business and of revenue derives from other activities which feed into tourism —most notably many transport services, but also including certain business services, distribution services, and recreational, cultural and sporting services —which are classified elsewhere and many of which are subject to trade restrictions and distortions with serious negative effects on the tourist sector. Other important challenges facing the industry include environmental and infrastructure problems, as well as rapid technological change.

World Tourism Organization statistics indicate that arrivals by air account for more than 90% of total arrivals in a significant majority of developing countries. Since many of these countries are far distant from the rich markets which provide their customers, their export revenues are diminished by the high air-fares caused by low air traffic density and by protectionist aviation policies, which according to the World Travel and Tourism Council, severely constrain the development of tourism. Protectionism in

the air transport sector, at the expense of hotels and other tourist activities whose net revenues are likely to be far greater than those of national airlines, may be a very expensive strategy.

An MFN exemption affecting tourism has been taken by Mexico in regard to tax deductions for individuals attending business conventions. Under the Aviation category in the Transport sector, Members have taken a significant number (16) of MFN exemptions for computer reservation systems (CRS); exemptions are also in place for a number of other aviation-related measures. In addition, a substantial number of Members have taken general MFN exemptions which may have an effect on the Tourism sector, most notably preferential access measures for natural persons.

Box IV.4. Proposed GATS Annex on Tourism

As part of the new round of services negotiations, three developing countries—the Dominican Republic, El Salvador and Honduras—have proposed to add a new Annex to the GATS, in order to help overcome the obstacles impeding tourism development.[1] The proposal addresses classification issues, anti-competitive practices, consumer safeguards, access to and use of tourism information, cooperation with other international organizations, and ensuring sustainable tourism development. The proposal is under discussion in the special sessions of the Services Council.

As noted above, the tourism sector is already relatively free of trade restrictions, and has the highest level of commitments. Nonetheless, the sector is narrowly defined in Members' GATS Schedules, and many believe this limited classification makes it difficult to address important issues affecting tourism, notably those related to air transport, financial services, etc.[2] For this reason, the Annex proposal uses the Tourism Satellite Account methodology, developed by the OECD, the World Tourism Organization and others, to provide a broader classification of tourism and tourism-related services.[3] A number of WTO Members are also concerned about rapid consolidation of the large tour operators, from the perspective of oligopoly behaviour and other anti-competitive practices, as well as conditions for access to global distribution systems (GDS) and other computerized networks used for supplying package tours, airline services, hotel services, car rentals, etc.

From a negotiating perspective, using a wider tourism definition may present some difficulties, especially regarding regulatory authority. For example, although a tourism bus might be used exclusively for supplying tourism services, in most cases regulations on bus services will be formulated in general terms, not with specific reference to tourism, and are likely to be under the jurisdiction of the transport ministry, not the tourism authorities. It is obviously desirable however that negotiators should have in mind the consequences for tourism, as a major revenue earner for so many of their countries, of restrictions in other sectors. The purpose of the approach suggested in the annex proposal is to ensure that this happens.

1 This document (WT/GC/W/372, dated 14 October 1999), is available on the WTO Internet site.

2 The classification issue is also addressed in the Secretariat background paper (S/C/W/51).

3 In an effort to improve the definition and measurement of tourism, the "OECD Tourism Economic Accounts" were developed, and the International Forum on Tourism Statistics was established in 1993 by the OECD and Eurostat to further the exchange of views. Cooperation also occurs with the World Tourism Organisation.

Appendix to Section IV

Annex IV.1. WTO Secretariat services sectoral background papers

Distribution Services	S/C/W/37
Construction and Related Engineering Services	S/C/W/38
Postal and Courier Services	S/C/W/39
Audiovisual Services	S/C/W/40
Legal Services	S/C/W/43
Architectural and Engineering Services	S/C/W/44
Computer and Related Services	S/C/W/45
Environmental Services	S/C/W/46
Advertising Services	S/C/W/47
Education Services	S/C/W/49
Health and Social Services	S/C/W/50
Tourism Services	S/C/W/51
Energy Services	S/C/W/52
Air Transport Services	S/C/W/59
Land Transport Services Part I - Generalities and Road Transport	S/C/W/60
Land Transport Services Part II - Rail Transport Services	S/C/W/61
Maritime Transport	S/C/W/62
Financial Services	S/C/W/72
Accountancy Services	S/C/W/73
Telecommunications Services	S/C/W/74

Annex IV.2. Services sectoral classification list

	Sectors and sub-sectors	Corresponding CPC
1.	**Business services**	**Section B**
A.	*Professional Services*	
a.	Legal Services	861
b.	Accounting, auditing and bookeeping services	862
c.	Taxation Services	63
d.	Architectural services	8671
e.	Engineering services	8672
f.	Integrated engineering services	8673
g.	Urban planning and landscape architectural services	8674
h.	Medical and dental services	9312
i.	Veterinary services	932
j.	Services provided by midwives, nurses, physiotherapists and para-medical personnel	93191
k.	Other	
B.	*Computer and Related Services*	
a.	Consultancy services related to the installation of computer hardware	841
b.	Software implementation services	842
c.	Data processing services	843
d.	Data base services	844
e.	Other	845+849
C.	*Research and Development Services*	
a.	R&D services on natural sciences	851
b.	R&D services on social sciences and humanities	852
c.	Interdisciplinary R&D services	853
D.	*Real Estate Services*	
a.	Involving own or leased property	821
b.	On a fee or contract basis	822
E.	*Rental/Leasing Services without Operators*	
a.	Relating to ships	83103
b.	Relating to aircraft	83104
c.	Relating to other transport equipment	83101+83102+83105
d.	Relating to other machinery and equipment	83106-83109
e.	Other	832
F.	*Other Business Services*	
a.	Advertising services	871
b.	Market research and public opinion polling services	864
c.	Management consulting service	865
d.	Services related to man. consulting	866
e.	Technical testing and analysis serv.	8676
f.	Services incidental to agriculture, hunting and forestry	881
g.	Services incidental to fishing	882
h.	Services incidental to mining	883+5115
i.	Services incidental to manufacturing	884+885 (except for 88442)
j.	Services incidental to energy distribution	887
k.	Placement and supply services of Personnel	872

Annex IV.2. *(cont'd.)*

	Sectors and sub-sectors	Corresponding CPC
l.	Investigation and security	873
m.	Related scientific and technical consulting services	8675
n.	Maintenance and repair of equipment (not including maritime vessels, aircraft or other transport equipment)	633+ 8861-8866
o.	Building-cleaning services	874
p.	Photographic services	875
q.	Packaging services	876
r.	Printing, publishing	88442
s.	Convention services	87909*
t.	Other	8790
2.	**Communication services**	
A.	*Postal services*	*7511*
B.	*Courier services*	*7512*
C.	*Telecommunication services*	
a.	Voice telephone services	7521
b.	Packet-switched data transmission services	7523**
c.	Circuit-switched data transmission services	7523**
d.	Telex services	7523**
e.	Telegraph services	7522
f.	Facsimile services	7521**+7529**
g.	Private leased circuit services	7522**+7523**
h.	Electronic mail	7523**
i.	Voice mail	7523**
j.	On-line information and data base retrieva	7523**
k.	Electronic data interchange (EDI)	7523**
l.	Enhanced/value-added facsimile services, incl. store and forward, store and retrieve	7523**
m.	code and protocol conversion	n.a.
n.	on-line information and/or data processing (incl.transaction processing)	843**
o.	other	
D.	*Audiovisual services*	
a.	Motion picture and video tape production and distribution services	9611
b.	Motion picture projection service	9612
c.	Radio and television services	9613
d.	Radio and television transmission service	7524
e.	Sound recording	n.a.
f.	Other	
E.	*Other*	
3	**Construction and related engineering services**	
A.	*General construction work for buildings*	512
B.	*General construction work for civil engineering*	513
C.	*Installation and assembly work*	514+516

*The (*) indicates that the service specified is a component of a more aggregated CPC item specified elsewhere in this classification list.

**The (**) indicates that the service specified constitutes only a part of the total range of activities covered by the CPC concordance (e.g. voice mail is only a component of CPC item 7523).

Annex IV.2. *(cont'd.)*

	Sectors and sub-sectors	Corresponding CPC
D.	*Building completion and finishing work*	517
E.	*Other*	511+515+518
4.	**Distribution services**	
A.	*Commission agents' services*	621
B.	*Wholesale trade services*	622
C.	*Retailing services*	631+632 6111+6113+6121
D.	*Franchising*	8929
E.	*Other*	
5.	**Educational services**	
A.	*Primary education services*	921
B.	*Secondary education services*	922
C.	*Higher education services*	923
D.	*Adult education*	924
E.	*Other education services*	929
6.	**Environmental services**	
A.	*Sewage services*	9401
B.	*Refuse disposal services*	9402
C.	*Sanitation and similar services*	9403
D.	*Other*	
7.	**Financial services**	
A.	*All insurance and insurance-related services*	812**
a.	Life, accident and health insurance services	8121
b.	Non-life insurance services	8129
c.	Reinsurance and retrocession	81299*
d.	Services auxiliary to insurance (including broking and agency services)	8140
B.	*Banking and other financial services* (excl. insurance)	
a.	Acceptance of deposits and other repayable funds from the public	81115-81119
b.	Lending of all types, incl., inter alia, consumer credit, mortgage credit, factoring and financing of commercial transaction	8113

*The (*) indicates that the service specified is a component of a more aggregated CPC item specified elsewhere in this classification list.

**The (**) indicates that the service specified constitutes only a part of the total range of activities covered by the CPC concordance (e.g. voice mail is only a component of CPC item 7523).

	Sectors and sub-sectors	Corresponding CPC
c.	Financial leasing	8112
d.	All payment and money transmission services	81339**
e.	Guarantees and commitments	81199**
f.	Trading for own account or for account of customers, whether on an exchange, in an over-the-counter market or otherwise, the following:	
	- money market instruments (cheques, bills, certificate of deposits, etc.)	81339**
	- foreign exchange	81333
	- derivative products incl., but not limited to, futures and options	81339**
	- exchange rate and interest rate instruments inclu. products such as swaps, forward rate agreements, etc.	81339**
	- transferable securities	81321*
	- other negotiable instruments and financial assets, incl. bullion	81339**
g.	Participation in issues of all kinds of securities, incl. under-writing and placement as agent (whether publicly or privately) and provision of service related to such issues	8132
h.	Money broking	81339**
i.	Asset management, such as cash or portfolio management, all forms of collective investment management, pension fund management, custodial depository and trust services	8119+** 81323*
j.	Settlement and clearing services for financia assets, incl. securities, derivative products, and other negotiable instruments	81339** or 81319**
k.	Advisory and other auxiliary financial services on all the activities listed in Article 1B of MTN.TNC/W/50, incl. credit reference and analysis, investment and portfolio research and advice, advice on acquisitions and on corporate restructuring and strategy	8131 or 8133
l.	Provision and transfer of financial information and financial data processing and related software by providers of other financial services	8131
C.	*Other*	
8.	**Health related and social services** (other than those listed under 1.A.h-j.)	
A.	*Hospital services*	9311
B.	*Other Human Health Services*	9319 (other than 93191)
C.	*Social Services*	933
D.	*Other*	
9.	**Tourism and travel related services**	
A.	*Hotels and restaurants (incl. catering)*	641-643

*The (*) indicates that the service specified is a component of a more aggregated CPC item specified elsewhere in this classification list.

**The (**) indicates that the service specified constitutes only a part of the total range of activities covered by the CPC concordance (e.g. voice mail is only a component of CPC item 7523).

	Sectors and sub-sectors	Corresponding CPC
B.	*Travel agencies and tour operators services*	7471
C.	*Tourist guides services*	7472
D.	*Other*	
10.	**Recreational, cultural and sporting services**	
	(other than audiovisual services)	
A.	*Entertainment services (including theatre, live bands and circus services)*	9619
B.	*News agency services*	962
C.	*Libraries, archives, museums and other cultural services*	963
D.	*Sporting and other recreational services*	964
E.	*Other*	
11.	**Transport services**	
A.	*Maritime Transport Services*	
a.	Passenger transportation	7211
b.	Freight transportation	7212
c.	Rental of vessels with crew	7213
d.	Maintenance and repair of vessels	8868**
e.	Pushing and towing services	214
f.	Supporting services for maritime transport	745**
B.	*Internal Waterways Transport*	
a.	Passenger transportation	7221
b.	Freight transportation	7222
c.	Rental of vessels with crew	7223
d.	Maintenance and repair of vessels	8868**
e.	Pushing and towing services	7224
f.	Supporting services for internal waterway transport	745**
C.	*Air Transport Services*	
a.	Passenger transportation	731
b.	Freight transportation	732
c.	Rental of aircraft with crew	734
d.	Maintenance and repair of aircraft	8868**
e.	Supporting services for air transport	746
D.	*Space Transport*	733
E.	*Rail Transport Services*	
a.	Passenger transportation	7111
b.	Freight transportation	7112
c.	Pushing and towing services	7113
d.	Maintenance and repair of rail transport equipment	8868**
e.	Supporting services for rail transport services	743

*The (*) indicates that the service specified is a component of a more aggregated CPC item specified elsewhere in this classification list.

**The (**) indicates that the service specified constitutes only a part of the total range of activities covered by the CPC concordance (e.g. voice mail is only a component of CPC item 7523).

Annex IV.2 *(cont'd.)*

	Sectors and sub-sectors	Corresponding CPC
F.	*Road Transport Services*	
a.	Passenger transportation	7121+7122
b.	Freight transportation	7123
c.	Rental of commercial vehicles with operator	7124
d.	Maintenance and repair of road transport equipment	6112+8867
e.	Supporting services for road transport services	744
G.	*Pipeline Transport*	
a.	Transportation of fuels	7131
b.	Transportation of other goods	7139
H.	*Services auxiliary to all modes of transport*	
a.	Cargo-handling services	741
b.	Storage and warehouse services	742
c.	Freight transport agency services	748
d.	Other	749
I.	Other Transport Services	
12.	**Other services not included elsewhere**	95+97+98+99

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