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FOREWORD

The World Trade Report is a new annual publication produced by the WTO Secretariat. Each year, the WTR will explore trends in world trade and highlight important issues in the world trading system. In addition to monitoring and interpreting trade developments, the Report seeks to deepen public understanding of pressing policy issues. The WTR does not pretend to provide comprehensive answers to complex and many-sided questions subject to continuing debate among governments and their constituencies. Rather, by explaining the origin of issues and offering an analytical framework within which to address them, the WTR aims to contribute to more informed discussion and a better appreciation of the options available to address policy challenges.

Following a report on trends in world trade over the previous year and some observations about prospects for the current year, WTR 2003 takes up three issues of topical interest in international trade. These are developments in South-South trade, trends in non-oil commodity markets, and the growth of regional trade agreements. In each case the Report analyses developments over the last few years, highlights their implications, and draws a number of conclusions about the options facing governments.

In the case of South-South trade, we see a marked expansionary trend, but one that is rather narrowly based in regional terms. South-South trade clearly holds dynamic potential that could be realized more effectively through further trade liberalization. This conclusion should in no way dilute focus on the need for continuing liberalization efforts in respect of North-South trade, nor should it understate the need to develop the necessary infrastructure and policy climate to facilitate South-South trade.

The Report's analysis of trends in non-oil commodity markets highlights the well-known fact that developing countries economically reliant on basic commodities have suffered in recent years from price declines and continuing volatility. A range of solutions are on offer to address this problem, but some of them have proven less than effective in the past. Fresh thinking is needed, both on the question of what can be done in respect of the commodity markets themselves, and how developing countries might diversify their economies away from excessive reliance on a narrow production base. Trade liberalization has a role to play, particularly in the areas of agriculture and tariff escalation.

Regional trade agreements have burgeoned in the last decade or so. This can be good news and bad news. Such agreements are good news when they bring regions closer together, create new profitable trading opportunities and set the scene for more inclusive market-opening. They are bad news when they discriminate unduly against third parties and frustrate the attainment of multilateral objectives built on non-discrimination. No government has challenged the view that the multilateral trading system must retain its primary unifying role at the core of trade relations among nations. Given this unity of purpose, governments need to do more to ensure the coherence and compatibility of regional trading arrangements with the multilateral trading system. This implies a strong commitment to advancing the multilateral agenda as well as ensuring that regional agreements are designed to support and not to compete with the WTO system.

The second section of the WTR addresses a broad range of issues that are of immediate and vital interest to the membership of the WTO. This year's theme is trade and development. Starting from a broad although brief discussion of development and the relationship between trade and development, the Report goes on to analyse how the Doha Development Agenda can contribute to growth and development in developing countries.

The Director-General of the WTO would never declare any year unimportant or unchallenging for the trading system. But some years are undoubtedly more momentous than others, and this is one of them. The Fifth Ministerial Conference in Cancún in September is not the end of the Doha negotiations, but a very important landmark on the road to completion. At Cancún, Ministers will have to take stock of progress in the negotiations, provide political guidance and take certain decisions. This is not simply about meeting targets and completing an agenda – it is about creating conditions for advancement in all countries, and in particular about expanding opportunities for developing countries through their more effective inclusion in the trading system.

Focusing particularly on this last point, the Report examines how the Doha negotiations and work programme can contribute to more effective and intensified engagement by developing countries in the WTO, building on new opportunities generated by policy change in both developed and developing countries. The Report divides its analysis into segments dealing with market access questions, policies aimed at facilitating openness for development, policies for managing openness within the WTO rules, and issues relating to the possible expansion of the WTO's negotiating agenda. In each instance, the Report identifies basic issues and assesses options in terms of their implications for development.

I shall allow the Report to speak for itself. But I wish to make two key points. First, strong and renewed political commitment is required if we are to give effect to the promise of Doha. Success in moving forward effectively on the Doha Agenda will generate new economic opportunities, boost business confidence, and send an important political message of support for multilateral cooperation aimed at restoring health and stability to the world economy. Failure to advance will deny us all these things and dent credibility.

Second, as governments formulate their positions in respect of the many issues on the Doha Agenda requiring decision, an important point to keep in mind is that the effective pursuit of national interests requires joint action around shared objectives. That means joint responsibility for an effective process of give and take. Countries hardly ever obtain everything they want in negotiations, but it is deeply fallacious to see an outcome yielding no result as a better option than one that might require hard work and patience, but offers something to all parties.

Supachai Panitchpakdi

Director-General

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DISCLAIMER

The World Trade Report and any opinions reflected therein are the sole responsibility of the WTO Secretariat. They do not purport to reflect the opinions or views of Members of the WTO. The main authors of the Report also wish to exonerate those who have commented upon it from responsibility for any outstanding errors or omissions.

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APPENDIX

ABBREVIATIONS AND SYMBOLS

ACP	African, Caribbean and Pacific Group of States
AFTA	ASEAN Free Trade Area
AMS	Aggregate Measurement of Support
APEC	Asia Pacific Economic Cooperation
ASEAN	Association of South East Asian Nations
AVE	*Ad valorem* equivalent
CACM	Central American Common Market
CARICOM	Caribbean Common Market
CBD	Convention on Biological Diversity
CEECs	Central Eastern European Countries
CEFTA	Central European Free Trade Agreement
CEMAC (UDEAC)	Economic and Monetary Community of Central African States (Communauté économique et monétaire de l'Afrique centrale))
CEP	Closer Economic Partnership
CEPT	Common Effective Preferential Tariffs
CGE	Computable General Equilibrium
CGs	Consultative Groups
CIS	The Commonwealth of Independant States
COMECON	Council for Mutual Economic Cooperation
COMESA	Common Market for Eastern and Southern Africa
CTE	Committee on Trade and Environment
DSB	Dispute Settlement Body
DSU	Dispute Settlement Understanding
DTIS	Diagnostic Trade Integration Study
ECCAS	Economic Community of Central African States
ECOWAS	Economic Community of West African States
EEZs	Exclusive Economic Zones
EFTA	European Free Trade Association
EKC	Environmental Kuznets Curve
EPZ	Export Processing Zone
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
FTAA	Free Trade Area of the Americas
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GNP	Gross National Product
GSP	Generalized System of Preferences
HIPC	Highly-indebted Poor Countries
HS	Harmonised System of tariff classification
ICO	International Coffee Organization
IDB	Integrated Database
IF	Integrated Framework
IFSC	Integrated Framework Steering Committee
IFWG	Integrated Framework Working Group
IICs	Inter-Institutional Committees
IMF	International Monetary Fund

ITC	International Trade Centre
IUU	illegal, unreported and unregulated
JITAP	Joint Integrated Technical Assistance Programme
kcal	kilo calorie
LAIA	Latin American Integration Association
LDCs	Least Developed Countries
MDGs	Millennium Development Goals
MEAs	Multilateral Environmental Agreements
MERCOSUR	Southern Common Market
MFA	Multifibre Arrangement
MFN	Most-Favoured Nation
MTN	Multilateral trade negotiation categories
MTS	Multilateral Trading System
MUV	Manufacturing Unit Values
NAFTA	North American Free Trade Agreement
NEPAD	The New Partnership for Africa's Development
NICs	Newly Industrialized Countries
NPR-PPMs	Non product-related processes and production methods
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PRSP	Poverty Reduction Strategy Papers
R&D	Research and Development
RMP	Ratio of Margin of Preference
RTA	Regional Trade Agreements
S&D	Special and Differential Treatment
SAARC	South Asian Association for Regional Cooperation
SADC	South African Development Community
SCM	Subsidies and Countervailing Measures
TFP	Total Factor Productivity
TPR	Trade Policy Review
TRIPS	Trade-Related Intellectual Property Rights
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNECLAC	United Nations Economic Commission for Latin America and the Caribbean
UNSD	United Nations Statistics Department
WHO	World Health Organization
WIPO	World Intellectual Property Organization
UEMOA	Union Économique et Monétaire Ouest Africaine

The following symbols are used in this publication:

c.i.f.	cost, insurance and freight
f.o.b.	free on board
...	not available
0	figure is zero or became zero due to rounding
-	not applicable
$	United States dollars
Q1,Q2,Q3,Q4	1st quarter, 2nd quarter, 3rd quarter, 4th quarter
I	break in comparability of data series. Data after the symbol do not form a consistent series with those from earlier years

Billion means one thousand million.

EXECUTIVE SUMMARY

1. DEVELOPMENTS AND SELECTED ISSUES IN THE TRADING SYSTEM

At the Fourth World Trade Organization Ministerial Meeting held in Doha in November 2001, Ministers launched a comprehensive set of multilateral trade negotiations and a work programme. This mandate is sometimes referred to as the Doha Development Agenda, reflecting a shared desire to ensure that the trading system is relevant and responsive to the needs of developing countries. Among the areas covered by the negotiations or the work programme are market access in manufactures, agriculture and services, certain rules (including anti-dumping, subsidies and countervailing measures, and regional arrangements), trade and environment, trade-related intellectual property rights, the relationship between trade and investment, the interaction between trade and competition policy, transparency in government procurement, trade facilitation, and dispute settlement. Developing countries were particularly instrumental in putting certain issues on the agenda, including trade and technology transfer, trade, debt and finance, small economies, implementation issues (mostly pending from the Uruguay Round) and special and differential treatment. Views continue to differ on how and in some cases whether to include all the issues mentioned above in the negotiations, which are due for completion at the end of 2004.

The World Trade Report 2003 contains two chapters. The first covers developments in the trading system such as changes in the structure, value and volume of international trade in goods and services. It also includes an analysis of two aspects of trade and one trade policy issue – South-South trade, commodity trade and regional trading agreements. Chapter II examines the link between trade and development and discusses opportunities offered by the Doha Development Agenda for Members to benefit more from trade and improved trading rules. It lays out briefly a conceptual framework that argues countries can increase the benefits of openness through international co-operation. Such co-operation allows countries to benefit from the liberalization of others as well as their own. Multilateral trade negotiations can play a valuable role in coordinating liberalization among countries and establishing rules of the trading system that are conducive to development. The second Section of Chapter II examines the challenges and opportunities for improving the prospects of developing countries through the negotiations and work programme of the Doha Development Agenda.

World trade did better in 2002 than 2001...

Trade in 2002 recovered from the decline of the previous year, growing at about 2.5 per cent in volume terms, which was faster than the growth of global output. Commercial services trade expanded by 5 per cent in value terms, despite the lingering fear of terrorism and higher fuel prices, both of which limited growth in international travel and transportation services. The rebound occurred under some difficult conditions: the weakness of the global economic recovery, greatly reduced capital (foreign direct investment) flows, major changes in exchange rates, increased restrictions on international trade transactions to mitigate risks from terrorism, and failings in corporate governance. Overall, the last two years have been a period of significant weakness in the global economy, departing from the last decade's unprecedented growth in global trade and capital flows.

... although there were significant differences in trade performance among regions and countries.

The global economic recovery proved uneven, with significant differences in growth performance across regions. The driving forces of the pick-up in global economic activity were the United States, the advanced economies in East Asia, China and the transition economies. In contrast, Western Europe and Japan experienced stagnation or a decline in domestic demand. In Latin America, crises in Argentina and Venezuela contributed to the severe slump. Trade performance largely mirrored the pattern of economic growth. It was strong in developing Asia and the transition economies. North America's imports recovered in line with stronger domestic demand, although exports decreased in 2002. Trade remained stagnant in Western Europe and imports contracted in Latin America as a result of economic turmoil in a number of countries in the region.

Despite recent shocks to the international economy, trade growth for 2003 may be a little better than in 2002 and about equal to the growth of global output.

Considerable uncertainty clouds trade volume growth prospects for 2003, estimated at less than 3 per cent. The downside risks on predictions for 2003 relate to continued sluggishness in the world economy, economic and political instability in the Middle East and the unexpected impact of the Severe Acute Respiratory Syndrome in East Asia.

Noteworthy features of the trading system to emerge in the last few years include the growth in the share of South-South trade in world trade,....

Between 1990 and 2001, South-South trade grew faster than world trade with the share of intra-developing country trade in world merchandise exports rising from 6.5 per cent to 10.6 per cent. Over this period, developing country economies grew much faster than those of the developed and transition countries. The liberalization of the trade and investment regimes of a large number of these countries has played a significant role in this expansion.

Much of this expansion in South-South trade took place in developing Asia (which accounts for more than two-thirds of intra-developing country trade). Manufactures, in particular office and telecom equipment, played a leading role in the growth of intra-developing country trade. This strong performance can be attributed in part to open trade and investment policies in the major developing economies of Asia. Trade liberalization in Asia took various forms in the 1990s: some of it was undertaken on a unilateral basis, some arose from multilateral efforts.

Despite the successes of a number of developing countries over the last decade, impediments still exist to prevent a further deepening of South-South trade. These include high levels of tariff protection, in particular on products such as automobiles and clothing, and in agriculture. The Doha negotiations on agriculture and non-agricultural tariffs could be an important source of efficiency gains for developing countries, an impetus for growth, and a means for increased trade among both developed and developing countries.

... the decline and continued volatility of commodity prices, ...

Declining and volatile commodity prices and their impact on the development prospects of poor countries have been a recurring issue in international trade. Many commodity prices have experienced pronounced declines in the course of the last decade, resulting in reduced export revenues. Evidence suggests that commodity price shocks retard growth rates and threaten persistent or rising poverty in already poor countries.

The explanation for the long-run behaviour of prices has traditionally focused on differences in demand elasticities for manufactures and commodities, as well as market power enjoyed by developed countries in manufactured goods. However, there are alternative explanations based on technical progress and secular improvements in agricultural productivity. In the short to medium term, other factors such as trade policies (particularly agricultural subsidies and tariff escalation) in developed countries, the structure of the international market for commodities, and global macroeconomic conditions also play a part.

In the past, many governments sought to manage terms of trade shocks through control of the marketing or supply of primary commodities. However, the experience of marketing boards in developing countries has been far from salutary. International commodity agreements have not fared very well either. An important part of the challenge is for developing countries to diversify away from primary exports. Considering the historical experience of the limitations of import substitution policies in fostering sustained income and export growth, attention has focused increasingly on fostering openness to trade and foreign direct investment, and on building human capital, infrastructure and sound institutions. Many of these changes take time; in the short to medium term, continuing reform in agricultural trade and greater reliance on markets would be beneficial to commodity exporters. By dealing with some of the underlying policy-related causes of low commodity prices, in particular domestic support and tariff escalation, the Doha work programme offers an opportunity to make a positive impact on the problem.

... and the proliferation of regional trade agreements.

The global trading system has seen a sharp increase in regional trade agreements (RTAs) over the past decade or so. As of March 2003, only four WTO Members – Hong Kong, China; Macao, China; Mongolia and Chinese Taipei – were not party to a regional trade agreement. And with the sole exception of Mongolia, these WTO Members are all engaged in negotiations on preferential agreements.

The motivations for regionalism are many. The possibility for co-operation at the multilateral level may be absent or attenuated. Governments may wish to go further, faster and at lower cost than is feasible in a multilateral setting. Regional agreements can also be interpreted as a defensive necessity, to avoid exclusion, or as a means of increasing bargaining power in a broader setting. Politically, preferential trade arrangements can help to consolidate regional security and tie in commitments that are more fragile if they need only be answered to in a national context. And of course, protectionist motives can also drive pressure for regional arrangements.

An attraction of RTAs is that by providing tariff preferences or duty-free treatment to goods originating from its members, more trade is created among them. But the available data do not provide strong empirical evidence that many RTAs expand trade among members any faster than trade taking place outside preferential arrangements. Some of the reasons for this are that, in the case of developed countries, MFN duties on many products are already at zero. Traders may choose to forgo preferential treatment because the costs of satisfying the requisite rules of origin might be higher than the advantage offered by the preferential margin. RTAs also often exempt the most sensitive sectors, which enjoy the highest protection, from significant liberalization.

Regionalism can serve as a catalyst for further liberalization at the multilateral level. But the increasing number of regional agreements may also represent a threat to multilateral liberalization. A multiplicity of regional agreements will almost certainly engender a degree of trade diversion, and the application of numerous rules of origin and differing standards will make international trade more complex and costly. The growing number of overlapping bilateral and plurilateral agreements risks undermining the transparency of trading rules, thus posing a threat to some of the fundamental principles of the WTO. Regional trading arrangements may create vested interests determined to avoid any dilution of preferential margins implied by multilateral trade liberalization. Finally, increasing regionalism will tend to distract attention and energy from multilateral negotiations.

Two ground rules of policy behaviour could help to consolidate and build upon the benefits of regionalism and promote a more effective multilateral trading system. The first rule would be to refrain from engaging in regional commitments (on issues covered within the mandate of the WTO) which governments would be unwilling, sooner or later, to extend to a multilateral setting. The second would be to consolidate the first rule by agreeing to a consultative system that would map and monitor the timing and conditions attached to the non-discriminatory, multilateral application of commitments made in regional arrangements. Such arrangements might provide a more effective link between regionalism and multilateralism than exists today.

2. THE CONTRIBUTION OF THE DOHA DEVELOPMENT AGENDA TO THE DEVELOPMENT PROCESS

Meeting the challenges of development requires additional resources and better use of existing ones.

Development is a process in which people through their work, investment and trade are able to secure basic needs, education, health, a comfortable standard of living and freedom for themselves and future generations. Attaining these objectives requires considerable economic resources, and economic growth is therefore a necessary condition for development, particularly in least-developed and other low-income countries. The relationship between economic growth and development is reflected in a strong, although not perfect, correlation between income and human development measured by indicators of health and education.

Openness can help on both accounts,...

Over time the international community has learnt from experience that severe impediments to international trade are detrimental to economic growth. The general picture is that open, export-oriented countries have succeeded in their development efforts, while heavily protected and inward-looking countries have not. There is a clear positive correlation between openness and income and there is little evidence that the countries that have protected infant or so-called dynamic sectors have done better than more open, export-oriented economies. It is important to bear in mind that international trade is about countries complementing each other through specialization and the exchange of goods and services, thereby creating a bigger pie. Trade is not about competing for slices of a pie with a pre-determined size. All countries have comparative advantage.

...creating a conducive climate for investment,...

An open economy that specializes in its areas of comparative advantage can make investments more effective and at the same time create incentives for additional investment, generally leading to a faster rate of growth than can be achieved in less open economies.

...exchanging ideas,...

Consumers of imported products can expose producers in developing countries to quality requirements and expectations about delivery reliability, which provide incentives for cost efficiency and for upgrading technology in line with market requirements. Furthermore, foreign firms sourcing inputs from developing countries often help their suppliers deliver high quality services and intermediate products in a timely and reliable manner.

Rapid adoption of technology, which is developed in rich countries and embodied in machinery and equipment imported by developing countries, is more likely when such goods face low trade barriers in importing countries. Trade data suggest that a relatively large amount of knowledge flows to developing countries through trade and there is considerable potential for higher flows of technology, particularly to Africa and LDCs. Embodied technology is often complementary to disembodied technology such as organizational and managerial innovations. Openness to trade in services helps transfer such disembodied technology.

...and improving the quality of institutions.

Trade and foreign direct investment require that traders are confident, contracts will be enforced, payments will be made and property rights to tangible and intangible assets are well defined. Countries with a better track record in such matters are therefore likely to trade more. On the other hand, openness may also have a positive effect on the quality of institutions. Lower trade barriers may, for example, increase the incentives for individuals and governments to improve the formal and informal rules governing commercial interactions in order to induce more trade. Trade in itself can increase the knowledge and understanding of foreign institutions and potentially lead to institutional reform. Empirical research confirms two-way causality, with institutional quality having a positive effect on openness and openness having a positive impact on institutional quality.

Countries that have better institutions grow faster, which suggests that trade can also have an indirect effect on incomes by improving institutional quality.

The poor can benefit from trade liberalization.

There appears to be a popular perception that globalization has widened income gaps both within and among countries. Yet empirical evidence shows that rapid growth in China and India following trade liberalization has contributed to a narrowing global income gap when the gap is measured in a way that takes the size of populations into account.

In numerous developing countries income distribution has become more equal during periods of trade liberalization. Some, however, experienced increasing income inequality. Several reasons have been put forward for this phenomenon. Emphasis has been placed on the role of technological progress in recent decades, which often took place in parallel with trade liberalization. New technologies have arguably shifted labour demand away from low-skilled labour, thus exercising downward pressure on the income of lower-skilled, often low-income earners. Trade and foreign direct investment have played a role in transferring these technologies from industrialized to developing countries.

The impact of trade liberalization on income distribution in a particular country also depends on the pattern of protection before liberalization at home and abroad and on the country's comparative advantage. Because the poor in developing countries are often located in rural areas and employed in agriculture, how trade reform affects agriculture will critically affect its overall impact on poverty alleviation. It cannot be excluded that the relatively slow pace of trade liberalization in agriculture has been negative for the poor in certain developing countries.

In order to obtain a more complete picture of the effect of trade on poverty, one has to look at the combined effect of trade on growth and on income inequality. If the growth effect is strong enough, increased income inequality may well go hand in hand with poverty alleviation. Empirical evidence for some countries indeed confirms that trade liberalization was accompanied by significant reductions in absolute poverty even though income inequality increased at the same time.

Engagement in the multilateral trading system allows a country to increase the benefits of openness.

Given a willingness by countries to benefit from trade, four reasons are presented why international co-operation through binding commitments on market openness and trade rules will make a country better off. The first of these relates to the economic and political advantages of reciprocity, even in circumstances where developing countries do not give full reciprocity. A second reason for favouring co-operation involving participation in a system of binding international rights and obligations relates to transactions costs. Third, trade is likely to expand and be more profitable under conditions of certainty and security as to the terms of market access and the rules of trade – pre-commitment around a set of rules also diminishes the role of power and size in determining outcomes. Fourth, international commitments are a way of strengthening the hand of a government in the face of pressure from special interests.

The Doha Development Agenda provides an opportunity to solidify progress made in previous rounds and identify ways to address the needs of the growing WTO membership.

Since the GATT was signed in 1947, membership has increased from 23 to 146 Members of the WTO in April 2003. The majority of new Members are developing countries and more recently countries in transition. Managing growing diversity in economic characteristics, needs and priorities has been a growing challenge for the multilateral system. It has been acknowledged that the international community needs to help developing countries to strengthen their capacity to participate more fully in international trade and to participate in deliberations and make their voices heard. The Doha Development Agenda outlines a work programme for the implementation of these objectives, reaffirms the role of special and differential treatment in fostering development, and acknowledges the need for effective capacity building and technical assistance. It also outlines the development dimensions of market access, rules-related issues and dispute settlement.

The highest levels of protection in developed country markets are against products of export interest to developing countries,...

The average applied tariff on manufactured goods in developed countries is very low, and slightly more than half of world imports are traded duty free. Nevertheless, two of the sectors that are of greatest export interest to developing countries, agriculture and textiles and clothing, were insulated from multilateral trade negotiations until the Uruguay Round. Tariff rates are significantly higher in these sectors than the average for merchandise trade, and quotas in textiles and clothing will remain until 2005. Tariff peaks and tariff escalation are also more common in these sectors. Domestic support and export subsidies in agriculture further distort trade to the disadvantage of developing countries, particularly the least-developed countries. In the services sectors, the number of commitments is the lowest in Mode 4 – movement of natural persons – which is a Mode of great interest to developing countries.

...but these impediments are also pronounced in developing country markets, which impedes South-South trade.

A country's average applied and bound tariff rates, as well as the incidence of these rates above 15 per cent, are negatively related to per capita income. Furthermore, developing countries are no different from developed countries when it comes to protecting the industries of particular export interest to other developing countries. These characteristics of the tariff profile of WTO Members determine the landscape of negotiating positions and opportunities to enhance the participation of developing countries in the multilateral trading system.

Facilitating openness for development requires that concerns about special and differential treatment are addressed, with the aim of creating better opportunities for developing countries to engage in the multilateral trading system.

Many developing country interests and priorities are reflected in the issues of special and differential treatment, technical assistance and capacity building. In addition, certain areas of the Doha work programme of particular interest to developing countries include trade and the transfer of technology, trade, debt and finance, and small economies. Trade-related intellectual property issues of particular interest to developing countries are examined briefly from a development perspective, such as access to medicines as well as access to genetic resources and the protection of traditional knowledge.

Special and differential treatment (S&D) provisions are key to the search for balance, relevance and priority as Members seek to define the contribution of the Doha Agenda to development. Special and differential treatment is hardly a panacea, however, if it is interpreted merely as an effort to minimize commitments on the part of developing countries within the system. But just as efforts to accept as little as possible by way of commitments will offer scant contribution to development, so too will coercive WTO commitments de-linked from a properly articulated national economic interest. Special and differential treatment provisions should focus on policy design and timing questions, and on aligning contractual commitments in the WTO with development needs and priorities. If "one size does not fit all", how should differentiated needs be accommodated by appropriately differentiated provisions without imparting excessive discretion, either to those who have access to S&D or those who make those access decisions? One way of trying to ensure relevance is to design provisions that intrinsically define beneficiaries, through such means as thresholds or triggers.

Developing country engagement in the system can be made more effective through the efficient delivery of trade-related technical assistance and capacity building.

The Doha Declaration marked a new departure in the GATT/WTO approach to technical assistance and capacity building. Many ingredients go into effective technical assistance and capacity building, and the scope of the WTO's contribution is circumscribed by its functions and competence. The WTO's efforts are focused on human capital development. This essentially concerns the acquisition of knowledge about international trade and the trading system, combined with the technical skills to identify, articulate and defend national interests in the field of trade. Other agencies and governments provide similar support in this area. Some of them are also engaged in other aspects of assistance and capacity building, such as providing physical infrastructure and

support in other areas of economic policy. The joint provision of support makes coherence among agencies and governments involved essential for effectiveness.

Multilateral co-operation could be an avenue to ease the access to essential medicines for developing countries.

The HIV/AIDS pandemic and other diseases can be contained, but the required medicines are expensive and beyond the economic means of those countries that are most affected. Some developing countries have the capacity to produce generic versions of patented drugs. Many others are able to import such drugs, and the TRIPS Agreement allows them to do so under a compulsory licence. It also allows them to determine the grounds upon which such licences are granted. However, the TRIPS Agreement requires that compulsory licences are to be granted predominantly for the supply of the domestic market. The problem is, therefore, how to ensure that supplies of generic versions of essential patented medicines can be available to developing countries without local capacity to produce if they should wish to import under a compulsory licence. Members have come close to a positive solution to this problem, but the major point of disagreement is the scope of public health problems or diseases to be covered by the proposed solution.

While on this issue and some others developing countries focus on the flexibilities provided under the TRIPS Agreement, in other areas, such as the protection of genetic resources, traditional knowledge and folklore or the extension of geographical indications, many of them look to the potential gains of tighter multilateral disciplines and see the WTO as a possible forum for this purpose.

Managing openness requires the multilateral trading system to have clear rules, flexibility,....

Safeguards, anti-dumping measures and countervailing measures allow governments to restrict trade temporarily in response to unforeseen circumstances and unfair trade practices that would disrupt the domestic market. Developing countries are permitted to restrict trade for balance-of-payments reasons and in order to promote the establishment of a particular industry with a view to raising living standards. The availability of contingency protection measures may allow governments to go further in opening markets than they would in the absence of protection against unforeseen circumstances and unfair trade practices. Furthermore, the threat of such measures may discipline trading partners to abide by the rules. Nevertheless, contingent measures are costly if they go further than necessary to address the situation at hand and if they are poorly designed. There is a need to clarify and improve these rules and take into account the needs of developing countries during the Doha negotiations.

... effective enforcement of rules, and sanctions when rules are broken.

The WTO dispute settlement system has worked well. It is a measure of last resort, and about three quarters of the complaints raised do not proceed beyond consultations to the panel stage. However, using the dispute settlement mechanism involves considerable costs that some developing countries are not able to meet. The cost of preparing a case can be substantial, and retaliation of a small country against a larger one is not always attractive in cases where the latter chooses not to comply with a finding. Permitted retaliation involves suspension of concessions and that may hurt the winning party as much as the losing party, particularly when a developing country wins a dispute with a developed country. Improvements and clarifications of the existing system are on the Doha Agenda.

Success in lowering tariff and non-tariff barriers calls for consideration of 'beyond border' issues such as investment and competition policy.

Changing business practices and a more liberal trading system are combining to create a more competitive global economy and increasing the flows of foreign direct investment. In response to the challenge of ensuring an open and equitable trading environment, Members are exploring the extension of further multilateral disciplines in the fields of investment and competition. Both issues have been discussed within the multilateral system since the Havana Charter preceding the GATT and gained new prominence at the First WTO Ministerial Meeting in Singapore in 1996. Gains can accrue from liberalization of investment flows just as they can from the liberalization of trade flows. This suggests a clear case for international co-operation, so the questions for

Members concern the reach of rules (scope), the architecture of any agreement, the appropriate forum, and the opportunity cost of resources devoted to such efforts.

The case for co-ordination and co-operation on competition policy issues is clear, especially where there are policy spillovers, be they negative (export cartels) or positive (coherent and mutually supportive national regimes). Once again decisions on how to move forward turn on questions of scope, architecture, forum and opportunity costs.

I TRADE AND TRADE POLICY DEVELOPMENTS

A RECENT TRENDS

1. THE GLOBAL ECONOMIC SITUATION IN 2002 AND PROSPECTS FOR 2003

International trade rebounded in 2002 from its contraction in the preceding year, growing at about 2.5 per cent in volume terms, which was faster than the growth of global output. The rebound occurred despite the weakness of the global economic recovery, greatly reduced capital flows, major changes in exchange rates, increased restrictions on international trade transactions to mitigate risks from terrorism, and rising geopolitical tensions. Trade growth was strong in Asia and the transition economies, largely reflecting better economic performance in those regions. However trade was stagnant in Western Europe, and contracted in Latin America as a result of economic turmoil in a number of countries in the region. North America's imports recovered in line with stronger domestic demand, while exports continued to decrease in 2002.

The trade policy environment benefited from the momentum generated by the Doha Ministerial Conference and the start of WTO negotiations. An important step in support of the negotiations was taken when the US congress approved trade promotion authority for the US President after a lapse of eight years. While the US safeguard measures on steel contributed to a rise in international trade tensions, the case was referred to a WTO panel. However, the passage of the US farm bill and the continuing disagreement over the reform of the EU common agricultural policy (CAP) cast a shadow over the agricultural negotiations.

Regional trade arrangements continued to proliferate with agreements being negotiated or concluded by countries in all corners of the world. Even countries that had long avoided regional agreements began to move in this direction. Many countries seem to be taking the multilateral trading system for granted, while pursuing their commercial interests on a preferential basis in the belief that this will not jeopardize multilateral, non-discriminatory trade relations. But there is a danger that regionalism will distract trade policy makers' attention from multilateral negotiations precisely at the moment when energy and resources need to be marshalled to shepherd these negotiations to a successful conclusion. Developments in regional trade arrangements and their implications for the WTO are discussed in more detail in Section IB.3 of this Report.

The recovery in a number of commodity prices in 2002 provided an important lift to commodity exporting developing countries. But since prices of non-oil commodities have been falling for much of the last decade, the recovery still leaves prices at historically depressed levels. An important part of the development challenge for commodity exporters is to diversify their export structures. But given that this shift in production and export structures cannot be effected immediately, continuing reform in agricultural trade leading to fewer distortions would be of particular benefit in the short and medium term. Commodity price issues are taken up in Section IB.2 of the Report.

The strong expansion of developing Asia's trade augured well for the continued expansion of South-South trade. This is because developing Asia trades proportionally more with developing countries than other developing regions. Over the last decade, developing countries' economies have grown much faster than those of the developed and transition countries. The liberalization of the trade and investment regimes of a large number of developing countries has played a significant role in this expansion. Intra-developing country trade was the main beneficiary of the higher economic growth and more liberal trade regimes in the developing countries. As a result, the share of intra-developing country trade in world merchandise exports rose from 6.5 per cent to 10.7 per cent in 2001 representing a historic peak in the last 50 years. South-South trade trends are discussed in Section IB.1 of this Report.

The global economic recovery in 2002 turned out to be less sustained than expected at the beginning of the year. The momentum of the output expansion remained moderate in the first three quarters and faltered in the last quarter of 2002 in the major industrial economies. The most prominent explanations, often interrelated, for the retardation in the global economic recovery included erosion of trust in institutional pillars such as public and corporate governance, weakening consumer and investor confidence and rising geopolitical risks.

The weakness of fixed investment expenditure – particularly pronounced for non-residential investment – contributed significantly to sluggish overall growth in the industrial countries. Investment expenditures play a critical role in the business cycle. Last year, they failed to sustain the recovery once inventory levels had been re-established. Investment activity generally picks up when prospects for profitable investment opportunities increase and the utilization of existing production capacities reaches a level that calls for a further increase of these capacities. In the first half of 2002, capacity utilization rates in the manufacturing sector of the industrial economies were still too low to warrant large scale capital expenditures. Perhaps even more important was the deterioration in business confidence as a result of growing appreciation of the poor profit prospects of large segments of the economy in addition to the IT sector or the internet economy. Confidence and credibility were further dented by the discovery of serious accounting irregularities in the financial statements of companies which had been used to inflate business expectations and reported profits. These irregularities, combined with doubtful practices by management in the mergers and acquisitions boom of the preceding years, shattered the trust in corporate governance and led to a flight out of stocks into investments considered to be safer – thereby aggravating further the downturn in stock markets. Falling stock values increased the strains on financial intermediaries, such as banks and insurance companies.

Consumer confidence in the major industrial economies improved only temporarily in the first quarter of 2002 and declined or stagnated thereafter. Marginal employment gains in some countries and rising unemployment rates in others led to only moderate increases in wage incomes and depressed private consumption expenditure. In some countries this led to an increase in precautionary savings.[1] The deterioration in the labour markets of industrial economies with rapidly aging populations rendered their already fragile social security systems even more precarious. The general public is increasingly aware that profound adjustments are needed to restore financial sustainability to social security systems and that these adjustments can have a significant impact on future contributions and benefits. The clouded prospects of social security, and in particular pensions systems, contributed to the erosion of consumer confidence and exerted a negative impact on private consumption expenditure. Consumer confidence was also negatively affected by the wealth effect of continuing falls in stock prices, although in some countries (e.g. the United States and the United Kingdom) this was compensated for by rising house prices.

Government expenditure was the most dynamic component of domestic demand for the second year in a row in the developed countries stimulated by anti-cyclical budgetary policies. Despite supportive fiscal and monetary policies, the recovery of domestic demand remained moderate in the developed world.

The sluggish economic performance of the EU(15) and Japan proved a major drag on global recovery. Domestic demand shrank or continued to stagnate in 2002. US domestic demand, however, expanded by 2.5 per cent despite a further contraction of US fixed investment. Among the large industrial economies, only Canada and Australia stood out with strong GDP growth in 2002 (both in excess of 3 per cent).

In marked contrast to the industrial economies, the recovery in the advanced developing economies in Asia was strong. With the two most populous countries in the world – China and India – growing very rapidly, the gains in output experienced by developing Asia exceeded that of all other regions.

[1] In the United States the personal savings ratio recovered from its record low of 2.3 per cent in 2001 to 3.7 per cent in 2002.

Economic growth in the transition economies in 2002 was second only to developing Asia and continued to exceed the global average. Nevertheless, there was a deceleration in the region's economic growth, which can be largely attributed to developments in the Russian economy. Economic growth in Africa and the Middle East remained roughly unchanged in 2002, at about 3 per cent. The moderate gains in regional per capita incomes are unlikely to have a significant impact on poverty levels in the region and one should not lose sight of the large variations in the economic performance of individual African countries. Latin America was the weakest part of the global economy in 2002, recording a decline in output and a steep contraction in imports. Unsustainable, large public sector debt, political instability, sizeable external account imbalances and a reduction in private sector net-capital inflows have contributed to severe slumps in output in a number of South American countries.

During the course of 2002, the US dollar depreciated against major currencies like the euro and the yen. However, this did not seem to have materially affected the US trade deficit, nor current account surpluses being accumulated by the euro zone countries, Japan and developing Asia. In the case of Latin America, though, the steep decline in the nominal and effective exchange rates of several crisis countries may have contributed to the sharp reduction of the region's current account deficit.

Total foreign direct investment (FDI) flows fell by about one quarter in 2002, to roughly $500 billion, with both developed and developing regions suffering sharp reductions. Only China and Central/Eastern Europe attracted larger FDI inflows than in the preceding year. Given the strong correlation between FDI flows and current and future trade flows, this development contributed to the weakness in trade growth in regions other than China and Central/Eastern Europe.

The threat of terrorism has led many governments and companies to take various measures to enhance security and to limit the risks of future terrorist attacks. Some of these measures have resulted in restrictions on the movement of persons and goods. The cost not only involves the direct expenditures for these security measures which governments and companies must put in place, but the indirect impact on trade in the form of more cumbersome procedures and delays. The increase in geopolitical risks and tensions have also taken their toll on international trade through the recent run-up in oil prices in the course of 2002. Heightened concerns about the security of oil supplies have lifted oil prices by about one third, reaching their highest level for 13 years in early 2003. The increased number of security measures, higher oil prices and the heightened perception of international uncertainty has had a large negative impact on air transportation and long-distance travel.

In March 2002, the United States imposed temporary safeguard measures on imports of key steel products. There was initially some apprehension about a tit-for-tat response from other trade partners. Although a number of countries (e.g. EU, China, Hungary) also imposed safeguard measures on imports of various steel products, the general level of restraint shown, the efforts of the United States to mitigate the effects of the measures on some trading partners, and the establishment of a WTO dispute settlement panel to hear the case, alleviated fears of retaliatory trade actions.

Global economic activity was strengthened by developments in China and the transition economies. The maintenance of stability combined with substantial market reforms culminating in China's accession to the WTO have contributed to the exceptional output and trade growth recorded by China in the 1990s. One factor contributing to this outstanding performance was the high level of FDI inflows driven by the relocation of labour-intensive manufacturing sectors from Japan and other advanced economies in Asia into China's coastal areas. WTO membership has supported these FDI inflows, combining increased access to Chinese consumers with an easing of restrictions on foreign investment.

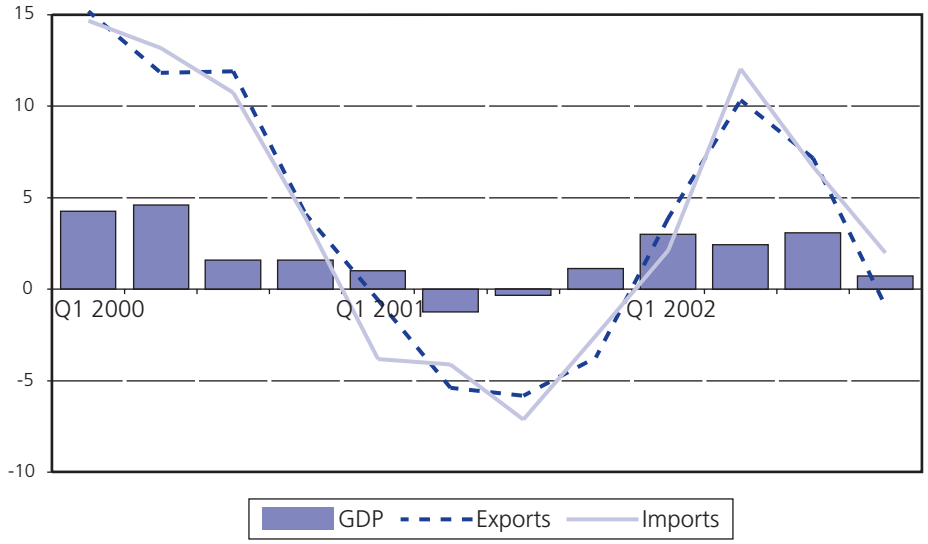
As a consequence of these developments, China's role in international trade has been further enhanced, with its trade expansion last year accounting for more than one-fifth of the increase in world merchandise exports (and imports). China has not only become a major supplier but also a prominent market for many countries.[2] Having overtaken the United Kingdom in 2002, China now ranks as the world's fifth largest merchandise trader. Concerns sometimes expressed about the effects on other economies of China's dynamism as an exporter should be tempered by the realization that Chinese import demand is also growing at a remarkable pace.

(a) Prospects for 2003

Considerable uncertainty clouds trade growth prospects for 2003. The expectations of a war in Iraq caused a sharp increase of oil prices in the first quarter of 2003 and had a detrimental effect on business confidence and global stock markets. Oil prices started to weaken in the second half of April but remained above the preceding year's level. Information on economic activity in the industrial countries in the first months of 2003 has led to a marked downward revision of output growth in 2003, in particular for Western Europe. As Western Europe accounts for more than 40 per cent of world merchandise and commercial services trade, global trade will suffer accordingly. The outbreak of Severe Acute Respiratory Syndrome (SARS) and the possibility of its continued spread will affect economic growth in developing Asia, which was one of the motors of the global trade expansion in 2002.

The slowdown in economic expansion in the industrial economies in the last quarter of 2002, continued sluggishness of business and consumer confidence in the first months of 2003 (reflected also in weak stock markets), together with the higher oil prices, call for a downgrading of the economic projections made in late 2002. Predictions then were for a moderate acceleration in global output growth and a significant rise in global trade on a year to year basis. In the light of the recent exchange rate developments – in particular the strong appreciation of the euro and yen vis-à-vis the US dollar – growth projections need to be lowered for the EU and Japan and increased for the United States, thereby increasing further the projected gap in output growth among these economies.

Chart IA.1
Expansion of trade and output of OECD countries slows in fourth quarter 2002
(Percentage change on a quarter to quarter basis)



Source: OECD, Olisnet

[2] For eight developing countries China was the principal export market in 2001 and for five other economies, the second largest market.

Global trade flows are projected to expand by 3 per cent or less in 2003. In the last quarter of 2002, trade expanded only marginally from the third quarter (see Chart IA.1). On the assumption that trade will stagnate during the first months of 2003 and pick up at a moderate rate thereafter – as economic activity strengthens on a world-wide basis – the year-to-year expansion of trade would be a disappointing rate of 3 per cent or less. Trade growth in 2003 would thereby be markedly lower than the average growth rate recorded in the 1990s.

This bleak short-term outlook for the world economy and world trade in particular calls for government policies which strengthen business and consumer confidence and which refrain from the introduction of trade restrictive measures. The forthcoming Ministerial Meeting in Cancún provides an opportunity to make progress in the current round of trade negotiations. Such progress would represent an important signal that governments are able to come together to conclude mutually beneficial agreements, boosting confidence in the world economy and strengthening the foundations of the multilateral trading system.

(b) The economic background

The global economic recovery was uneven in 2002 and lost steam in the second half, limiting full-year growth to only 1.5 per cent. The main driving forces in global economic activity in 2002 were the recovery in domestic demand in the United States and the advanced economies in East Asia. The expansion of world GDP was also sustained by both China and the transition economies which continued to record much faster economic growth than the world economy. In sharp contrast, Japan and Western Europe continued to experience stagnant or declining domestic demand growth, and Latin America's economy plunged into a recession largely brought about by the crises in Argentina and Venezuela. The per capita income in the region declined for the second consecutive year.

In the industrial countries, the main expenditure categories of GDP differed markedly in behaviour during the cyclical slowdown and recovery. The run down in inventories and their replenishment in 2002 was the most outstanding factor in last year's cyclical recovery. Inventory changes in the OECD reduced GDP growth by 0.8 per cent in 2001, but added 0.2 per cent to GDP growth in 2002. In the United States, public consumption expanded by 3 per cent and was also the fastest growing component of demand in the industrial countries. Private consumption in the OECD area rose by 2 per cent in 2002 as the acceleration of consumer demand in the US was balanced by the slowdown in both Japan and Western Europe. A major element in the weakness of the recovery was the continuing contraction of non-residential investment, which was even more pronounced last year than in 2001. The recent decline in non-residential investment was also much more marked than the last downturn in the early 1990s, which can be attributed to the steeper contraction in the United States. Residential investment, however, recovered in the OECD, in particular in North America and the European Union.

The sluggishness of economic activity and widespread excess capacity in the manufacturing sector contributed to a further decline in inflation rates.[3] Inflation decreased slightly in Western Europe, North America and Asia. While consumer prices in the transition countries receded markedly, from what were sometimes double digit rates, they increased in South and Central America under the impact of currency devaluations. As global economic growth lagged behind both productivity and labour force growth, unemployment and underemployment worsened in most regions. Recorded unemployment rates rose in North America, Western Europe and Japan. In the latter country, the unemployment rate reached a historic record level of 5.5 per cent in 2002, more than twice the level reported in the early 1990s. In Latin America, the steep decline in output has led to a sharply worsened employment situation. According to CEPAL (Comisión Económica para América Latina y el Caribe), the average urban unemployment rate in the region increased to 9.1 per cent, the highest rate observed in the 1990s.[4]

[3] In mid-2002, capacity utilisation rates in the manufacturing sector in the US, Japan and the euro zone were still well below the average utilization rates recorded on average in the 1990s.

[4] UNECLAC (2003).

Marked differences in domestic demand growth between the United States, developing Asia and the transition economies on the one hand, and Japan, Western Europe and Latin America on the other, contributed to major shifts in trade and current account balances. Japan and Western Europe recorded an expansion in net exports. Consequently, the trade and current account surpluses of Japan and the EU widened with increases equivalent to 1 per cent and 0.7 per cent of GDP respectively. Under the impact of sharply lower capital inflows, Latin America had to cut its imports, which led to a trade surplus and reduced the region's current account deficit. The US current account deficit widened to more than $500 billion or 5 per cent of GDP, which was a historic peak in absolute and relative terms. Given that the aggregate deficit for the OECD area remained almost unchanged in relative terms in 2002, this implied that the level of net imports from developing areas also stayed unchanged. Developing Asia again recorded a substantial current account surplus. Japan, the four advanced developing Asian economies (Hong Kong, China; Korea, Rep. of; Singapore; Chinese Taipei) and China all reported large current account surpluses, indicating that these economies have become the principal suppliers of capital to the rest of the world.[5]

International capital flows had risen throughout the 1990s and peaked in 2000. Since then there has been a drastic contraction. This can be illustrated by the pronounced rise and fall in FDI. Total FDI flows surged from about $200 billion in the early 1990s to almost $1.2 trillion in 2000. In 2001, the value of these flows collapsed by about 50 per cent, and in 2002, by another 25 per cent, falling back to about $500 billion, a level first reached five years ago. Both developed and developing regions have been affected by the reduction in FDI flows. Only FDI inflows to China and to Central/Eastern Europe continued to increase. China's FDI inflows rose by 19 per cent, to $ 52.7 billion, and those to Central/Eastern Europe increased by 9 per cent, to $30 billion.[6] The sharp decline in nominal terms of global FDI flows can be attributed to the end of the frenzied boom of mergers and acquisitions and the lower market values of corporations listed on global stock markets. Between the end of 2000 and the end of 2002, the valuation of global stock markets decreased by about 40 per cent, which automatically lowers the transaction value of FDI flows for buying corporations listed on equity markets.[7]

In the course of 2002, the real effective exchange rate of the US dollar depreciated while those of the euro and yen appreciated. In the medium term, the depreciation of the US dollar, after its rise of nearly 20 per cent between 1995 and 2001, could contribute to arresting the steady increase in the US trade deficit. For the euro zone and Japan, however, the net contribution of foreign demand to GDP will decrease if real effective exchange rates remain at the level attained at the end of 2002 and the beginning of 2003. A number of countries in Central/Eastern Europe who are in the process of accession to the EU as well as some economies in developing Asia also felt upward pressure in their exchange rates with respect to the US dollar. The nominal and effective exchange rates of several countries in Latin America affected by the financial crisis in 2002 decreased sharply thereby helping to reduce the region's current account deficit. One aspect of the dollar decline vis-à-vis the currency of major traders is the "inflationary" impact on world trade prices measured in dollar terms. Although intra-EU trade stagnated in 2002 in euro terms, it recorded an increase of nearly 5 per cent measured in dollar terms. The overall impact of exchange rate developments on trade values in 2002 contrasts with the tendency prevailing between 1995 and 2001, when the dollar's appreciation had the impact of "deflating" world trade prices measured in dollar terms.

For the first time since 1995, the dollar prices of internationally traded agricultural and manufactured goods showed an annual increase. Oil prices recovered from their trough in early 2002, with annual average prices for 2002 marginally exceeding those of the preceding year. Prices for metals continued to decline, particularly for aluminium, the most heavily traded metal. The recovery in food prices was the net outcome of higher prices for all types of cereals, soybeans and vegetable oils, which outweighed the price reductions in meat,

5 The foreign exchange reserves of the five Asian developing economies increased by about $50, while Japan's international reserves increased by $30 billion in 2002.

6 The Vienna Institute for International Economic Studies, press release, February 2003: FDI in CEECs in 2002: Record Inflow Concentrated in a Handful of Countries. At http://wiiw.ac.at.

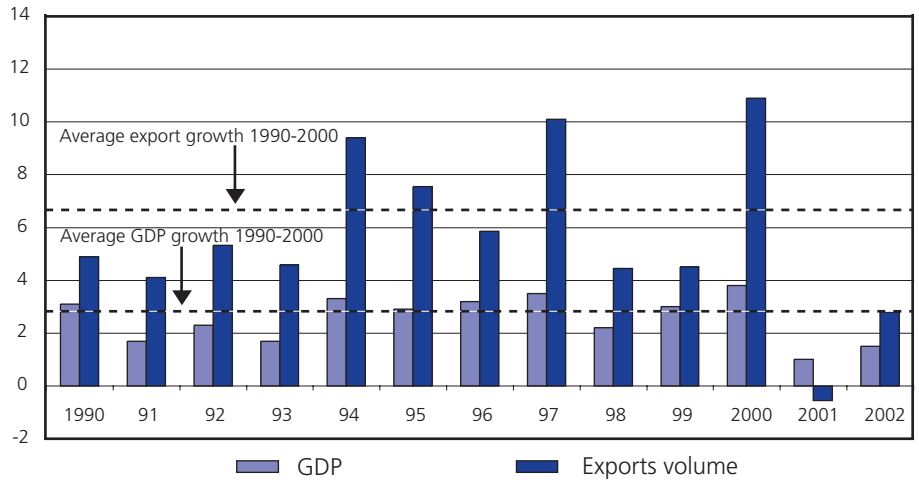
7 Estimates based on the average decrease of four major stock market indices: NYSE-Composite, FTSE 100, Frankfurt DAX and Tokyo Topix. Source: World Federation of Exchanges at http://www.world-exchanges.org.

seafood, sugar and tropical fruits. Prices for cereals, in particular wheat, rose as droughts in four of the five traditional exporting regions caused a decline in production for the second year in a row.

Given the steady recovery of prices for fuels and non-fuel commodities in the course of the year, the price levels attained in the fourth quarter of 2002 exceed those of the corresponding quarter in 2001 by 30 per cent and 12 per cent respectively. However, the annual averages for 2002 remained almost unchanged from those in 2001.

The price increase for manufactured goods can be largely attributed to European price developments as the export and import prices for manufactured goods of the United States and Japan continued to decrease in 2002. Among manufactured goods, prices of iron and steel products and automotive products recorded above average increases, while those for office and telecom equipment decreased further. Prices for internationally traded chemicals and clothing showed only marginal increases.

Chart IA.2
Merchandise trade recovers more strongly than output in 2002
(Annual percentage change)



Source: WTO, International Trade Statistics.

The pick up in global economic activity went together with a rebound of international trade flows. Based on preliminary estimates, world merchandise exports rose in volume terms by 2.5 per cent in 2002 after the contraction in the preceding year. Although global trade recovered faster than output, the expansion was less than half the average rate recorded in the 1990s (see Chart IA.2). The annual average growth rates conceal the steep decrease of global trade in the course of 2001 and its rapid recovery between the last quarter of 2001 and the third quarter of 2002. In the fourth quarter of 2002, there was a notable flattening of trade growth for both the United States and Western Europe.

A major element in the more subdued expansion of trade in the last quarter of 2002 was the continued sluggishness of investment in the major developed markets and in Latin America. The continued contraction of new investment in machinery and equipment in 2002 can be linked to low capacity utilisation rates in the manufacturing sector, and in particular, in information technology and telecommunication equipment. Worldwide expenditures on electronic equipment, IT hardware and semi-conductor plants continued to shrink worldwide.[8] The repercussions of the decline of investment expenditure on trade flows can be illustrated by

[8] According to industry sources, global sales of electronics equipment and IT hardware decreased by about 5 per cent while sales of semi-conductor plant equipment decreased by more than 20 per cent in 2002.

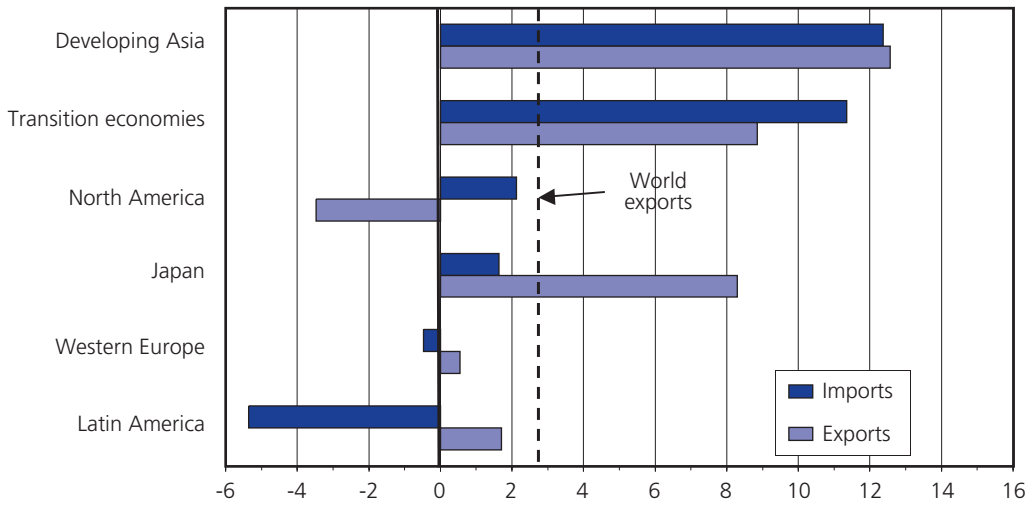
[9] US Department of Commerce, Commerce News FT-900-12, Exhibit 11, p. 16.

the continuing decline in the volume of US imports of capital goods in 2002, while US imports of all other products recovered by 6 per cent.[9]

Largely due to sluggish investment expenditures, trade expansion (average of exports plus imports) in both North America and the Western Europe lagged behind their GDP growth. In Asia and the transition economies, however, trade expanded at least two times faster than output, which was in each case well above the global average. The strength of these regions' trade growth, which was around 10 per cent in 2002, stemmed largely from the vigorous expansion of domestic or intra-regional demand. The performance of these two regions explains why global trade expanded faster than output in 2002. In contrast, Latin America's output decline caused a contraction of its imports by 5.5 per cent, while exports continued to grow despite shrinking intra-regional trade because of the expansion of trade with countries outside the region. On the whole, both trade and output declined in Latin America, with trade decreasing more than output.

An important element in the global trade recovery of last year was North American, and in particular, US import growth. United States merchandise imports account for one-fifth of world trade and expanded by 3 per cent in volume terms, which was faster than the global trade expansion. Relatively buoyant private and public consumption growth continued to stoke US import demand. Developing Asia and the transition economies, which were the regions with the highest GDP growth, also contributed strongly to the growth in imports. Developing Asia's imports rebounded by 12.5 per cent following a contraction in the preceding year (see Chart IA.3). Two factors can be singled out for this dramatic reversal. First, the surge of FDI inflows in the aftermath of China's accession to the WTO resulted in a jump in China's real imports by nearly a quarter. Second, was the recovery of imports in the developing East Asian IT traders of nearly 9 per cent (after a decline of 8.5 per cent in the preceding year). As regards the transition economies, most of the strength was contributed by Russian demand, although import growth was broad-based, with more than half of all transition economies experiencing double digit growth.

Chart IA.3
Large variations in trade volume growth by region in 2002
(Annual percentage change)



Source: WTO

The recovery of global trade was retarded by the stagnation of Western Europe's imports and a contraction of Latin America's imports. Among the West European countries, imports shrank or stagnated in France, Germany and Switzerland while Belgium and Denmark recorded a relatively vigorous import expansion. A reduction of net capital inflows into Latin America forced the region to cut back its current account deficit. This was achieved primarily by a fall in imports in the order of 4 per cent and a rise in extra-regional exports.

(c) Price and exchange rate changes contribute to the increase in global trade values

The recovery in the volume of trade combined with a moderate increase in prices of internationally traded goods resulted in a rise in the value of world trade. Merchandise and commercial services exports rose by 4 and 5 per cent respectively in 2002. However, these rates of nominal trade expansion remained below the average recorded in the 1990s (see Table IA.1). For merchandise trade, the expansion in 2002 offset the decrease reported in the preceding year, while commercial services trade reached a new peak level. For world merchandise exports, available data point to an above average rise in the exports of manufactured goods and a below average increase for both mining and agricultural products. Among the categories of commercial services, exports in the largest category – other commercial services – expanded significantly faster than those of travel and transportation services.

Table IA.1
World exports of merchandise and commercial services, 1990-2002
(Billion dollars and percentage)

	Value	Annual percentage change				
	2002	1990-2000	1999	2000	2001	2002
Merchandise	6240	6	4	13	-4	4
Commercial services	1540	7	3	6	-1	5

Source: WTO

As inflation and exchange rates evolved quite differently by region, developments in nominal merchandise trade differed from those in volume terms. This is most evident in the case of Western Europe, whose exports in volume terms stagnated at 0.6 per cent while its exports in value terms increased by 5.5 per cent. The difference can be attributed almost entirely to the 5 per cent depreciation of the dollar against the euro and other western European currencies. Asia and the transition economies had the strongest export value growth of all regions, followed by Western Europe. North America reported the largest export contraction among regions, while imports recovered by 1.5 per cent. The double digit import growth of the transition economies contrasts with the contraction in Latin American imports of 6.5 per cent, the worst of all regions. Latin America's exports rose moderately despite a steep contraction in intra-regional trade, which was balanced by a rise of shipments to other areas. Africa's exports and imports achieved small positive gains. Middle East exports are estimated to have decreased further in 2002, although at a lower rate than in 2001. As the region's imports continued to grow, the large trade surplus of the Middle East eroded somewhat.

2. TRADE AND TRADE POLICY DEVELOPMENTS BY REGION

A notable feature of North America's trade in 2002 was the poor performance of its merchandise exports, which decreased by 4 per cent (see Table IA.2). A major reason for this was reduced demand from some of its key trading partners because their economies were either hardly growing, such as Western Europe and Japan, or in outright contraction, as in Latin America. Despite the recent depreciation of the dollar, lack of price competitiveness might have also played a major role as US exports decreased even to those regions whose imports grew strongly. Exports from the United States lost market share not only in developing Asia, the transition economies, Western Europe and NAFTA, but also in the developing economies of Latin America, the Middle East and Africa. However, imports continued to grow, driven by consumer spending and

an increasingly expansionary fiscal stance. Consumer spending, particularly on durables, remained healthy because of low inflation, strength in the US housing market, which partly offset stock market losses, and tax relief.[10] The federal budget deficit rose to $158 billion in fiscal year 2002, which is about 1.5 per cent of GDP. The widening deficit was due to the slowdown in economic growth, increased expenditures on homeland security and the tax cut of 2001. North America's export and import prices decreased slightly in 2002 and contributed to sluggish growth in merchandise trade in value terms. On the other hand, commercial services trade recorded a better performance, as exports rose by 3 per cent and imports by 11 per cent (see Table IA.3).[11] Once again, there were big differences in the performance of the three major services sectors. While travel and transportation services shrank, other services saw double-digit import and export growth.

Table IA.2
Growth in the value of merchandise trade by region, 1990-2002
(Billion dollars and percentage)

	Exports				Imports			
	Value	Annual percentage change			Value	Annual percentage change		
	2002	1990-2000	2001	2002	2002	1990-2000	2001	2002
World	**6240**	**6**	**-4**	**4**	**6500**	**6**	**-4**	**3**
North America	946	7	-7	-4	1431	9	-6	2
United States	694	7	-7	-5	1202	9	-6	2
Latin America	351	9	-3	1	355	12	-2	-7
Mexico	161	15	-5	1	176	15	-4	0
MERCOSUR	88	6	4	1	62	12	-6	-26
Other Latin America	102	6	-7	0	116	7	3	-3
Western Europe	2648	4	0	5	2644	4	-2	4
European Union (15)	2441	4	0	5	2438	4	-2	3
Excl. intra-EU trade	939	5	1	6	931	5	-4	1
Intra-EU trade	1502	4	-1	5	1507	4	-1	5
Transition economies	309	10	5	8	297	8	11	10
Central/Eastern Europe	145	10	12	12	176	12	9	10
Russian Federation	107	-	-2	4	60	-	20	12
Africa	139	3	-6	1	133	3	2	1
Middle East	236	6	-7	-2	183	5	4	2
Asia	1610	8	-9	8	1457	8	-7	6
Japan	416	5	-16	3	336	5	-8	-4
Developing Asia	1114	11	-7	10	1033	9	-7	9
China	326	15	7	22	295	16	8	21
IT traders (6)[a]	618	10	-13	7	561	9	-13	6

[a] Chinese Taipei, the Rep. of Korea, Malaysia, Philippines, Singapore and Thailand.

Source: WTO

[10] The passage of the Economic Growth and Taxpayer Relief Reconciliation Act of 2001 (EGTRRA) was estimated to have resulted in a reduction of $78 billion in federal tax liabilities in 2002.

[11] Most of this increase is linked to the rise in US imports of insurances services which recovered from the fallout of insurance payments linked to the damage caused by the terrorist attacks of 11 September 2001.

Intra-North American trade declined marginally while exports to crisis-ridden South America and stagnating Western European economies decreased at double-digit rates. Imports from these regions, however, increased slightly in 2002. Imports from Asia rose largely due to higher shipments from China. United States imports from China increased by 20 per cent, but decreased from Japan and the NICs(4). The steep decline of US exports to and imports from Japan, Hong Kong, China and Singapore point to structural shifts in US trade with Asian countries. For the first time, China replaced Japan as the principal Asian supplier of merchandise to the United States. Although US exports to China also rose rapidly, the bilateral trade deficit widened sharply and reached almost $103 billion, the largest with any country.

The imposition of emergency safeguard measures by the United States on specialty steel products may be expected to have reduced US steel imports, but precise estimates of these effects cannot yet be provided. However, the value of total iron and steel imports into the United States (including those not subject to restrictions) had already fallen by 22 per cent in 2001, followed by a further decrease of 2 per cent last year. As US import prices for iron and steel had risen on average by 1.5 per cent, the reduction in import volumes was greater than in import values.

Table IA.3
Growth in the value of commercial services trade by region, 1990-2002
(Billion dollars and percentage)

	Exports				Imports			
	Value	Annual percentage change			Value	Annual percentage change		
	2002	1990-2000	2001	2002	2002	1990-2000	2001	2002
World	**1540**	**7**	**-1**	**5**	**1520**	**6**	**-1**	**5**
North America	304	7	-4	3	260	7	-5	11
United States	268	7	-4	3	218	8	-5	13
Latin America	55	7	-2	-6	63	7	0	-12
Mexico	13	7	-7	0	16	5	-1	-1
MERCOSUR	13	8	-5	-13	19	10	-3	-26
Other Latin America	30	7	1	-5	28	7	3	-6
Western Europe	744	5	1	7	695	5	2	6
European Union (15)	673	5	2	8	651	6	3	6
Transition economies	58	...	7	8	63	...	11	12
Central/Eastern Europe	33	...	6	3	29	...	7	12
Russian Federation	12	...	10	18	21	...	12	13
Africa	29	5	1	-6	40	4	4	1
Middle East	32	9	-7	-4	47	4	-6	3
Asia	316	9	-1	5	354	7	-4	1
Japan	65	5	-7	2	105	3	-7	-2
Developing Asia	230	11	2	6	227	11	-1	2
China	37	18	9	13	44	24	9	13
Hong Kong, China	44	8	2	6	24	8	-1	-2
Korea, Rep. of	29	13	0	-1	34	13	0	2
Singapore	27	8	-2	3	21	10	-6	1

Source: WTO

Other US trade policy measures taken in 2002 are likely to have both short-term and long-term impacts on trade flows, but these are not always quantifiable. For the first time since 1994, Congress granted Trade Promotion Authority (TPA) to a US President. The granting of TPA in August 2002 was an important signal not only of US commitment but also its ability to advance WTO trade negotiations. But the US administration also approved the 2002 Farm Bill, which was to increase spending on US agriculture by $82.8 billion over a six-year period. United States agricultural exports decreased slightly in 2002 in value terms, although the decline in export volumes was larger given strengthening US prices. Imports of agricultural commodities rose by 6 per cent in both value and volume terms.

In 2002, the US developed further its preferential trade policy across many regions by the conclusion of free trade agreements (FTAs) with Chile and Jordan, the acceleration of the tariff elimination process among NAFTA members agreed to in early 2002, and the extension of the list of African countries benefiting from the African Growth and Opportunity Act (AGOA). As discussed below, in relation to other regions, many countries continued to divide their attention between multilateral and preferential trade negotiations (see also Section IB.3 in this Report).

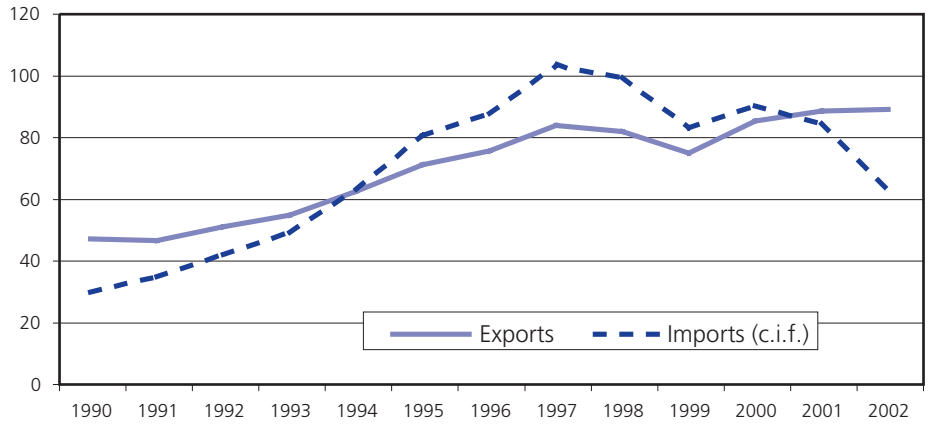
For the Latin American region, 2002 turned out to be one of the most difficult years since the debt crisis of the 1980s. Private net capital inflows to the region, which exceeded $60 billion in 1999 and 2000, had financed large current account deficits and supported economic activity, investment and imports. But given the loss in confidence by foreign investors in the sustainability of the economic policies of some major countries, there was a curtailment of net capital inflows into the region. This reduction had already begun in 2001, and there was a sharp fall again in 2002. Even FDI inflows, which had continued to enter in large volumes in 2001, contracted last year.[12] The reductions in inflows were first compensated by a reduction in foreign exchange reserves and eventually by devaluations ranging between 50 and 70 per cent in the most affected countries. Early in January 2002, Argentina decided to abandon the 10-year-old parity link between the Argentinian peso and the US dollar and devalued the peso by 30 per cent. This decision triggered a series of further devaluations in the region. Given that the level of many commodity prices remained low in 2002, this limited the export earnings of many countries in the region, while the huge contraction in economic activity significantly dampened imports.

The financial crisis in Argentina, the economic repercussions on its MERCOSUR neighbours, and the civil unrest in Venezuela were the major factors contributing to the contraction of Latin America's merchandise imports, by nearly 7 per cent in 2002. Argentina experienced a massive cut in imports (-55 per cent), which exceeded even the worst import contractions during the Asian financial crisis. The reduction in Latin America's imports was the largest of any of the seven major regions covered in this report and contrasts with its trade performance in the 1990s, when Latin America's imports and exports expanded much faster than the global average. Merchandise exports rose slightly as falling intra-regional trade was offset by rising exports to other regions (Chart 1A.4). For the first time since 1991, Latin America's merchandise trade balance (measured on a f.o.b.-f.o.b. basis) turned positive again. Commercial services imports are estimated to have decreased by more than 10 per cent in 2002. In contrast to merchandise exports, the region's exports of commercial services experienced a contraction of about 5 per cent.

MERCOSUR countries increased their overall exports by 1 per cent, as the dramatic contraction of intra-regional trade by more than one-third was offset by an increase in shipments to all other destinations of 8 per cent. Brazil, the country least dependent on intra-MERCOSUR trade, increased its total merchandise exports by 4 per cent. In 2000, intra-MERCOSUR trade had accounted for about one-fifth of both total exports and imports. But given the economic difficulties experienced by the region in the last few years, these shares have fallen quite precipitously. In the case of exports, the intra-MERCOSUR share has now been cut almost by half (from 20 to 11 per cent). And despite the quite substantial preferential margin (about 13 per cent on average) on imports originating in MERCOSUR countries, the share of intra-MERCOSUR imports has fallen back to levels last seen prior to 1995.

[12] A major exception to this regional development was the increase in FDI flows to Mexico.

Chart IA.4
Diverging developments in MERCOSUR merchandise trade in 2002
(Billion dollars)



Source: WTO

Latin America's merchandise exports increased slightly as the decline in intra-regional trade was balanced by increased shipments to other regions. The recovery of commodity prices in the course of the year and the upturn in the US economy contributed to this rise. While most Latin American countries saw a reduction or stagnation in their imports, those of Costa Rica increased by 9 per cent. Mexico benefited from the recovery of the US market while for Costa Rica, the recovery in semi-conductor shipments boosted both imports and exports. Despite the continuation of low prices for a number of primary commodities, exports of many Central American and Caribbean countries recovered strongly.

Economic activity in Western Europe remained subdued as Germany, the largest economy, experienced declining domestic demand. Domestic demand growth remained positive in the rest of the region, but was sluggish in several other countries. In the euro zone, public consumption was the most dynamic expenditure category while private consumption slowed down and fixed investment in the enterprise sector fell nearly 3 per cent. In the midst of this poor economic situation, further progress was made in the process of European integration.

At the beginning of the year, another major step in monetary integration was taken with the introduction of euro notes replacing ten national currency notes. (Box IA.1).

Box IA.1: Effects of the euro on trade and financial markets

The introduction of the euro in January 1999, followed by the elimination of national currencies in the euro area in 2002, is bound to have powerful effects on trade and financial flows.

The euro is now the second most widely used currency worldwide. Around 1 per cent of the official foreign exchange reserves of IMF member countries were denominated in euro at the end of 2001. About half of the euro area's external trade is denominated in the euro. Some one-fifth of global foreign exchange trade involves the euro. The share of euro-denominated international debt securities issued by non-residents has risen to 29 per cent (compared to 44 per cent for the dollar). Fifty countries include the euro in their exchange rate policies as an anchor or reference currency (although these countries only account for 4 per cent of global GDP).

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In theory, the introduction of the euro should be conducive to trade growth. Floating currencies create uncertainty that discourages international trade and investment. Once currencies are fixed, this uncertainty is eliminated. Moreover, if trading nations adopt a common currency, this will eliminate the transaction costs of currency exchange. One study estimates that belonging to a currency union or currency board can as much as triple trade among currency union members. Finally, trade in a common currency leads to trade creation while there is no evidence of trade diversion.[1]

The introduction of the euro can also have indirect effects on trade and financial flows arising from the impact of policies on macroeconomic stability and economic growth. These effects stem from the ability of the monetary authorities to control inflation within a common currency area, and thus the seignorage tax, as well as the level of interest rates.

The euro has facilitated the integration of financial markets in the euro area. Interest rates converged rapidly – typically to the level of German rates – well before the common currency was launched. There has been some consolidation of financial industries with the EU area through mergers and acquisitions as well as growth in the establishment of branches by other EU banks, although the changes have been relatively modest.[2] The introduction of the euro has also facilitated a switch in investment financing away from bank-intermediated credit to other sources of financing.[3]

Last year saw a significant weakening of the US dollar against major currencies. The euro moved from substantially below parity to the dollar (86 cents per euro) at the start of the year to $1.05 to the euro at the end of the year. The euro also strengthened by about 10 per cent against the yen, moving from 114.8 to 125.7 yen to the euro by the end of the year. On a trade-weighted basis, the euro appreciated by about 6.8 per cent during the year.[4] The reasons for a weaker dollar include a slower than expected economic recovery in the United States, loss of confidence as a result of a spate of corporate scandals, rising geopolitical tensions and a widening current account deficit towards the end of the year. A strengthening euro could reduce competitiveness of euro area exports and increase imports. However, this does not seem to have occurred as during the first 11 months of 2002, euro area exports rose by 2.1 per cent while imports declined by 4.1 per cent. These combined to create a substantial increase in the goods surplus (by 56.7 billion) compared to the level in 2001.[5] One explanation for this is that there may be lags in the way exchange rate changes affect trade flows.

1 Frankel and Rose (2001). For further evidence see Kenen (2002); Lopez-Cordova and Meissner (2000); and Micco, Stein and Ordonez (2002).

2 For more discussion see Baldwin and Wyplosz (2003). Downloadable at http://heiwww.unige.ch/~baldwin/THX, -R

3 Galati and Tsatsaronis (2001).

4 Based on data from the ECB Monthly Bulletin (February 2003). The 'narrow' nominal and real effective exchange rates of the euro are weighted averages of bilateral exchange rates with the dollar, yen, Swiss franc and the pound. The weights used are average 1995-97 manufactured goods trade weights of those countries with the euro area.

5 ECB Monthly Bulletin (February 2003).

Source: European Central Bank (2002).

In December 2002, the heads of 15 EU governments agreed with their counterparts from the 10 EU accession countries on the financial framework for their future membership. Following the signature of the accession treaties in April 2003, and depending on the pace of ratification of the treaties by the respective parliaments, the EU enlargement to 25 countries could be achieved by May 2004 (Box IA.2). Among other trade policy developments in 2002, the conclusion of free trade agreements with Jordan, South Africa and Mexico, and the start of Cotonou Economic Partnership Agreement negotiations should be highlighted.

Box IA.2: The enlargement of the European Union from 15 to 25

The key measures. At its meetings on 12-13 December 2002 in Copenhagen, the European Council formally closed negotiations with ten countries and approved their accession to the European Union. The ten countries are Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovak Republic, Hungary, Slovenia, Cyprus and Malta. The actual accession of the ten countries is scheduled to take place on 1 May 2004 provided that the 2003 schedule of conditions is respected (mainly ratifications).

Likely impact of the enlargement. As shown in the table below, the ten acceding countries will account for 15 per cent of the EU population and 19 per cent of the EU area. While significant, historically this is not the biggest enlargement of the EU. The expansion from six to nine EU members in 1973 was larger in terms of the population criterion. All previous accessions added more in terms of land area than the current accession. But by far the smallest contribution will be in the economic size of the market. The ten countries will only add 5 per cent to the EU's GDP, which reflects both the small size of most of the acceding countries as well as low income per capita.

Shares of the acceding countries in population, surface, GDP and exports of the enlarged EU (1973-2004)
(Percentage)

The Enlargement of the European Union	Date	Population	Surface	GDP	Exports
From Six to Nine	1973	25	22	20	21
From Nine to Twelve	1981-86	18	31	9	3
From Twelve to Fifteen	1995	6	27	7	9
From Fifteen to Twenty Five	2004	15	19	5	6

Sources: Revue Elargissement, Paris, MINEFI – DREE/Tresor, No. 37, p.2, and WTO Secretariat.

The enlargement is not expected to increase sharply the shares of trade between the EU(15) countries and the ten acceding countries. The main reason is that most of the trade re-orientation has already taken place under the umbrella of the Europe Agreements – extended free trade agreements – which preceded the enlargement. Under those agreements, the acceding countries have enjoyed virtually duty free access to the European market for industrial products since 1994 (fully free access since 1998). The share of the EU in total imports of the ten prospective members remained constant at 58 per cent between 1995 and 2001. The share of acceding country exports going to the EU increased from 60 per cent to 68 per cent during the same period. The share of the new entrants in total EU trade remained very small and stable over this period, at between 4 per cent and 5 per cent.

Based on 2001 world trade values, enlargement will increase the share of intra-EU trade in the EU's total trade from nearly 62 per cent to 67 per cent, while the share of the EU in world merchandise exports (including intra-EU flows) will reach 41 per cent. The degree of integration of the acceding countries is also apparent from the sharp increase in FDI flows from the EU. The latter increased from 1.5 per cent of GDP of the acceding countries in 1996 to 3.2 per cent of GDP in 2000. The EU accounted for 80 per cent of acceding countries' FDI inflows in 2000.

Since the acceding countries will be adopting the common external tariff of the EC, other trade partners will be concerned with how their current market access to the ten countries will be affected. In adopting the *acquis communautaire*, Central and Eastern European countries are likely to increase average protection in agriculture and decrease it in industry and services. In contrast, the Balkan countries will decrease their

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average protection in all three sectors.[1] Given that all ten countries are also WTO Members, accession could result in improvements over existing WTO commitments in some areas but a deterioration in others. WTO Members who may be adversely affected will have the right to negotiate for compensation.

[1] Francois and Rombout (2001).

Given the depreciation by about 5 per cent of the US dollar vis-à-vis the euro, the pound and various other European currencies, Western European trade performance measured in dollar terms concealed the stagnation in volume terms. Western Europe's merchandise exports in dollar terms increased by 5.5 per cent, while the expansion of imports was limited to 3.5 per cent. EU imports from third countries languished while intra-regional trade rose by 4.5 per cent. The most dynamic part of EU trade was exports to third countries which expanded by about 6 per cent. Among the other Western European countries, Switzerland's merchandise exports rose by 7 per cent, largely due to the appreciation of the Swiss franc. The stagnation of the Swiss economy left its imports unchanged from the preceding year. Turkey's imports recovered strongly in 2002, from a contraction in the preceding year, while exports continued to expand at double digit rates. Western Europe's commercial services exports, which account for nearly one half of world services trade, increased by nearly 8 per cent, somewhat faster than imports, with exchange rate changes accounting for most of this increase in dollar terms. Exports of transportation services experienced the weakest growth, while exports of other commercial services showed the most dynamic performance in 2002.

More than a decade after the fall of the Berlin Wall and the dissolution of the USSR, many transition economies are still struggling with their transformation from planned to market-oriented economies. The progress made in the transition has been uneven and despite numerous achievements, the reform process is still incomplete in particular in CIS economies. Six out of the 15 successor states of the former USSR have already joined the WTO. Armenia will be the seventh after its parliament signs its protocol of accession, which was agreed upon by WTO Members on 10 December 2002. The Baltic States and five Central East European countries concluded their accession negotiations with the EU in December 2002, thereby anchoring their economies to Western Europe. Over the last decade, trade and investment flows have already linked these economies in a substantial way to Western Europe. One of the outstanding features of the transition process has been the massive re-direction of trade flows from within the region to trade with countries outside the region, and in particular, to Western Europe. This shift in structure can be observed not only in the trade of Central/Eastern Europe or the Baltic States, but also in the CIS countries. Efforts to sustain intra-regional trade through various forms of RTAs have only had limited success so far.[13] Intra-CIS trade in 2002 was still at about the level reached in 1994, while extra-CIS exports nearly doubled between 1994 and 2002. Despite the relatively strong economic growth in the region, the share of intra-regional trade in CIS merchandise exports and imports declined to one third and one fifth respectively. Part of this further decline can be attributed to restrictive trade measures introduced by Russia on imports from Ukraine in mid-2001.

Merchandise trade of transition economies was sustained by strong domestic demand growth, above all in private consumption, and by rising FDI inflows into Central/Eastern Europe. The region's merchandise and commercial services imports rose at double-digit rates. Export growth was somewhat less dynamic than imports, but was still twice a fast as growth in world merchandise and commercial services trade.

Merchandise exports of the transition economies expanded by 8 per cent, reaching a new record level of $310 billion in 2002. Russia, the leading trader in the region, recorded merchandise export gains of 3.5 per cent, while 11 other transition economies recorded import growth in excess of 10 per cent. Preliminary data suggest that the transition economies' commercial services exports and imports both rose by about 8 and 12 per cent respectively in 2002.

[13] For a discussion of the various CIS intra-regional agreements, see UNECE (2003).

The preliminary data available on Africa's output and trade in 2002 do not indicate a reversal of past trends with respect to incomes or participation in world trade. Average per capita income levels changed little and Africa's trade growth lagged behind global trade expansion. Although various debt indicators improved and non-oil commodity prices recovered somewhat from their depressed levels in 2001, a broad-based expansion of output and trade has not yet occurred.

In 2002, Africa's merchandise and commercial services trade lagged behind the global trade expansion.[14] Merchandise exports and imports recorded only marginal gains. The African oil exporters saw a further decline in their exports (-3 per cent) and a fall in their imports in the order of 5 per cent to 10 per cent. South African exports and imports recovered by 2 per cent to 3 per cent from the preceding year's decline. Exports of the other non-oil exporting African countries were much stronger and expanded by about 6 per cent. A strong rebound in exports in 2002 from the preceding years' decline in a number of countries (including Morocco, Egypt, Côte d'Ivoire and Ghana) accounted for most of this strength in the export growth of non-oil exporters in Africa.[15] However, it is estimated that only six out of 53 African countries achieved a sustained expansion of their exports over the 1999-2002 period.[16] Africa's overall merchandise import growth was held back by import contraction in Nigeria and Egypt, the third and second largest merchandise importers in Africa in 2001. In at least 15 other African countries, however, there was double digit import growth.

Various initiatives have been undertaken to strengthen Africa's production and trade capacity. These include such mechanisms as debt cancellation (HIPC), improved regional cooperation (NEPAD, African Union), the Cotonou Agreement and various trade preference schemes. A recent example is the African Growth and Opportunity Act (AGOA) of the United States, which improves the access of African products to US markets. Although the largest part of US imports from Africa is accounted for by fuels, there are some indications that a number of non-oil exporting countries have experienced markedly higher shipments to the United States in 2002. While overall imports of the United States from Africa decreased by 20 per cent, imports from non-oil exporting countries which are full beneficiaries of AGOA preferences rose by 6 per cent. The strongest increases in shipments to the United States were reported by Kenya, Swaziland and Lesotho. Initiatives such as AGOA and the EU's Everything But Arms are new and therefore may need more time to mature. However, the available evidence suggests that they have not yet succeeded in bringing about sustained growth in trade to the beneficiary countries. This reflects in part the reality that various supply-side constraints are also key to Africa's growth and trade performance.

In 2002, the Middle East's trade and output growth was curbed by a fall in the region's oil production and growing political tensions. As fuels account for more than three quarters of the region's merchandise exports, a decline in oil output has immediate repercussions on export revenues. One notable feature of Middle East trade in recent years is the increased orientation of its exports to Asia, where more than one-half of the region's fuel exports are shipped.

Merchandise and commercial services trade of the Middle East lagged behind world trade growth in 2002. The region's merchandise exports are estimated to have decreased only slightly, despite lower exports from various large oil exporters in the region. This is due to a number of smaller traders who reported double-digit export growth. Given the rising tensions in the region, earnings from tourism suffered, leading to an overall decline in commercial exports of about 4 per cent. In Israel, both exports and imports continued to be at depressed levels.

Merchandise imports of the region increased only marginally. Stagnating import levels in two major countries (Saudi Arabia and Israel) contrasted with a double-digit increase in Iran's imports. The region's overall trade surplus was reduced somewhat, but was still large enough to offset the region's commercial services trade deficit, which widened in 2002.

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14 At the time of writing (in early March 2003) only four African countries have reported full-year data on their merchandise trade.

15 Sharp increases in the prices of cocoa and gold helped export recovery in Côte d'Ivoire and Ghana.

16 The six countries are Equatorial Guinea, Lesotho, Mozambique, Seychelles, Sierra Leone and Tanzania.

The rather moderate share of intra-regional trade (less than 8 per cent of merchandise exports) can be attributed partly to similarities in the production structures of the countries in the region. In order to strengthen the integration of the gulf economies, a planned customs union among the members of the Gulf Cooperation Council was advanced by two years, to 1 January 2003. Various free trade agreements with major partners outside the region are also being pursued. In the first half of 2002, Jordan concluded free trade agreements with the EU, the United States and EFTA.

In 2002, trade developments in Asia were shaped by the diverging growth paths between Japan, still Asia's largest economy, and China and India, the two most populous nations in the world. While Japanese domestic demand stagnated, China and India continued to grow rapidly. ASEAN countries and other East Asian economies also experienced stronger economic growth in 2002 compared to the preceding year, but for most of them, the expansion was less than the rates of growth achieved in the early nineties. The exchange rates of some major Asian traders strengthened against the dollar. The yen recovered strongly during the year from its low levels at the beginning of the 2002. Both the Korean won and the Singapore dollar also appreciated against the dollar.

A major aspect of trade policy developments in Asia was the continuing spread of bilateral free-trade agreements. Until recently Asia had the largest number of countries which were not members of any bilateral free trade agreement. But some of these countries signed their first free trade agreement in 2002.[17] Japan and Singapore signed an FTA in January 2002. Leaders of ASEAN and China signed a framework free trade agreement which would be realized in ten years time. ASEAN countries continued with the accelerated tariff liberalization among its members. The year 2002 also saw the implementation by China and Chinese Taipei of the liberalization commitments agreed to in their WTO accession protocols.

Asia's merchandise trade recovered vigorously in the course of 2002 but the annual average values of both exports and imports still remained below their respective 2000 levels. Trade in commercial services was less dynamic than merchandise trade in 2002, with exports up by 5 per cent and imports advancing only marginally. While the deflation of the IT boom was the largest single factor leading to the sharp fall of Asia's exports in 2001, the moderate recovery in this sector was a major element in the overall 2002 recovery. The rebound of about 6 per cent in the trade of the six Asian economies with a high share of electronic goods in their exports was not strong enough to offset fully the severe contraction experienced in 2001. Part of the incomplete recovery in IT can be attributed to the relocation of IT plants from Japan and developing East Asian economies to China. Chinese exports of computers, telecom equipment and semiconductors rose by about one third in 2002, much stronger than the growth in exports of the same products of the six major IT exporters in Asia.

Two main factors left their mark on Japan's trade in 2002. Weak domestic demand and the depreciation of the yen vis-à-vis the US dollar on an annual average basis favoured export growth over import growth and led to a decline of both dollar export and import prices. Consequently, the recovery in the dollar value of Japan's merchandise exports was limited to 3 per cent and imports contracted further by nearly 4 per cent. The second outstanding feature in Japan's trade in 2002 was the sharp increase in bilateral flows with China. Japan's exports to China rose by 20 per cent while its imports increased by 7 per cent. Last year China replaced the United States as Japan's largest supplier of goods.

China's export and import growth accelerated sharply during the year. For 2002 as a whole, merchandise exports and imports increased by more than 20 per cent, while in the fourth quarter of 2002, trade value exceeded the 2001 figure by one third. The boom in China's trade can be attributed largely to record investment inflows in 2002, which were largely directed to the export sector. Caution should be exercised in linking trade liberalization measures introduced in the context of China's WTO accession directly to the country's trade performance last year. However, trade liberalization in the automobile sector, for example, caused a fall in domestic prices which

[17] For a discussion on trends in regional free trade agreements see Section IB.3.

contributed to a large increase in demand for passenger cars, a surge in imports of automotive products (an increase of 40 per cent in value terms), and a large increase in domestic production. China's trade in agricultural products remained also in 2002 far less dynamic than trade in manufactured goods. China's exports of agricultural products increased (in value terms) by 13 per cent and exceeded thereby the expansion of imports, which grew by 8.5 per cent. In short, the momentum of China's ascendancy in Asia continued last year as a result of continuing high GDP growth, increasing FDI inflows and strong trade expansion.

Another interesting feature of Asia's trade is the relatively less dynamic performance of Singapore and Hong Kong, China in recent years. This can be attributed to at least two factors. First, both Singapore and Hong Kong, China have become high income economies which have lost their competitive edge in many of their traditional exports of manufactured goods and have therefore shifted their economic development strategies to the services sector. Following a double-digit decrease in 2001, exports of domestically produced goods of Hong Kong, China contracted by 18 per cent, while those of Singapore recovered by only 1.5 per cent. Second, within the services sector, the position of these economies as regional distribution/transit centres is being challenged by their neighbours. One indication of this development can be seen in the growth of ports in neighbouring countries. The expansion of container traffic in ports in Malaysia and China outpaced those in Singapore and Hong Kong, China.[18] Singapore's exports of commercial services are estimated to have decreased again slightly in 2002, while those of Hong Kong, China increased by 6 per cent.

Merchandise and commercial services trade data of the world's largest traders are reported below (see Appendix Tables IA.1, IA.2 and IA.3 at the end of this Chapter). Among the main features of the 2002 merchandise services trade developments one can highlight the following developments: among the 30 leading merchandise traders five reported a double-digit increase in their exports while those of the US and Canada decreased. Merchandise imports declined for Japan, Switzerland and Brazil as did the retained imports of Hong Kong, China and Singapore. The strongest merchandise import increases (in excess of 10 per cent) are reported by China, the Russian Federation and India (see Appendix Table IA.1).

Commercial services trade by principal trader showed also a large variation in their performance in 2002. While eight services exporters reported an expansion between 10 and 30 per cent, six other exporters recorded a stagnation or a decrease in their exports in 2002. The results on the import side are also mixed as seven traders reported an increase in excess of 10 per cent while six other major importers recorded a decrease or stagnation (see Appendix Table IA.3).

[18] The container traffic volume rose in Shenzen, Shanghai and Tanjung Pelepas (Malaysia) by 50, 35 and 30 per cent respectively. The corresponding rates for Hong Kong, China and Singapore are 4.5 and 8 per cent. (Neue Zürcher Zeitung, 15 January 2003)

B SELECTED ISSUES IN TRADE AND TRADE POLICY

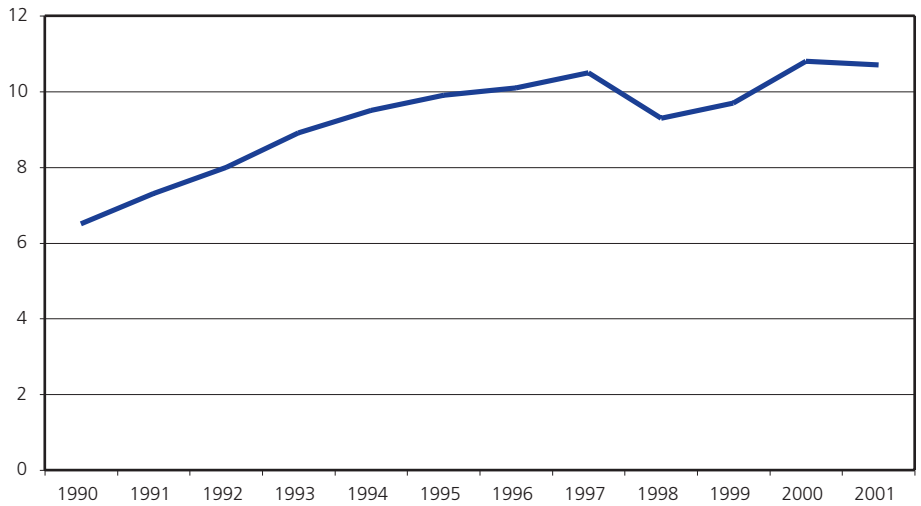
1. SELECTED FEATURES OF SOUTH-SOUTH[19] TRADE DEVELOPMENTS IN THE 1990-2001 PERIOD

(a) Introduction

South-South trade has long been promoted as a means to reduce the dependence of developing countries on markets of developed countries and to enhance diversification of Southern exports beyond primary commodities. Most of the mechanisms that were created to foster co-operation among developing countries were largely subregional and regional arrangements, many of them preferential in nature. During the 1950s and 1960s, the promotion of South-South trade was in many instances part of a set of policy measures anchored in a strategy of import substitution behind high trade barriers. South-South trade grew in spurts as developing country economies went through stop and go cycles. Despite efforts to promote and diversify South-South trade, primary products continued to dominate these flows in most regions, and by 1990 South-South trade accounted for only 6.5 per cent of world trade.

Over the last decade, however, developing country economies have grown much faster than those of the developed and transition countries and are expected to continue to do so in the first decade of the 21st century.[20] Positive growth performance in the 1990s was a principal factor leading to the share of South-South trade in world trade almost to double, reaching 10.7 per cent in 2001 (see Chart IB.1). Since 1985, the trade and investment regimes of a large number of developing countries have been liberalized and access to their markets has improved significantly. Foreign direct investment inflows into developing countries increased fourfold between the beginning and the end of the 1990s. Investment flows among developing countries rose sharply and are tentatively estimated to be in the order of $50 billion in 2000[21].

Chart IB.1
Share of South-South trade in world merchandise trade, 1990-2001
(Percentage)



Source: WTO, International Trade Statistics.

[19] Developing countries, or the South, comprise the following regions: Latin America, Africa, the Middle East and Asia excluding developed Asia (Japan, Australia and New Zealand). Hong Kong, China's re-exports are not included in the trade flows.

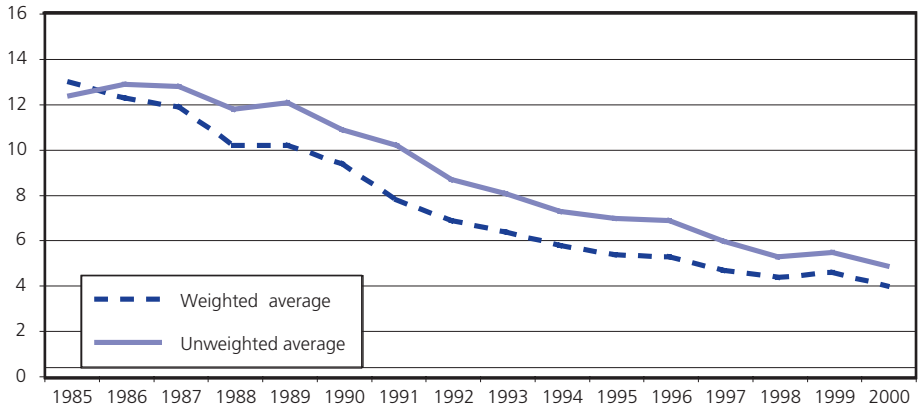
[20] The World Bank report Global Economic Prospects 2003 forecasts that real GDP growth in developing countries will expand by 4.7 per cent annually while that of the industrial countries will grow by 2.5 per cent annually between 2003-2015. Similarly, the IMF's medium-term baseline scenario (2003-2007) projects an annual GDP growth rate of 5.7 per cent for the developing countries and 3.1 per cent for the advanced economies. IMF, World Economic Outlook, September 2002, Table 45, p.233.

[21] Aykut and Ratha (2002).

The combination of above-average economic growth and substantial trade and investment liberalization led to dynamic growth in developing country trade flows. For the 1990-2001 period, merchandise export and import growth exceeded world merchandise trade growth in both value and volume terms. Intra-developing country trade was the main beneficiary of the higher economic growth and more liberal trade regimes in the developing countries. Despite these significant reductions in the obstacles to trade, the developing countries still maintain higher tariff and non-tariff barriers on average than the developed countries. The persistence of these barriers suggests the potential for further trade liberalization and consequent expansion of South-South trade.[22]

Chart IB.2 (and Appendix Table IB.4) report on the reduced tariff protection – measured by the ratio of duties collected to imports – for a selection of major developing country importers. The chart shows that for the average of the sample countries, the ratio of duties collected to imports decreased from more than 12 per cent in 1985 to less than 5 per cent in 2000.[23] The chart also shows that average applied tariffs have fallen in developing countries from a level above 25 per cent in 1985 to less than 15 per cent in 2000. Nevertheless, wide differences remain in levels of protection, both among developing countries and product categories. The dollar value of customs duties collected by developing countries on their total merchandise imports in 2000 was about $83 billion. This is equivalent to more than 60 per cent of import duties collected globally. Further liberalization could boost developing countries' imports and exports in the years ahead and could sustain the expansion of their output, contribute to rising overall income levels and reduce poverty. Developing countries in Asia and Latin America provide several important examples of how trade and investment liberalization have stimulated trade (for example, several countries in South-East Asia, China, recently India, Mexico and Chile).

Chart IB.2
Developing countries[a] have substantially lowered import duties between 1985 and 2000
(Ratio of duties collected to imports)



[a] Data refer to 10 selected developing countries accounting for 60% of developing countries' merchandise imports.

Source: IMF Government Finance Statistics Yearbook and national statistics.

[22] The potential for trade liberalization in general to contribute to development is taken up in more detail in Chapter II of this Report.

[23] One has to take into account that a decline in the ratio of import duties to imports might be partly due to a change in the product structure of imports (i.e. a shift to less taxed products). Very high tariffs leading to negligible import values have also only a minimal weight in the calculation of this ratio.

Despite their increased popularity, regional and bilateral preferential trade arrangements have not contributed in a significant way to the rapid expansion of intra-developing country trade during the 1990-2001 period. It is estimated that the share of intra-regional trade in those RTAs formed among developing countries remained unchanged at 20 per cent of South-South trade between 1990 and 2001.[24] This conclusion regarding the lack of a significant contribution by RTAs in South-South trade is very similar to other findings with respect to South-South trade in the 1970s and 1980s.[25]

The expansion of intra-developing country trade is not only held back by trade barriers but numerous other non-trade barriers as well.[26] Among the major obstacles faced by many developing countries are relatively high transport, insurance and communication costs, difficulties in trade financing and insufficient marketing and distribution skills. The lack of product diversification can also be an obstacle as dependence on a few (non-fuel) primary products facing sluggish long-term demand growth constitutes a structural handicap for the expansion of trade. This is true for trade in general, as well as trade with other developing countries having similar resource endowments. This means that trade liberalization needs to be complemented by measures that address these infrastructure and supply-side bottlenecks, and for which resources need to be mobilized.

(b) General trends

(i) Intra-developing country trade expands faster than world trade

What have been the main features of merchandise trade flows among the developing countries over the 1990-2001 period? Over this eleven-year period South-South trade expanded twice as fast as world trade (10 per cent versus 5 per cent). The value of South-South trade rose from $219 billion in 1990 to $640 billion in 2001. The share of intra-developing country trade in world merchandise exports rose from 6.5 per cent to 10.7 per cent in 2001, representing a historic peak in terms of the last 50 years.[27] Another way to gauge the increased importance of South-South trade is to compare it with South-North trade. In 1990, the dollar value of intra-developing country exports was equivalent to 41 per cent of South-North exports. Eleven years later, the ratio had risen to 60 per cent.

The share of developing country exports to other developing countries rose from 28 per cent in 1990 to 37 per cent of their total exports in 2001. The share of imports from the South in developing countries' imports exceeded 41 per cent of total imports by 2001, an increase of 10 percentage points from the 1990 level. In recent years the share of South-South trade in total developing country trade has been larger for imports than for exports as the developing countries recorded a substantial overall merchandise surplus at the end of the 1990s, a marked reversal from the situation at the beginning of the decade (see Chart IB.3).

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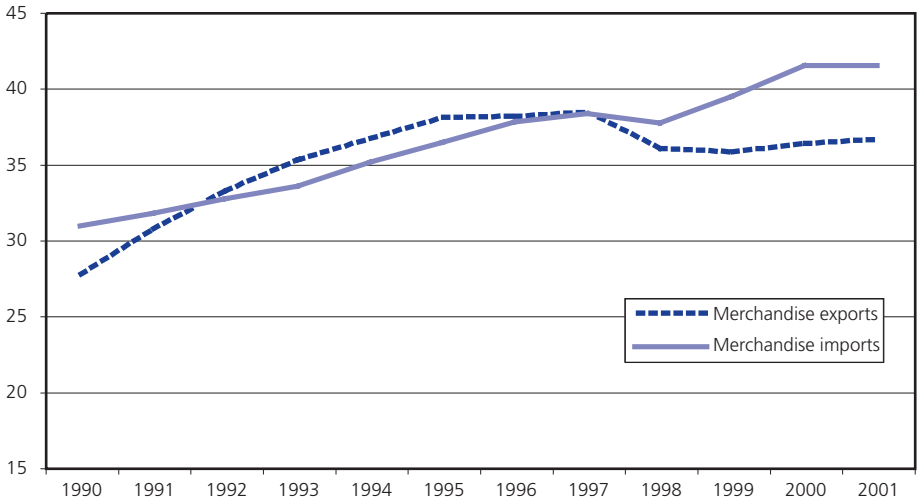
24 The calculations cover all intra-RTA trade irrespective of the fact that not all products benefit from RTA preferences and, even for those that do, not all preferences are used due to additional transaction costs such as increased documentation requirements linked to rules of origin. One should also be cautious about how some intra-regional trade flows are reported because they may inflate regional totals. In the case of ASEAN, for example, there is a large discrepancy between intra-regional exports and imports (In 2001, intra-regional exports were $90.4 billion while intra-regional imports were $76.5 billion). The discrepancy in this case can be largely explained by Singapore's re-exports being counted as intra-ASEAN exports despite the fact that some originate from non-ASEAN countries.

25 Greenaway and Miller (1990) observe that "South-South arrangements have generally failed to encourage South-South trade".

26 Langhammer and Hiemenz (1990) make the distinction between material barriers, political barriers, economic barriers and political-economic barriers, while UNCTAD (1994) differentiates between structural and policy-induced obstacles to South-South trade.

27 Excluding intra-EU trade from the world total, the corresponding share increased from 9 to 14 per cent in the 1990-2001 period.

Chart IB.3
Share of the South is rising in developing countries trade, 1990-2001
(Percentage)



Source: WTO, International Trade Statistics.

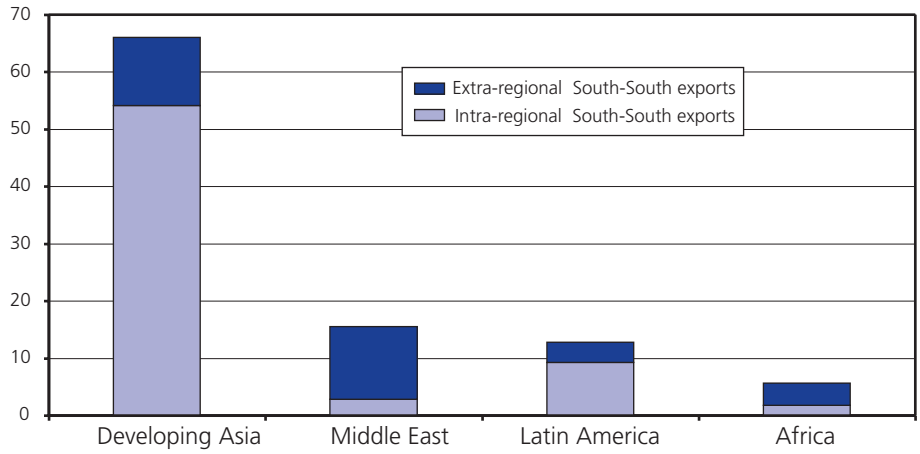
The overall increase in the share of South-South trade between 1990 and 2001 was strong and rather steady on the import side. However, for exports a strong increase in the first half of the 1990s was followed by an erosion of the share in the second half. The steeper rise of the export share than that of imports up to 1996, and its stagnation thereafter while the import share continued to grow, has much to do with the relative strength of demand growth in the developing countries. Up to 1996, demand growth in developing countries exceeded that of the developed and transition countries by a very wide margin, turning the former into a prominent export destination for all regions. Partly due to the Asian financial crisis and the reduction of net capital inflows into the developing countries since 1996, domestic and import demand became much weaker than in the first half of the 1990s in both absolute and relative terms. Since developed country demand did not suffer a similar weakness in the second half of the 1990s, Southern exports to the North continued to expand at the same rate while exports to other Southern countries became less dynamic (falling from a 17.2 per cent growth rate in the first half of the 1990s to 6.8 per cent in the second half) (see Table IB.1).

Developing countries are very heterogeneous with respect to economic size, income levels, the degree of industrialization, outward orientation and trade structure. This makes it necessary to examine more disaggregated data in order to understand the driving forces behind South-South trade expansion. An analysis of South-South trade by product group and by region/country is presented below.

(ii) Intra-developing country trade is highly concentrated on Asia

More than two-thirds of intra-developing country trade originates from and is destined to developing Asia (see Chart IB.4). This high share primarily reflects the relatively large size of the developing markets in Asia. The developing Asian economies accounted for nearly one-half of the GDP of developing countries and more than two-thirds of its population in 2001. The weight of developing Asia in the total GDP of developing countries increased over the 1990-2001 period as the rate of economic expansion in Asian developing economies (6.5 per cent) exceeded that of the other developing regions (about 3.1 per cent). As with income growth, developing Asia's intra-regional trade and trade with other developing regions has been dynamic, exceeding the growth of South-South trade in general. This strong trade performance can be attributed in part to open trade and investment policies in the major developing economies of Asia.

Chart IB.4
Developing Asia is the predominant region in South-South trade, 2001
(Percentage)



Source: WTO and UNSD, Comtrade database.

The share of developing Asia in intra-developing country exports rose from 60 per cent in 1990 to 66 per cent in 2001, while the share of the other developing regions – Latin America, Africa and the Middle East – suffered a decline. On the import side, the share of developing Asia accounted for more than two-thirds of total intra-developing country imports (see Table IB.1).

Middle East exports to the South rank second in size among the four developing regions, accounting for almost $100 billion or about 15 per cent of intra-developing country trade. The Middle East has the smallest share of intra-regional trade of all developing regions, a feature which can be attributed to the pre-eminence of fuels in the exports of many countries in the region. The lack of product diversification, combined with similarity in resource endowments, constrained the expansion of trade within the Middle East.

Latin American exports to all developing countries amounted to $82 billion or 13 per cent of South-South trade. Intra-MERCOSUR trade alone reached $15 billion in 2001, representing 2.4 per cent of intra-developing country trade. The region's expansion rate for both exports and imports was very close to the overall growth rate of intra-developing country trade.

Africa has the smallest share of intra-developing country trade. In 2001, the value of African exports to developing countries was estimated to be in the order of $36 billion, which accounts for slightly less than 6 per cent of intra-developing country trade. This represents a moderate decrease from 1990, as export growth to all developing countries was held back by the poor performance of Africa's trade.

Table IB.1
South-South merchandise exports expanded strongly in all developing regions, 1990-2001
(Billion dollars and percentage)

	Value	Share	Annual percentage change		
	2001	2001	1990-1995	1995-2000	1990-2001
Developing Asia	422	66.0	21	6	11
intra-developing Asia	345		21	6	11
Middle East	99	15.5	7	13	8
intra-Middle East	18		6	8	7
Latin America	82	12.8	16	4	9
intra-Latin America	59		18	5	10
Africa	36	5.6	12	9	9
intra-Africa	11		12	-6	6
South-South	639	100.0	17	7	10

Source: WTO and UNSD, Comtrade database.

The importance of Southern markets in the total exports of developing regions differs widely. For developing Asia and the Middle East, 4 out of every 10 dollars are earned from shipments to other developing countries. The corresponding number for Latin America and Africa is 2.50 dollars out of 10. In Latin America, the ratio is increased to 4 dollars out of 10 when Mexico, a member of NAFTA, is excluded from the regional total. This leaves Africa with the lowest share of trade with other developing countries. The level of intra-African trade is low in all major product categories. Even for agricultural and manufactured goods, intra-African trade accounts for less than 15 per cent of the region's total exports. Fuels account for a significant share of African exports, but for geographical and historical reasons, Western Europe and the United States, rather than developing countries, account for most of the trade in this product category.

What can be said about the contribution of RTAs among Southern countries to the expansion of South-South trade in the 1990s? First, as can be seen from Chart IB.4, the share of intra-regional trade in Asia accounts for four-fifths of developing Asia's South-South trade, the highest share among the four developing regions. More than half of Latin America's exports to developing countries are shipped within the region, while for both Africa and the Middle East, developing markets outside those regions are far more significant. What is notable about this chart is the inverse correlation between intra-regional trade shares and the number of RTAs. Developing Asia, with only one major RTA, has the largest share of intra-regional trade, whereas Africa, with the largest number of RTAs, has the smallest share of intra-regional trade. Second, over the entire 1990-2001 period, the growth of intra-RTA trade among developing countries was 10 per cent, identical to the growth of trade among developing countries (see Table IB.2)

The breakdown of intra-developing country trade by region reveals also the origins of the sharp deceleration in the expansion of South-South trade between the first and second half of the 1990s which was more pronounced than for world trade. The geographic breakdown (see Table IB.1) shows that the regions with the most dynamic export growth in the 1990-95 period, developing Asia and Latin America, are also those which recorded the steepest deceleration in their merchandise export (and import) growth in the 1995-2000 period (see Appendix Table IB.1). The principal RTAs in these two regions, ASEAN and MERCOSUR, recorded even steeper deceleration of their export expansion than their respective home regions.

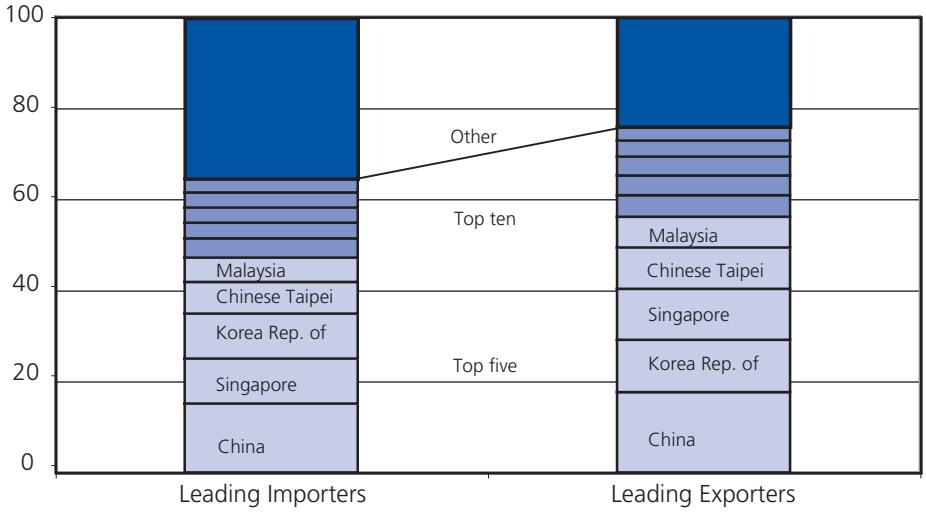
Table IB.2
Contribution of RTAs to South-South trade, 1990-2001
(Billion dollars and percentage)

	Value		Share		Average annual change		
	1990	2001	1990	2001	1990-1995	1995-2000	1990-2001
South-South exports	219	639	100.0	100.0	17	7	10
Intra-South RTA	44	129	20.3	20.1	21	4	10
MERCOSUR	4	15	1.9	2.4	28	4	13
ASEAN	29	90	13.2	14.2	23	5	11
Other RTAs	11	23	5.1	3.6	11	3	7

Source: WTO and UNSD, Comtrade database.

Besides being focused on Asia, South-South trade expansion was concentrated among a small number of traders exporting primarily manufactured goods. For 2001, the five (ten) leading exporters in intra-developing country trade accounted for 50 per cent (70 per cent) of South-South trade. On the import side, the concentration is less pronounced as the top five (ten) traders accounted for 41 per cent (60 per cent) of South-South trade (see Chart IB.5). The five leading exporters are also the five leading importers, with four of them being developing economies in Asia. The countries that have experienced the most rapid expansion in their trade with developing countries are Mexico (18 per cent), India (14 per cent), China (14 per cent) and the Republic of Korea (14 per cent)[28]. All these countries have greatly reduced their trade barriers (see Appendix Table IB.4) and recorded above average trade growth over that period.

Chart IB.5
South-South trade is concentrated on a few leading traders in 2001
(Percentage shares: cumulative)



Source: WTO, International Trade Statistics.

While there are marked differences in the regional pattern of South-South trade, the variation is even greater at the country level. The degree of reliance on developing country markets differs sharply among individual exporting countries, ranging from more than 90 per cent in the case of Bhutan and Somalia, to less than 10 per cent for Mexico and Libya. A small number of countries have a share similar to the average rate of 37 per cent, as can be seen in Appendix Chart IB.1. Out of a sample of 121 developing countries, 32 countries reported a very high share

[28] The figures in parentheses are the average growth rates of exports and imports to developing countries over the 1990-2001 period.

of exports to developing countries i.e. a share in excess of 50 per cent and rising up to 99 per cent (Group A). At the other extreme of the ranking were about 32 countries for which shipments to other developing countries accounted for less than 20 per cent of their total exports (Group C). Between these two extremes, there is a third group for which intra-developing country exports represented between 21 and 49 per cent of total exports. No single factor could be found to explain the degree to which a developing country depended on other developing markets. Product diversification of exports, product structure, income levels, location in a particular geographic region, and membership in an RTA do not stand out individually as dominant determinants of these trade flows. Among the developing countries which exported more than one half of their merchandise exports to other developing countries, one can find several LDCs and high income developing countries. Developing countries which had limited product diversification could be found in both groups A and B. Only small, landlocked countries who had a large developing country as a neighbour tended to be more prominent in group A (e.g. Bhutan, Mongolia) than in other groups (see Appendix Chart IB.1). For these countries, geography seems to play a predominant role.

(iii) Manufactured goods play a leading role in intra-developing country trade

Trade in manufactured goods has been the most dynamic component of intra-developing country merchandise exports, expanding by 12 per cent annually in the 1990s and accounting for nearly two-thirds of intra-developing country trade in 2001. Agricultural trade expanded at only half that rate, while the growth in mining products (mainly fuels) averaged nearly 9 per cent. The shares of agriculture and mining products are somewhat larger in intra-developing country trade than in developing country exports to developed countries. For all major product categories, intra-developing country trade grew faster during the 1990-2001 period than developing countries' trade with developed or transition economies. Consequently, for all three product categories, the weight of developing markets in developing country exports increased over the last decade, ranging from about 40 per cent for agricultural products and mining products to 35 per cent for manufactured goods (see Appendix Table IB.3).

At a more detailed level, office and telecom equipment and automotive products experienced the highest annual average export growth during the period 1990-2001, at 18 per cent and 17 per cent respectively. Above average growth in intra-developing country trade also occurred in chemicals and clothing. South-South trade in chemicals amounted to $59 billion (or 9.2 per cent) in 2001, exceeding food exports and the combined value of intra-developing country trade in textiles and clothing. Developing countries depended on other developing markets for more than one-half of their chemicals and textiles (slightly more than 60 per cent) exports, but only 11 per cent and 22 per cent respectively of exports of clothing and other consumer goods involved intra-developing country trade. Exports of agricultural products to other developing countries was the least dynamic element in intra-developing country trade.

Fuels continued to play a major role in intra-developing country trade. Although the share of fuels in trade among developing countries decreased slightly between 1990 and 2001 to 22 per cent, fuels remain the largest single traded product. Indeed, the share of fuels in intra-developing country trade was larger than its share in developing country exports to developed countries in 2001.

(c) Factors contributing to the dynamics of intra-developing country trade: 1990-2001

As noted above, rapid growth in intra-developing country trade from 1990-2001 is largely the consequence of strong export and import performance of developing Asian countries. This is linked to above average GDP growth in the region, fuelled in part by open trade and investment regimes. Trade liberalization in Asia took various forms in the 1990s, but much of it occurred on an autonomous MFN basis. China's reduction of tariff and non-tariff barriers since the mid-1980s fits into this context, reflecting a fundamental re-orientation towards a market economy and preparations for WTO accession. The Uruguay Round and the Information Technology Agreement made significant contributions to further liberalization of Asia's trade in the second half of the 1990s. The contribution made by developing Asia to the expansion of intra-developing country trade differs markedly by period and sector. It was particularly strong in the first half of the 1990s and in trade of office and telecom equipment.

The most dynamic component (and the second largest product category after fuels) in intra-developing country trade – office and telecom equipment – benefited from tariffs that were already low in Asian developing countries in the early 1990s. The tariffs on information technology (IT) products were fully eliminated through the WTO Information Technology Agreement. This open regime for IT products favoured the inflow of foreign direct investment and the establishment of production networks across Asia. Consequently, developing Asia has become a major player in global trade in office and telecom equipment and accounts for 90 per cent of intra-developing country trade in this product category. The combination of trade liberalization, large inflows of foreign investment directed at the establishment of production networks (especially in electronics), and the surge in global demand for information and technology products were major elements in the rapid growth of developing Asia's trade. The development of export processing zones has also played an important role in the overall trade performance of developing countries in Asia and in this sector.

Automotive products account for only 2.5 per cent of intra-developing country trade. In addition, the share of developing markets as a destination for developing countries' exports of automotive products (23.5 per cent) was one of the lowest of all product categories reported in Appendix Table IB.2. But between 1990 and 2001, imports from all developing countries recorded an eightfold increase.

Despite automotive products being a dynamic category in intra-developing country trade, the contribution made by developing Asia to the expansion of South-South trade in this sector was quite different. Developing Asia's imports of automotive products from developing regions expanded less than those of any other developing region between 1990 and 2001 and accounted for just one quarter of intra-developing country trade in automotive products. For automotive products, the developing Asian economies accounted for a much smaller weight in South-South trade and contributed far less to its expansion than in the electronic goods sector. High trade barriers – both tariff and non-tariff – on automotive products in developing Asia have contributed to this outcome.

Much of the expansion in South-South trade in automotive products has taken place in Latin America, although its exports of automotive products to developing countries are largely confined to other Latin American countries (more than 90 per cent of exports are intra-regional). MERCOSUR countries and more recently Mexico have become significant market outlets for developing countries exporting automotive products. MERCOSUR's share in Latin America's imports of automotive products from developing countries increased markedly between 1990 and 1995, but fell sharply thereafter. This development can be attributed to a rapid increase of Mexico's imports from Brazil in recent years while intra-MERCOSUR trade shrank. Mexico's imports of automotive products from developing countries have increased strongly, as Mexico liberalized its trade regime and has succeeded in establishing itself in the global automobile production network.

Trade in chemicals accounts for 9.2 per cent of South-South trade and expanded very dynamically over the 1990-2001 period (see Appendix Table IB.2). About two-thirds of intra-developing country trade in chemicals consists of organic chemicals and plastics, two categories comprising mainly petrochemicals. Medicinal and pharmaceutical products are estimated to account for less than 5 per cent of intra-developing trade of chemicals. Exports and imports of Asian developing countries account for two thirds in intra-developing country trade in chemicals. The strength of the position of Asian developing countries coincides with tariff rates which are – on average – much lower than in other developing regions (see Appendix Table IIB.7).

In the second half of the 1990s, India and Mexico reported the highest growth of imports from developing countries (see Table IB.3). Oil imports accounted for nearly one-half of India's imports from developing countries in 1995 and the rise in oil prices played a major role in that regard. However, India's imports from developing Asia and in particular from China; Hong Kong, China; Singapore; Indonesia and Thailand more than tripled between 1995 and 2001 and expanded much faster than those from the oil exporting countries

of the Middle East. In the case of Mexico, the high growth of imports from developing countries can be largely attributed to a quadrupling of imports from developing Asia. Most of this increase was in office and telecom equipment and to a lesser extent also in consumer goods, with the main beneficiaries in developing Asia being China, the Republic of Korea and Malaysia. Finally, it should be noted that those developing countries which experienced strong overall trade growth were also those which saw a large expansion of their trade with the South.

Table IB.3
Trade expansion varies among the leading South-South traders in 1990-2001
(Billion dollars and percentage)

	Exports				Imports			
	Value	Annual percentage change			Value	Annual percentage change		
	2001	1990-95	1995-00	1990-01	2001	1990-95	1995-00	1990-01
China	72	19.7	9.1	13.8	71	23.5	10.9	14.4
Korea, Rep. of	74	28.5	6.4	14.4	65	20.4	11.9	13.6
Singapore [a]	72	20.7	3.7	9.7	61	15.9	3.7	7.5
Chinese Taipei	61	20.0	5.2	10.1	42	16.4	12.0	10.9
Malaysia	42	20.7	5.6	10.5	33	20.5	6.8	11.1
Thailand	28	27.6	3.6	13.1	28	15.0	3.8	8.2
India	19	24.7	8.3	15.2	27	12.4	19.7	13.3
Brazil	22	16.5	1.7	9.0	22	14.8	3.5	7.7
Saudi Arabia	33	6.3	11.1	7.1	9	5.7	4.9	4.9
Indonesia	25	19.3	9.0	11.5	16	14.1	3.8	7.2
United Arab Emirates	18	5.8	13.5	8.6	21	25.0	10.6	16.2
Mexico	8	19.0	4.7	10.9	26	19.2	29.9	24.7

[a] Includes significant re-exports or imports for re-export.
Source: WTO and UNSD, Comtrade database.

One cautionary note to all of this is that there was a marked deceleration in the nominal trade expansion among the developing countries between the first half of the 1990s and the 1995-2001 period. This reflected the deceleration of GDP growth in developing Asia and Latin America in the second half of the 1990s because of the Asian financial crisis, various crises in Latin America but also different global price trends in the first and second half of the nineties. In the 1990-95 period, world trade prices increased by 10 per cent, but decreased by 12 per cent between 1995 and 2000. What may have balanced that trend were oil price developments. Falling oil prices between 1990 and 1995 depressed the exports of the major oil suppliers (i.e. Saudi Arabia and the United Arab Emirates) to the developing countries, but rising prices between 1995 and 2001 strengthened the relative performance of oil exporting developing countries, also in South-South trade.

(d) Conclusions

South-South trade has been a dynamic component of the global trade expansion over the last decade. A key contributor to this outcome was the strong trade performance of a number of middle income developing countries that trade with other developing countries, particularly in Asia. The combination of high growth in the global IT industry and production sharing arrangements in this industry across much of Asia also played a significant part in the growth of South-South trade.

This increase in trade among developing countries, particularly in manufactured goods, may validate the view that South-South trade is important to allow developing countries to escape from excessive reliance on primary commodity production and exports. It is important to bear in mind, however, that in the case of numerous poorer developing countries, much is required on other fronts in order for them to benefit fully from open markets, not least in the sphere of infrastructure development and in terms of a broad range of measures required to facilitate trade.

Where growth in South-South trade has contributed to diversification and development, this has not come about, to any major degree, through preferential arrangements among developing countries, but rather through creating the underlying conditions to exploit comparative advantage. Trade liberalization has played a part in stimulating trade, including with other developing countries. In recent years, some of the larger developing countries have become major markets for other developing countries. Despite the successes of a number of developing countries over the last decade, tariff protection often continues to be high, in particular on products such as automotive products and clothing, and in agriculture, where other developing countries are likely to have a comparative advantage. In addition, a significant part of the liberalization undertaken by developing countries in the last decade has not been bound in the WTO, which increases the risk of future trade policy reversals and the economic costs associated with uncertainty.

The Doha Agenda provides a valuable opportunity for the momentum of the last decade to be maintained. In the midst of one of the most difficult periods for the global economy, a number of middle-income developing countries have shown surprising economic strength and have been an important source of demand growth for other developing countries, and also the rest of the world. The work programme on agriculture and non-agricultural tariffs can be an important source of efficiency gains for developing countries, an impetus for growth, and a means for increased trade with both developed and developing countries. Finally, much has been said here about the scope for fostering growth and development through action aimed at freeing up South-South trade. But this in no way diminishes the considerable contribution that could be made from further trade liberalization in developed countries. These issues are considered further in Chapter II of this Report.

2. NON-FUEL COMMODITY PRICES

(a) Introduction

The impact of low and volatile commodity prices on the development prospects of poor countries is a recurring issue in international trade. The dependence of a large number of poor countries on commodity exports and the volatility of commodity prices combine to present a formidable development challenge. The problem has assumed renewed prominence because of the pronounced declines in many commodity prices in the course of the last decade.

The issue of commodity prices has not escaped the attention of the GATT. As early as 1957, the GATT had noted the "excessive short-term fluctuations in prices of commodity products". They commissioned a report by a group of experts, the Haberler report (1958), which in turn identified developed country trade policies as contributing factors to the problem. In response to the conclusions of the report, the GATT adopted an action programme, which included as one of its objectives the expansion of the export earnings of developing countries.[29] Part IV of GATT 1994 (Trade and Development), which was introduced in 1965, makes explicit reference to the need to provide more favourable and acceptable conditions of access as well as to devise measures to attain stable, equitable and remunerative prices for primary products.[30]

Issues arising in the field of commodities are numerous and complex. It is not intended here to cover all of these issues. In what follows, some basic information on the magnitude and extent of the decline in prices will be provided. The section will also examine the possible causes of price declines and the degree to which the Doha work programme, particularly on domestic support, export subsidies and tariff escalation, might ameliorate the problem. Since the behaviour of oil prices has diverged from that of non-oil commodity prices and oil producers face a different set of development challenges, the analysis will focus more narrowly on non-oil commodity prices.

(b) Movement of non-oil commodity prices

Last year saw a recovery in non-oil commodity prices, with some prices moving up from historic lows reached in late 2001. The unit export value indices for food, beverages and agricultural raw materials rose by about 9 per cent, 12 per cent and 2 per cent respectively. However, there continued to be some weakness in metal prices, with the index falling by 4 per cent during the year. The immediate prospects for commodity prices hinge on the strength and speed of the global economic recovery, the resolution of geo-political risks, as well as weather-related trends (e.g. *El Niño*). Some recent forecasts suggest that non-oil commodity prices will increase by 5.8 per cent in nominal terms this year and by about 8 per cent in real terms by 2005.[31] Given that the prices of non-oil commodities have been falling for quite some time now, the recovery, while welcome, still means that prices will be below their average in the 1990s. In the medium term, changes in trade policies, through reductions in domestic support, export subsidies and tariff escalation, may bring about some improvements. The long-term prospects for commodity prices will depend on the pace of technological progress in agriculture, which augments supply, and the success of diversification in the economies of commodity producers.

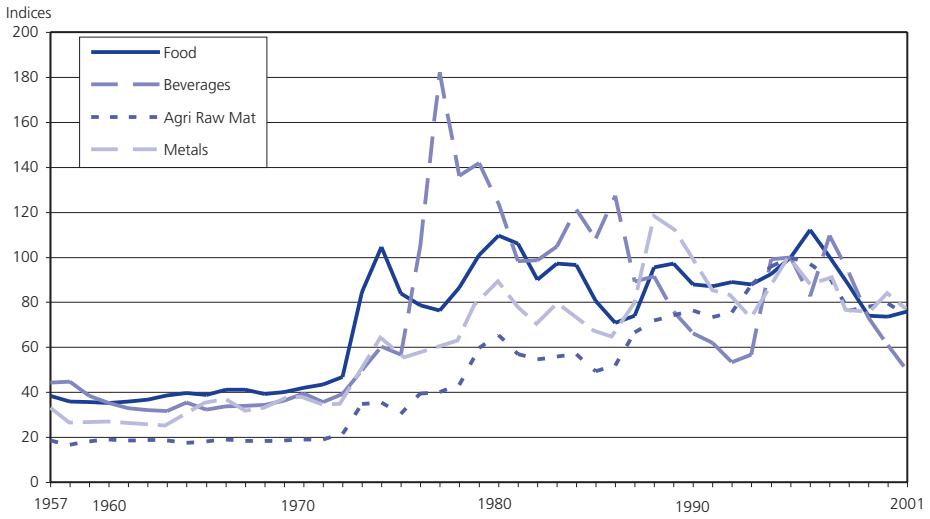
29 Hudec (1987).

30 Article XXXVI of GATT 1994 states that: "Given the continued dependence of many less-developed contracting countries on the exportation of a limited range of primary products, there is need to provide in the largest possible measure more favourable and acceptable conditions of access to world markets for these products, and wherever appropriate, to devise measures designed to stabilize and improve conditions of world markets in these products, including in particular measures designed to attain stable, equitable and remunerative prices, thus permitting an expansion of world trade and demand and a dynamic and steady growth of the real export earnings of these countries so as to provide them with expanding resources for their economic development".

31 See for example the World Bank (2003).

Over the long term, real commodity prices have suffered a decline marked by significant volatility. The original finding about the terms of trade decline of commodity prices was based on data which covered the period from 1876 to 1947 (Prebisch, 1950). Contemporary research has continued to confirm this secular decline with price data up to the end of the 20th century (Ray, 1977; Grilli and Yang, 1988; Diakosavvas and Scandizzo, 1991; Bloch and Sapsford, 2000; Cashin and McDermott, 2002). The conclusion is robust regardless of the commodity price data used or the deflators chosen.[32]

Chart IB.6
Commodity prices, 1957-2001
(Indices, 1995=100)



Source: Commodity price indices of food, beverages, agricultural raw materials and metals are taken from the IMF's International Financial Statistics series.

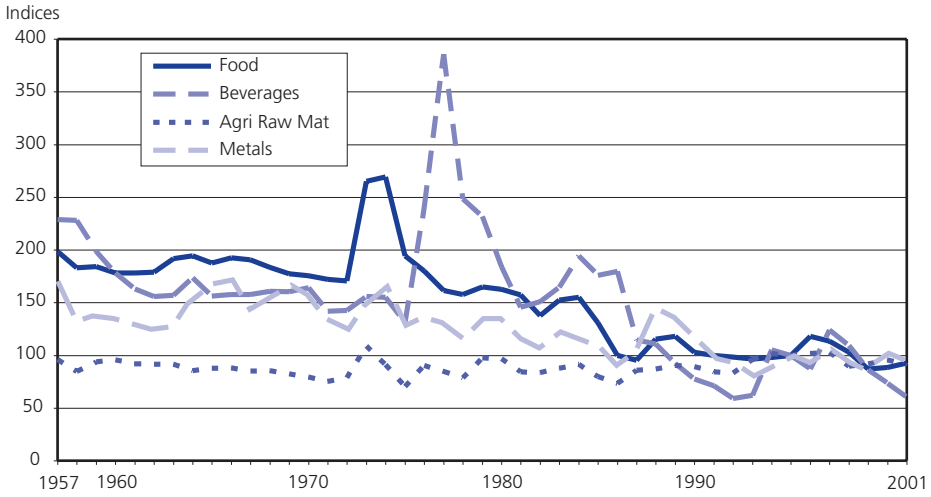
The history of commodity prices since the mid-1950s is shown in Chart IB.6. After the commodity boom associated with the Korean War, nominal commodity prices entered a relatively stable phase before shooting up again during the commodity price boom of the 1970s. By the mid-1990s, nominal prices began a pronounced downturn so that by the end of the decade they were about 15 per cent lower than at the beginning. Chart IB.7 plots the relative prices of commodities during the same period. The relative commodity prices are derived by deflating the prices of commodities with the manufacturing unit values (MUV) of industrial countries.[33] The indices derived in this way can be interpreted as the relative price between a basket of primary commodities and a basket of manufactured exports of the industrial countries. With the exception of agricultural raw material prices, all the other relative price series exhibit a clear downward trend. From 1957 to 2001, the estimated annual reductions in food, beverage and metal prices are 1.9 per cent, 2.4 per cent and 1.3 per cent respectively (see Table IB.4). However, the time trend on agricultural raw material prices was not significant. Volatility, as measured by the coefficient of variation, was most severe for beverages while the price of agricultural raw materials exhibited the least turbulence.[34]

[32] For example, Grilli and Yang (1988) constructed a US dollar index series (1900-86) based on international prices of 14 major non-fuel commodities and used the UN's manufacturing unit values as their deflator. Cashin and McDermott (2002) used *The Economist*'s industrial commodity price index (1862-1999) for their price series and the US GDP deflator.

[33] Unit value index in dollar terms of manufactures exported from the US, UK, Germany, France and Japan weighted proportionally to the countries' exports to developing countries. The index, most recently used in G*lobal Economic Prospects: 2003*, was made available by the World Bank.

[34] It should be noted that a measure of volatility like the coefficient of variation will tend to overestimate the difficulties posed by price changes on farmers. This is because if the change in price was anticipated, farmers (as well as consumers) could make the necessary adjustments beforehand no matter how large the change in price. The real concern is with unanticipated changes in prices for which adequate preparations cannot be made.

Chart IB.7
Relative commodity price developments, 1957-2001
(Indices, 1995=100)



Source: IMF (2003). International Financial Statistics. Manufacturing unit values from the World Bank.

Table IB.4
Measures of trend and volatility in selected commodity prices, 1957-2001

Commodity	Trend coefficient	Coefficient of variation
Food	-1.92 [a]	0.30
Sugar	-2.30 [b]	0.46
Beverage	-2.42 [a]	0.41
Coffee	-1.91 [c]	0.54
Ag. raw materials	-0.11	0.09
Cotton	-2.04 [a]	0.39
Metals	-1.26 [a]	0.20
Aluminium	-1.21 [a]	0.21
Copper	-2.13 [b]	0.50

[a] Significant at the 1% level

[b] Significant at the 5% level

[c] Significant at the 10% level

Notes:

1. Since the logarithm of the relative price indices are regressed on time, the trend coefficients are average annual percentage changes in relative prices.
2. The coefficient of variation is the ratio of the standard deviation to the mean. Normalizing the standard deviation by the mean allows us to better compare the variability of different statistical series.

(c) Impact on developing countries

While the share of non-fuel commodities in the exports of all developing countries was only 12.3 per cent in 2001, they are still important for a large number of developing and least-developed countries. About 25 least-developed countries, many of them in Africa, depend on non-fuel primary products for more than half of their exports (see Table IB.5 for the list).

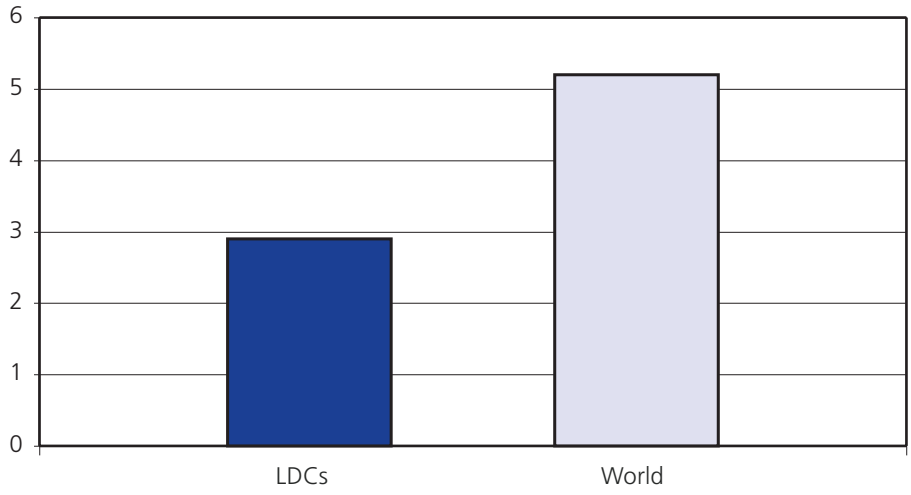
Table IB.5
Least-developed countries dependent on non-fuel commodity exports
(Average: 1998-2000)

	Country	Share of non-fuel commodities in total exports	Major commodity exports
1	Zambia	99.8	Copper
2	Liberia	99.8	Rubber, timber
3	Mauritania	99.5	Iron ore
4	Guinea Bissau	97.7	Cashew nuts
5	Samoa	96.8	Coconut oil
6	Chad	95.0	Cotton
7	Mali	94.5	Cotton
8	Benin	93.7	Cotton
9	Uganda	90.5	Coffee
10	Vanuatu	88.4	Copra
11	Central African Rep.	88.2	Diamonds, timber, cotton, coffee
12	Malawi	87.0	Tobacco, tea, sugar, cotton, coffee
13	Comoros	82.9	Vanilla, cloves
14	Burundi	82.8	Coffee, tea, precious metals
15	Dem. Rep. of Congo	82.1	Diamonds, copper, timber
16	Gambia	80.8	Seeds for soft fixed oils, cotton
17	Burkina Faso	79.0	Cotton
18	Tanzania	78.2	Coffee
19	Niger	73.3	Uranium
20	Mozambique	64.6	Cashews, cotton, sugar
21	Rwanda	58.7	Coffee, tea
22	Maldives	57.4	Fish
23	Guinea	56.7	Bauxite, alumina, gold, diamonds
24	Myanmar	54.0	Foodstuffs, precious stones
25	Lao PDR	51.0	Wood products, coffee, tin

Source: WTO and UNCTAD (2002).

Some idea of the impact of price behaviour on the exports of these commodity-dependent exporters over the past decade is seen in Chart IB.8. While the value of world merchandise exports grew by an annual average of 5.8 per cent over the 1990-2002 period, the corresponding rate was about 2.9 per cent for the commodity-dependent LDCs. For the specific example of coffee, the International Coffee Organization (ICO) estimated the export earnings of coffee-producing countries for 2002 at $5.5 billion, which is less than half of the annual average of $10-12 billion they received in the early 1990s.

Chart IB.8
Exports of LDCs dependent on non-fuel primary commodities, 1990-2002
(Annual average percentage change)



Source: WTO.

But reduced export revenues do not tell the whole story as commodity price shocks can retard GDP growth rates. Negative price shocks have had a statistically significant (adverse) impact on the economic performance of Africa (Deaton, 1999). The terms of trade reduction of 36 per cent in the 1980s cost Africa 0.7 percentage points in its growth rate (Hadaas and Williamson, 2001).[35] This suggests that the consequences of commodity price shocks can persist, and with growth stalled, threaten rising poverty in the affected countries.

(d) Underlying causes

It might be useful to separate the discussion on underlying causes into those that explain the long-run behaviour of prices and those that explain the short to medium-run movements. The framework of analysis for the behaviour of long-term commodity prices has been largely shaped by the Prebisch-Singer thesis, which focuses on differences in demand elasticities for manufactures and commodities, as well as market power enjoyed by developed countries in manufactured goods. However, an explanation that is based on technical progress and secular improvements in agricultural productivity, is also a plausible alternative.

In the short to medium term, some of the underlying causes of price declines include trade policies in developed countries, the structure of the international market for commodities, and global macroeconomic conditions. Large agricultural subsidies in a number of important commodities have the effect of depressing their world prices. Tariff escalation in developed markets increases developing countries' reliance on primary commodities as it discourages the further processing of commodities in the home country. In some commodities, e.g. coffee, there has been rapid expansion of production as new suppliers (e.g. Viet Nam) have entered the market. One important feature of some commodity markets is that price changes in world markets are not reflected in retail prices of finished products. This suggests the possibility that firms involved in the commodity value chain possess market power that reduces prices received by producers. Current global macroeconomic weakness has also been a factor in depressing some commodity prices. The year 2001 saw the first downturn in the global economy since 1990, with world trade falling by about 1 per cent in volume terms.

[35] The terms of trade are measured as the relative price of imports and exports. When the terms of trade deteriorate, as they have for many developing countries, this means that these countries have to export more to pay for the same level of imports or import less for a given level of exports. Either way, falling terms of trade reduce national income.

(i) Long-term causes

In looking at the issues that bear on the long-term relative decline of commodity prices, it is important to recall that the classical economists had predicted exactly the opposite result.[36] For them, the major constraint on the economy was the fixed supply of land. The principle of diminishing returns would ultimately put pressure on agricultural yields and lead to a long-term increase in the relative price of food or agricultural products. Capital accumulation and population growth could not be sustained, as rising food prices kept population in check and stalled human progress.

The favoured explanation of many contemporary economists as to why these dismal predictions did not materialize over the following centuries is based on technological progress and improvements in agricultural productivity.[37] Among these favourable influences were the introduction of new crops (e.g. potatoes, maize), changes in farming practices (enclosure movement, the elimination of fallow), the mechanical revolution (the introduction of the reaper in the 19th century and of the tractor in the 20th century) and the application of science to agriculture (the "green revolution" marked by the development and use of high-yielding varieties of rice and other cereals with fertilizers, pesticides and irrigation). Production has grown to feed a rapidly expanding human population, which increased nearly eightfold from 760 million in the middle of the 18th century. These improvements have continued today, with world food availability for direct human consumption growing by 19 per cent to 2,720 kcal/day in the 35 years to 1994-96 (Alexandratos, 1999). This increase in per capita consumption occurred even as world population increased from 3 billion in 1960 to 5.7 billion in 1995. Agricultural productivity growth was not confined to the developed world. Sender (1999) estimates that agricultural productivity in Africa increased by an annual average of 2.3 per cent during the 1965-95 period, a rate that was as rapid as could be expected given the various infrastructure constraints in the continent.

But why should technological change in agriculture lead to a commodity price decline? One explanation is that developing countries have a large supply of farm labour, which is available at the subsistence wage. This large supply of labour prevents the real wage from rising when productivity increases. Thus, any productivity gain simply increases the supply of commodities, and is captured entirely by consumers in the form of lower relative prices.[38] This alternative explanation had not drawn as much attention as the Prebisch-Singer hypothesis but has recently garnered some support.[39]

In the case of metals, the long-term trends in prices are likely to have been shaped by the pace of technological improvements in extraction techniques (e.g. the use of the flotation process in copper) and in the production process (e.g. Bessemer's invention of the blast furnace and the employment of large reverberatory furnaces for smelting), recycling (e.g. in 1998, about 40 per cent of global demand for aluminium came from recycled aluminium scrap) and substitution by other materials (e.g. replacement of copper wires by fiber-optics).

Either the Prebisch-Singer or Lewis explanation still implies that if a country specializes in commodity production, it will face the long-term challenge of managing adverse terms of trade movements. In the face of continued growth in agricultural productivity, greater diversification in the economic structure of commodity-dependent countries will be the only effective way to manage the problem.

36 Ricardo (1817) and Malthus (1798; 1815).

37 Galor and Weil (2000), Johnson (2000) and Hansen and Prescott (2002). However, see O'Rourke and Williamson (2002), who have argued for an equally important role for international trade in the transition from a Malthusian world to the modern one.

38 This explanation was first articulated in Arthur Lewis' 1954 paper on unlimited supplies of labour. The inquiry was provoked by the question why the well-documented productivity growth in sugar in the West Indies was not accompanied by an increase in the real wage.

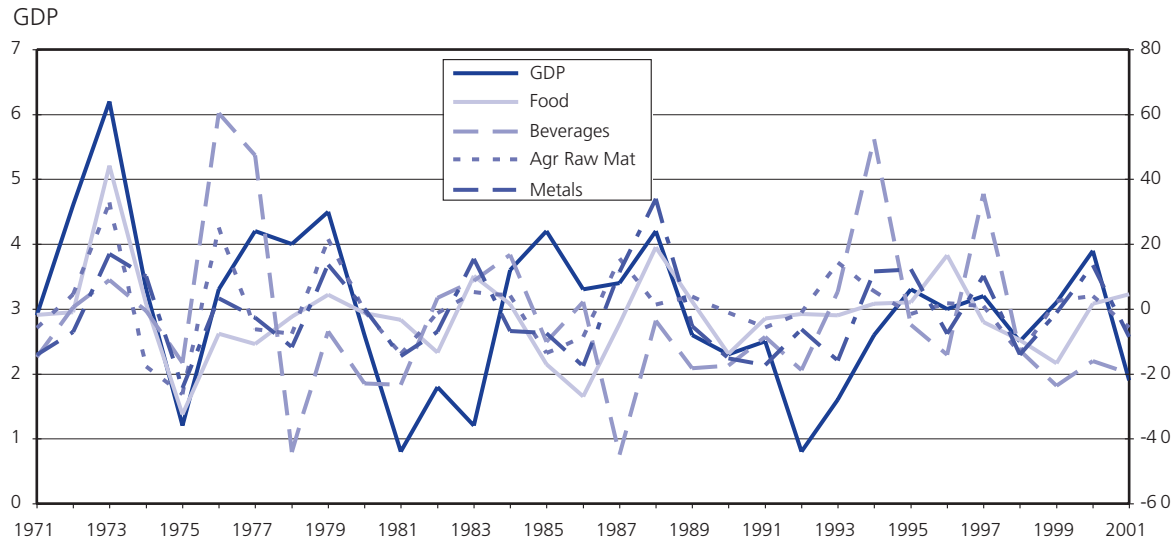
39 Deaton (1999).

(ii) Short and medium-term causes

Global macroeconomic slowdown

The strength of the global economy has an important bearing on prices (see Chart IB.9). Periods of rapid global expansion have usually been accompanied by rising relative commodity prices while periods of global weakness put downward pressure on prices. To examine the strength of the relationship, the change in relative commodity prices is compared to the change in real GDP.[40] The estimated coefficients are all positive and large in magnitude, suggesting a strong relationship. The relationship is much stronger and significant for metals, agricultural raw materials and food (see Table IB.6). However, it is not significant for beverages. Since metals and agricultural raw materials are important inputs in industrial production, their prices tend to be pro-cyclical. One possible implication of this strong business cycle link is that any sustained strengthening of commodity prices will likely have to await a full economic recovery in the major industrialized countries.

Chart IB.9
World GDP and non-fuel commodity prices, 1970-2001
(Annual percentage change)



Sources: World Bank (2002), World Development Indicators IMF (2003), International Financial Statistics.

Table IB.6
Relative commodity prices and global output, 1971-2001

Commodity	Output coefficient
Food	4.73 [b]
Beverages	3.58
Agricultural raw materials	4.56 [b]
Metals	5.43 [a]

[a] Significant at the 1% level

[b] Significant at the 5% level

[40] In technical terms, the change in the natural logarithm of relative commodity prices is regressed on the change in the natural logarithm of real GDP. The change in the natural logarithm approximates the annual percentage change of prices and real GDP.

Trade policies in developed country markets

Apart from the global business cycle, the trade policies adopted in the major markets of primary goods exporters will have a bearing on prices. Many developed countries provide substantial domestic support or subsidies to their agricultural sector. The OECD estimated the value of producer support to the farm sector in its members in 2000 to be about $241 billion, 63 per cent of which was market price support.[41] Table IB.7 shows the current total Aggregate Measure of Support (AMS) for the period 1995-99. Under the Agreement on Agriculture, WTO Members are considered to be in compliance with their domestic support commitments if the current total AMS does not exceed the annual or final bound AMS commitment specified in their schedules. Although the current total AMS has fallen from about $120 billion in 1995 to around $75 billion in 1999, the amount still represents a sizeable level of trade-distorting support.

Table IB.7
Current total aggregate measurement of support, 1995-99
($ billions)

	YEAR				
	1995	1996	1997	1998	1999
AMS	120	108	99	77	75

Notes:

1. Because of delays in notifications, 1999 was the last year in which there were relatively complete submissions on current total AMS.
2. Notifications from WTO Members were in national currencies. These have been converted into US dollars at exchange rates specified in the source document TN/AG/S/4.

Source: WTO document TN/AG/S/4 and notifications from WTO Members.

By providing incentives for farmers to either maintain or increase agricultural production, the support can put downward pressure on world prices of commodities. Hence, reduction of domestic support, particularly in developed countries, is likely to result in increases in world prices of previously subsidised commodities. A number of recent simulations suggest that developing countries who are net commodity exporters are likely to benefit from this, both in terms of increased exports and also in welfare.[42] However, an important drawback is that developing countries who are net agricultural importers may face reductions in welfare.

Another trade policy issue that has received significant attention is tariff escalation (see Section IIB.2 as well). While the level of tariff protection on many primary commodities may be low in developed markets, the protection tends to increase with the degree of processing of the commodity. If significant, tariff escalation has the effect of discouraging the further processing of commodities in the home country, thus increasing the exporter's reliance on primary commodities. Table IB.8 gives some indication of the degree of tariff escalation for selected primary products of export interest to developing countries. As a general observation, we find that tariff protection tends to rise with the degree of processing. The degree of tariff escalation differs, sometimes markedly, across countries. For the United States, the biggest differential in applied rates is 7 per cent (coffee) and it is 8 per cent in the case of the EU (cocoa). The differential is larger in the case of Japan at about 22 per cent (cocoa). Much more severe cases of tariff escalation can be found in Mexico for coffee and in Turkey for sugar.

41 OECD (2002a).

42 See Hertel, Anderson, Francois and Martin (2000) and Hoekman, Ng and Olarreaga (2002a, b) who simulate, among others, the impact of a reduction in agricultural support on trade and welfare. For developing countries, the impact of a reduction in domestic support works primarily through changes in the world price benefiting net commodity exporters while lowering welfare of net importers.

Table IB.8
Average applied rates on some commodities in selected OECD countries, 2001
(Percentage)

	Commodity				
OECD Member	Cocoa	Coffee	Jute	Non-ferrous metals	Sugar
Australia					
Unprocessed	0.0	0.0	0.0	0.0	...
Semi-processed	0.0	0.0	3.3	3.4	1.5
Prepared or preserved	5.0	0.0	0.0	4.4	5.0
Canada					
Unprocessed	0.0	0.0	0.0	0.0	...
Semi-processed	1.2	0.0	3.6	1.2	3.8
Prepared or preserved	5.2	0.0	5.5	2.9	7.8
Czech Republic					
Unprocessed	0.0	1.0	0.0	0.0	...
Semi-processed	4.0	1.8	5.1	3.4	41.7
Prepared or preserved	12.7	2.0	5.5	4.2	12.7
European Union					
Unprocessed	0.0	4.2	0.0	0.0	...
Semi-processed	7.0	7.0	1.6	4.3	10.4
Prepared or preserved	8.0	9.8	3.0	4.0	13.4
Japan					
Unprocessed	0.0	0.0	0.0	0.0	...
Semi-processed	5.6	9.0	6.4	2.4	9.2
Prepared or preserved	21.7	19.8	0.0	2.1	19.8
Korea, Rep. of					
Unprocessed	5.0	2.0	2.0	1.5	...
Semi-processed	6.0	6.8	8.0	6.6	23.7
Prepared or preserved	12.3	8.0	8.0	7.2	8.0
Mexico					
Unprocessed	18.0	23.0	13.0	11.3	...
Semi-processed	19.0	72.0	13.0	14.1	17.1
Prepared or preserved	n.a.v.	141.0	23.0	18.6	n.a.v.
Turkey					
Unprocessed	0.0	13.0	0.0	0.0	...
Semi-processed	11.0	13.0	2.0	5.5	50.2
Prepared or preserved	8.0	9.5	3.4	3.9	13.4
United States					
Unprocessed	0.0	0.0	0.0	0.0	...
Semi-processed	0.0	0.0	0.5	2.3	5.8
Prepared or preserved	6.3	6.9	0.0	2.8	8.1

n.a.v. = Non-ad-valorem rates

Source: WTO.

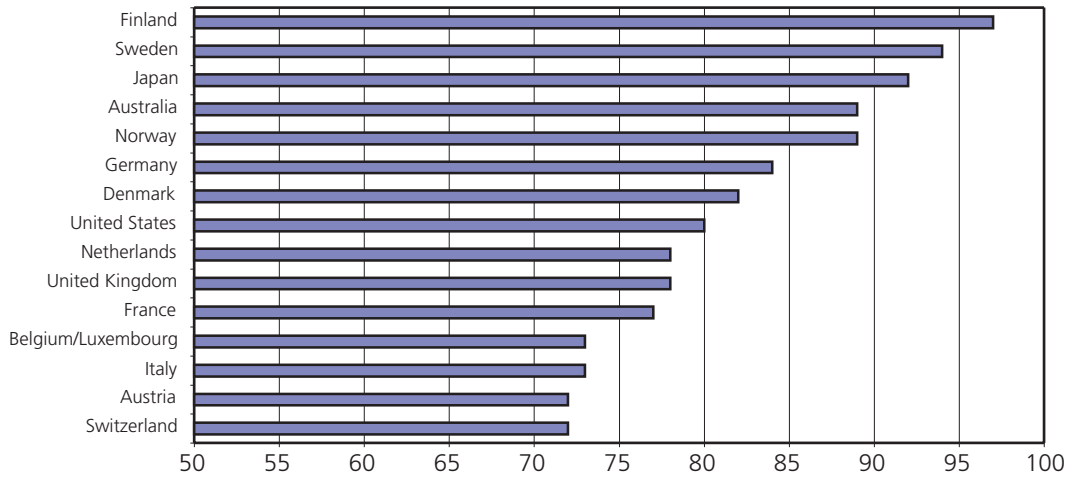
Oligopoly in product markets

One important feature of some commodities is that movements in world commodity prices do not seem to be fully reflected in the retail prices of the finished products.[43] There is also a fair degree of concentration in the various stages of the marketing chain. In the case of coffee, for example, the top ten roasters in the world account for an estimated 63 per cent of all processed coffee sales (roasted and soluble).[44] Chart IB.10 further documents the degree of concentration in 15 developed country markets including the US, Italy, Germany, France and the UK. The behaviour of retail prices, coupled with the large degree of concentration, raises the question of market power by the firms involved in the commodity supply chain. Lack of competition in these markets may allow firms to extract rents from the value chain and lead to lower prices being received by the primary producers.

Nevertheless, recent studies on this question have been unable to find significant monopoly power by market players. A study of the Dutch coffee market (Bettendorf and Verboven, 2000) concluded that while it was oligopolistic, the market was relatively competitive and the weak relationship between world prices and consumer prices was because of the relatively large share of costs other than coffee beans. In the case of the German coffee market, which is the second largest in the world after the US, while there is a long lag (almost two years) before changes in green coffee prices are transmitted to retail prices it is not clear to what extent this slow adjustment reflects market power by firms (Feuerstein, 2002).

This is an area that seems to warrant further research, particularly since most studies have looked at market power in the consumer or retail segment rather than the effect of market power on the producer or farm segment. To the extent that market power is present, and is used to extract economic rents from further down the production chain, the question would be whether action to stem anti-competitive behaviour might be warranted, including through international co-operation.

Chart IB.10
Share of top 5 coffee roasters in selected markets in 2000
(Percentage)



Sources: ITC (2002), International Coffee Guide.

[43] Morisset (1998) has found, for example, that the spread between world and domestic prices of a number of commodities (beef, coffee, oil, rice, sugar and wheat) has increased and there is asymmetry in adjustments with upward movements in world prices being passed on to consumer prices while downward movements are transmitted only imperfectly.

[44] ITC (2002).

(e) Possible responses

In the long term, commodity-dependent countries should work to diversify the export structures of their economies.[45] Experience from the 1950s and 1960s, however, has shown the limitations of excessive reliance on import substitution or industrial policy to achieve these ends. This is particularly true where these policies have taken the form of high protection from imports, simply creating space for replacing imports with domestic substitutes. Rather, the emphasis should be on investing in human capital, knowledge, better institutions and public infrastructure thereby hoping to build new endowments.[46] This more nuanced approach to intervention, aimed at increasing technology absorption and diffusion, finding ways of increasing productivity and building the appropriate institutions, may yield better results. These issues are discussed further in Section IIA of the study.

Even with the best pro-diversification policies that a country could pursue, a shift in the structure of production and exports is unlikely to occur immediately or easily. For the short and medium term, a range of responses to the problem of declining prices have been considered. In the past, many governments opted for control of the marketing or supply of primary commodities. Domestically, this control was exerted through marketing boards; internationally, a number of commodity agreements (tin, coffee, cocoa, rubber, etc.) were established.

Concerns about commodity price fluctuations have led to various forms of interventions by governments including marketing boards. However, attempts to insulate domestic producers from gyrations in world prices have often proved financially unsustainable since severe fluctuations in world prices can quickly drain the resources available for commodity price stabilization. Equally important perhaps, involvement by governments in marketing often has squeezed out private traders and by reducing competition in marketing also has a detrimental impact on the farmers. In a study of 18 LDCs, it was estimated that procurement measures (through government marketing boards, which are often the only legal buyers of agricultural outputs), quotas on exports of food crops and other agricultural commodities, and direct taxation of such exports have resulted in an effective tax on agriculture of 8 per cent on average (Schiff and Valdes, 1992). Marketing boards have generally failed to pass on export price increases to producers, and have themselves often been part of the system of *de facto* agricultural taxation.

The past decades have not been kind to international commodity agreements either. Some have collapsed, others faced adverse market conditions which made attempts at stabilization impractical. Others were not able to raise the funds to intervene effectively, while still others have suffered from disagreement over the division of the benefits among countries.[47] Difficulties have also arisen in circumstances where the implicit objective of price stabilization schemes has been to change secular trends in prices rather than smooth out fluctuations in prices.

Futures markets offer a way to hedge commodity price risk and have been used for a long time in developed countries by trading companies and financial institutions, although these financial instruments are not typically purchased by farmers. Nevertheless, the benefits of such markets can filter down to farmers through intermediaries who package these instruments into simpler forms of price insurance. But financial institutions in developing countries may have little access to hedging instruments in international markets. This is because of the high costs and inherently more risky nature of such transactions. Poor countries may lack the physical facilities (for storage, transportation, processing), legal and institutional infrastructure which are necessary preconditions for the efficient functioning of such markets. The important challenge is to create the necessary conditions for these markets to function successfully in poor countries given the benefits from market-based hedging of commodity price risk.

45 See Ng and Yeats (2002).

46 See De Ferranti et al. (2002).

47 Gilbert (1995).

The long-term reform process of agricultural trade envisioned by the Agreement on Agriculture calls for a "fair and market-oriented agricultural trading system" and a system that results "in correcting and preventing restrictions and distortions in world agricultural markets". As the Agreement currently stands, it allows some leeway for market instruments, such as export taxes, as a means of managing exports. Some commodity exporters also view export taxes as a measure to counteract tariff escalation.

By dealing with some of the underlying trade policy-related causes of low commodity prices, the Doha work programme offers an opportunity to make a positive impact on the problem. It has assigned importance to the issues of trade-distorting subsidies and tariff escalation. It calls for "comprehensive negotiations aimed at...reductions of, with a view to phasing out, all forms of export subsidies and substantial reductions in trade-distorting domestic support". The "negotiations ... shall aim ... to reduce or as appropriate eliminate tariffs, including the reduction or elimination of tariff peaks, high tariffs, and tariff escalation, as well as non-tariff barriers, in particular on products of export interest to developing countries". A successful outcome to the negotiations in agriculture and in market access for non-agricultural products, particularly in areas of interest to commodity exporters, would represent a valuable move forward on a long and difficult path.

3. REGIONAL TRADE AGREEMENTS

(a) Regional trade agreements have multiplied in recent years

The global trading system has seen a sharp increase in regional trade agreements (RTAs) over the past decade or so (Chart IB.11).[48] A total of 259 RTAs had been notified to the GATT/WTO by the end of December 2002, although only 176 RTAs are currently in force.[49] An additional 70 RTAs are estimated to be operational although not yet notified and about 70 are under negotiation (Appendix Table IB.5 contains a list of the main RTAs under negotiation at present and their stage of advancement). As of March 2003, only four WTO Members – Hong Kong, China; Macao, China; Mongolia and Chinese Taipei – were not party to a regional trade agreement. With the sole exception of Mongolia, these WTO Members are all engaged in negotiations on preferential agreements.

While the recent rapid growth of RTAs began in the 1990s, the seeds of this development were arguably sown in the 1980s. Part of the impulse towards regionalism was driven then by the seemingly bleak prospects for progress on the multilateral agenda in the wake of the inconclusive 1982 GATT Ministerial Meeting. Moreover, Western Europe was continuing its moves towards deeper and broader regional integration. Highly significant also was the decision of the United States to explore the preferential approach to trade. Prior to this, the United States had relied almost entirely on the GATT and the most-favoured-nation (MFN) principle to define its trade relations with other nations.[50] The United States signed its first free trade agreement (FTA) with Israel in the mid-1980s, followed by a FTA with Canada in 1988 and the North American Free Trade Agreement (NAFTA) in 1994. The current negotiations on free trade for the Americas (FTAA) span two continents and involve over 30 countries. More recently Asian countries, including Japan, have also departed from exclusive reliance on MFN-based trade.

A major explanation for the expansion in the number of RTAs in the 1990s was the collapse of the COMECON (the preferential arrangement involving the old Soviet Union and Eastern European countries) and the alignment of the Central and Eastern European countries to the European Union. Of the 123 new RTAs in force since 1990, covering trade in goods, about a third were signed among transition economies (Table IB.9). These new agreements were a response to the splintering of COMECON and represented efforts to make up for the forgone preferences. Hence, some of these new RTAs do not necessarily represent increased regionalization of the international trade regime. Another third were agreements concluded as part of the effort of the transition economies to integrate with the European Union.

Regional agreements among developing countries account for about 30-40 per cent of all RTAs currently in force, including those not notified to the WTO. In Africa alone, there are about eighteen trading agreements. Typically, they seek to reach beyond FTAs and establish customs unions or common markets. They tend to encompass a large number of countries and may have extended transition periods, often 20 or 30 years. These long transition periods suggest that some recent RTAs are more a declaration of intent than agreements promising a significant impact on trade flows.

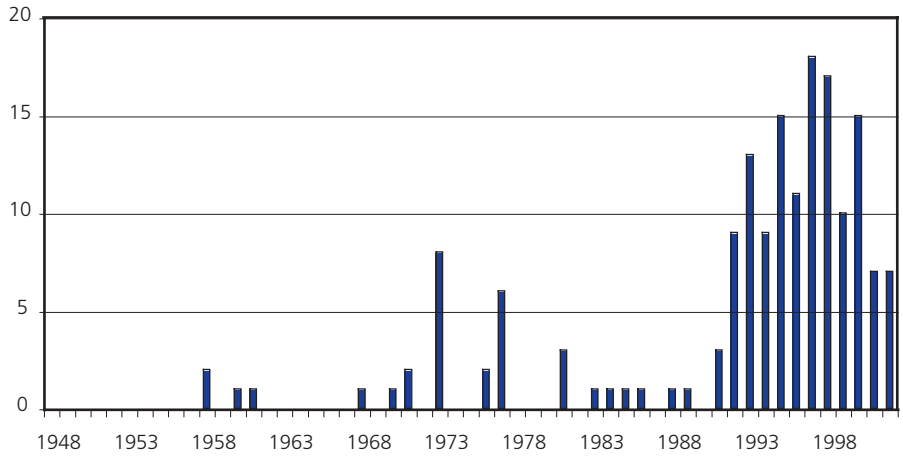
The number of RTAs signed between developed and developing countries has increased over the years. The European Union has played a major role in this respect through a series of agreements with a number of countries including Turkey, Mexico, South Africa and Chile. Euro-Mediterranean Association Agreements have also been concluded or are being negotiated between the EU and the countries of North Africa and the Middle East. These replace the earlier non-reciprocal RTAs signed in the 1970s. Moreover, the post-Lomé Cotonou agreements will be negotiated between the EU and the ACP countries on the basis of reciprocal preferential trade.

48 RTAs in the WTO context constitute a permitted departure from the most-favoured-nation principle.

49 Some of the notified agreements may have lapsed or may have been superseded. Included in the 259 total are notifications made under GATT Article XXIV, GATS Article V, and the Enabling Clause, including accessions to existing RTAs.

50 Exceptions to this included trade preferences for developing countries and the US-Canada Auto Pact.

Chart IB.11
RTAs by date of notification
(Number of RTAs notified to the WTO and in force as of December 2002)



Source: WTO.

Table IB.9
Notified RTAs in goods by the date of entry into force and type of partners
(as of January 2003)

	Developed-Developed	Developed-Developing	Developed-Transition	Developing-Developing	Developing-Transition	Transition-Transition	Total
1958-1964	2	0	0	1	0	0	3
1965-1969	0	0	0	0	1	0	1
1970-1974	5	3	0	2	0	0	10
1975-1979	0	5	0	1	0	0	6
1980-1984	2	1	0	1	0	0	4
1985-1989	1	1	0	2	0	0	4
1990-1994	3	3	12	5	0	6	29
1995-1999	3	7	10	4	12	28	64
2000-2002	0	11	4	5	4	6	30
Total	16	31	26	21	17	40	151

Note:

In this table, developed countries include Canada, the United States, EU, EFTA, Japan, Australia and New Zealand; transition countries include the former Soviet Union, Eastern and Central Europe, the Baltic States and the Balkans; the remaining countries are classified as developing.

Source: WTO.

Table IB.10 shows that 43 per cent of world merchandise trade now occurs under the umbrella of preferential trade arrangements. This share will increase as more RTAs are negotiated in the future. If all RTAs under negotiation at present are successfully concluded within the next three years, over 50 per cent of world merchandise trade will then occur among countries linked by preferential agreements.

Table IB.10
Preferential trade share of intra RTAs trade in merchandise imports of major regions, 2000 and 2005
(as of January 2003)

	2000	2005
Western Europe	64.7	67.0
Transition economies	61.6	61.6
North America (incl. Mexico)	41.4	51.6
Africa	37.2	43.6
Middle East	19.2	38.1
Latin America (excl. Mexico)	18.3	63.6
Asia	5.6	16.2
World	43.2	51.2

Note:

Estimates are calculated on the basis of the 113 agreements covering trade in goods notified to the WTO and in force as of July 2000, using trade data for 1999.

Source: WTO.

Not all trade among preferential trading partners takes place at preferential rates. Most agreements exclude certain sensitive sectors. Traders may choose to forgo preferential treatment because the costs of satisfying the requisite rules of origin might be higher than the advantage offered by the preferential margin. Such costs can take the form of higher-priced inputs linked to within-region sourcing requirements under the origin rules or may result from burdensome administrative requirements. Moreover, many applied MFN tariffs in developed countries are already zero. For the above reasons, the estimates reported in Table IB.10 will overstate the impact of preferential trading arrangements as far as tariffs are concerned.

The question of how regional trade arrangements affect the multilateral trading system cannot be understood solely through the prism of preferential tariff margins. Many other factors come into play such as the systemic implications of excluding particular sectors from RTAs, whether deeper integration involving regulation and "inside-the-border" areas of policy imparts an additional discriminatory impact on third parties, and whether regional integration efforts influence the pace of progress in multilateral rule-making and liberalization efforts. When these considerations are factored into the analysis, not to mention the political forces at play, the question whether regional arrangements complement or frustrate multilateralism becomes altogether more complex.

In assessing this issue, it is essential to consider a simple counter-factual question – how far does the choice exist for nations to define their desired trading relations through regionalism or multilateralism? If regionalism is second-best to a multilateral approach in defining trade relations, as suggested by many analysts and commentators, then the core question is whether regionalism has become an easy and ultimately unhelpful option, or whether there are circumstances in which it is the only option. If it is the latter, the policy challenge is to preserve as much as possible, a multilateral focus in the face of real world exigencies. If it is the former, then the challenge is to render regionalism a lesser temptation by moving forward more effectively on the multilateral front.

The rest of this section of the World Trade Report further explores these issues. The next sub-section considers some of the reasons why governments may be attracted by regional trade arrangements. This is followed by a discussion of the evolution of regional arrangements, the degree to which they might achieve deeper integration than is practicable under the WTO, and the ways in which regionalism and multilateralism interact with one another.

(b) The formation of RTAs is driven by economic and political considerations

(i) The economics

Economic analysis offers at least two reasons why governments might opt for preferential liberalization. The first of these is an application of the theory of the "second-best". In a world where policy-imposed barriers to trade exist, and it is impossible to remove them across-the-board, it may still make sense in terms of national and global well-being to reduce these barriers on a selective basis. If some countries are unwilling to liberalize while others wish to do so, for example, liberalization via a regional agreement might be more beneficial to the world than the *status quo*. The brief discussion below of trade creation and trade diversion illustrates why discriminatory liberalization could also make the world worse off, even if those undertaking the liberalization are better off. It could be argued that the willingness of a country to liberalize should not depend on whether others will do the same, since the gains from additional trade would accrue to the liberalizing country anyhow. This is an argument for unilateral liberalization on a non-discriminatory basis.

But reciprocal liberalization moves can yield even higher income gains than unilateral liberalization, and these gains can be augmented if unilateral liberalization was complemented with reciprocal liberalization. Furthermore, there are political economy reasons why governments may find it easier to liberalize when other countries are doing the same. So arguments in favour of unilateral liberalization do not necessarily trump the case for discriminatory liberalization on a reciprocal basis in a world of the second-best.

A second reason for governments to seek discriminatory liberalization is that they may be able to reap gains from trade in product areas where they cannot compete internationally. In other words, regional trade agreements could serve the purpose of shutting out third-party competition from more efficient suppliers. This motivation for striking regional agreements has unambiguously negative connotations for the world trading system. In the first case cited above, discriminatory trade liberalization does not necessarily work against subsequent non-discriminatory multilateral liberalization scenarios. But the exclusionary motivation for discrimination in the second case implies that the spread of regionalism will be an obstacle and not a complement to the multilateral agenda.

What are the circumstances in which the multilateral option might be considered more desirable but is more elusive than a regional approach, driving governments to focus on regional agreements? Three distinct dimensions are apparent. One concerns the possibility referred to earlier that for one reason or another, some countries are simply uninterested in pursuing multilateral liberalization.[51] Second, governments may wish to go deeper in integrating their economies than seems possible in a multilateral framework. They may prefer to remove all trade barriers rather than just reducing some. Or they may want to negotiate agreements on a range of other issues not touched upon or fully dealt with in the WTO, such as investment, competition, trade in services, or environment and labour standards. There may be gains from deeper integration unattainable in the WTO, including harmonization of economic policies or regulations, that is feasible among similar or like-minded countries. Third, governments may regard the multilateral option as too time-consuming, with negotiations being more drawn out because a wider range of interests needs to be reconciled. In addition, transaction costs associated with liberalization will be lower with fewer participants in negotiations.

[51] If the reluctant country is large enough on the world stage, its reticence to enter into liberalization commitments could push other countries towards regional arrangements. If the reluctant country is small, MFN-based liberalization might still be pursued by other countries. If lots of small countries are reluctant, the MFN approach may be rejected by those pursuing a liberalization agenda and they will turn to regionalism.

Sometimes countries, especially smaller ones, may see participation in regional arrangements as a defensive necessity from an economic perspective. Governments may simply fear exclusion from markets, and regard participation as an insurance policy against being placed at a competitive disadvantage through discriminatory policies. The phrase "domino regionalism" has been coined in the literature to capture this kind of motivation, explaining to a degree the explosion of membership in regional arrangements.[52] A particular reason why some developing countries may be seeking trade agreements with their larger developed country partners is that they are losing the preferential access to those markets previously enjoyed under developing country preference schemes (e.g. exclusion from GSP) or because the developed country is negotiating preferential agreements with other developing countries. Reciprocal regional trade agreements provide a means of maintaining preferential conditions of access, and this can be particularly important if some of the countries with which they are competing to supply the markets in question have not yet been "graduated" out of non-reciprocal preferential access arrangements or benefit from preferential treatment as a result of a RTA.

Another important economic factor behind the conclusion of RTAs is to attract foreign direct investment which will flow toward those countries which enjoy preferential access to larger markets.

Participation in regional agreements may also be valued for its "signalling" properties. If a country can demonstrate to potential traders and investors that it is committed to opening its markets, and that the commitment will not be easy to reverse, this could also be a reason for engagement. In these instances regionalism may not be particularly favoured over multilateralism, except for necessity or expediency.

(ii) The politics

Political considerations will inevitably feature in decisions to establish regional trading arrangements. Governments may seek to consolidate peace and increase regional security. However, the impact of the formation of a RTA on regional security can be twofold. On the one hand, creating linkages between economies can make conflicts more costly and favour cross-border collaboration. On the other hand, RTAs can create internal and external tensions. This is because the design of regional agreements affects the way gains are redistributed across members and may divert trade from non-members, thus reducing the welfare of third countries.

Governments may seek to acquire greater bargaining power in multilateral negotiations by first tying in partner countries through regional commitments. The same might happen at a regional level, where a subset of countries potentially engaged in broader regional negotiations would first strike their own agreement in order to increase bargaining power and press for a better outcome. Such empowerment, however, is conditional on the ability of the parties concerned to define a common position.

Just as the economic motivation of signalling commitment to a certain policy stance may induce participation in a regional agreement, so too might the wish to pursue the more political objectives of good governance and durable democracy. Regional agreements could be used to lock in institutional changes. A regional framework could be preferred to the multilateral context if it promises a deeper level of commitment or was likely to yield dividends in a shorter time-frame.

Vested interests within national bureaucracies could also drive RTA formation. Once the bureaucratic machinery has been set up to negotiate regionally, there is a natural temptation for those involved to seek to perpetuate their functions by creating conditions for the negotiation of successive agreements. There is perhaps also a sense in which governments have come to see the negotiation of trade agreements as a natural accompaniment of economic diplomacy. With regional agreements becoming so ubiquitous, the default question asked seems increasingly to be why a regional agreement does not exist with a trading partner, rather than why such an agreement should exist. To the extent that this tendency informs policy, the proliferation of unhelpful, criss-crossing agreements of questionable economic value is a risk that should not be ignored.

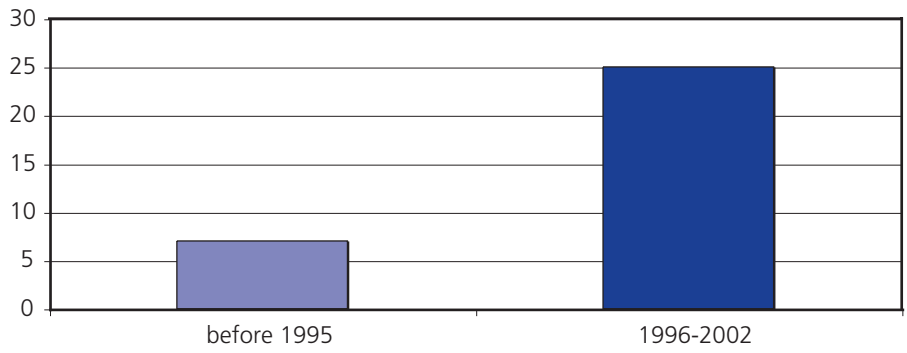
52 Baldwin (1995).

(c) Towards a complex network of RTAs

As noted earlier, the international trading system is increasingly characterized by a complex network of preferential trade regimes, sitting side-by-side with the WTO multilateral trading system. We see a rise in cross-regional bilateral agreements, the growing involvement of countries that have traditionally remained outside regional arrangements, the development of inter-linked (overlapping) agreements, and considerable variations in the design and content of RTAs.

One-third of the FTAs currently under negotiation are among countries that belong to different geographical areas. All major countries are involved in cross-regional FTAs. The EU has concluded FTAs with Mexico, Chile, South Africa and numerous other African and Middle Eastern countries and is in the process of negotiating regional agreements with ACP countries under the framework of the Cotonou Agreement. The EU is also negotiating an agreement with MERCOSUR. EFTA has signed a FTA with Mexico and various African countries, and is negotiating FTAs with Canada, Chile and South Africa. The United States signed a FTA with Jordan, and is negotiating with Australia, Chile, Egypt and Singapore. Chart IB.12 illustrates this trend.

Chart IB.12
Rise of cross-regional RTAs: a new phenomenon
(Number of RTAs)



Source: WTO.

Countries that have traditionally remained outside regional agreements are now negotiating and joining RTAs. The last major country to join the trend is Japan, which signed a FTA with Singapore in January 2002. Within the ASEAN region, Singapore has concluded bilateral FTAs with New Zealand (signed in November 2000) and EFTA (signed in June 2002). It has concluded negotiations with Australia and the United States and is negotiating with Canada, Mexico and the Republic of Korea. Japan is considering entering into talks with Canada, Chile, Mexico, and the Philippines. A bilateral FTA between Japan and the Republic of Korea is under negotiation. In November 2002, leaders of China and ASEAN signed a framework agreement commencing negotiations leading to a FTA within 10 years.

The proliferation of RTAs and the increasing number of bilateral free-trade agreements has meant overlapping membership for many countries. A large number of countries are now a party to two or more RTAs. For example, the EU has over 30 preferential trade agreements. Mexico is a member of NAFTA and also has a FTA with the European Union and a number of other countries. Singapore is a member of AFTA and has bilateral FTAs with Australia, EFTA, Japan, New Zealand and the US. All these countries are involved in negotiating future agreements. Chart IB.13 provides a picture of the degree of overlapping in RTAs. The Chart shows recently concluded RTAs and RTAs under negotiation among parties belonging to different regions.

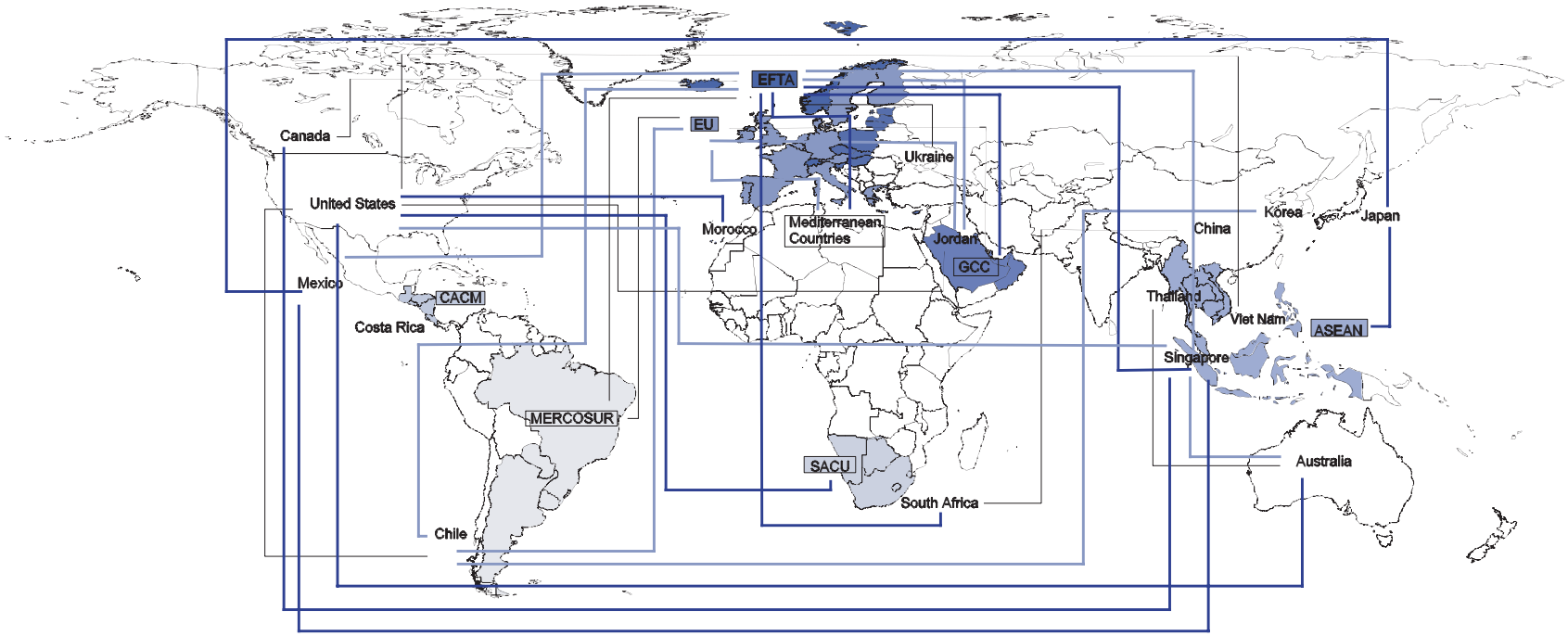
Finally, recent RTAs take many different forms. Many go beyond the simple removal of tariff barriers and quotas. They include the removal or reduction of non-tariff barriers, through harmonization or mutual recognition of product standards and conformity assessment procedures. Increasingly, many RTAs contain provisions on

trade in services.[53] Some also reach into policy areas that are either not covered or are covered differently by WTO rules, such as capital mobility, competition, environmental standards, investment and labour standards. For example, the agreement between Japan and Singapore covers a broad range of economic aspects such as capital flows, harmonized regulations, co-operation on paperless trade, financial services, media/broadcasting services, movement of professionals and development of human resources. The agreement between the United States and Jordan includes commitments on labour and environmental standards. Both the expected US-Singapore agreement and the agreement being negotiated between the United States and Chile will contain labour and environmental provisions.

With this patchwork of agreements and diverse treatment of issues, governments are increasingly likely to have to manage different provisions within the same policy areas. This carries the risk that some provisions are mutually inconsistent and may hamper trade. Complexity in the trade regime increases the transaction costs of conducting trade and the possibility of mutually inconsistent provisions creates uncertainty as regards the applicable rules.

[53] One possible explanation for this is that countries are more likely to gain from preferential liberalization of services trade as barriers in services are often prohibitive (so only domestic suppliers are present) and do not generate tariff revenues so that there are few costs of trade diversion. Furthermore, preferential access (even if it is temporary and followed by multilateral liberalization) may confer long-term advantages in a market given the location-specific sunk costs which apply in some services sectors. Thus, the conclusion of RTAs in services, which are increasingly common, may be used as a means to steal an irreversible march on the competition (Matoo and Fink, 2002).

Chart IB.13
Cross-regional RTAs recently concluded or under negotiation (2003)



RTAs rencently concluded (entered into force after July 2001 or soon to enter into force)

RTAs under negotiation

(d) Do regional trade agreements realize deeper integration than the WTO?

In light of the growing predilection among governments to enter into new regional trade agreements, an obvious question to which we alluded earlier is whether RTAs offer deeper integration beyond what can be expected from the WTO in the foreseeable future. A precise answer to this question is not always easy to discern because only partial information exists on many regional agreements. Some commitments are difficult to evaluate with any precision and the picture is further complicated by the plethora of overlapping agreements. However, some analysis can be done on concentration ratios, margins of preferences, tariff peaks and the depth of integration. Such analysis suggests that many RTAs do not offer strong evidence of trade creation, they often do not solve the problem of tariff peaks (high protection in sensitive sectors), and a significant part of trade within RTAs is non-preferential.

As far as liberalization beyond tariffs is concerned, some agreements clearly go in directions precluded by existing multilateral arrangements or go further in the coverage of liberalization. But more generally, it is difficult to establish to what degree a large number of RTAs achieve a deeper level of integration than the WTO. A recent study by the OECD (2002b) assessed to what extent provisions included in RTAs go beyond WTO commitments. The study focused on tariffs (including rules of origin), services, labour mobility, trade facilitation, special and differential treatment and environmental provisions in APEC, NAFTA, EFTA and the EU. The conclusion was that in many respects RTAs have not progressed too much beyond the GATT/WTO agreements, and that it was very difficult to determine whether RTAs represented an improvement in terms of the liberalization of trade. Box IB.1 supports a similar conclusion for the case of ASEAN.

Box IB.1: The case of ASEAN

The ASEAN Free Trade Area (AFTA) was created in 1992. Originally, it included only six ASEAN countries (Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand). However, as ASEAN expanded its membership to include countries in Indochina, the new countries also joined AFTA. In 1995 Viet Nam acceded to AFTA. Then Lao PDR and Myanmar, and Cambodia followed in 1997 and 1999 respectively.

AFTA was envisioned to reduce intra-regional tariffs or CEPT (Common Effective Preferential Tariffs) rates to a range of 0-5 per cent by 2008. However, the deadline for achieving the latter objective has been continuously brought forward – from 2008, to 2003 and then to 2002. The Agreement now also calls for elimination of all customs duties by 2010. ASEAN's new members have a slightly delayed timetable.

The ASEAN integration process has evolved from "narrow to broad", from an initial phase where the target was removal of trade barriers on industrial goods to a subsequent phase which saw the inclusion of unprocessed agricultural products. ASEAN integration has also progressed from "shallow to deep" integration. Deeper integration denotes going beyond the simple removal of trade barriers.[1] The AFTA-Plus programme (as this new agenda is sometimes called), includes preferential liberalization of services and investment, harmonization of tariff nomenclature, intellectual property co-operation, the harmonization of product standards and mutual recognition of conformity assessment tests.

Despite the realization of AFTA (at least for its first six members), the share of intra-regional trade has not increased significantly since the 1970s. In fact, the concentration ratio has been decreasing over time. It does not appear that the preferences under AFTA have significantly boosted intra-regional trade. There are a number of reasons for this. First, within ASEAN about 66 per cent of the tariff lines have the same MFN and CEPT rates.[2] As far as the remaining one third of tariff lines is concerned, since many ASEAN countries have also autonomously reduced their tariffs in the 1990s, the difference between MFN and CEPT rates is small. Given the rule of origin of 40 per cent ASEAN content, traders

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may not have found the difference worth the cost of retooling their production to meet the content requirement. Hence, less than 5 per cent of intra-regional trade is covered by CEPT preferences. Second, many products with strong potential for intra-regional trade (agricultural products such as rice and sugar and industrial products like automobiles) are also politically sensitive and have had their liberalization delayed by a number of members to a later date.

[1] Lawrence (1996) defines the removal of trade barriers as a shallow form of integration.

[2] As of 1998.

(i) Many RTAs do not provide strong evidence of trade creation

The most powerful argument for RTAs is that by providing tariff preferences or duty-free treatment to goods originating from its members, more trade is created. Since it is empirically difficult to isolate the trade creation effects of RTAs, proxies are often used. But even the most widely used proxies, such as intra-regional trade shares or concentration ratios, will tend to give an over-estimate of the trade creation effects, since the increase in trade among partners may just reflect trade diversion (see Box IB.2 on the concepts of trade creation and trade diversion). However, even with the use of these imperfect indicators, the data do not show that trade is increasingly becoming concentrated within RTAs.

Table IB.11 below shows the evolution of intra-regional export shares for the major regional trade agreements. It is true that the share of intra-regional exports as a percentage of regional bloc exports has been increasing since 1970 in most of the major regional trade blocs. Over 60 per cent of EU exports are to other EU partners and over half of NAFTA exports are to other NAFTA partners. However, intra-regional export shares within the EU have remained nearly constant and those for NAFTA have shown an upward trend since 1970, well before NAFTA entered into force in 1994.[54] Similar patterns can be identified for other major RTAs. MERCOSUR is an exception, where data show a sharp increase in intra-regional export shares after the agreement entered into force.

[54] Some of the empirical literature finds a significant positive impact of the formation of the EU on intra-regional trade. Results are sharper when estimations are conducted on disaggregated data or focussed on growth in trade flows (Frankel, 1997 and Bayoumi and Eichengreen, 1998).

Table IB.11
Intra-regional export shares, 1970-2001

	1970	1980	1985	1990	1995	2000	2001	year in force
Europe and North America								
CEFTA	...	...	...	...	14.6	11.5	12.4	1993
European Union	59.5	60.8	59.2	65.9	62.4	62.1	61.2	1957
NAFTA	36.0	33.6	43.9	41.4	46.2	55.7	54.8	1994
Latin America and the Caribbean								
CACM	26.0	24.4	14.4	15.4	21.7	13.7	15.0	1961
Andean Group	1.8	3.8	3.2	4.2	12.2	8.8	11.2	1988
CARICOM	4.2	5.3	6.3	8.1	12.1	14.6	13.4	1973
MERCOSUR	9.4	11.6	5.5	8.9	20.3	20.7	20.8	1991
Africa								
CEMAC (UDEAC)	4.8	1.6	1.9	2.3	2.2	1.2	1.3	1999
COMESA [a]	7.4	5.7	4.4	6.3	6.0	4.8	5.2	1994
ECCAS	9.8	1.4	1.7	1.4	1.5	0.9	1.1	1983 [c]
ECOWAS	2.9	9.6	5.1	8.0	9.0	9.6	9.8	1975 [c]
SADC [b]	4.2	0.4	1.4	3.1	10.6	11.9	10.9	1992 [c]
UEMOA	6.2	9.9	8.7	12.1	10.3	13.0	13.5	2000
Middle East and Asia								
ASEAN/AFTA	22.4	17.4	18.6	19.0	24.6	23.0	22.4	1992
GCC	4.6	3.0	4.9	8.0	6.8	5.0	5.1	1981 [c]
SAARC	3.2	4.8	4.5	3.2	4.4	4.3	4.9	1985 [c]

[a] Prior to 2000, data unavailable for Namibia and Swaziland.
[b] Prior to 2000, data unavailable for Botswana, Lesotho and Swaziland.
[c] Year of foundation.

Sources: UNCTAD, Handbook of Statistics 2002; WTO, International Trade Statistics 2002.

The intra-regional trade share is calculated as the ratio of trade among members over total trade (with members and non-members) of the regional grouping. This measure has the unfortunate property that its value will tend to vary with the size of the regional trading arrangement, either in terms of the number of members or the volume of trade among members. Therefore, if new countries enter the RTA or one of the countries experience high rates of GDP growth, the intra-regional trade ratio will increase. At the limit, if all countries in the world became members, the share would equal unity. Because of this, a high intra-regional trade share does not necessarily reflect a greater tendency for RTA members to trade with other partners in the region.

A better measure of intra-regional trade bias is provided by concentration ratios. These are calculated as the ratio of the intra-regional trade share to that region's share of world trade. This measure adjusts for the size of RTAs and their degree of openness to the rest of the world. The idea is to see whether a given country trades more with a fellow bloc member than does any one country in the world. If geographic patterns of bilateral trade are simply proportional to the distribution of total trade, then the concentration ratio should be close to one. But if trade is concentrated within a given regional group, that group should show a concentration ratio in excess of one.[55] What is particularly important is how these concentration ratios evolve over time, since many factors can explain intra-regional trade bias. If RTAs have a significant trade impact, then the concentration ratio should show a significant increase at about the time when the RTA is implemented.

[55] An alternative way to correct the bias of intra-regional trade shares is to divide each bilateral trade quantity by both partners' total GDPs. However, adjusting for total trade has the advantage of taking out the unwanted influence of size as well as openness. Other studies measure the trade bias introduced by preferences using intensity coefficients. Intensity coefficients are corrected concentration ratios, where the numerator does not count the first country's trade with itself.

First we note that concentration ratios seem to confirm that there is a bias toward trading with regional partners (see Table IB.12). In all cases concentration ratios are greater than one, meaning that trade is concentrated in the region more than the size and the openness of the trading partners would suggest. On the other hand, this could be the result of factors that have not been taken into account such as geographical proximity. In particular, the very high concentration ratios recorded for most RTAs among developing countries are the consequence of the relatively more important role of transport costs given the undeveloped state of their infrastructure. In other words, high values of concentration ratios may simply reflect the fact that countries trade more with their partners in a RTA because they are also neighbouring countries or they share a common language rather than because of preferences. Geographical contiguity or cultural similarities may reduce the cost of trading with one another. Some countries are "natural" trade partners. This may at least partly explain a coefficient of concentration greater than unity across RTAs, so this kind of analysis is somewhat inconclusive.

Second, the evidence on trade creation, as measured by increased concentration ratios, is not very clear. The concentration ratios for the EU and NAFTA have remained nearly unchanged over time although there is a slightly positive trend for NAFTA since 1990. There is an upward trend in the major Latin American RTAs (Andean Group and MERCOSUR) but a downward trend in ASEAN. As for Africa, the ratios show a great deal of variability, reflecting the unreliability of the trade data. For this reason, the African data are the hardest to interpret.

Table IB.12
Intra-regional export concentration ratios, 1970-2001

	1970	1980	1985	1990	1995	2000	2001	year in force
Europe and North America								
CEFTA	...	...	...	...	9.1	6.2	5.5	1993
European Union	1.5	1.6	1.6	1.5	1.6	1.7	1.6	1957
NAFTA	1.9	2.2	2.7	2.6	2.8	2.9	2.9	1994
Latin America and the Caribbean								
CACM	74.8	103.0	75.4	122.4	151.1	46.9	52.1	1961
Andean Community	1.1	2.5	2.6	4.5	15.4	8.7	9.6	1988
CARICOM	10.7	10.1	19.2	51.4	86.1	128.3	92.6	1973
MERCOSUR	6.2	8.0	3.1	6.6	14.9	15.2	13.6	1991
Africa								
CEMAC (UDEAC)	34.5	7.0	8.4	12.9	19.4	7.0	7.9	1999
COMESA [a]	5.5	12.1	8.9	15.6	17.8	11.6	12.9	1994
ECCAS	18.6	4.5	4.2	4.3	7.2	3.1	3.8	1983 [c]
ECOWAS	3.1	28.5	5.3	14.5	22.0	20.0	20.6	1975 [c]
SADC [b]	2.2	0.2	1.3	3.1	14.0	20.1	16.1	1992 [c]
UEMOA	22	42.0	34.9	80.7	89.3	137.3	140.4	2000
Middle East and Asia								
ASEAN(AFTA)	11.4	4.9	5.1	4.6	3.9	3.4	3.5	1992
GCC	5.7	0.4	1.5	3.2	3.4	1.9	2.0	1981 [c]
SAARC	3.3	7.5	6.6	4.1	4.9	4.2	4.6	1985 [c]

[a] Prior to 2000, data unavailable for Namibia and Swaziland.
[b] Prior to 2000, data unavailable for Botswana, Lesotho and Swaziland.
[c] Year of foundation.

Sources: UNCTAD, Handbook of Statistics 2002; WTO, International Trade Statistics 2002.

Box IB.2: Trade diversion and trade creation: definitions and empirical evidence

Since Jacob Viner's seminal work over fifty years ago, the concepts of trade creation and trade diversion have been used to analyze the economic effects of preferential trading arrangements. Trade creation takes place when, as a result of the preferential rate established by a RTA, domestic production of a product is displaced by imports from a member country, where the good is produced at a lower cost. Trade diversion occurs when as a result of regional preferences, imports from a low cost country outside the regional trade agreement are displaced by imports from a higher cost partner country.

Trade creation and trade diversion have opposite effects on welfare, or income. Trade creation generates welfare gains for member countries without imposing any losses on non-members. Consumers resident in the preferential area will pay less to purchase the same product, so they enjoy a welfare gain. In contrast, trade diversion generates a welfare loss. Trade diversion not only represents a cost for the exporting country outside the regional agreement (that will see its exports reduced), but also a cost for the importing country in the regional trading arrangement. Consumers pay a lower price than before the preference was introduced, but the government loses tariff revenue. In any case, consumers pay a higher price than they could have paid for their imports had liberalization occurred at the multilateral level. Trade diversion occurs when the difference in production costs between the lowest-cost member and the lowest-cost non-member is lower than the tariff rate faced by non-member countries. Therefore, lower external barriers minimize the extent of trade diversion. WTO rules, by requiring that members of a RTA do not raise trade barriers against the rest of the world, seek to minimize trade diversion.

But which is more likely, trade creation or trade diversion? Grossman and Helpman (1995) claim that the formation of trade diverting RTAs is the most likely case. The sectors that are more likely to be excluded from the agreement are those domestic import-competing sectors that face strong competition from abroad. Domestic producers of these sectors will be lobbying to obtain preferential access to the regional market. In contrast, the efficient exporter of the foreign country, that is already competitive in the international markets, will not.

Trade diversion also has negative systemic effects. A RTA that is net trade diverting, not only reduces welfare, but might also have negative effects on further liberalization in the multilateral trading system. How can this happen? Trade diversion favours the inefficient firm located in the preferential area at the expense of the efficient firm located outside that region. A firm located in the region, albeit inefficient, will be able to overcome the competition from a more efficient firm located in a non-member state because it will benefit from preferential rates. Preferential rates act as a form of protection against non-members. Therefore, it is likely that an inefficient firm will lobby against the prospect of future global liberalization, because it will not want to forgo its privileged access to the regional market. Moreover, its lobbying power (as measured by the amount that a firm is willing to pay for lobbying) is likely to be higher after the formation of the RTA than before the regional agreement. This is because the expected loss from international competition is higher. WTO rules reflect the need for RTAs to be compatible with the multilateral trading system by requiring that they eliminate trade barriers on substantially all trade in goods.

To conclude, economic gains depend on the balance between trade creation and trade diversion. In this context, trade diversion can be eliminated by reducing external tariffs so as to keep trade with non-members unchanged (Kemp-Wan Theorem). Other studies show that the balance between trade diversion and trade creation is more likely to favour trade creation, when MFN tariffs before the formation of the RTAs are low (Meade, 1955), member countries of the RTA are already large trading partners (Lipsey, 1957) and transportation costs are low (Summers, 1991).

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Numerous analyses of the economic effects of specific RTAs, undertaken in recent years, show mixed results.[1] The evidence drawn from econometric analysis generally produces different results for different RTAs.[2] Using aggregate data, many studies find only a slight positive impact on trade creation following the formation of the EU and EFTA and in general no evidence of trade diversion. However, results are in general stronger when the analysis is conducted at the sectoral level. A non-significant effect is in general found for NAFTA, due probably to the insufficient number of observations (NAFTA only has 3 members). There is some evidence of trade diversion for the Andean Group and MERCOSUR. Contrasting results are obtained for ASEAN. Frankel (1997) and Gilbert et al. (2001) observe a positive and significant bloc effect on intra-ASEAN trade, and show that this effect remains significant even when the high level of openness of Singapore is taken into account. In contrast, Winters and Solaoga (1999) find that ASEAN countries trade among themselves less than expected by the gravity model[3].

The results derived from simulations of Computable General Equilibrium (CGE) models generally show that RTAs have positive welfare effects. However, the size of the welfare impact depends on whether the model used assumes perfect or imperfect competition.

1 See OECD (2001a).

2 Most empirical models rely on the gravity model. In the basic gravity model, trade between two countries depends on their size and on transaction costs. Typically, size is proxied by their incomes and populations and land areas, while transaction costs are proxied by the distance between the two countries, cultural similarities (such as common language) and geographical contiguity (whether countries share a common border, or if one of the two is an island). In this context, the impact of the formation of an RTA is detected by introducing a regional "dummy" variable.

3 There are only a very few studies on Africa that have been based on the estimation of a gravity model. In many cases, the poor quality of intra-RTA trade data will not allow a test to be conducted on a specific RTA. Therefore, the analysis is often conducted on larger regions, such as Sub-Saharan Africa, or Central-Western Africa and Southern-Eastern Africa.

(ii) Not all trade occurring within RTAs is preferential

A portion of the trade flows within RTAs does not take place on a preferential basis because MFN duties on some products are already set at zero. The percentage of MFN duty-free tariff lines is as high as 49 per cent in Canada and 35 per cent in the United States (see column 4 in Table IB.13). Where duties are not zero, they may nevertheless be very low, which also reduces the significance of preference margins arising from preferential trade agreements. Low MFN rates are characteristic of many tariff lines in developed countries. For Canada, the United States and the EU, the simple average bound tariff is below 5 per cent. In addition, cumbersome and costly requirements associated with rules of origin limit the effective use of preferences when preference margins are low. Finally, some sectors do not enjoy any preferences with respect to MFN tariffs, as many RTAs exclude certain sectors or products from coverage.

Table IB.13 also provides an indication of the extent to which partners in some major RTAs enjoy preference margins in relation to MFN trade. The margin of preference depends on the difference between preferential rates and MFN rates and the degree to which preferences have been extended across the spectrum of all products. Table IB.13 shows the differences between average, preferential and MFN rates. For the United States, for example, the average preferential tariff within NAFTA is 0.3 per cent and the comparable MFN rate is 4.6. per cent. As noted above, the table also indicates the percentage of tariff lines which are duty free under the relevant RTA and the MFN regimes (column 4).[56]

56 Simple averages of tariff rates across tariff lines can be a misleading measure of the degree of integration. Indeed, since data only refer to tariff lines with *ad valorem* duty rates, those countries with a relatively high number of lines where specific duties apply (that in some cases account for as much as 20 per cent of agriculture) could appear with a lower average tariff rate (the same caveat applies to the percentage of duty free tariff lines).

Because MFN rates are already very low for the industrial countries, the margins of preference reported in column 3 of Table IB.13 are not very big. The margin is less than 5 per cent for the United States and Canada in NAFTA and about the same for the EU in EU-South Africa. However, developing country members of RTAs tend to grant larger margins of preference reflecting the fact that their MFN tariffs tend to be higher and therefore the scope to offer tariff concessions is greater. The margin is more than 10 per cent for Mexico in NAFTA and for Argentina and Uruguay in MERCOSUR. This raises the question of how large the trade creation effects are likely to be in RTAs where both developed countries, who make up the bulk of the trade, and developing countries are members.

Finally, Table IB.13 introduces a ratio called the ratio of margin of preference (RMP). The RMP is the difference between the average applied MFN tariff and the average applied preferential tariff divided by the MFN tariff. This ratio, reported in column 5 of Table IB.13, offers an important insight into the extent to which a RTA has liberalized substantially all trade among its members, a condition required by GATT Article XXIV. The RMP is comparable across RTAs regardless of differences in levels of MFN tariffs. A value of the RMP close to 100 per cent indicates almost complete preferential tariff liberalization. The RMP ratios shown in Table IB.13 indicate sharp differences in the degree to which individual RTA members have liberalized their trade with other partners. In the case of Argentina in MERCOSUR, for example, the RMP of 99 per cent indicates that almost all trade with MERCOSUR partners enjoys preferential rates of zero. In the case of South Africa in EU-South Africa, on the other hand, the RMP of 9 per cent indicates exclusions from preferential coverage.

Table IB.13
Indicators of the preferential tariff treatment within selected RTAs
(Estimates for the end of the implementation period)

(1) RTAs	(2) Year	(3) Average applied tariff		(4) Duty free tariff lines (per cent of total)		(5) Marginal preference ratio (per cent)
		Preferential	MFN	Preferential	MFN	
NAFTA						
Canada	2000	0.5	4.4	93	49	90
Mexico	1997	4.0	15.5	49	0	75
US	2000	0.3	4.6	95	35	94
EU-SOUTH AFRICA						
EU	2000	n.a.	5.5	55	19	n.a.
South Africa	2002	9.8	10.7	47	45	9
MERCOSUR						
Argentina	2000	0.1	13.3	100	5	99
Uruguay	2001	0.1	12.3	99	5	99
ASEAN						
Malaysia	2001	3.9	9.2	60	58	57
SADC						
South Africa	2002	5.2	10.7	65	45	52

Note:
For NAFTA, figures reported are simple average applied tariff across products and NAFTA members. Weighted averages across all products are 0.7, 5.8, and 0.5 for Canada, Mexico and the US respectively; where weights are given by the percentages of duty free lines vis-à-vis each of the other NAFTA members. Calculations are based on out-of-quotas tariffs only and include the *ad valorem* component of specific duties.

Source: WTO.

(iii) Tariff peaks prevail in a number of areas

A recent study by the WTO Secretariat (2002a) analyzes the extent of tariff liberalization among a selected number of RTAs.[57] A major result is that "sensitive" sectors in multilateral negotiations are also sensitive sectors in regional agreements, suggesting that the degree of liberalization achieved in RTAs is less than one may be led to believe as far as certain sectors are concerned.

RTAs have frequently not addressed the problem of tariff peaks. In other words, products (or tariff lines) which have high MFN tariffs are also likely to have high (preferential) tariffs in RTAs. For analytical purposes, we shall define a tariff peak as a product (or tariff line) with a tariff of 30 per cent or more. In the case of Malaysia for example, there are a total of 240 tariff lines whith MFN rates above 30 per cent. But even in extending concessions under ASEAN, about half (45.8 per cent) of these tariff lines have preferential rates that are above 30 per cent. The percentage of MFN peak tariff lines that remain above 30 per cent under other preferential regimes is equal to 98.2 per cent for South-Africa (EU-South Africa agreement) and 33.3 and 100 per cent for Argentina and Uruguay respectively (MERCOSUR). In the case of NAFTA, only 6.3 per cent (for the United States) and 8.0 per cent (for Canada) of Mexico's tariff peaks remain above 30 per cent under NAFTA concessions.[58] However, this does not mean that the problem of tariff peaks has been solved within NAFTA. The percentages of MFN peak tariff lines that remain above 45 per cent for Mexico are 60.3 per cent for duties applying to the United States and 74.1 per cent for those applying to Canada. A similar argument applies for South Africa in SADC.[59]

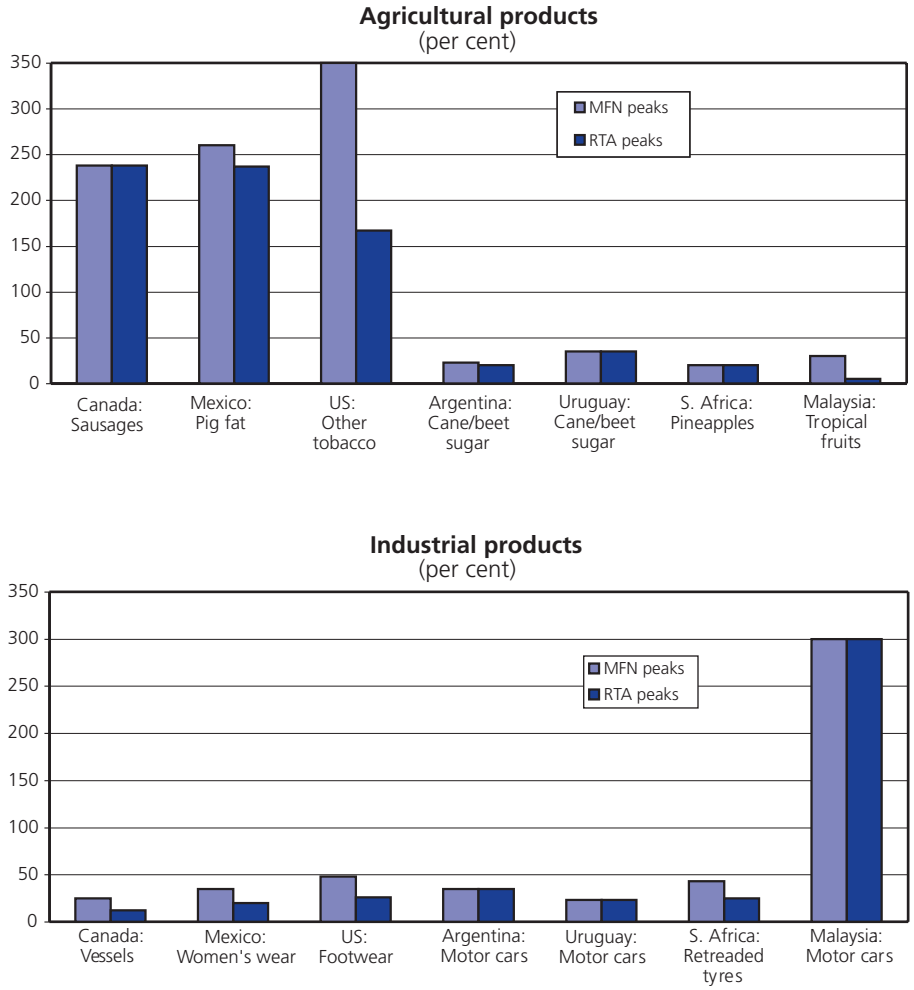
Chart IB.14 reports the highest preferential and MFN tariff peaks for industrial and agricultural products across a selection of countries who are members of regional agreements. The Chart shows that the pattern of protection under preferential regimes tends to be similar to MFN regimes. In short, protection is higher in agriculture than in manufactures in many RTAs, just as it is in the world of MFN trade. The persistence of tariff peaks in RTAs does raise the question of how significant trade creation is in some regional agreements.

57 See WTO document WT/REG/W/46.

58 In the case of NAFTA, Mexico gives different concessions to Canada and the US.

59 Tariff peaks may be a function of transition periods. Many RTAs signed in the last decade contain long transition periods (often 10 years or more) so that tariffs on sensitive sectors do not immediately come down. Hence it is possible that tariff peaks will gradually disappear in some RTAs.

Chart IB.14
Peaks in WTO (MFN) and RTAs tariff schedules
(Selected countries and product groups)



(e) Regional trading arrangements and the multilateral trading system

The economic impact of regional arrangements depends on their particular architecture, including how far they go in reducing trade barriers and how many sectors they cover. It is impossible to draw ex ante conclusions from arguments based on principle. Costs are typically associated with arrangements that penalise third parties and benefits with new trading opportunities created within a regional grouping (see Box IB.2 on trade creation and trade diversion). The risks of distortions associated with RTAs are minimized when these agreements avoid raising barriers to trade with outsiders and when free trade covers all sectors within the preferential area.[60] An assessment of how regional integration affects countries will inevitably turn up favourable and less favourable elements, and the ultimate verdict will turn on the net balance of costs and benefits for countries both inside and outside preferential trade agreements. The case of Mexico reported in Box IB.3 considers some of the elements that enter into such an assessment for an individual country involved in regional integration arrangements.

[60] Regional trade agreements would be more strongly positive if they also improved trading conditions for outsiders through multilateral liberalization. In a dynamic sense, they might do that if third parties are able to benefit from heightened economic activity and trade growth resulting from preferential liberalization.

Box IB.3: Involvement in RTAs: the case of Mexico

Mexico is a relatively recent, though increasingly energetic, participant in regional trade agreements. Although long party to a number of preferential partial scope agreements signed under the auspices of the Latin American Integration Association (LAIA), it was the entry into force of the NAFTA in January 1994 which sparked Mexico's involvement in fully-fledged free trade agreements (FTAs). Mexico currently participates in 13 FTAs, ten of which contain provisions on trade in services[1], and is currently engaged in negotiations with Ecuador, Japan, Panama, Peru, Singapore and Trinidad and Tobago, MERCOSUR and the Republic of Korea. Mexico currently derives over 80 per cent of its total imports from preferential partners, giving it one of the world's highest ratios.

Positive effects of RTA involvement

Mexico's involvement in RTAs has enabled it to liberalize its import tariffs through the progressive reduction of duties over a predefined period with a selected number of trading partners. Participation in RTAs, particularly the NAFTA, has exposed Mexican producers to foreign competition and subjected them to strong pressure to increase productivity. Average productivity per worker in the manufacturing sector, which accounted for an average 21 per cent of total GDP during 1996 – 2000, increased at an average rate of 6.8 per cent in the period 1990 – 2001. At the same time, preferential access to the huge North American market has granted certain Mexican producers the demand base, capital, and technology necessary to exploit economies of scale and sustain productivity gains.

Mexico has used its participation in RTAs as a means to introduce complex policy issues of commercial significance into its economic relations (notably services, investment, intellectual property protection, co-operation on competition policy, technical standards and government procurement).

Participation in the NAFTA and other RTAs has helped Mexico attract foreign direct investment (FDI), enabling it to overhaul its manufacturing capacity away from protected, inefficient import substitution towards competitive, export-oriented industries. FDI inflows into Mexico, which averaged $3.9 billion from 1990 to 1993, trebled in the period 1994 to 1999 and reached $25 billion in 2001.

A recent OECD study demonstrates that in the period 1970 to 1998[2], Mexico moved away from specializing in primary goods towards a greater specialization in manufacturing products such as motor vehicles, consumer electronics and computer equipment. This is in marked contrast to Argentina, Brazil and Chile which continue to specialize in primary products. The authors suggest that Mexico's pattern of specialization, which follows a similar path to that of the US and the EU and which is highly dependent on access to FDI or other forms of partnership, may be the result of Mexico's participation in the NAFTA and its increased market integration within North America.

Other considerations

An increase in Mexico's MFN tariff rates in January 1999 (applied MFN rates were raised on some 80 per cent of total tariff lines), coupled with progressive tariff reductions under various preferential agreements, has resulted in a substantial and widening gap between MFN and preferential tariff rates. This has raised some concerns about potential trade diversion. For example, the average MFN tariff on agricultural goods (2001) was 25.6 per cent, while those for preferential partners ranged from 3.2 per cent (Chile) to 23.8 per cent (Israel). For non-agricultural goods (excluding petroleum) the average MFN tariff was 15.6 per cent, while for preferential partners it ranged from zero per cent (Chile) to 5.8 per cent (Israel).

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Mexico has, thus far, failed to take full advantage of liberalization with selected RTA partners as a means of reducing tariff rates on certain highly protected agricultural goods such as poultry, potatoes and pig fat where prevailing rates exceed 200 per cent. Although Mexico has reduced such tariff peaks with certain RTA partners (United States, Chile, Nicaragua and, to a more limited extent, Canada and Bolivia), this is not the case (as of 2001) for its remaining RTA partners.[3]

Mexico, which already has a $2 billion trade deficit in agricultural products with the United States, faces increased competition from the more heavily subsidized US agribusiness sector and Mexican farmers face further painful adjustment and restructuring in order to survive increasing floods of imports. Notwithstanding the productivity gains realized in the manufacturing sector, workers have not reaped the benefits, as salaries in 2001 remained lower than the level in 1994 in real terms.

Although Mexico has benefited considerably from its geographic proximity to the huge North American market, it faces increasing competition from lower-cost exporters such as China where wage costs are a third of Mexico's, especially in goods such as apparel, electronics and telecommunications where transport costs are low. Thus, while membership in RTAs, particularly the NAFTA, allowed Mexico a jump start on other suppliers to the US market, it provides no insurance policy against more efficient large-scale producers such as China.

Preferential rules of origin employed by Mexico in its RTAs are diverse and complex, and methods of conferring origin in individual RTAs differ. Some RTA partners (Bolivia, Chile, NAFTA) are entitled to self-certification of proof of origin, while for others (the European Union, Colombia, Uruguay) the proof of origin must be certified by the competent authority in the exporting country. The administrative burden associated with a complex web of differing rules of origin may partly offset trade liberalization goals.

In 1993, Mexico's total exports were $52 billion, increasing to $166 billion in 2000. Total imports in 1993 were $65 billion and increased to $191 billion in 2000. Mexico's increasingly concentrated economic integration with the United States, which accounted for 73.1 and 88.6 per cent of Mexico's merchandise imports and exports respectively in 2000 (up from corresponding figures of 69.3 and 82.7 per cent in 1993, the year preceding the NAFTA's entry into force), dwarfs all other trading partners and makes the Mexican economy particularly vulnerable to fluctuations in the North American business cycle.[4] This argues for engagement in concurrent multilateral liberalization in order to dampen the effects of shocks from downturns in preferential markets.

1 Mexico's RTA partners are Canada and United States (NAFTA), Nicaragua, El Salvador, Honduras, Guatemala, Costa Rica, Columbia, Venezuela, Chile, Bolivia, EU, Israel, and EFTA. With the exception of the RTAs with Costa Rica, Bolivia and Israel, all contain provisions on trade in services.

2 Oliveira Martins and Price (2001).

3 It should be noted that the phase-out periods for sensitive products range from six years (in the case of Israel) to 14 years (United States, Bolivia, Costa Rica, Nicaragua).

4 For example, merchandise exports to Argentina and Brazil accounted for only 0.6 per cent of total exports in 2001, while other countries in the western hemisphere accounted for less than 5 per cent of the total.

Similarly, the positive and less positive effects of regionalism must be assessed in terms of non-discriminatory alternatives offered by a multilateral approach to trade policy. Given the wide variety of motives that entice governments to pursue RTAs, including non-economic ones, there will always be a drive towards regional arrangements no matter how well the multilateral trading system functions. Regionalism can serve as a catalyst for further liberalization at the multilateral level. A process of "competitive liberalization" could contribute to the removal of trade barriers and to innovative policies in such areas as investment rules and market regulations. Perhaps the most forceful example of this argument is the creation of the European Community, which in turn propelled the United States to initiate successive GATT negotiations under the Dillon, Kennedy and Tokyo Rounds (Whalley, 1998).

The increasing number of regional agreements may also represent a threat to multilateral liberalization. Preferential agreements can distort trade flows and for this reason may be regarded as an inferior option compared to coordinated multilateral liberalization. To sustain that argument it must be assumed that multilateral arrangements are capable of delivering the quality and depth of welfare-enhancing integration sought through regional arrangements. The question, then, is one of balance. Regional arrangements can be destructive of more desirable multilateral outcomes but they can also supplement and build upon multilateralism in positive ways. How can the community of nations reap the benefits of constructive coexistence and avoid the costs of distraction and destructive conflicts of interest?

Four key arguments are put forward as to why regional arrangements might frustrate the attainment of multilateral goals. First, a multiplicity of regional agreements safeguarding varying levels of protection against external third parties will almost certainly engender a degree of trade diversion, and the application of numerous rules of origin and differing standards will make international trade more complex and costly. In contrast, non-preferential trade liberalization will allow the underlying pattern of comparative advantage in the world to emerge, leading eventually to patterns of specialization among countries and regions that make the most efficient use of available resources.

Second, the growing number of overlapping bilateral and plurilateral agreements risks undermining the transparency of trading rules, thus posing a threat to one of the fundamental principles of the WTO. The parallel existence in a single country of differing trade rules applying to different trading partners can represent a barrier to trade not only because of the costs involved in meeting a wide range of conditions of trade rules, but also because it is likely to introduce uncertainty and opacity into the trading system as a whole. In other words, ubiquitous and highly varied regional arrangements may not only reduce profitable trading opportunities, but also undermine the integrity and clarity of the multilateral trading system.

Third, regionalism may adversely affect the internal dynamics of trade liberalization in a political economy sense, especially where RTAs exclude "difficult sectors" from coverage. If groups favouring liberalization can be at least partially satisfied through regional arrangements that exclude more protectionist sectors, then the balance of forces for and against liberalization in a multilateral setting is tilted in favour of those seeking to arrest liberalization. Many, if not most, regional agreements have excluded agriculture. It appears that if agricultural trade liberalization is to be addressed more effectively than it has been so far, this will have to occur in a multilateral setting where the appropriate trade-offs might be found. If this is the case, and manufacturing and service industries with export interests are at least in part satisfied through regional arrangements, who will be left in domestic markets for political influence to advocate on the side of more openness? More generally, regional trading arrangements may create vested interests determined to avoid any dilution of preferential margins implied by multilateral trade liberalization (see discussion of this point in Box IB.2).

Finally, increasing regionalism will tend to distract attention and energy from multilateral negotiations. This is a particular worry at this point in time, given the need to shepherd the current WTO negotiations to a successful outcome.

The two basic WTO rules on regional trade agreements (Article XXIV of GATT and Article V of GATS) recognize that RTAs can make a contribution to the multilateral trading system, even though they entail a departure from the MFN principle. The rules seek to minimize the downside of discrimination by requiring that trade restrictions within the preferential area be removed in substantially all sectors, without barriers being raised on trade with non-members.

The recent proliferation of RTAs, combined with the very limited historical success of Member governments to agree on concrete standards for judging the GATT/WTO conformity of regional arrangements, have resulted in widespread agreement on the need to revisit the rules. Ministers agreed at the Fourth Ministerial Conference in Doha to launch negotiations aimed at clarifying and improving the disciplines and procedures under existing WTO provisions applying to regional trade arrangements. Discussions in the Regional Trade Agreements

Committee so far have focused on transparency issues, such as the definition of rules for notification to the WTO (i.e. when and what needs to be notified). The negotiating group has yet to consider some challenging issues, such as the definition of the requirement that a FTA liberalize "substantially all trade".[61]

(f) Conclusions

Governments opt for regional trade agreements for a variety of reasons. Possibilities for co-operation at the multilateral level may be absent or attenuated. Governments may wish to go further, faster and at lower cost than is feasible in a multilateral setting. Some may see regional agreements as a defensive necessity, to avoid exclusion, or as a means of increasing bargaining power in a broader setting. Politically, preferential trade arrangements can help to consolidate regional security and tie in commitments that are more fragile if they need only be answered to in a national context.

But protectionist motives can also drive pressure for regional arrangements. Where exclusion is the incentive, the results are unlikely to sit well with a multilateral focus, nor promise as much by way of economic gain. Incomplete and distorting arrangements will tend to prevail.

Regardless of whether regional arrangements seek to pursue goals compatible with multilateralism or to short-circuit the discipline of non-discrimination, RTAs can pose threats to a coherent and active multilateral trading system. A proliferation of ill-considered and partial RTAs could turn fears of shortcomings in the multilateral framework into a self-fulfilling reality. The existence of numerous overlapping arrangements can distort trade, raise transactions costs, and undermine the systemic integrity of multilateralism. Regional trading agreements can strengthen vested interests hostile to non-discriminatory outcomes. They can weaken resolve to make multilateralism work by draining away scarce negotiating resources and reducing the effectiveness of pro-liberalization forces in the domestic economy.

The GATT/WTO rules have sought to discourage these features of preferential trading arrangements, but have not achieved what governments would have wished. Clearer rules are important, but insufficient. Political commitment and a clear understanding of the consequences of preferential trading arrangements are vital if the multilateral agenda is to be carried forward.

Two ground rules of policy behaviour could help to consolidate and build upon the benefits of regionalism and promote a more effective multilateral trading system. The first rule would be to refrain from engaging in regional commitments which governments would be unwilling, sooner or later, to extend to a multilateral setting.[62] The second would be to consolidate the first rule by agreeing to a consultative system that would map and monitor the timing and conditions attached to the non-discriminatory, multilateral application of commitments made in regional arrangements. Such arrangements might provide a more effective link between regionalism and multilateralism than exists today.

61 Article XXIV paragraph 8.b.

62 This assumes that the multilateral framework covers the relevant areas of the rules. Rules on labour rights in a regional agreement, for example, could not be incorporated within the framework of WTO obligations. Regional tariff reductions, on the other hand, could be replicated in the WTO.

Appendix Table IA.1
Leading exporters and importers in world merchandise trade, 2002
(Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	United States	693.5	10.8	-5	1	United States	1202.5	18.0	2
2	Germany	612.2	9.5	7	2	Germany	493.3	7.4	1
3	Japan	416.0	6.5	3	3	United Kingdom	339.8	5.1	2
4	France	329.5	5.1	2	4	Japan	336.4	5.0	-4
5	China	325.6	5.1	22	5	France	326.4	4.9	-1
6	United Kingdom	275.9	4.3	1	6	China	295.2	4.4	21
7	Canada	252.5	3.9	-3	7	Italy	241.1	3.6	4
8	Italy	252.0	3.9	5	8	Canada	227.6	3.4	0
9	Netherlands	243.4	3.8	5	9	Netherlands	217.7	3.3	4
10	Belgium	213.2	3.3	12	10	Hong Kong, China	208.6	3.1	3
						retained imports [a]	24.7	0.4	-21
11	Hong Kong, China	200.6	3.1	5	11	Belgium	195.7	2.9	10
	domestic exports	16.7	0.3	-18	12	Mexico	176.5	2.6	0
	re-exports	183.9	2.9	8	13	Spain	153.7	2.3	...
12	Korea, Rep. of	162.5	2.5	8	14	Korea, Rep. of	152.1	2.3	8
13	Mexico	160.8	2.5	1	15	Singapore	116.2	1.7	0
14	Chinese Taipei	130.3	2.0	6		retained imports	57.7	0.9	-5
15	Singapore	125.6	2.0	3	16	Chinese Taipei	112.6	1.7	5
	domestic exports	67.0	1.0	1	17	Switzerland	83.5	1.2	-1
	re-exports	58.6	0.9	5	18	Malaysia	80.2	1.2	9
16	Spain	118.9	1.9	...	19	Austria	77.7	1.2	4
17	Russian Fed.	106.9	1.7	4	20	Australia	72.7	1.1	14
18	Malaysia	95.7	1.5	9					
19	Ireland	88.6	1.4	7					
20	Switzerland	87.6	1.4	7					
21	Sweden	80.7	1.3	7	21	Sweden	65.9	1.0	4
22	Austria	79.1	1.2	12	22	Thailand	64.5	1.0	4
23	Saudi Arabia	73.9	1.2	1	23	Russian Fed.	60.0	0.9	12
24	Thailand	68.6	1.1	5	24	India	56.3	0.8	12
25	Australia	65.0	1.0	3	25	Poland	54.8	0.8	9
26	Brazil	60.4	0.9	4	26	Ireland	51.9	0.8	3
27	Norway	60.3	0.9	2	27	Brazil	49.5	0.7	-15
28	Denmark	56.8	0.9	10	28	Denmark	49.2	0.7	9
29	Indonesia	52.0	0.8	0	29	Turkey	48.8	0.7	18
30	India	50.0	0.8	15	30	Czech Rep. [b]	40.6	0.6	11
	Total of above [c]	5538.1	86.2	-		Total of above [c]	5651.3	84.5	-
	World [c]	6424.0	100.0	4		World [c]	6685.0	100.0	3

[a] Retained imports are defined as imports less re-exports.

[b] Imports are valued f.o.b.

[c] Includes significant re-exports or imports for re-export.

Source: WTO

Appendix Table IA.2
Leading exporters and importers in world merchandise trade (excluding intra-EU trade), 2002
(Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	Extra-EU exports	939.0	19.1	6	1	United States	1202.5	23.2	2
2	United States	693.5	14.1	-5	2	Extra-EU imports	931.3	18.0	1
3	Japan	416.0	8.5	3	3	Japan	336.4	6.5	-4
4	China	325.6	6.6	22	4	China	295.2	5.7	21
5	Canada	252.5	5.1	-3	5	Canada	227.6	4.4	0
6	Hong Kong, China	200.6	4.1	5	6	Hong Kong, China	208.6	4.0	3
	domestic exports	16.7	0.3	-18		retained imports [a]	24.7	0.5	-21
	re-exports	183.9	3.7	8	7	Mexico	176.5	3.4	0
7	Korea, Rep. of	162.5	3.3	8	8	Korea, Rep. of	152.1	2.9	8
8	Mexico	160.8	3.3	1	9	Singapore	116.2	2.2	0
9	Chinese Taipei	130.3	2.6	6		retained imports [a]	9.4	0.2	-27
10	Singapore	125.6	2.6	3	10	Chinese Taipei	112.6	2.2	5
	domestic exports	67.0	1.4	1					
	re-exports	58.6	1.2	5					
11	Russian Fed.	106.9	2.2	4	11	Switzerland	83.5	1.6	-1
12	Malaysia	95.7	1.9	9	12	Malaysia	80.2	1.5	9
13	Switzerland	87.6	1.8	7	13	Australia	72.7	1.4	14
14	Saudi Arabia	73.9	1.5	1	14	Thailand	64.5	1.2	4
15	Thailand	68.6	1.4	5	15	Russian Fed.	60.0	1.2	12
16	Australia	65.0	1.3	3	16	India	56.3	1.1	12
17	Brazil	60.4	1.2	4	17	Poland	54.8	1.1	9
18	Norway	60.3	1.2	2	18	Brazil	49.5	1.0	-15
19	Indonesia	52.0	1.1	0	19	Turkey	48.8	0.9	18
20	India	50.0	1.0	15	20	Czech Rep. [b]	40.6	0.8	11
21	United Arab Emirates	40.4	0.8	-2	21	United Arab Emirates	40.6	0.8	4
22	Poland	40.4	0.8	12	22	Hungary	37.0	0.7	10
23	Czech Rep.	36.8	0.7	10	23	Philippines	35.5	0.7	13
24	Philippines	35.6	0.7	9	24	Israel	35.2	0.7	-1
25	Turkey	34.8	0.7	11	25	Norway	34.6	0.7	5
26	Hungary	33.7	0.7	11	26	Indonesia	31.3	0.6	1
27	South Africa	29.7	0.6	2	27	Saudi Arabia	31.2	0.6	0
28	Israel	29.5	0.6	1	28	South Africa	29.4	0.6	3
29	Venezuela	26.9	0.5	-2	29	Iran, Islamic Rep. of	21.4	0.4	20
30	Argentina	25.4	0.5	-5	30	Viet Nam	19.4	0.4	21
	Total of above [c]	4460.0	90.6	-		Total of above [c]	4686.0	90.5	-
	World (excl. intra-EU trade) [c]	4922.1	100.0	4		World (excl. intra-EU trade) [c]	5178.4	100.0	3

[a] Retained imports are defined as imports less re-exports.

[b] Imports are valued f.o.b.

[c] Includes significant re-exports or imports for re-export.

Source: WTO

Appendix Table IA.3
Leading exporters and importers in world trade in commercial services, 2002
(Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	United States	267.8	17.4	3	1	United States	218.4	14.3	13
2	United Kingdom	121.0	7.9	10	2	Germany	142.8	9.4	4
3	Germany	94.9	6.2	14	3	Japan	105.3	6.9	-2
4	France	84.0	5.5	5	4	United Kingdom	98.0	6.4	6
5	Japan	64.7	4.2	2	5	France	64.3	4.2	4
6	Spain	61.1	4.0	6	6	Italy	61.7	4.0	11
7	Italy	58.7	3.8	3	7	Netherlands	55.9	3.7	5
8	Netherlands	54.7	3.6	5	8	Belgium-Luxembourg	47.9	3.1	12
9	Belgium-Luxembourg	53.3	3.5	9	9	China	44.2	2.9	13
10	Hong Kong, China	44.0	2.9	6	10	Canada	41.7	2.7	0
11	China	37.3	2.4	13	11	Ireland	38.8	2.5	12
12	Canada	36.2	2.4	2	12	Spain	36.2	2.4	9
13	Austria	36.1	2.3	11	13	Korea, Rep. of	33.9	2.2	2
14	Korea, Rep. of	29.3	1.9	-1	14	Austria	33.8	2.2	8
15	Switzerland	27.3	1.8	5	15	Denmark	24.6	1.6	5
16	Singapore	27.0	1.8	3	16	Chinese Taipei	24.4	1.6	3
17	Denmark	26.9	1.8	0	17	Hong Kong, China	23.9	1.6	-2
18	Ireland	26.2	1.7	31	18	Sweden	23.1	1.5	1
19	Sweden	22.0	1.4	1	19	Russian Fed.	20.7	1.4	13
20	Chinese Taipei	21.3	1.4	10	20	Singapore	20.6	1.4	1
21	India	20.7	1.3	8	21	Australia	17.0	1.1	3
22	Greece	18.9	1.2	-3	22	Norway	16.5	1.1	8
23	Norway	18.8	1.2	5	23	Mexico	16.4	1.1	-1
24	Australia	16.0	1.0	1	24	Thailand	16.3	1.1	13
25	Thailand	14.9	1.0	16	25	Indonesia	15.7	1.0	...
26	Turkey	14.4	0.9	-10	26	Malaysia	15.6	1.0	-5
27	Malaysia	14.1	0.9	-2	27	India	15.5	1.0	-14
28	Mexico	12.6	0.8	0	28	Switzerland	15.3	1.0	1
29	Russian Fed.	12.4	0.8	18	29	Brazil	13.6	0.9	-14
30	Poland	9.8	0.6	0	30	Israel	12.5	0.8	1
	Total of above	1345.0	87.5	-		Total of above	1315.0	86.4	-
	World	1540.0	100.0	5		World	1520.0	100.0	5

Source: WTO

Appendix Table IB.1
Developing regions' imports from the South, 1990-2001
(Billion dollars and percentage)

	Value		Share		Average annual change		
	1990	2001	1990	2001	1990-1995	1995-2000	1990-2001
Developing Asia	145	446	66.2	69.9	19	7	11
Middle East	23	55	10.5	8.6	10	7	8
Latin America	33	95	15.0	14.9	16	7	10
Africa	18	43	8.3	6.7	12	6	8
South-South	219	639	100.0	100.0	17	7	10

Source: WTO, International Trade Statistics.

Appendix Table IB.2
South-South merchandise exports by product, 1990-2001
(Billion dollars and percentage)

	Value	Share	Average annual change		
	2001	2001	1990-1995	1995-2000	1990-2001
Agricultural products	67	10.5	14	0	6
Food	55	8.6	15	1	7
Raw materials	12	1.8	11	-3	3
Mining products	162	25.4	8	13	9
Ores and minerals	9	1.5	9	6	7
Fuels	140	22.0	6	15	9
Non-ferrous metals	13	2.0	22	2	10
Manufactures	403	63.1	22	6	12
Iron and steel	14	2.2	16	-1	6
Chemicals	59	9.2	22	6	12
Other semi-manufactures	40	6.3	19	2	9
Machinery and transport equipment	206	32.2	28	9	16
Automotive products	16	2.5	34	4	17
Office and telecom equipment	122	19.1	32	13	18
Other machinery and transport equipment	68	10.6	22	5	12
Textiles	40	6.3	17	1	7
Clothing	13	2.0	17	7	11
Other consumer goods	31	4.8	16	3	8
Total merchandise exports	639	100.0	17	7	10

Source: WTO, International Trade Statistics.

Appendix Table IB.3
South-South exports of office and telecom equipment and automotive products by destination, 1990-2001
(Million dollars and percentages)

A. Values

Destination		Latin America	Africa	Middle East	Developing Asia	All develop. countries	World
Office and telecom equipment	1990	1401	488	784	16318	18991	76321
	1995	4924	1317	2205	66250	74696	216353
	2001	7222	1649	3619	109455	121945	343200
Automotive products	1990	1028	424	383	1105	2940	12676
	1995	5829	1334	1531	3862	12556	35429
	2001	7565	1615	2920	4026	16126	67777

B. Shares in exports to world

Office and telecom equipment	1990	1.8	0.6	1.0	21.4	24.8	100.0
	1995	2.3	0.6	1.0	30.6	34.5	100.0
	2001	2.1	0.5	1.1	31.9	35.6	100.0
Automotive products	1990	8.1	3.3	3.0	8.7	23.1	100.0
	1995	16.5	3.8	4.3	10.9	35.5	100.0
	2001	11.2	2.4	4.3	5.9	23.8	100.0

C. Average annual percentage change

Office and telecom equipment	1990-95	29	22	23	32	32	23
	1995-00	11	4	7	14	13	12
	1990-01	16	12	15	19	18	15
Automotive products	1990-95	34	26	32	28	34	23
	1995-00	5	4	12	0	4	13
	1990-01	20	13	20	12	17	16

Source: WTO, International Trade Statistics.

Appendix Table IB.4
Import duties collected by selected developing countries 1985-2000
(Billion dollars and percentage)

	Imports value	Ratio of duties collected to imports Period averages		
	2000	1985-89	1990-94	1995-2000
China	225	10.3	4.7	3.2
Mexico	183	5.2	5.7	2.0
Korea, Rep. of	160	8.0	5.3	3.6
Chinese Taipei	140	7.1	4.9	3.5
Malaysia	82	6.4	4.0	2.3
Thailand	62	11.3	9.0	5.0
Brazil	59	8.2	8.1	8.0
India [a]	51	54.8	38.4	24.5
Indonesia [a]	34	5.2	5.0	2.4
South Africa [a]	29	6.6	4.4	3.8

[a] Data are on a fiscal year basis.

Source: IMF, Government Finance Statistics Yearbook various issues and national statistics.

Appendix Table IB.5
Prospective free trade agreements
(Latest update 17 March 2003)

Regional agreement	Type of agreement	Current situation	Agreement expected by
1. America (excl. Cuba)	FTA	under consideration	talks to create an FTAA, North America and Chile want by 2003, other Latin American countries by 2005
2. Andean -MERCOSUR	FTA	under negotiation	near to conclusion as of July 2002
3. Arab League, The	FTA	under consideration	summit in Jordan in March 2001 to launch a FTA by 2005
4. ASEAN	FTA	under negotiation	AFTA to be realized by 2003
5. ASEAN-China	FTA	under negotiation	signed on 4.11.2002, framework of the final draft of agreement is to be endorsed by 2011
6. ASEAN-India	FTA	under consideration	agreed to set up an Economic Linkages Task Force to submit recommendations including the draft of a framework agreement

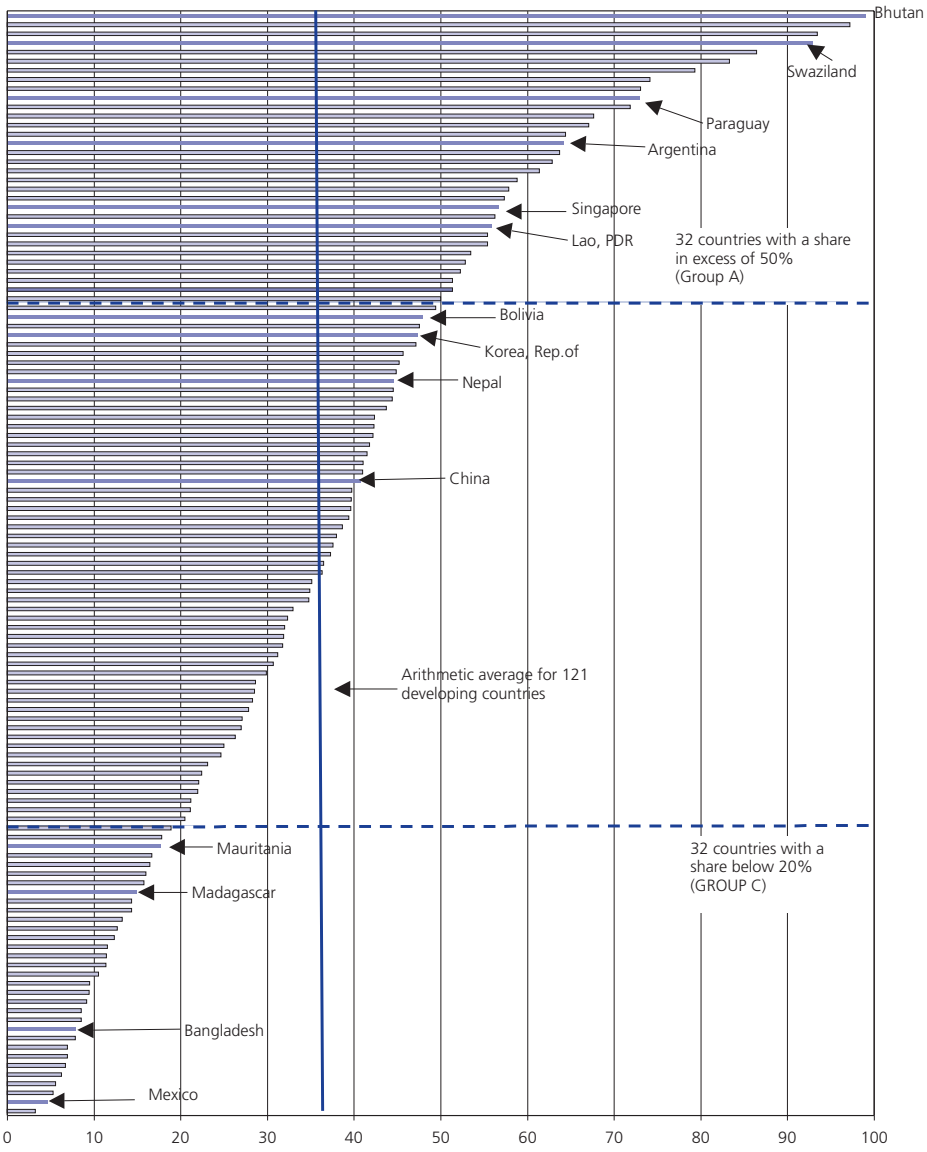
7. ASEAN-Japan	FTA	under consideration	agreed to start negotiations starting 2003 as the Japan – ASEAN Closer Economic Partnership (CEP) Experts Group submits its report
8. Australia-Thailand	FTA	under negotiation	first round in August 2002
9. Brazil-Chile	FTA	negotiation concluded	concluded in March 2002, needs to be approved by MERCOSUR
10. Canada-Andean	FTA	under consideration	
11. Canada-CARICOM	FTA	under consideration	
12. Canada-Costa Rica	FTA	negotiation concluded	Royal assent received
13. Canada-Central America	FTA	under negotiation	
14. Canada-Dominican Republic	FTA	under consideration	
15. Central America-Panama	FTA	under negotiation	
16. China-Hong Kong, China China-Macao, China	FTA	under negotiation	by end of 2003
17. Costa Rica-CARICOM	FTA	under negotiation	1st round of negotiation Oct. 2002
18. East Asia Free Trade Area including ASEAN, China, Japan and Rep. of Korea	FTA	under consideration	agreed to initiate a feasibility study by 2003
19. EU–Chile	Association Agreement incl. FTA	negotiation concluded	Agreement signed in November 2002
20. EU–GCC	FTA	under negotiation	negotiations began in 1990 soon reached a standstill, were resumed in March 2002
21. EU–Lebanon	Association Agreement, incl. FTA	negotiation concluded	signed in June 2002, FTA by 2010
22. EU–MERCOSUR	FTA	under negotiation	negotiations began in March 2000
23. EU–Syria	Euro Mediterranean Agreement	under negotiation	FTA exists, Euromed. negotiation started in 1998
24. EU–Algeria	Euro Mediterranean Agreement	negotiation concluded in Dec. 2001	needs to be signed and ratified, FTA exists
25. EU–Iran	Trade Coop. Agreement	under consideration June 2002	
26. EU–India	FTA	under consideration	group of experts for a viability study
27. EFTA–Canada	FTA	finalizing negotiations	
28. EFTA–Chile	FTA	under negotiation	
29. EFTA–Egypt	FTA	under consideration	
30. EFTA–GCC	FTA	under consideration	Declaration on Co-operation signed on 23 May, 2000
31. EFTA–MERCOSUR	FTA	under consideration	Declaration on Co-operation signed on 12, Dec., 2000
32. EFTA–Singapore	FTA	negotiation concluded	concluded June 2002
33. EFTA–South Africa	FTA	under consideration	negotiations set to begin in the first half of 2003
34. EFTA–Tunisia	FTA	negotiations opened	
35. EFTA–Ukraine	FTA	under consideration	Declaration on Co-operation signed in June 2000

36. EFTA–FR of Yugoslavia	FTA	under negotiations	Declaration on Co-operation signed in Dec. 2000, negotiations on a wider pact under way
37. EFTA–Albania	FTA	under consideration	Declaration on Co-operation signed Dec. 1992, exploratory talks on FTA
38. EFTA–Lebanon	FTA	under consideration	Declaration on Co-operation signed in 1997, exploratory talks on FTA started in Feb. 1998
39. Egypt–Jordan–Morocco–Tunisia	FTA	under negotiation	expected to be established by 2010
40. Japan–Australia	FTA	agreed to engage in high-level talks, April 2002	
41. Japan–Indonesia	FTA	under consideration	
42. Japan–Mexico	FTA	under negotiation	first round of trade talks completed, expected to be completed by Fall 2003
43. Japan–Philippines	FTA	under consideration	
44. Japan–Rep. of Korea	FTA	under negotiation	to be signed by 2004 after a study conducted by a Joint Committee on the feasibility of an FTA
45. Rep. of Korea–Chile	FTA	negotiation concluded	agreement reached in November 2002, expected to take effect in the first half of 2003
46. Mexico–Trinidad & Tobago	FTA	under negotiation	
47. Singapore–Australia	FTA	negotiation concluded	signed in Feb. 2003
48. Singapore–Canada	FTA	under negotiation since 2001	
49. Singapore–Chile	FTA	under consideration	
50. Singapore–Mexico	FTA	negotiations under way	end of the year
51. Singapore–ASEAN and PR of China	FTA	under negotiation	framework agreement signed Nov. 2002
52. Singapore–Rep. of Korea	FTA	under negotiation	launched Nov. 2002
53. Rep. of Korea–Chile	FTA	negotiation concluded	agreed to sign the agreement, October 2002
54. Sri Lanka–Pakistan	FTA	under negotiation	October 2002, failed to be finalised
55. US–Australia	FTA	under negotiation	started March 2003
56. US–CACM	FTA	under negotiation	negotiation began Jan. 2003
57. US–Chile	FTA	negotiation concluded	negotiations end, December 2002
58. US–Morocco	FTA	under negotiation	negotiations began Jan. 2003
59. US–SACU	FTA	under consideration	discussions will begin Feb. 2003
60. US–Singapore	FTA	negotiations concluded	Jan 2003 agreement reached, not yet signed

Appendix Chart IB.1

Importance of South trade varies strongly among developing exporters, 1999-2001

(Percentage)



Source: UNSD, Comtrade database, national statistics and WTO estimates.

II TRADE AND DEVELOPMENT

From its beginnings the international trading system has been shaped by a blend of principle and pragmatism. Trade relations cannot be determined solely on the basis of simple, inviolate principles that are defined and agreed upon at the outset. Practical considerations, politics and particular expressions of the national interest inevitably intervene to determine positions taken by governments. Some commentators reflect this reality when they refer to a government measure or policy approach as "bad economics but good politics". Yet much of the strength and historical success of the multilateral trading system has rested on the willingness of governments to pre-commit to a set of principles and rules, underpinned by binding arrangements for settling trade disputes.

A continual challenge facing the trading system is to secure balanced outcomes faithful to these core tenets which at the same time accommodate the divergent needs, interests and priorities of the membership, including those of smaller and weaker countries. This is a moving target, and the mix that has emerged from the interplay of principle and pragmatism at different stages of the GATT/WTO's development has never seemed ideal to all participants in the system. But as long as governments believe that no serious alternative exists to co-operation, they will negotiate and the system will continue to modify and redefine itself. It is this essential process of modification and redefinition that underlies negotiations like those upon which Members embarked at Doha in November 2001.

The outcome of these negotiations will be assessed in no small measure on the basis of their contribution to development. This part of the Report focuses on the question of how developing countries can derive greater benefits from participation in the trading system. The answer to this question depends on two fundamental considerations. The first is the policies that developing countries themselves choose to pursue. The second is whether the trading system is appropriately designed and effectively functions to support and promote development.

Section II.A discusses what we understand of the development process and the part that trade plays in that process. Despite the remarkable technological achievements of the last two hundred years, we still live in a world of pervasive human poverty and underdevelopment. Deep and complex factors underlie this sad reality, and not all of them are fully understood. A very brief discussion of some of these issues follows, with pointers to elements of what we do understand about successful development strategies and the nature of outstanding challenges. Particular attention is paid to the role of trade in the development process. The analysis will focus on the potential developmental contribution of openness to trade and investment, the economic and socio-political preconditions that enable nations to take advantage of openness, and the ways in which openness relates to the continuing challenges of poverty alleviation and environmental sustainability.

Section II.B links this analysis to the Doha negotiating agenda and work programme. Those aspects of the Doha Agenda that seem most directly related to the development needs and interests of developing countries form the central focus of analysis. Options and priorities are examined in terms of how outcomes might affect the development prospects of developing countries. This analysis builds on the basic argument that even if governments were perfectly aware of the best possible policy options available to promote development, and the growth that must inevitably accompany development, additional gains accrue from active participation in a well designed system of international co-operation. The analysis also considers the impact of developed country policies and positions on the prospects of developing countries.

A THE ROLE OF TRADE AND TRADE POLICY IN THE DEVELOPMENT PROCESS

1. THE COMPLEXITIES OF DEVELOPMENT

Different aspects of the development process have been emphasized by the many scholars and observers who have ventured into this field. The seminal work of Sen (1999) identifies freedom as both the primary end and principal means of development.[1] The Brundtland Commission stressed that development must involve the care and nurturing of the environment for future generations. Others have focused particularly on poverty reduction and the empowerment of poor people. All these approaches consider economic growth a vital component of the development process, while emphasizing that development is about more than growth.

Growth in real income is an important means of expanding freedom but it is not the ultimate objective.[2] The means and ends of the development process should not be confused. Moreover, the correlation between levels of income and the quality (or even the length) of human lives is not perfect.[3] It may thus be possible to improve the human condition without requiring significant growth in real incomes. Ultimately the development process is about expanding the opportunities of people to choose a life they have reason to value.

Closely linked to this broader definition of development is the importance of poverty reduction in the development process. It is estimated that of the world's 6 billion people, 2.8 billion live on less than $2 a day, and 1.2 billion live on less than $1 a day (World Bank, 2000). Poverty not only encompasses material deprivation. It is also associated with low levels of education and health, greater vulnerability, possible ill treatment by institutions of the state and society, and powerlessness to influence key decisions.

A major objective of poverty alleviation is to enable poor people to take greater control of their own destiny. This "empowerment" amounts to the "expansion of assets and capabilities of poor people to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives" (World Bank, 2000). Empowerment requires that people have access to information, participate in decisions that affect them, hold public and private institutions accountable, and develop organisational abilities.

In the 1960s and early 1970s, concern about the impact of economic growth on the environment came to the fore. The environmental impact of economic growth and industrialization – air and water pollution, acid rain, deforestation – was emerging as an important policy issue in developed countries. Given growing population and the enormous challenge of lifting the quality of life of billions of poor people, the development process is bound to exert pressure on the earth's limited resources (air, water, land and biodiversity). As a consequence, the concept of sustainable development gained ground. Sustainable development means that the needs of the present should be met without compromising the ability of future generations to meet their own needs.

The concept of sustainable development carries the seeds of potential tension. On the one hand, it is essential to meet the current needs of the world's poor. A world in which poverty and inequality are endemic will always be prone to ecological and other crises, so the objective of uplifting the poor and of achieving economic growth are integral to the concept of sustainability. But on the other hand, limitations imposed by available

[1] Sen argues that development should be a process that expands the freedom people enjoy or removes obstacles to freedom that leave people with little choice and few opportunities. He defines freedom as escape from the indignities of poverty, illiteracy, ill-health and early mortality. It is liberty from political tyranny, the possession of political rights and civil liberties, the absence of racial, ethnic, sexual or religious discrimination, and the availability of social and economic opportunities and the capability to take advantage of them.

[2] The philosophical thrust of development beyond economic growth underlies much of the work done by institutions such as UNDP and is reflected in its human development index. As originally proposed in 1990, the index measured three aspects of human life – longevity, knowledge and decent living standards. The index has since been expanded to include the environment, gender, human and labour rights.

[3] Sen points out, for example, that the survival rates for African Americans is lower than for people in China or India, despite the former having higher average levels of income.

environmental resources can cut across the development process. There is a need to manage the process of economic growth so that pollution and depletion of non-renewable resources do not cause irreversible damage to the stock of environmental resources and threaten the well-being of future generations.

The eight Millennium Development Goals (MDGs), adopted by the UN Millennium Summit held in September 2000, exemplify the holistic approach to development. The MDGs are a set of time-bound and measurable goals for combating poverty, hunger, disease, illiteracy, discrimination against women and environmental degradation (see Box IIA.1). The fact that economic growth is not listed as a goal reflects the accepted view that has been described above, namely that growth is a means to achieve development targets, not an end in itself.

Box IIA.1 : Millennium Development Goals

In September 2000, world leaders met at the United Nations Millennium Summit, to address the role of the United Nations in the 21st century. At the Summit, world leaders adopted the Millennium Declaration, which identified as the key challenge faced by the international community the need to "ensure that globalization becomes a positive force for all the world's people". The Declaration recognized that developing countries and countries in transition faced special difficulties in responding to this central challenge and that broad and sustained efforts were needed to create a shared future. The Declaration agreed on a set of ambitious development goals and targets, all of which are to be achieved by 2015. The Millennium Development Goals (MDGs), as they are now called, involve 8 goals and 18 targets. They represent a holistic approach to development with key targets in the economic, social, health, education, gender and environmental areas.

#	Millennium Goals	Targets
1	Eradicate extreme poverty and hunger	(i) Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day (ii) Halve, between 1990 and 2015, the proportion of people who suffer from hunger
2	Achieve universal primary education	(iii) Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling
3	Promote gender equality and empowering women	(iv) Eliminate gender inequality in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015
4	Reduce child mortality	(v) Reduce by two thirds, between 1990 and 2015, the under-five mortality rate
5	Improve maternal health	(vi) Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio
6	Combat HIV/AIDS, malaria and other diseases	(vii) Have halted by 2015 and begun to reverse the spread of HIV/AIDS (viii) Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases
7	Ensure environmental sustainability	(ix) Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources (x) Halve by 2015 the proportion of people without sustainable access to safe drinking water (xi) By 2020 have achieved a significant improvement in the lives of at least 100 million slum dwellers
8	Develop a global partnership for development	(xii) Develop further an open, rule-based, predictable, non-discriminatory trading and financial system - Includes a commitment to good governance, development, and poverty reduction – both nationally and internationally (xiii) Address the special needs of the least-developed countries - Includes: tariff and quota free access for LDC exports; enhanced programme of debt relief for HIPC and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction (xiv) Address the special needs of landlocked countries and small island developing states - (through Barbados Programme and 22nd General Assembly provisions) (xv) Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term (xvi) In co-operation with developing countries, develop and implement strategies for decent and productive work for youth (xvii) In co-operation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries (xviii) In co-operation with the private sector, make available the benefits of new technologies, especially information and communication technologies, to all

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Trade's contribution looms large in many of the key goals and targets of the Millennium Declaration, particularly in the first (eradication of poverty and hunger), sixth (Combat HIV/AIDS, malaria and other diseases), seventh (environmental sustainability) and eighth (global partnership for development) Millennium Development Goals. Many of the work programmes of Doha feed directly into these areas of the MDGs and the specific targets under each of the goals.

Eradication of Poverty and Hunger. Trade, as the Monterrey Conference on Financing for Development recognized, is in many cases the single most important external source of development financing for developing countries as well as countries with economies in transition. The Doha work programme in the areas of agriculture, tariff peaks and tariff escalation on products of export interest to developing countries, are key to enhancing growth prospects in the developing world. These negotiations are being complemented by the unprecedented attention paid to technical assistance and capacity building in various provisions of the Doha Declaration. The objective is to build negotiating capacity and institutional capacity for understanding WTO rules and implementing WTO obligations and commitments.

Combating HIV/AIDS, malaria and other diseases. The Declaration on TRIPS and Public Health emphasizes that the TRIPS Agreement should not prevent WTO Members from taking measures to protect public health and reaffirms their right to use the provisions of the TRIPS Agreement for this purpose. The Declaration extends until 2016 the transition period for least-developed countries in regard to the protection and enforcement of patents and undisclosed information with respect to pharmaceutical products and seeks ways for countries with limited manufacturing capacities to be able to make effective use of compulsory licensing.

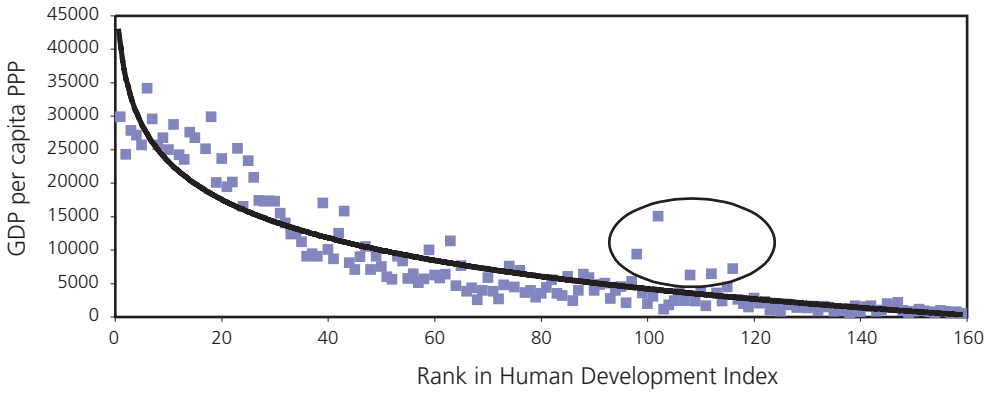
Environmental Sustainability. The Doha work programme offers an important opportunity to enhance the mutual supportiveness of trade and environment, as negotiations will examine the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs), whose numbers have been growing in recent decades. One of the key targets of the MDGs is to halve by 2015 the proportion of people without sustainable access to safe drinking water. The Doha work programme promotes the realization of this target through the mandated negotiations which aims to reduce or eliminate tariff and non-tariff barriers on environmental goods and services. The provision of water supply is one of the key areas or activities in the environmental goods and services sector. Another example in which Doha will contribute to environmental sustainability is through the negotiations to clarify and improve WTO disciplines on fisheries subsidies, which many believe have played a major part in the depletion of fishery stocks.

Global Partnership for Development. The Doha work programme directly addresses other key targets (xiii, xiv, and xviii) of the Millennium Development Goal to develop a global partnership for development. It recognized that the integration of least-developed countries into the multilateral trading system required meaningful market access and an important commitment made in this connection was duty-free, quota-free market access for products originating from LDCs. A work programme has also been established under the aegis of the WTO General Council to examine issues relating to small economies, with a view to framing responses to the trade-related issues identified for the fuller integration of small and vulnerable economies into the multilateral trading system. The Working Group on Trade and Transfer of Technology was established to examine steps that might be taken within the mandate of the WTO to increase flows of technology to developing countries.

(a) Growth is important for development

A good education system, a healthy diet, safe water and good health services all require considerable economic resources. Economic growth can generate the resources necessary to meet these development challenges. The link between human development and the availability of economic resources is reflected in Chart IIA.1. The chart plots countries' ranking on the Human Development Index (HDI) constructed by UNDP against GDP per capita. The HDI ranks countries according to their performance in relation to health, education and income. Since income per capita has a weight of one third in the index, one should expect correlation between the HDI and GDP per capita, but the chart clearly indicates that health and education are also closely correlated with income.

Chart IIA.1
Human development index closely linked to income levels.
(Dollars and rank)



Source: UNDP, Human Development Report, 2002; World Bank, World Development Indicators, 2002.

The chart suggests that human and economic development often move in concert. Yet this is not always the case. Human and economic development can be out of step, as the encircled countries above the trend-line indicate. These include three middle-income sub-Saharan African countries with high HIV/AIDS infection rates (South Africa, Namibia and Botswana), where life expectancy has fallen dramatically, while the income level has so far been maintained. The other two are oil-exporting African countries (Equatorial Guinea and Gabon) which have experienced a rapid increase in their level of income due to production from new oil fields without corresponding gains in human development.[4]

The interdependence of human and economic development also suggests that human development is unlikely to be sustained in the face of enduring economic stagnation. In Zambia, for example, the level of GDP per capita peaked in 1965 and has fluctuated around a downward trend ever since.[5] Life expectancy at birth increased from 42 years in 1960 to a peak of 51 years in 1982 and after that slipped back to 49 years in 1990 and 38 years in 2000. The sharp decline during the 1990s is probably due to the HIV/AIDS pandemic, but it appears that the slippage started even before the pandemic. Primary school enrolment in the country increased from 89 per cent in 1970 to 100 percent in 1985 and then gradually slipped back to 86 per cent in 1998. In the absence of growth, it has been difficult to sustain early gains in social development, notwithstanding aid flows to the social sectors.

Given the significance of growth as a means to achieve development, it is important to understand how growth is generated. Our understanding of the growth process has much improved in recent decades but is still far from complete. The discussion that follows considers factors that our current state of knowledge points to as the main driving forces behind growth.

4 This should be seen as a shift in the level of income rather than economic growth, since it is largely due to the expansion of extractive industries exploiting non-renewable resources.

5 GDP per capita reached 473,528 kwacha in 1965, but in 2000 stood at only 247,012 kwacha. Both figures are at constant 1995 local prices (World Development Indicators, 2002).

(b) Effectively using resources

Economic growth is driven by two major forces: finding new and better ways of utilizing existing resources, and generating new productive resources through investment. Better utilization of existing resources appears to be the more important of the two factors. If, for example, the only difference between the United States and Niger was their endowments of capital and their level of education, the United States would be only 4.6 times richer than Niger. There are, however, huge differences in the way the two countries utilize their resources and the United States is in fact 35 times richer than Niger in terms of per capita income (Hall and Jones, 1999).[6] Countries utilize resources differently because they have different histories, institutions, and geographical circumstances.

Early research on economic growth focused on the accumulation of capital, such as investment in machinery, equipment and infrastructure. That is why during the 1950s and 1960s the development strategy in newly independent countries and other poor countries emphasized investment and rapid industrialization. Furthermore, it was widely believed that markets in these countries were too underdeveloped for growth and that they lacked competitiveness with manufacturers from developed countries. Therefore, the policy framework for early investment-led industrialization and growth was one of government planning and protected domestic markets. In addition, domestic savings were considered to be inadequate for the necessary investments, and foreign borrowing and aid came to play an important role in the development strategy.[7] It soon turned out that planned, investment-led development created rigidities that became an obstacle to growth in the face of changing circumstances such as the oil price shocks in the 1970s and 1980s and technological change. These problems are further discussed in Section IIA.2(e) in this Report.

During the 1950s and 1960s the world economy experienced rapid growth, including in some poor countries. The fastest-growing countries during the period 1960 to the first oil crisis in 1973 were natural resource-based developing countries such as Oman (13 per cent), Botswana and Saudi Arabia (about 11 per cent) and Côte d'Ivoire (about 8 per cent).[8] During the same period there were also some newly industrialized countries and some at an early stage in the industrialization process that experienced very rapid growth. Japan, Hong Kong, China; and Singapore experienced growth rates above 9 per cent during the period, while Brazil, Thailand, Greece, Israel, the Republic of Korea and Costa Rica had average growth rates exceeding 7 per cent. Nevertheless, there were some countries that experienced little or no growth during the same period. Chad, Niger and Uruguay had less than 1 per cent growth annually during the period 1960-73, while Haiti, Senegal and Sudan had less than 1.5 per cent growth. Population growth was between 0.9 and 2.7 per cent on average in the slow-growing countries, implying falling per capita incomes.

In all the fast-growing countries mentioned above, the investment share of GDP has been relatively high while it has been relatively low in the slow-growing countries.[9] In general, there is a strong positive correlation between the investment share of GDP and growth. This observation raises the question as to why some countries have more high-yielding investment opportunities than others. And is it investment that generates growth or is it growth that stimulates investment? In order to answer these questions, one has to look at the factors that complement and support capital investment.

6 Data are from 1988.

7 See Krueger (1997) for a discussion of the evolution of our understanding of the development process and development policies, focusing on the role of trade.

8 All figures are annual average growth rates.

9 See Table IIA.1.

Human capital is one of these factors. Human capital acquired through education and work experience is clearly required in order to operate advanced machinery in an efficient manner. The introduction of modern machinery and production processes creates demand for skilled workers, while increased supply of skilled workers improves productivity of new machinery and equipment. Investments in machinery and skills thus feed on each other.[10] A better educated labour force makes investment in physical capital more profitable and therefore attracts more of it. But not all countries with a well educated labour force and a high investment rate grow. The Eastern European countries during the 1980s are a case in point and again illustrate that it is not the accumulation of capital (human and physical) that is most important, but the way it is utilized.[11]

To conclude this section, high-yielding investment opportunities become exhausted if not complemented by other factors such as education and research and development (R&D), to which we now turn.

(c) How is knowledge converted into productive technology?

Knowledge has two properties which make it an important component of the development process. The first is its durability implying that it can be used repeatedly. The second is its non-exclusive nature. More than one person can take advantage of knowledge without diminishing its value to others. Yet there are huge technology gaps between rich and poor countries. In order to understand how universal knowledge can co-exist with such technology gaps there is a need to distinguish between knowledge in the form of abstract ideas and the way the abstract ideas are transformed to changes in behaviour and to productive technology. While abstract ideas are an indication of potential development and growth, changes in behaviour and improvements in productive technology determine actual growth.

Ideas are created through research and development (R&D) and they spread through the education system and through dissemination of research findings in publications, patents and interchange of ideas within the research community. The ideas are largely in the public domain and often referred to as a common pool of knowledge which everybody can draw from. When everybody can draw on every new idea, there are clearly economies of scale in R&D. First, the larger the population, the more people there are who can take advantage of existing ideas. Second, the more scientists and engineers, the more ideas are discovered or created. It follows that a large community should be expected to have a larger stock of knowledge than a small community. The key questions for understanding the linkage between knowledge and growth are then how far ideas spread, how ideas affect behaviour and technology, and to what extent a large stock of knowledge makes it easier to discover or create new ideas.

When individuals, firms and governments are able to act upon new ideas in terms of changing behaviour, improving technologies or changing policy respectively, ideas affect economic growth. For example, common knowledge of nutrition and what constitutes a healthy diet improves public health and labour productivity, given that knowledge changes behaviour and that healthy food is available and affordable. By the same token, knowledge of family planning techniques reduces fertility and increases growth, given that knowledge changes behaviour. From the R&D side, common knowledge of technologies – for example how a computer works – can be used by all producers of computers once the innovation has been made. Obviously reproducing what has already been invented is less costly than inventing the product. New innovations create new investment opportunities while the prospect of capitalizing on new inventions motivates further R&D. Capital investment and R&D thus feed on each other in much the same way as investment in human and physical capital feed on each other. Furthermore, R&D prevents investment from running into diminishing returns, as new technologies are more productive than the ones they replace, and new products often fetch higher prices than comparable existing products.

[10] Industrialization during the nineteenth and early twentieth century was, however, "deskilling" as machinery simplified tasks and replaced craftsmen with unskilled manual workers.

[11] By the same token, empirical research has found that the impact of female education on economic growth is insignificant or even negative (e.g. Barro 2001), indicating that if women have less opportunity to participate in the labour force in jobs where their skills are utilized, the social return to their education may be low.

When assessing how far ideas spread, the distinction between abstract ideas and productive technology becomes crucial. At the level of abstract ideas it appears that knowledge is universal. The school curriculum is fairly similar across countries and scientists and engineers have access to more or less the same information everywhere. Diffusion of productive technology, however, appears to be more limited in scope. There is evidence to suggest that technological diffusion falls off sharply with distance and that technology is local rather than global (Keller, 2002).

Finally, there is the question whether new ideas are more easily created the larger the stock of existing knowledge. If so, one would expect that the rate of innovation would increase over time and there would be more innovations in large economies than in small economies. It is indeed true that R&D expenditure has increased over time and that it is higher in the larger and richer economies. The share of scientists and engineers in total employment has risen three-fold in the United States since 1950, and similar figures are found in other OECD countries. The average number of years of schooling has increased substantially during the same period. Yet the trend rate of productivity growth has been stable (Jones 1995; 2002). These findings indicate that, at least during this period, the discovery of past ideas has not made current research more productive. That does not necessarily mean that the same will apply in the future. It has been argued that knowledge and technology move forward in leaps. Sometimes a new discovery leads to a significant technological breakthrough followed by a large number of complementary innovations. So-called general purpose technologies are examples of this. General purpose technologies are characterized by their usefulness in a wide range of sectors in ways that drastically change modes of operation. Examples are electricity, the internal combustion engine, and recent developments in information and communication technology.[12] Periods of rapid technical progress can, however, be followed by periods where fewer productive ideas emerge from R&D efforts.

(d) Specialization and the extent of the market – are markets local, regional or global?

Economic activities are not evenly spread over the earth's surface, but tend to cluster in certain areas. In these clusters each activity benefits from access to inputs produced by others located in the same area and to a pool of skills, infrastructure and business services. A sufficiently large market allows for extensive specialization while each company is still able to exploit economies of scale. Furthermore, when manufacturers have access to a broad variety of specialized inputs their productivity improves, their costs are reduced and they can expand sales. As the market expands, room for more specialized producers is created with a further lowering of costs. It is entirely possible for this process to create a self-sustained virtuous cycle.[13]

The virtuous cycle only becomes self-sustaining once a critical mass of producers and a critical level of demand are reached. Countries with markets below this critical size may find themselves in a poverty trap with the majority of the population engaged in household and subsistence production, where very little specialization takes place. Early development theory was concerned with how to trigger the virtuous cycle, moving production from the household to the market and extending the market beyond the village and then beyond national borders in order to adopt industrial production methods that require a minimum scale to be efficient. Early industrialization take-offs in the United Kingdom and Continental Europe were preceded by extensive improvements in roads, canals and harbours that integrated the domestic market, while construction of intercontinental railway lines served the same purpose in the United States.[14]

[12] Gordon (2000), among others strongly disagrees that "the new economy" measures up to earlier industrial breakthroughs such as electricity. See Helpman (1998) for an extensive analysis of general purpose technology.

[13] The clustering of firms in a well-serviced area may well be equally important for the performance of export processing zones.

[14] See McDermott (2002) for a discussion.

Openness to trade is clearly one way of extending the market to reach the critical mass of demand that makes specialization feasible. Economic integration preceded industrialization and sustained growth in Continental Europe and was a crucial trigger for launching the virtuous cycle described above. Likewise, the take-off to sustained growth in newly industrialized countries was preceded by strong export growth in all cases except China, where export growth came later.[15] China, however, has a huge internal market that could set in motion the early industrialization process, which subsequently has been sustained through opening up to international trade. Market size is in other words important for industrial development, and small developing and least-developed countries can only attain the critical market size through integration with the rest of the world. The scarcity of success stories from inward-looking countries underscores this point and is further discussed in Section IIA.2(e).

Specialization has taken a new turn in developed and newly industrialized countries in recent years, following a sharp decline in the costs of transport and information. Now specialization occurs not only between industries or between different models and trademarks within industries – it changes the very boundaries of the firm. Production is increasingly split into a sequence of activities that are performed by different firms that form a more or less closely knit production network. Such networks are often international in scope, and allow for a more extensive division of labour between countries based on comparative advantage. Labour-abundant developing countries that lack comparative advantage in the production of cars or computers, for example, can still produce labour-intensive components for the car or the computer industry, and over time move into higher value added activities.[16]

Table IIA.1 shows average annual growth rates in GDP per capita, primary and secondary school enrolment ratios, the investment rate and the degree of openness for fast-growing and slow-growing countries. The fast-growing countries are defined as those that have an annual average growth rate above the median and the slow-growing countries grow less than the median. Three periods are estimated: the rapid growth period from 1960 until the first oil crisis in 1973; the turbulent period of stagflation following the oil crises in the 1970s and early 1980s; and finally the period since 1985. The fast-growing countries have consistently higher investment rates, higher school enrolment rates and they trade more than the slow-growers.[17]

Table IIA.1
Sources of economic growth, 1960-2000
(Percentage)

	1960-73		1973-85		1985-2000	
	Fast-growers	Slow-growers	Fast-growers	Slow-growers	Fast-growers	Slow-growers
Per capita income growth	4.6	1.2	2.9	-0.9	3.0	0.0
Share of investment in GDP	23.8	10.8	20.9	14.0	18.8	12.2
Ratio of trade to GDP (X plus M)	62.6	43.5	72.3	58.2	79.3	64.0
Primary school enrolment rate	...	...	87.4	74.1	97.5	86.6
Secondary school enrolment rate	...	...	37.8	28.7	59.5	36.0

Sources: Penn World Tables, version 6.1 and World Bank, World Development Indicators, 2002 (for school enrolment rates). Estimates include all countries for which data was available for each period; 1960-73: 112 countries, 1973-85: 117 countries and 1985-2000: 110 countries.

15 McDermott (2002).

16 See Box IIA.5 on Malaysia for the electronics industry.

17 School enrolment data refer to the beginning of period or the year closest to the beginning of period for which data are available. 1970 is used for the period 1973-85, while 1980 is used for the period 1985-2000.

It is clear from what has been said above that investment in physical and human capital, specialization and knowledge are all important ingredients in the growth and development process. But there are other, perhaps deeper, determinants to be considered. The forces driving growth and development operate within a social, cultural, geographical and institutional context. We now turn to a brief discussion of how these factors might influence outcomes.

(e) Growth, institutions, history and geography

The notion of an institution embodies several elements – formal and informal rules of behaviour, ways and means of enforcing these rules, procedures for mediation of conflicts, and sanctions in the case of breach of the rules.[18] Institutions are more or less developed, depending on how well these different features operate. Institutions can create or destroy incentives for individuals to invest in human and physical capital, and the incentives to engage in R&D and work effort. An investment decision involves considerable risk and in the words of Bernstein (1996): "Only the foolhardy takes risks when the rules are unclear".

One feature of institutions that is of particular relevance for economic development and growth is the treatment of property rights. In addition the rule of law, the enforcement of contracts and payments of debts are important. Property rights, combined with access to credit and education, grow in importance with the degree of complexity of the industrial and technological environment. In an agrarian society, an elite can invest in the land and induce the rest of the population to work on it. An industrial society, in contrast, requires entrepreneurship and creativity. The distribution of such talents in the population is independent of the distribution of income. Limiting economic opportunities to an elite therefore represents a huge waste of resources. Conversely, when entrepreneurs have access to funding and can expect to receive a return on their investments, society will be better able to benefit from new technologies and continue to upgrade their industrial base as new technologies arrive.

The more complex the technology and the more extensive the degree of specialization, the more interdependent are economic agents. Transparent and efficient institutions that facilitate the establishment and enforcement of contracts therefore become more important as development proceeds. This does not mean that institutions are not important in developing countries. To the contrary, the rule of law and the enforcement of contracts are equally important in developing countries. It is, however, important that the complexity of regulations matches the institutional capacity to enforce the regulation.

A current issue in the development debate is the relative role of institutions and geography in explaining the fact that poor countries tend to be located near the equator. The question is whether a tropical climate *per se* is detrimental to growth, or whether countries in the tropical climate zone tend to have less development-friendly institutions. The direct impact of the tropical climate on development goes through agriculture and health. While tropical conditions were favourable to agriculture in the very early history of mankind, the invention of heavy ploughs, systems of crop rotation and the introduction of new crops favoured temperate zones. Tropical diseases are found to have both a direct and an indirect impact on development. They represent higher health risks, and consequently a lower stock of human capital. Furthermore, the demographic transformation towards lower mortality and fertility rates has been slower in tropical areas due to higher health risks. This transformation is part of the development process towards sustained growth.[19] The suggested linkage from climate to institutions is that the prevalence of tropical diseases prevented Europeans from settling, but not from exploiting, the natural resources in tropical areas. They therefore imposed institutions with the exclusive purpose of extracting resources. These institutions concentrated wealth and power within a small elite and the associated structures have tended to prevail after independence. A number of empirical analyses suggest that institutions are indeed important determinants of the growth and development process.[20]

[18] See North (1994).

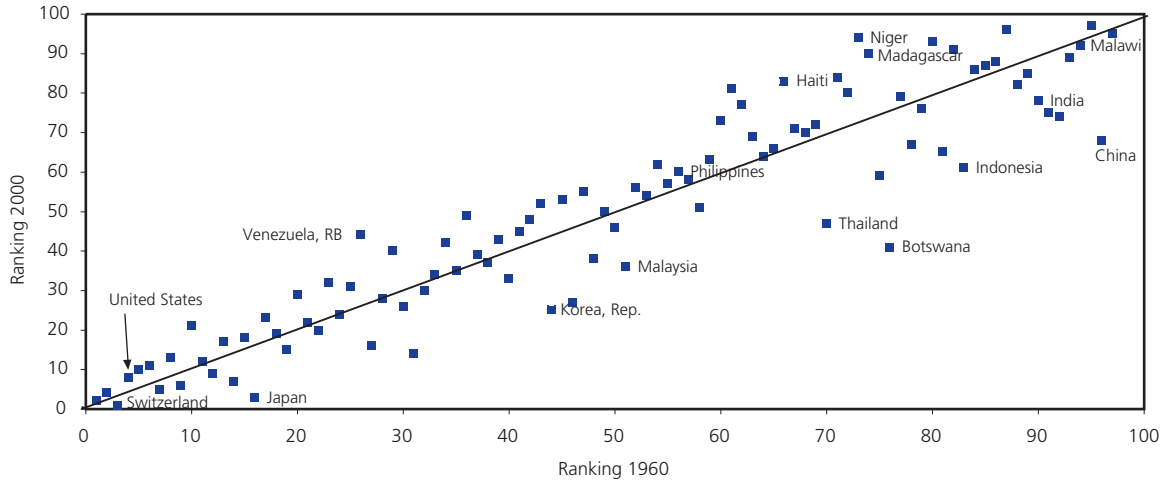
[19] See Sachs (2001; 2003) for a discussion.

[20] See Acemoglu et. al.(2001; 2002), Rodrik et al. (2002) and Hall and Jones (1999).

Geography is largely given by nature and persists over time, although geographical disadvantages can be overcome through human effort. Malaysia and Singapore, for example, have had high growth rates and reached a middle-income and high-income status respectively in spite of being located in the tropical zone. Institutions may well change with changing policy, but sometimes not quickly enough to support positive change. If development is by and large driven by geography and institutions, two predictions follow. First, one might expect the ranking of countries according to social and economic indicators to remain relatively unchanged over time. Second, if countries with better locations and better institutions grow faster, income gaps are likely to widen over time.

The first prediction seems to fit the facts fairly well, at least during the period 1960 – 2000 for which data are readily available.

Chart IIA.2
Ranking of selected countries according to income levels, 1960 and 2000



Note: Data comprise 97 developed and developing countries.

Source: World Bank, World Development Indicators, 2002.

Chart IIA.2 plots the ranking of countries according to GDP per capita in 1960 against the ranking in 2000. Countries cluster around the 45-degree line, indicating little change in rankings. There are, however, some exceptions. Botswana climbed 35 places, China 28, Thailand 23, Indonesia 22 and the Republic of Korea nineteen. Other countries went down the rankings, with Niger falling by 21 places, Zambia by 20, Venezuela by 18, Haiti by 17, and Madagascar sixteen.

As to the second prediction, there is evidence that cross-country income distribution has become less equal over time, although the picture is more mixed when weighted by population and when taking into account within-country income distribution (Sala-i-Martin, 2002a, b). In particular, a steep increase in income levels in China and India modifies the picture of growing inequality.

Given the apparent roles played by institutions and geography in determining growth and development, moving from a stagnant pre-industrial economy to sustained progress seems to be a tall order often underestimated by policy makers and advisers. The concept of institutions is at present rather abstract and the discussion of their role in growth and development has much in common with the discussion in the 1980s of the role of technology, following the first publications on endogenous growth. An understanding of how economic agents and the institutional framework interact in the growth process, and how geography benefits or impedes the process, is emerging.

But there are still gaps in our knowledge about what aspects of the institutional framework are the most relevant for growth, to what extent and how the optimal institutional framework depends on geography, culture, religion and the level of development in each case, and how far and how quickly "getting institutions right" would generate growth and development. We do know, however, that corruption, severe impediments to trade and unclear and non-transparent regulations are detrimental to growth and development. Yet the brief discussion above has illustrated the sheer complexity of the growth and development process. No quick fixes have been identified. Nevertheless, in the section that follows, we discuss fairly well-established propositions about the circumstances in which engagement in the world economy can contribute to improved economic performance.

2. OPENNESS IMPROVES EFFICIENCY AND STIMULATES GROWTH

Openness to trade helps countries utilize their resources better in several ways. First, trade allows a country to specialize in the productive activities that it does relatively better than other countries, and thus exploit comparative advantage. Second, trade extends the market facing local producers, allowing them to better exploit economies of scale, which increases income levels and the efficiency of resource allocation. These effects are characterized as static gains from trade. Trade will have a positive long-run growth effect only if it increases the rate of investment or improves incentives for the development and diffusion of technology. This section explores in some more detail these linkages between trade and growth.

(a) Open economies invest more

Investment is one of the few economic variables that is positively and robustly related to economic growth as indicated in Table IIA.1. International trade, in turn, shows a strong positive correlation with investment (Levine and Renelt, 1992; Florax et al., 2002). As explained in the previous section, trade allows for increased specialization and stimulates investment through the exploitation of economies of scale, and through technology transfer. It was also emphasized that R&D and capital investment reinforce each other since new innovations are sometimes embodied in capital goods and sometimes generate new consumer goods and services that require new investments in order to enter the market. Upfront investments can be substantial and a sufficiently large market is necessary for an innovating company to break even. Trade often provides the market opportunities needed for investing in R&D and introducing the resulting innovations in the marketplace. Open economies are therefore more rewarding to R&D, and this is another reason why open economies have a higher investment rate.

An additional channel through which trade affects the investment rate is trade in financial services. The financial sector plays an important role in the mobilization and allocation of resources for investment. In fact, the degree of financial development has been found to be a good predictor of future growth (Levine, 1997). Trade in financial services improves the ability of the financial sector to mobilize and allocate resources for investment. Even when the market share of foreign banks is small and limited to narrow segments of the local market, these banks contribute to the development of the domestic financial sector through competitive pressure and the introduction of new products and technology (Levine, 2001).[21]

It is not only the large, multinational financial corporations that benefit from trade liberalization. Recently, some micro-credit institutions have also become international in scope. In Bangladesh, micro-credit institutions have provided credit to 12 million people engaged in micro- and small enterprises and are widely seen as an important factor behind Bangladesh's growth performance. One Bangladeshi micro-credit institution (Bangladesh Rural Advancement Committee, BRAC) has expanded into Afghanistan to assist in rehabilitation and development, and BRAC is also planning to expand its activities into India.[22]

To summarize, openness creates new investment opportunities and strengthens and deepens the financial sector, which in turn plays a crucial role for the mobilization and efficient allocation of resources for investment.

[21] See also Section IIB.5 for a discussion of the financial sector and development.

[22] "Bangladeshi micro-credit group to expand operations into India", Financial Times, 24.02.03.

(b) Open economies exchange more ideas

As shown above, accumulation of physical and human capital can only partially explain different income levels across countries. Differences in the way resources are utilized play a key role in determining income inequality among countries. One of the factors that explain such differences across countries is technological knowledge.

Technological knowledge can be defined as the design, or blueprint, of a new product, process or service. It can be embodied in a product and, therefore, it can be utilized and transported with it. For example, employing a foreign intermediate good in production involves an implicit usage of the design knowledge that was created with the R&D investment of the foreign inventor. One of the principle characteristics of technological knowledge is that it can be transferred across countries. The stock of technological knowledge in a country is determined by domestic innovation and the international diffusion of technology. In developing countries, where domestic innovation is low, the international diffusion of technology acquires greater importance from the perspective of economic development.

Box IIA.2: Technology transfer through trade and FDI: the case of Mexico

Since Mexico began liberalizing its economy in the mid-1980s, technology transfers have been closely linked to trade growth, which has been the result of increased foreign investment and, in turn, has spurred new investment itself. Mexico's trade and investment flows have been amongst the largest in the developing world, particularly following the entry into force of the North American Free Trade Agreement (NAFTA) in 1994: between that year and 2001, Mexican trade increased from about $140 billion to $327 billion, while cumulative foreign direct investment (FDI) totalled almost $98 billion. The third Trade Policy Review report for Mexico (WTO, 2002b) concluded that considerable cross border technology transfers had gone hand-in-hand with Mexico's closer integration into the global economy and its efforts to improve intellectual property rights (IPR) protection.[1]

In Mexico, increased trade and investment flows have been associated with both disembodied and embodied flows of foreign technology. An indicator of the first type of transfer is the purchase or licensing of IPRs, a process that appears to have accelerated in recent years. Direct commercial transactions related to international technology transfers to Mexico were valued by the OECD at some $454 million in 1999, up from $347 million in 1996 (OECD 2001b). These patterns are likely to be related to the strong presence of foreign affiliates in Mexico, which actively acquire technology from their countries of origin.

Trade and investment flows have also brought to Mexico foreign innovations embodied in new plant and equipment, which are generally imported duty-free, including under-tariff preferences or concessions. These goods have reached Mexico in significant volumes, as imports of machinery and transport equipment account for about half of Mexican imports. This is also closely related to the large share, just over 50 per cent, of FDI flowing into manufacturing, which heavily relies on the use of foreign inputs and capital goods, particularly for export production (formerly based on the export incentives granted under the *maquila* regime).

IT products and pharmaceuticals have been among Mexico's fastest-growing traded items, which are both IPR-intensive and characterized by active intra-industry and intra-firm trade. The tendency for trade in those products to grow faster than overall merchandise flows is indicative of Mexico's expanding technological capacity. More importantly perhaps, it has also been closely related to an increase in international sourcing and involvement of foreign affiliates in Mexico to supply both the domestic and export markets. Indeed, given that Mexico still has the lowest gross domestic expenditure

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on R&D as a percentage of GDP in the OECD, its manufactures-dominated export patterns can in large part be explained by the considerable size of technology transfers and will depend on such flows to continue.

Another possible indicator of the importance of technology flows to Mexico is the number of patents applied for and granted. Reflecting trade and investment patterns, between 1996 and 2002 most patents granted related to manufacturing activities, namely chemistry and metallurgy (30 per cent of all patents) and various industrial techniques (21 per cent). Over the same period, most patents were granted to nationals of countries with whom Mexico has particularly strong trade and investment links: the United States (56 per cent of all patents), five European countries (France, Germany, Italy, United Kingdom and Switzerland, together accounting for 21 per cent) and Japan (almost 4 per cent). This is likely to reflect the medium-high technological content of trade and investments undertaken in Mexico.

Source: IMPI (2002); OECD (2002c, 2001b); WTO (2002b).

[1] Cross border technology transfer is defined as the actual passage of a technology from a country to another one. It is worth noting that not all foreign technology that flows to a country represents technology transfer, as this may include the phase of adaptation and learning of the know-how by the technology importing country.

A number of channels exist through which technological knowledge can be transferred across countries, including trade (both in goods and services), FDI and partnership agreements. Trade can enhance technology transfer by giving firms access to technologically advanced capital goods and intermediate products from abroad. Trade in services including business, financial, telecommunication and transport services may provide the input needed to enter new sectors and lower the costs for exchanging information (see Section IIB.2). Imports can also provide access to knowledge that can be acquired through reverse engineering. Trade opens up the possibility of person-to-person communication that may foster technology transfer. Foreign direct investment can also contribute to technology transfer through on-the-job training and various forms of interaction among local and foreign firms. Backward and forward linkages favour technological diffusion, as technologically advanced foreign affiliates help their local suppliers and host country firms involved in later stages of the production process to raise quality and service standards. New managerial, marketing and production processes may be adopted as a result of interaction between local and foreign producers. This interaction may also exert a positive effect on technology transfer through competitive pressure.[23]

The effectiveness of trade as a vehicle for the transfer and diffusion of technology depends in part upon the volume and the composition of imports.[24] Empirical research has found a positive relationship between the size of trade flows and a country's level of total factor productivity. In particular, this relationship has proved stronger in respect of capital goods, such as imports of machinery and equipment, than final goods (Coe, Helpman and Hoffmaister, 1997). Inputs into the production process may themselves embody new technologies, such that technology is transferred merely by making use of the inputs or of machinery in production. For final goods, technological benefits may accrue through less direct means of transfer, such as reverse engineering and other forms of adaptation or learning. The country of origin of imports also matters for technology diffusion. Imports originating in industrial countries generally embody a higher technology content than imports from developing countries (Blyde, 2001; Coe and Helpman, 1995).

[23] For a review of the channels through which technology transfer occur and the conditions under which those channels could be most effective see the WTO document WT/WGTTT/W/1.

[24] As far as FDI is concerned, the degree of effective technology transfer depends mainly on the technological content of output, the technology intensity of that part of the production activity that occurs in the host country, and the degree of integration of the foreign firm with the local economy.

Table IIA.2
Imports of intermediate machinery[a] by regions, 1995-2000
(Billion dollars)

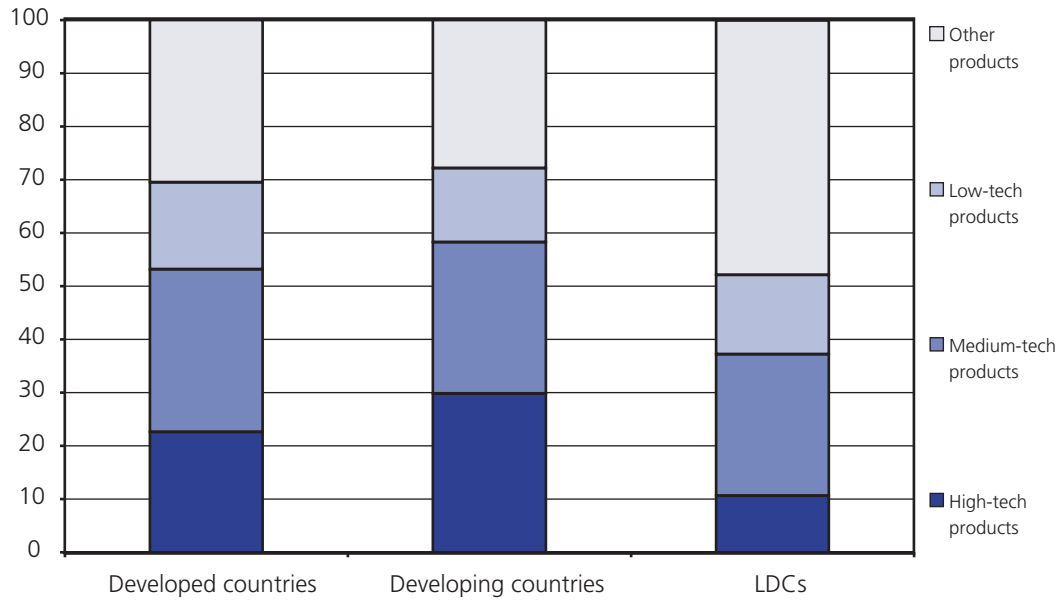
	1995	2000
North America	223	355
Latin America	58	105
Western Europe	399	527
EU (15)	363	483
Transition economies	...	51
Africa[b]	21	22
Middle East	17	19
Asia	329	418
Memorandum item:		
Developed countries	647	925
Developing countries	400	521
LDCs[b]	2	4
Developing Asia	267	332
NICs	191	239

[a] For definition of machinery see Mayer (2000).
[b] Data for Africa (LDCs) refer to a sample of 27 (19) countries.

Sources: UNSD, Comtrade database.

The data on imports of machinery in Table IIA.2 provides an indication of the amount of knowledge that potentially flows across countries through trade. Charts IIA.3 and IIA.4 show import composition by technology intensity and by level of development of trading partners for developed, developing and least-developed countries. The data indicate that the volume of imports of machineries has increased between 1995 and 2000 in developed countries, developing Asia and NICs, but has stagnated in Africa and among LDCs. Imports of medium and high-technology manufactures make up nearly 60 per cent of developing countries total imports. However, this percentage falls to below 40 per cent for LDCs. Machinery imports represent about 30 per cent of the total imports of developing countries. However, for Africa and LDCs the percentage share of machinery imports is much lower, at below 20 per cent and 10 per cent respectively. Finally, three-quarters of developing country imports originated in developed countries or new industrialized countries, while the percentage of LDCs imports from developed countries was only 39 per cent.

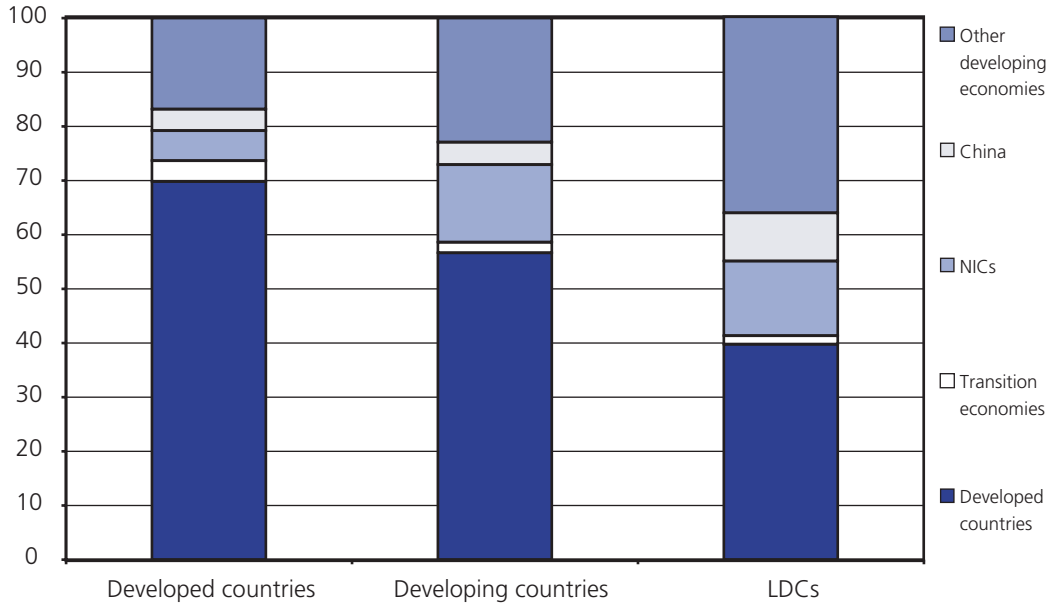
Chart IIA.3
Import structure by product technology content, 2000
(Percentage shares)



Note: For product definition see Lall (2000).

Source: UNSD, Comtrade database.

Chart IIA.4
Import structure by area of technological development, 2000
(Percentage shares)



Note: For product definition see Lall (2000).

Source: UNSD, Comtrade database.

Overall, the composition (high-technology content) and source (large developed-country share) of developing country imports suggest that a relatively large amount of knowledge flows to developing countries through trade. However, since much of what has been observed is driven by trade patterns in Asian countries, there is a significant potential for higher flows of technology through trade to Africa and LDCs.

Successful technology transfer through trade also depends on conditions and policies in the importing country. Effective transfer requires a learning process in relation to the use of technology (know-how), understanding of the underlying principles of a given technology (know-why), adaptation of a technology to local conditions, and diffusion of new technology within the country. These are key determinants of the absorptive capacity of a country in relation to technology.

A country's absorptive capacity depends on several other considerations as well, not necessarily related to the treatment of a specific technology. These include the following four factors: first, the nature of the relationship between basic research and applied R&D. Good linkages between academic research and R&D activity conducted in the private sector would favour technology transfer, as they would be complementary in the learning process of the know-why and know-how of a foreign technology. Second, a country's absorptive capacity is determined by the level and quality of the education system. An education system directed toward abstract thinking is shown to produce better researchers in basic research than in applied research. An education system directed to develop a "culture of entrepreneurship" is more likely to lead to success in developing and marketing a new product. Both types of education are needed for successful technology transfer. The quality dimension of human capital is at least as important as its general level in determining the success of technology transfer (Hanushek and Kimko, 2000).

Third, the ability of a country to absorb foreign technology depends on the gap between existing technology and imported technology. There is some empirical evidence that technology transfer is greater in those industries in which the technological gap is smaller. One explanation for this is that when the technology gap is small, the domestic producers can build on already acquired knowledge to imitate foreign affiliates. Kokko, Tansini and Zejan (1996) use plant level data for Uruguay over the period 1988-1990 to test the existence of spillovers within industries. They find spillovers only for plants in industries with small technology gaps vis-à-vis foreign firms. They interpret this as meaning that the ability of the domestic economy to generate knowledge spillovers from FDI requires the knowledge in foreign affiliates to be close to the technology frontier of the domestic economy. Finally, the entrepreneurial environment, and other conditions in the host country, including the intellectual property regime determine how easily a country learns and adapts a foreign technology to the local market. Technology transfer will take place if local managers have an incentive to invest in learning a foreign technology. This, in turn, will depend on the possibility of commercializing the product in the local market, that is on the existence of an appropriate entrepreneurial environment.

To the extent that openness fosters technology transfers, barriers to trade constitute an obstacle. This is particularly the case where barriers affect imports of technology-intensive final goods and intermediate inputs, including machinery and equipment. Table IIA.3 shows tariff levels according to technology category.[25] It also shows average *ad valorem* tariffs for machinery and equipment used as inputs into the production process.[26] The data indicate that tariffs on technology products tend to be higher in countries at a lower stage of development for all technology categories.[27] In most countries tariffs on high-technology products and machinery are lower than they are on low-technology goods. However, while for low-technology goods import duties in low income countries are on average 3.4 times higher than they are in high-income countries, for high-technology goods they are 8.5 times higher. That is, unlike technology transfer needs would require, the degree of protection in low-income countries is relatively higher for high-technology products.

25 Tariffs are simple averages across *ad valorem* duty lines.

26 This definition of machinery excludes radios, television receivers, household type equipment, sound recorders and transistors better classified as consumption goods rather than capital equipment. It follows Mayer's (2000) definition.

27 There is a negative correlation between countries' per capita income and tariff rates for all technology categories. Moreover, correlation coefficients are higher for high to medium-technology intensive products.

Table IIA.3
Tariff profile by income level and technology content
(Arithmetic average applied rates)

GDP PPP per capita	Primary products	Resource-based manufactures	Low-tech products	Medium-tech products	High-tech products	Machinery
GDP below $5,000	12.6	12.4	16.1	12.3	8.5	8.1
GDP between $5,000 and $10,000	14.3	12.4	14.2	11.1	7.0	7.6
GDP between $10,000 and $20,000	10.0	9.3	9.9	8.3	5.5	6.1
GDP above $ 20,000	3.6	2.8	4.7	2.5	1.0	1.4

Note: For product definition see Lall (2000) and Mayer (2000).
Source: WTO, IDB.

Where imports transfer technology and conditions exist in importing countries that promote effective absorption and diffusion of such technology, open trade arrangements can make a positive contribution to development through fostering technology transfer.

(c) Openness and the quality of institutions

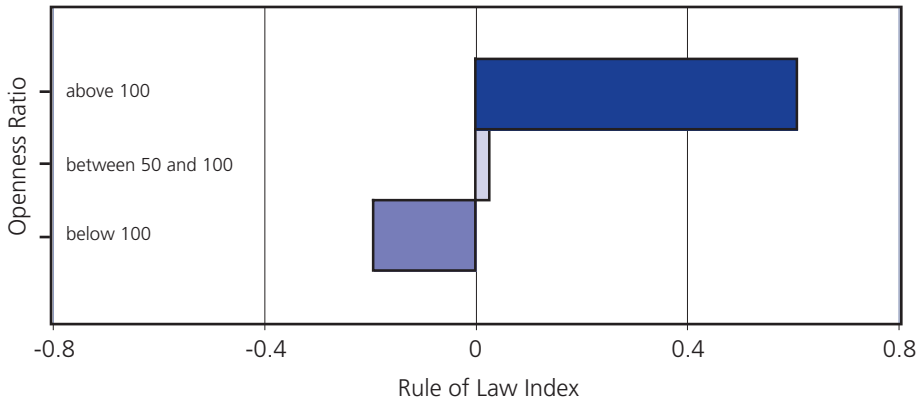
The quality of institutions has long been recognized as an important component of a well functioning market. Section IIA.1 already highlighted the importance of institutions for economic development. Two key questions concern the kind of institutions that are relevant, and whether trade or trade policy can have a positive effect on these institutions. A country's institutional setting is determined by a wide range of formal and informal rules of behaviour. While formal constraints might be quickly changed, the informal ones usually change only gradually.[28] Any trade impact on institutions should in general, therefore, not be expected to be immediate.

As noted earlier, the establishment of secure and stable property rights is considered key to economic development.[29] The rule of law is also important, including the ability to enforce contracts and secure payment of debts. A positive relationship seems to exist between the effective rule of law and openness to trade. This can be illustrated by correlating openness and an indicator measuring the extent to which people have confidence in and abide by the rules of society. This indicator is a composite measure including perceptions of the incidence of both violent and non-violent crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts.

28 North (1994).

29 See Section II A.1(e) and Rodrik et al. (2002), Rodrik (2002a, b), Acemoglu et al. (2001).

Chart IIA.5
Openness and the rule of law



Note: The Rule of Law Index can take values between -2.5 and 2.5 and has been averaged across countries grouped according to their level of openness. Openness has been computed as exports plus imports divided by GDP. The sample comprises 187 countries: 54 countries fall into the range of most open economies, 48 in the range of least open economies and 84 countries in the intermediate range.

Sources: Kaufmann, Kraay and Zoido-Lobaton (2002) and World Development Indicators (2002).

Chart IIA.5 shows a positive link between openness and the rule of law as characterized by the composite measure.[30] But a correlation says nothing about causality. In this case, causality could run both ways. Even if a country lowers its trade barriers, outsiders may be reluctant to trade with the country if they do not believe contracts can be enforced or are not sure whether payments will be made. Countries with a better track record in such matters are likely to trade more. On the other hand, openness may also have a positive effect on the quality of institutions. Lower trade barriers may, for example, increase the incentives for individuals and governments to improve the formal and informal rules governing commercial interactions in order to induce more trade. Trade in itself can increase the knowledge and understanding of foreign institutions and potentially lead to institutional reform.[31] Empirical research confirms two-way causality, with institutional quality having a positive effect on openness and openness having a positive impact on institutional quality (Rodrik et al, 2002). These findings thus suggest that trade can have an indirect effect on incomes by improving institutional quality.

The level of corruption is another indicator of institutional quality. Empirical support exists for a link between higher perceived corruption and lower investment and growth[32], and openness seems to be negatively correlated with corruption.[33] Chart IIA.6 shows that more open economies exercise stricter control over corruption than less open ones.[34] Again, it is not clear *a priori* whether trade leads to less corruption or less corruption induces more trade. It has been argued, however, that in markets with low levels of competition, economic rents are higher and illicit payments may therefore also be higher. To the extent that greater openness engenders competition, then, corruption levels may be expected to fall.[35]

30 A simple regression between the two variables finds a positive and significant relationship between both variables.

31 See Rodrik (2002a).

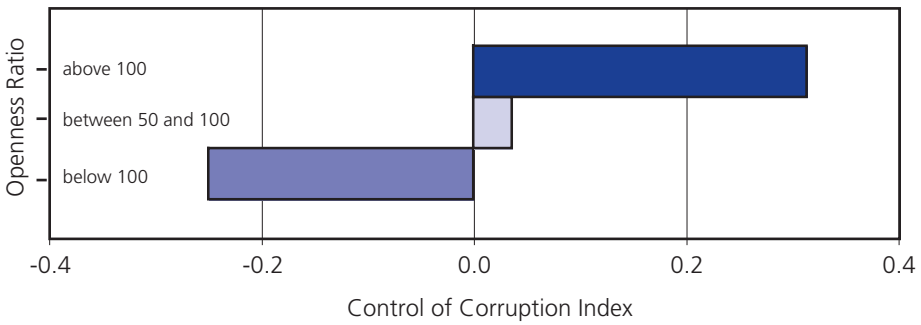
32 Mauro (1995).

33 Bacchetta and Drabek (2002).

34 A simple regression between openness and corruption control finds a positive and significant relationship between the two variables.

35 Ades and Di Tella (1999) perform an empirical test of this hypothesis and find that the ratio of imports to GDP has a significantly negative effect on corruption. See also Drabek and Payne (2002) for evidence on the inverse relationship.

Chart IIA.6
Openness and corruption control



Note: The Control of Corruption Index can take values between -2.5 and 2.5 and has been averaged across countries grouped according to their level of openness. Openness has been computed as exports plus imports divided by GDP. The sample comprises 187 countries: 54 countries fall into the range of most open economies, 48 in the range of least open economies and 84 countries in the intermediate range.

Sources: Kaufmann, Kraay and Zoido-Lobaton (2002) and World Development Indicators (2002).

Causality can also run in the opposite direction. Taking into account that international traders and investors are more footloose than domestic ones, poor governance and corruption in a country may reduce international trade and investment more than domestic trade and investment. A country that is naturally more open – as determined by its size, geography and other factors – would find it optimal to devote more resources to building good institutions. Empirical results confirm this argument, as it has been shown that "naturally" more open economies do exhibit less corruption.[36]

The level of civil liberties and political rights within a country constitute another aspect of institutional quality. Economists have frequently asked the question whether democracy fosters economic growth, but the debate on this issue has been inconclusive so far.[37] There does, however, seem to be agreement that democracy may prevent the worst outcomes, even if it does not guarantee the best ones.[38] In particular, it has been shown that democracies have been successful in avoiding famines, a very acute form of poverty. A second important claim for democracy is that there have been no wars between democracies.[39] It has often been argued that greater openness leads to more democracy. Higher levels of openness imply more frequent contacts with individuals in other countries, and thus more intensive information flows with the outside world. Such interaction arguably makes it more difficult for oppressive regimes to maintain power. Empirical evidence confirms the existence of a positive link between openness and democracy. Hamilton (2002) uses the Freedom House Democracy Index to measure the "level of democracy" of countries and uses two alternative measures for economic openness: the simple mean tariff average and the change in shares of trade in GNP. He finds a positive and significant correlation between both measures of openness and democracy. Milner and Kubota (2001) argue that democracy leads to more openness. They find empirical evidence that democracy and democratisation have contributed to the lowering of trade barriers in a number of developing countries since the 1970s: i.e. causality goes from more democracy to increased openness.[40] These empirical findings to a certain extent contradict annecdotal evidence emphasizing the role of authoritarian regimes in trade reform.[41]

36 Wei (2000) also finds that openness is positively related to public sector wages. As higher wages may lower the incentives for officials to accept bribes, this result suggests that open trade may have a negative impact on corruption to the extent that it contributes to higher incomes. See also Bacchetta and Drabek (2002).

37 Hamilton (2002).

38 UNDP (2002).

39 Hamilton (2002).

40 Robinson (2000), on the other hand, points out that globalization has in the past also been used by military regimes to help consolidate their political power and demobilize their opponents.

41 See Fernandez and Rodrik (1991) for examples.

The rule of law, including the enforcement of property rights, the level of corruption and the political process are only a few of many aspects that determine a country's institutional setting. Industrialized countries are typically equipped with a wide range of institutions that seek to guarantee the proper functioning of markets. These include regulatory institutions, institutions for macroeconomic stabilization, institutions for social insurance and institutions for conflict management.[42] The question has been raised whether it is not advisable to have (some of) these institutions in place before opening up markets. In effect, increased openness may call for accompanying domestic institutional reforms, in the absence of which a liberalizing country may encounter difficulties in reaping the benefits of increased trade. Greater openness, for example, may imply increased exposure to external risk, and consequently greater demand for social insurance.[43] Trade liberalization itself can also imply the need for institutional reform, for instance in the form of a change in custom procedures. To the extent that reforms are costly and developing country governments tend to face serious financial restrictions, the question arises as to which institutional reforms deserve priority.[44]

Box IIA.3: The importance of institution building: customs modernization in Guatemala

Since the signing of Peace Accords in 1996, which ended 36 years of internal armed conflict, Guatemala has embarked on a programme of institution building and economic liberalization seeking to increase economic efficiency, including in the supply of public services, and to integrate in the global market place. Given the need to raise the low level of tax revenues and reduce wide-spread tax evasion, the Government established the Superintendency of Tax Administration (SAT) in 1998, replacing the former General Direction of Internal Revenue and the General Direction of Customs. The SAT was given sole responsibility for the administration and collection of all internal taxes and trade-related duties as well as for customs inspection.

The efforts made since SAT's establishment to reform customs administration and streamline related procedures have facilitated trade while helping to minimize the fiscal impact of tariff reductions. Between 1998 and 2001, the average tariff decreased almost 17 per cent while tariff revenue (in current US dollars) marginally increased. This reflects both lower tax evasion and increased imports, with the latter being partly due to reduced tariffs.

Guatemala has also broadened its tax base and, thus, significantly reduced its reliance on trade-related duties, thereby lessening the dependency of trade policy on budgetary considerations. Fiscal revenue from direct taxes, which had stagnated in real terms between 1996 and 1998, increased in 1999 to more than 3,150 million real quetzales and, in 2002, amounted to 4,486 million real quetzales. Both the decrease in tariffs and increase in internal revenue led to a reduced reliance on import duties: while in 1995 the share of tariff income in fiscal revenue was nearly 24 per cent, this proportion had fallen to 12 per cent in 2000.

Multilateral rules have also been a catalyst for institutional modernization. Considerable modifications were required to bring domestic practices in line with WTO rules, in particular, in the area of customs valuation. This included eliminating the regular use of minimum prices, which, although relatively simple to apply, can cause significant trade distortions. The required institutional changes involved the adoption of new legislation, training of customs personnel, and modernization of customs infrastructure and procedures. In order to have sufficient time to bring about those wide-ranging changes, Guatemala requested and obtained an extension until November 2001 to apply WTO rules on customs valuation.

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42 Rodrik (2002a, b), Acemoglu et al. (2001).

43 See Rodrik (1998).

44 See the discussion in Rodrik (2002a).

As part of Guatemala's modernization process, the SAT introduced an electronic system to facilitate customs clearance, providing the possibility to fill the customs declaration in electronic form. Customs procedures and clearance of imports were reduced to approximately four to six hours; in the case of physical inspection, clearance now takes less than 24 hours, provided that the goods to be imported comply with all requirements.

Likewise, export procedures were simplified and streamlined, reducing costs for Guatemalan exporters. In 2001, the Government abolished the requirement for foreign exchange and export licences and introduced a single export form, which can be downloaded from SAT's website and submitted electronically. Export procedures were further simplified through the establishment of a one-step export office bringing together in one single place all the institutions associated with export activities. Exports are usually cleared on the day of their arrival at the customs office. To further reduce the cost and time involved in customs procedures and foster regional integration, bi-national customs offices with neighbouring El Salvador started to be set up in 2000.

Source: WTO (2002c), Stotsky and WoldeMariam (2002), WTO document G/C/W/248 of 14 February 2000 and SAT online information available at: http://www.sat.gob.gt.

The costs of WTO membership have received particular attention in recent literature. For many developing countries the implementation of WTO agreements entails institutional reform, for instance related to customs valuation, sanitary and phytosanitary measures (SPS), and intellectual property rights (TRIPS). According to one estimate those reforms would cost the typical developing country $150 million, a sum equal to a year's development budget for many of the least-developed among them.[45] While doubts arise as to what is actually being estimated by such measures – mere compliance with WTO rules or a deeper reform agenda – the question of how to prioritize the use of scarce resources is no less real.

Certain aspects of WTO membership are likely to have positive effects on domestic institutions without involving significant costs. Tariff bindings under the WTO, for example, may generate a more predictable incentive structure and solidify property rights – two important attributes of a high-quality institutional framework.[46] Membership of the WTO may strengthen the institutional environment by enhancing the credibility of domestic institutions and encouraging collaboration among different domestic institutions. In general, openness and WTO membership can be considered to offer governments a range of new opportunities.

(d) Openness and pressures to adjust

When countries lower their barriers to trade companies and consumers gain access to a whole range of new opportunities. Imports will allow domestic consumers to take advantage of a large variety of goods at lower prices. Domestic companies can also take advantage of cheaper imported inputs and some companies will seize the opportunity to expand exports to foreign markets. But changes in relative prices brought about by trade liberalization will lead to a reshuffling of resources from less competitive import competing sectors to competitive and expanding export sectors. It is these shifts of resources into more productive activities that raise the economy's efficiency and create benefits from trade.

The adjustment of an economy to this new set of opportunities is not necessarily immediate and often involves costs. In an economy with an inflexible labour market, for instance, job losses in import competing sectors may not be immediately compensated by job creation in expanding exporting sectors. The resulting temporary increase in unemployment represents an economic cost. If financial markets are not efficient, companies with lucrative opportunities in foreign markets may not be able to find the funding necessary to expand their activities. Again, capital and workers may be idle for some time, which is costly for the economy. The quality

45 Finger and Schuler (1999).

46 See, for instance, Rodrik (2002a). See also Bacchetta and Drabek (2002).

and availability of infrastructure and utilities also have an important effect on the adjustment process following trade liberalization. These amenities, for instance, influence the quality of information flows within a country and information is crucial for firms and workers to react to trade reform. They also affect the size of investments companies need to make in order to expand their activities. The higher those investments, the more likely it is that adjustment takes time, in particular in countries characterized by inefficient credit markets.

Given the potential obstacles to the adjustment process, it may in certain circumstances make sense to give the private sector some time for adaptation after the announcement of trade reforms.[47] Announcing trade reform today for a well-specified moment in the future can give the private sector time to make the necessary adjustments. It is crucial, however, that the announced reform is credible.

WTO agreements often foresee implementation periods for negotiated reductions in trade barriers or changes in trade rules. Implementation periods are typically longer for developing countries, reflecting the notion that these countries may encounter more difficulties in the adjustment process. Financial markets tend to be less sophisticated in developing countries, infrastructure of lower quality and utilities less available. As a consequence, adjustment costs may indeed be higher for companies in developing countries than in developed countries. Many least-developed countries are also characterized by a low level of diversification on the export side. This makes it harder for least-developed countries to expand their exports, as it is generally more costly to start new export activities than to expand existing ones. WTO agreements therefore also accord more flexibility in the use of export promotion policies to low-income Members than others. WTO agreements also foresee safeguard mechanisms aimed at alleviating the burden of adjustment in an open trading environment.

Adjustment is not only a challenge to be met in the period immediately following trade liberalization. Economies operate in a constantly changing environment. Policy changes at home and abroad, climate changes, technological changes, the discovery of raw materials – among many other factors – have an impact on the comparative advantage of countries. Companies that are competitive today may not be competitive tomorrow. Those lacking competitiveness will be replaced by others taking advantage of new business opportunities. Trade exposes open economies to constant adjustment pressure. But real growth opportunities are hidden behind these adjustment imperatives.

(e) Other aspects of the relationship between openness and growth

(i) Import substitution policies taken too far have proved to be bad for growth

In the aftermath of the second world war and decolonization, it became increasingly obvious that differences in income between North and South had to be addressed and something fundamental had to be done to raise incomes in the South. At the time, the South's major export was commodities. A great deal of concern was generated by the finding that the terms of trade between commodities and manufactured exports of developed countries in the seventy years prior to the outbreak of the second world war had suffered a secular deterioration (Prebisch, 1950). A number of explanations were provided for this including long-term productivity growth in agriculture that, because of unlimited supplies of labour, were captured by consumers (Lewis, 1954) as well as differences in the income elasticity of demand for agricultural products and raw materials (Singer, 1950). Whatever the explanation, the prediction was of a continuing decline in primary product prices, with the implication that international trade would result in poor countries becoming trapped in commodity production. In the long run, it was believed that this would be incompatible with development and that in order to grow, poor countries needed to industrialize.

47 See Bacchetta and Jansen (2003).

The process of growth and technological development was not well understood at the time.[48] The policy assumption was that there was a fixed relation between capital and output and that once the capital equipment was installed and the workers employed, the expected volume of production would follow.[49] It was necessary to keep the price of capital goods low and thus stimulate investment. This approach implied a prominent role for the government in development planning, industrialization behind protective tariff barriers and special and differential treatment of developing countries in international trade agreements.

The implementation of the import substitution strategy involved tariff protection, exchange rate controls, quotas and import licensing. The restrictions were focused on imported consumer goods, while capital goods were charged lower rates. Interest rate subsidies were prevalent and were defended as an encouragement to investment. In many countries, the trade regime created negative effective rates of protection on agriculture, thus implicitly taxing agriculture, which was often the only viable source of exports. The overall result was a very distorted set of prices (i.e. imported capital was made cheap, labour was made expensive, commodity exports were taxed) that were not compatible with prevailing economic conditions and scarcities.

Initially, the regime of import controls typically had some positive effect on GDP growth, investment rates and industrialization. The rates of growth were markedly higher during the 1950s and 60s, especially if compared with the stagnation of the 1930s.[50] Manufacturing increased as a proportion of GDP and manufactured exports from all developing countries increased. This was the easy stage of import substitution although it is important to note that we cannot attribute all the economic changes that took place to the pursuit of this policy. However, by the 1970s it became apparent that the initial success could not be sustained as economic distortions took their toll and economic growth stagnated. The first problem was a persistent current account deficit due to the overvalued exchange rate. A second and closely related symptom that something was seriously wrong was the underutilization of existing capital and lack of employment growth, even in countries where capital was scarce. Due to balance of payments problems and the rationing measures needed to tackle them, industries could not import the necessary intermediate inputs and production could not run at full capacity. A further problem was that productivity growth was meagre and even negative in many import substituting industries. Infant industries often had difficulty growing up as the protection they enjoyed reduced incentives to learn and upgrade technology, in ways that would increase productivity and render firms competitive. Finally, some economies in Asia, such as the Republic of Korea and Chinese Taipei emerged as major exporters of non-traditional manufactured products and proved wrong the assumption that poor countries could not compete with the North.

Import substitution policy was abandoned or drastically modified in an increasing number of countries during the 1970s and 1980s, both because it had failed to deliver the expected results and because an alternative model of export-led growth seemed to be emerging. The early success of some Asian countries was not always well understood. In particular, industrial policy also played an important role in some of these countries, but the policy-makers there were better able to pursue policies that worked and change policies that did not (Bruton, 1998). As discussed below, key ingredients of successful export-led industrialization policies included the absence of a policy bias against exports, an ability to remove as well as to accord protection to firms, and very importantly, the maintenance of sound macroeconomic policies and attention to adequate social and infrastructural investments.

(ii) There is little evidence that protection is good for growth

A modern version of the infant industry argument focuses on differences among industries in terms of technological content and productivity growth. In the same way as commodity exporters were believed to lag behind, it is argued that countries specializing in less dynamic manufacturing sectors will be locked into an industrial structure that yields slower growth than those specializing in the dynamic sectors. Again, the fear is

48 The neoclassical growth model was developed in the 1960s. See Bruton (1998) for a discussion of the import substitution policy.

49 The incremental capital-output ratio (ICOR) formed the basis for planning and expected output.

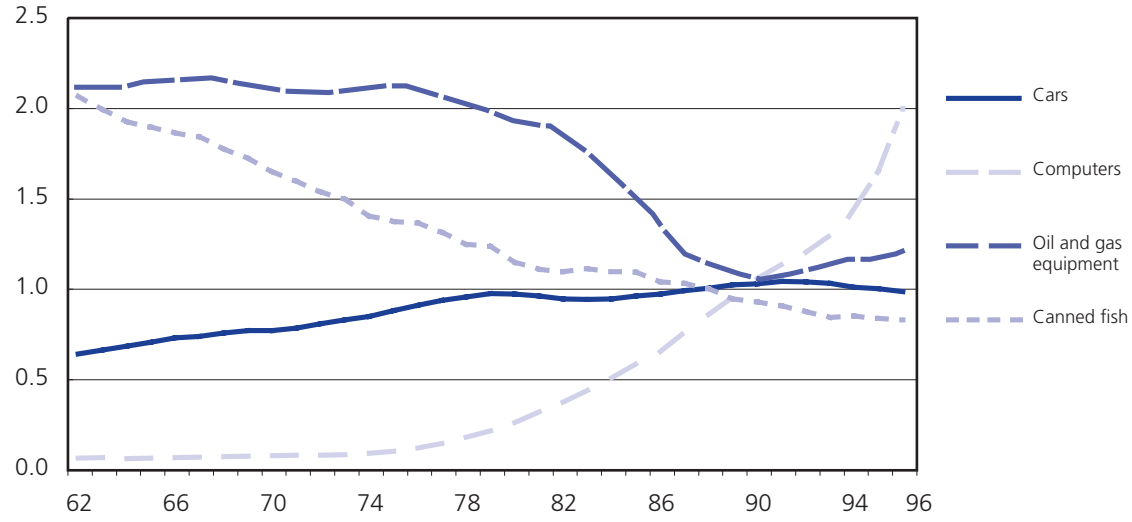
50 See for example the World Bank (1978).

that an ever-widening income gap will be the result, and as with import substitution, temporary protection is seen as a means of avoiding becoming locked onto a slow growth path. This argument rests on the belief that the industrial structure is static over time, that there are no technology spillovers across countries and industries, and that the ranking of industries according to productivity growth persists over long periods of time.

Even if this were the case, faster productivity growth may be reflected in declining relative prices of the output from the dynamic sectors, so that consumers, including those in importing countries, would gain as much as the workers and capital-owners in the industry in question. In the computer industry in United States, for example, (total factor) productivity has grown at an annual average rate of 9.6 per cent during the period 1959–96, while quality-adjusted prices have fallen on average 17.5 per cent per year during the same period.[51] Since computers are widely used in the production of almost all goods and services, their declining price spurs productivity in all computer-using sectors.[52]

It also appears that industries experience periods of high productivity growth and periods of slower productivity growth, and that the ranking of industries according to productivity differs both over time within a country and across countries at a specific time. Productivity performance over time within a country is illustrated in Chart IIA.7. The chart shows five-year moving average productivity indices in four selected industries setting 1987 equal to unity in all sectors. The sectors depicted represent four typical development paths – one with a monotonically declining trend in the productivity-level (canned fish), one with accelerating growth (computers), one with a hump-shaped trend (cars), and one that appears to become U-shaped (oil and gas field machinery and equipment).

Chart IIA.7
Total factor productivity in selected US industries, 1962-1996
(TFP Index, 5-year moving average 1987=1)



Source: Bartelsman, Becker and Gray (2000).

51 The price estimate is taken from Jorgenson (2001), while productivity growth was estimated by Bartelsman, Becker and Gray (2000).

52 The quote that computers are seen everywhere except in the productivity figures of the economy is famous. However, recent research has found a sharp increase in productivity growth due to use of computers at the firm level. But such productivity growth is conditioned on complementary investments in skills and organizational changes (Bresnahan et. al. 2002).

Labour productivity has increased during the entire period for all the sectors in the chart due to capital deepening. Capital deepening implies that each worker acquires more equipment or more sophisticated equipment to work with over time, enabling him or her to produce more. Total factor productivity increases if output per worker increases faster than the capital stock.[53] When new equipment is only marginally better than the equipment it replaces, and the technology is already quite capital intensive, additional investment may not improve total factor productivity. It would then in many cases be more profitable to relocate production to a developing country where labour is more abundant. A less capital-intensive technology can then be applied and total factor productivity growth may resume in the new location.[54] Furthermore, while low-technology sectors can experience high productivity growth in poor countries, high-technology sectors do not necessarily exhibit high productivity growth in countries with scarce human capital. Table IIA.4 identifies the ten sectors with the highest productivity growth in South Africa and the United States during the period 1970-96, showing the annual average growth rate of total factor productivity during this period.[55] It clearly illustrates the point that there is no one-to-one relationship between technology level and productivity growth that is independent of time and resource endowments.

Table IIA.4
The most dynamic industries[a] in the United States and South Africa
(Percentage)

	United States		South Africa	
	Industry	Percentage change	Industry	Percentage change
1	Electronic computers	14.10	Basic non-ferrous metals	5.3
2	Semiconductors	13.20	Other chemicals and man-made fibres	4.6
3	Computer peripheral equipment	12.90	Other manufacturing	3.7
4	Computer storage devises	11.80	Electrical machinery and apparatus	3.0
5	Magnetic and optical recording media	6.50	Television, radio and comm. equipment	2.9
6	Calculating and accounting machines	4.10	Plastic products	2.9
7	Laboratory and analytical instruments	3.80	Professional and scientific equipment	2.7
8	Optical instruments	3.60	Paper and paper products	1.7
9	Household audio and video equipment	3.10	Basic iron and steel	1.4
10	Women's hosiery	3.00	Coke and refined petroleum products	1.1

[a] Ranking of industries according to total factor productivity growth during the 1970-1996 period.

Source: Bartelsman, Becker and Gray (2000) and TIPS (2002).

[53] Strictly speaking, there is an increase in TFP when output per worker grows faster than the growth rate of the capital stock times the capital share in input.

[54] The product cycle theory predicts that innovations resulting in new products take place in rich countries. Early in the life of a new product, incremental technical progress improves productivity at a rapid but declining rate. Eventually the product matures, it becomes standardized and costs become the most important factor for competitiveness. Imitators in developing countries will then take over production (Grossman and Helpman, 1991).

[55] The productivity growth rates are calculated from data given in TIPS (2002) and Bartelsman, Becker and Gray (2000). They are not entirely comparable as the US data are at a 4-digt level while the South African data are at a 3-digit level and the South African data include only capital and labour in the production function, while the US data include intermediate goods and energy as well. The table nevertheless gives an impression of the differences in ranking of sectors according to productivity growth.

Table IIA.4 suggests that each country has the fastest productivity growth in the industries for which it has a comparative advantage (natural resource-based industries in South Africa and science-based industries in the United States). And even in the United States, one sub-sector in the apparel industry makes it to the top ten, while high-technology sectors do not top the list in South Africa, despite the fact that South Africa has a computer industry. The level of productivity and the rate at which it grows in a country are, therefore, probably more related to a country's ability to innovate, to learn from others and combine its resources in the most productive way rather than to the industrial structure at one particular point in time. Thus, the modern version of the infant industry argument for deviating from free trade may suffer from similar limitations as the traditional case for import substitution.

(iii) Striking success stories of export-led growth exist

A series of important investigations in the 1970s demonstrated the high cost of protectionism in developing countries (Little, Scitovsky, and Scott, 1970; Balassa, 1971). They set in motion a major rethinking of the role of trade in development. The idea that trade can become an engine of growth was accentuated by the success of a growing number of developing countries, primarily in East Asia, in using exports to promote sustained growth and industrial transformation.

Looking at the Asian economies that have recorded the most impressive economic performance during the past decades, it is impossible not to notice the connection between strong export orientation and periods of rapid growth and development. In most cases, high and sustained economic growth was preceded by shifts from traditional import substitution to more export–oriented and outward–looking policies, resulting in export growth rates reaching 20 per cent per year (or more) over extended periods of time.

Export success has, for instance, been intimately connected with Japan's overall growth performance, and export growth averaged 17 per cent per year for a sustained period up until 1973. Exports provided foreign currency to pay for imports of raw materials, intermediates, and capital goods needed for industrial development. They also allowed firms to grow large enough to benefit from economies of scale that could never have been achieved on the domestic market alone.[56]

Chinese Taipei turned from traditional import substitution to a strong export oriented development strategy in the 1960s. This policy shift led to increases in the average share of exports to GNP from 8.8 per cent in the 1950s to 18.5 per cent in the 1960s, 42.4 per cent in the 1970s and 50.3 per cent in the 1980s. Average GNP growth rates were 10.2 per cent in the 1960s, 8.9 per cent in the 1970s and 7.6 per cent in the 1980s. Table IIA.5 shows how economic growth was accompanied by a change in the economy's export structure, away from agricultural products and textiles in the 1960s, to clothes and "other consumer goods" (including toys and watches) in the 1970s and 1980s, and finally office and telecom equipment in the 1990s. This indicates that exports can play an important role in shifting an economy's resources into the most dynamic economic activities. Yet these shifts are not necessarily automatic, as the experience of New Zealand indicates (Box IIA.4).

[56] Kokko (2002)

Table IIA.5
Changes in the product structure of Chinese Taipei's merchandise exports, 1963-2001
(Percentage shares)

	1963	1973	1983	1993	2001
Agricultural products	59.3	15.4	8.0	5.1	2.6
Mining products	2.7	0.9	2.4	1.7	2.6
Manufactures	38.0	83.6	89.1	93.0	94.6
Iron and steel	3.0	1.3	2.5	1.6	3.0
Chemicals	5.1	1.5	2.4	5.1	7.0
Other semi-manufactures	11.7	12.1	11.6	9.6	7.4
Machinery and transport equipment	1.5	23.5	26.2	44.4	57.3
Office and telecom equipment	0.3	16.3	13.9	23.8	37.9
Electrical machinery and apparatus	0.3	2.7	3.6	6.5	7.7
Textiles	11.7	12.8	7.2	9.6	7.8
Clothing	3.0	16.1	11.9	4.4	2.0
Other consumer goods	1.8	16.3	27.4	18.4	10.1

Source: WTO.

Box IIA.4: New Zealand's experience

In the mid-1980s, New Zealand embarked on a comprehensive programme of macro-economic and structural reforms, thereby transforming itself from a rather closed economy into one of the most open in the world. The outcome was a substantial improvement in the country's productivity and growth performance. New Zealand's success in withstanding recent external shocks, namely the Asian crisis and the global slowdown in 2001, as well as adverse climatic conditions, is also undoubtedly due in large part to macroeconomic and structural reforms. Prior to these reforms, the Government had responded to major external shocks in the 1970s, notably the oil price increases and the loss of free access to the UK market for dairy products, owing to the latter joining the European Community, by adopting essentially inward-oriented policies that sought to maintain a high level of economic activity and employment; these policies continued to insulate New Zealand from the global economy. By the start of the 1980s, the economy experienced low growth and high inflation together with large fiscal and current account deficits. Furthermore, increasingly restrictive regulatory policies in the early 1980s hindered private sector adjustment.

Macroeconomic reforms in the mid-1980s and early 1990s included granting the Reserve Bank independence to set monetary policy in pursuit of an explicit inflation target agreed periodically with the Government. Measures were also taken to tighten fiscal discipline by making policy more transparent and ensuring that the government took more account of the future implications of current policies. Structural reforms included: unilateral dismantling of trade barriers; extensive liberalization of product, service and financial markets; widespread privatization of state-owned enterprises; new forms of governance in the public sector; and labour market reforms.

While economic growth slowed initially from an average of 2 per cent annually during 1970-83, to 1.7 per cent annually between 1983 and 1991, it then accelerated to around 2.7 per cent during 1991-2002. Real GDP is expected to grow by 4 per cent in 2002/03. Much of this growth was due to a rapid expansion of labour inputs owing to labour market reforms, although labour productivity improvements have been moderate. On the other hand, total factor productivity (TFP) growth rose considerably to 1.5 per cent annually

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between 1993 and 1998 versus only 0.9 per cent during the previous 15 years. Despite this substantial acceleration in TFP and growth, New Zealand's real GDP per capita has continued to slip below the OECD average. The Government's hope of making up the ground lost during the past few decades has yet to be realized, prompting a re-examination of some policies, which has resulted in the suspension of several previous liberalization programmes, including unilateral tariff reform (up to 2005 pending a review) and all further privatization, as well as measures to encourage higher value-added activities and exports.

One of the major reasons given for New Zealand's growth not being more rapid is the structure of the economy and its major exports. Despite considerable diversification since the 1960s, around 60 per cent of merchandise exports are concentrated in agricultural products, for which demand has grown relatively slowly; world agricultural markets are also highly protected and thus distorted, thereby possibly curtailing New Zealand's exports. It has also been suggested that while the agricultural sector has made considerable productivity gains, these might have been greater if domestic market distortions, such as export monopoly policy, had been eliminated earlier; unlike in other sectors of the economy, New Zealand only began eliminating the export monopoly of state trading enterprises (STEs) in certain agricultural products in the late 1990s. Furthermore, it has been argued that New Zealand's comparative advantage in resource-based activities have impeded its ability to diversify into more innovative manufacturing and service activities. Other important reasons may include New Zealand's small size and geographic isolation from major markets, limiting the ability of its firms to exploit economies of scale and to export; insufficient private involvement in innovative activity, including investment in R&D; the high cost of capital possibly due to inadequate national saving; and a monetary policy that some think has been too rigid.

Source: WTO(2003a).

Observers tend to agree that the success of the East Asian "tigers" involved a move away from an import substitution strategy. Yet there is some disagreement as to whether their trade policies actually represented a move towards free trade, or whether they should be considered interventionist but different from the standard import substitution package. Those arguing that the East Asian "tigers" were arbitrarily close to a free trade regime emphasise that they installed fairly uniform incentives for earning or saving foreign exchange.[57] Others argue that these economies pursued an "export push" strategy consisting in "picking winners" that would be able to conquer foreign markets.[58]

Box IIA.5: Electronics and the automotive industry in Malaysia

Robust economic growth was observed in Malaysia's manufacturing sector during the period 1997-2001; however, performance varied across different manufacturing industries, possibly reflecting their relative openness, and thus their exposure to competition. This is particularly true when one compares the relatively open electronics industry with the relatively closed automotive industry.

The export-oriented electronics industry provides a striking example of the benefits of an open trading and investment regime in fostering economic development. The industry has received relatively little tariff or non-tariff protection and, as a consequence of a liberal investment regime, attracted significant inflows of foreign direct investment. It has been among the main engines of Malaysia's growth, and has grown to such an extent that it now accounts for approximately 2.5 per cent of global electronics production. Moreover, the industry's strong external competitiveness was an important element in Malaysia's recovery from the Asian financial crisis, with electronics accounting for almost half of Malaysia's total exports.

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57 See for instance Krueger (1997).

58 Rodrik (2002a) points out that trade policies like those of the Republic of Korea in the 1960s should not be considered orthodox free trade strategies. The different views are summarized in Panagariya (2000).

Duty-free imports comprised over 97 per cent of total Malaysian imports of electronic products during the period 1997-2000. No major non-tariff protection for the industry was observed. The industry was the largest contributor to Malaysia's manufacturing output, employment, and exports; output growth of 22 per cent was recorded in 1999 and almost 32 per cent in 2000. In 1999, the sector employed around 16 per cent of the total labour force in manufacturing. Exports of electronics products accounted for 45 per cent of total exports in 2000, up from 37 per cent in 1997. Imports of electronic products, which were mainly used for further processing, have increased alongside exports. Electronics accounted for over one-third of total fixed assets held by foreign investors as of 31 December 1998; 100 per cent foreign equity participation has been allowed for export activities. In 1999 and 2000, foreign investment constituted 85 per cent and 84 per cent, respectively, of approved capital investment in the electrical and electronic product industries.

By contrast, the domestic automotive industry has been relatively sheltered from foreign competition owing to high tariffs and support from various tax and non-tax measures. While such protection was successful in winning the industry a large share of the domestic market, contrary to stated objectives, automotive exports have been modest, which is perhaps indicative of a certain lack of external competitiveness.

Malaysia's automotive market was protected by both tariff and non-tariff measures. Tariffs on automobiles in 1999 ranged from 42 per cent to 300 per cent. Most automobile parts and components were subject to 25-30 per cent tariffs. Motor vehicles, various chassis, bodies, parts, and some tractors were subject to discretionary import licencing. Cars produced domestically under the National Car Projects received a 50 per cent reduction in the excise tax. All assemblers and manufacturers were required to source certain amounts of parts and components locally. Malaysia's promotion schemes for its motor vehicle industry notably included tax allowances, incentives for high-technology industries, R&D, and training. Following a slowdown during the financial crisis, sales of passenger cars, commercial vehicles, motorcycles, and scooters increased in 1999 and 2000. Imports of automotive products decreased from $3,057 million in 1997 to $1,351 million in 1999 or around 2.1 per cent of total imports. The two national car companies secured large shares of the domestic market, but few cars were exported from Malaysia; indeed, exports of automotive products accounted for 0.4 per cent of total exports in 1999.

Source: WTO (2001a).

In most of the Asian economies that have recorded strong and long-lasting export growth, governments have pursued policies to support export activities. They have played a strong role in developing new markets by establishing institutions specializing in marketing and research, and by disseminating information about foreign markets. The export sector has also been able to take advantage of policy orientations and priorities that were not explicitly about exports, such as heavy investments in infrastructure and human capital accumulation.

Several Asian economies established Export Processing Zones (EPZs) at some moment in time. The trend has spread to many other countries and regions. These zones are typically thought of as open-market oases within an economy that is dominated by distortion-ridden trade policies, exchange rate regulations, and other regulatory controls. The potential role of EPZs as an engine for growth in developing countries has been a much discussed topic, not only in the context of Asian countries. Export processing zones may indeed make a positive contribution to growth if they manage to attract foreign direct investment that is accompanied by technological transfer, knowledge spillovers and demonstration effects acting as catalysts for domestic entrepreneurs to engage in the production of non-traditional goods or services. Individual country experiences with export processing zones have been mixed and the specific set-up and management of the zones seems to be paramount to their success.[59] The fact that in many cases firms locating in EPZs enjoy tax breaks and host

[59] See Madani (1999) for an overview.

countries subsidize infrastructure in EPZs has been prone to criticism. It is indeed not clear at all whether such incentives can always be justified on a cost-benefit basis. However well EPZs may fare, overall liberalization of the economy is likely to be a better policy in the longer term.

Box IIA.6: Export Processing Zones in Mauritius (EPZs)

Incentives provided under various schemes, and in the context of Export Processing Zones (EPZs) in particular, have given impetus to manufacturing in Mauritius; EPZ companies account for the bulk of manufacturing.

In Mauritius, EPZ companies are not located in specified areas; they are "free points" (export enterprises), which may sell up to 80 per cent of their production duty free on the domestic market, subject to authorization by the Ministry of Industry.

The EPZ scheme, together with preferential market access provided by certain developed countries, has contributed to the specialization of the manufacturing sector in the production of export-oriented, labour-intensive goods requiring low skills and low technology, in particular textiles and clothing. This strategy has helped Mauritius to move away from one-crop production at the time of its independence in 1968 and to become a relatively diversified, export-oriented economy.

High protection of the domestic market has resulted in an annual average wage increase of 7.5 per cent between 1988 and 1997, which eroded the competitiveness of Mauritian products as productivity rose by only 3.5 per cent a year. With real wages growing faster than productivity, Mauritius has become a high-cost country in the production of its major export products (sugar, textiles and clothing).

High protection of companies supplying the domestic market in combination with incentives granted to exporters under the EPZ scheme have created elements of duality in the economy and led to tensions in resource allocation between the export and domestic sectors.

The complete dismantling of the MFA, of which Mauritius has not been a member, and post-Lomé ACP-EU Agreements will further increase competition in the country's traditional markets, mainly the EU, where Mauritius is the largest exporter of textiles and clothing among ACP countries. This changing international environment, combined with a decline in competitiveness, has highlighted the task of transforming the economy from export- to outward-orientation.

The manufacturing strategy of Mauritius is now focusing on market and product diversification (e.g. delocalization of low-cost activities to neighbouring countries, vertical sectoral integration at the regional level, and promotion of higher value-added and more capital-intensive production) and on improved competitiveness through, *inter alia*, elimination and reduction of customs tariffs on inputs and equipment, and enhancement of incentive schemes.

(iv) Trade liberalization is not enough to fully realize the gains from trade in poor countries

Despite strong theoretical and empirical support for the benefits of openness, trade liberalization and globalization have not been embraced with enthusiasm in all quarters. A primary concern has been that the poorest countries may not be able to benefit from a more open trade regime and will lag even further behind successful economies. This concern is justified, but it does not imply that poor countries should not liberalize trade. Rather it implies that poor countries may not realize the full potential benefits of trade liberalization unless trade liberalization is complemented by other policy measures such as investment in infrastructure and deregulation of key infrastructural services sectors, including finance.

High transport costs, inefficient logistics services and weak supportive services in general constitute a substantial barrier to trade in many poorer countries. Over-land transport costs in African land-locked countries, for example, adds at least 200 per cent to the transport cost from the nearest port. In addition, port handling costs are much higher than in more developed regions.[60] Poor infrastructure and high transport costs can cut off producers in African countries from developed country export markets altogether. For example, if an item fetches a price of $100 in New York and it costs, say, $80 to bring it there, there will be hardly anything left to cover the cost of producing the item. Moreover, if a producer has to import intermediates from overseas at similar transport costs and with uncertain delivery times, the prospect of entering the US market would be even bleaker. Finally, land transport, port handling and border crossing are time consuming in Africa, and the time factor has become increasingly important as modern manufacturing practices, including just-in-time delivery, have proliferated. As discussed in Section IIB.2, liberalization in key services sectors can help opening infrastructural bottlenecks and stimulate merchandise exports in poor countries.

3. TRADE LIBERALIZATION AND POVERTY ALLEVIATION

One indicator of how far trade has a positive impact on development is its effects on poverty. Linkages between trade and poverty issues are not as direct or immediate as the linkages between poverty alleviation and national policies on education and health, land reforms, micro-credit, infrastructure development, and governance. Trade can affect the income opportunities of the poor in a number of ways. The final outcome depends on the relationship between trade liberalization and growth, and the relationship between trade liberalization and income distribution.

As indicated earlier, economic theory suggests that trade can help the poor within a country through its positive impact on per capita income. Trade liberalization creates conditions for faster income growth through better access to ideas, technology, goods, services and capital. Moreover, trade may boost growth by promoting a more efficient use of resources through specialization and by allowing the realization of economies of scale. Finally, trade can be a major instrument in bringing about convergence in incomes between rich and poor countries.

Growth is a necessary but not sufficient condition for poverty alleviation. Even if trade liberalization leads to more rapid growth, this does not imply that it will improve the conditions of the poor. If income inequality increases at the same time, then the poor may actually become worse off. A large theoretical and empirical literature has focused on the relationship between trade and inequality. Economists consider it to be most likely that wage inequality decreases in developing countries as a consequence of trade liberalization. This would be the case because developing countries are typically well endowed with low-skilled labour relative to developed countries. When opening up to trade developing countries will therefore be more competitive in low-skill intensive sectors and these sectors will expand. The increased demand for low-skilled workers, who typically belong to the poorer segments of the population, will lead to an increase of their wages relative to the wages of skilled workers.

[60] Recent empirical work on transport costs can be found in Limao and Venables (2001), Clark et al. (2001) and Radelet and Sachs (1998).

Empirical evidence on the link between trade and wage inequality, however, is mixed. Most of the empirical evidence from East Asia confirms the argument presented in the last paragraph, as the gap in wages between skilled and unskilled workers narrowed in the decade following trade liberalization (the 1960s in the Republic of Korea and Chinese Taipei, and the 1970s in Singapore).[61] Wage differentials also decreased in Malaysia (between 1973 and 1989), but evidence on the Philippines is more ambiguous.[62] In China, recent increases in openness have been accompanied by increases in income inequality. Two different studies estimate that the Gini coefficient in China increased from 38.2 in 1988 (28.8 in 1981) to 45.2 (38.8) in 1995.[63] Yet a recent empirical paper finds that across China, those cities that have had a greater increase in the trade-to-GDP ratio have also tended to witness a reduction, rather than an increase, in income inequality.[64]

In Latin America, Argentina undertook trade liberalization between 1976 to 1982 and again from 1989 to 1993.[65] The Gini coefficient rose from 36 in 1975 to 42 in 1981 and 48 in 1989 implying an increase in income inequality. The skill differentials in wages increased in the first period but narrowed in the second period. Chile liberalized between 1975 to 1979 and the Gini coefficient rose from 46 in 1971 to 53 in 1980. The wage gap between different skill levels also increased. Costa Rica liberalized from 1987 to 1993, the Gini coefficient increased from 42 in 1986 to 46 in 1989, and the wage gap also increased. Finally, during Mexico's liberalization episode from 1985 to 1988 the Gini coefficient also rose – from 51 in 1984 to 55 in 1989.

The links between trade liberalization and income distribution are not fully understood. Several explanations have been put forward for the differences in outcome between East Asia and Latin America. One line of argument focuses on the fact that Latin America opened its markets later than the East Asian economies (Wood, 1997). As a result, the entry of China and other large low-income Asian countries into the world market for labour-intensive manufactures in the 1980s shifted the comparative advantage of middle-income Latin American countries into goods of medium-skill intensity.[66] As a result, increased openness in middle-income countries reduced the relative demand for unskilled workers by causing sectors of low-skill intensity to contract. This would explain why relative wages of unskilled workers decreased.

Another explanation for rising inequality in some developing countries is that liberalization introduces new skill-intensive activities into developing countries. For example, there is evidence for Mexico that liberalization induced larger FDI inflows from the United States (Feenstra and Hanson, 1997). These FDI flows reflected the shift of low-skill intensive activities from the United States to Mexico. Yet, Mexico's relative demand for skilled workers within industries in manufacturing rose along with FDI inflows into those industries, which led to increases in Mexican wage inequality.[67] The explanation of this phenomenon is that jobs which were low-skill-intensive in the United States were relatively skill-intensive in a country like Mexico.

The tariff schedule in place before trade liberalization will also affect the impact of trade on wage inequality. If protection was higher in the low-skill intensive sectors, then trade liberalization may actually lead to shrinkage of these sectors. As a consequence, wage inequality would increase. Mexico and Morocco are examples of countries where low-skill intensive sectors received relatively more protection than high-skill intensive sectors before trade reform.[68]

[61, 62] Wood (1997).

[63] Cited in Wei and Wu (2001). The Gini coefficient is a measure of income inequality in an economy. The higher the value of the coefficient, the more unequal is the distribution of income.

[64] Wei and Wu (2001). Chen and Ravallion (2003) find a small positive impact of trade reform in China on mean household income. Yet the impact varies across households with rural households tending to lose and urban households tending to gain.

[65] Data on income inequality in this paragraph are taken from Slaughter (2000). Information on skill differentials is taken from Wood (1997). The findings of Robbins (1996) go in the same direction.

[66] It has also been argued that most Latin American economies are abundant in natural resources rather than low-skilled labour. This would also explain why wage inequality did not decrease in Latin America.

[67] Currie and Harrison (1997) focus on another explanation for rising inequality in developing countries when liberalization occurs. They argue that the wage impact of liberalization depends crucially on the nature of product market competition. If increased product market competition reduces the relative price of low-skill-intensive products, trade could have perverse wage-inequality effects. Currie and Harrison argue that this pro-competitive effect of liberalization mattered in Morocco.

[68] Hanson and Harrison (1999) and Currie and Harrison (1997) as quoted in Slaugther (2000).

Trade can also affect wages indirectly through its impact on institutions. It has been argued, for instance, that trade liberalization weakens the bargaining power of unions, so exerting downward pressure on wages. Rodrik (1997) discusses how openness can weaken the bargaining power of unions, and Driffill and van der Ploeg (1995) have shown that trade liberalization with unionised labour markets may lead to lower wages. While several analyses in this area point to weaker union power as a consequence of increased international competition, not all the evidence on this is unambiguous.[69]

So far this discussion focused on situations in which trade affects wage inequality without affecting the distribution of assets. Yet increased openness may lead to changes in asset distribution that can be to the advantage or to the detriment of the poor. Robinson (2000) illustrates this with the following example:

> *"In the nineteenth century as transportation costs fell and the European economies developed and created a large market for tropical crops, Central American countries were ideally endowed to take advantage of the expanding world demand for coffee. In Costa Rica this led the government to pass laws in 1828, 1832 and 1840 allowing peasants to farm and gain title to frontier lands. This led to the creation of the famous class of Costa Rican yeoman farmers. In Guatemala the profitability of coffee instead induced a mass land grab by political elites in the 1870s that led to the creation of large coffee estates and the re-introduction of colonial forced labour laws which lasted until the democratic interlude after 1945. As a result, land inequality is higher in Guatemala than in Costa Rica today, as is income inequality."*

Much of the empirical literature discussed so far focuses on wages and thus fails to take into account other components of household income. Income from self-employment is for instance not reflected in wage statistics. The poor in developing countries are often located in rural areas and working in agriculture. Many of them are self-employed. It has been argued that the relatively slow pace of trade liberalization in agriculture has been negative for poor farmers in developing countries. Data on income distribution rather than wage inequality need to be used in order to capture such an effect. Only a few empirical papers, showing mixed results, analyse the link between personal income distribution and trade.[70]

Measures of income inequality focus on the difference in income between the rich and the poor within a society. Changes in income inequality do not necessarily tell us whether poverty increases or decreases. It may be that trade raises the income of the poor. Yet if the income of wealthier people increases more, a reduction in poverty will go hand in hand with an increase in inequality. To better understand what happens to poverty the focus of analysis should be the absolute income levels of the poor.[71] It is also preferable to look at the evolution of real income rather than nominal income or wages. Given that trade affects the prices of goods, it is important to include in the analysis the effect of trade on goods the poor consume. Trade liberalization will, for instance, lead to an increase in the price of agricultural crops in developing countries that export agricultural goods. This is likely to be beneficial for the rural poor if they are producers of agricultural goods. But it may be to the disadvantage of the urban poor in the same country who are consumers of agricultural goods.[72]

69 See Dunthine and Hunt (1994) for a different result.

70 Edwards (1997) does not find any significant effect of trade on income distribution. Spilimbergo et al. (1999) find that trade openness reduces inequality in capital-abundant countries and increases inequality in skill-abundant countries.

71 This is more easily said than done. See Ravallion (2003) for a detailled discussion on the measurement of poverty and on how results concerning the evolution of poverty in recent decades depend on the poverty measure used.

72 A recent study by Dollar and Kraay (2001) analyses how growth affects average real income of the poorest quintile of a society. They find that their income increases proportionally with the country's average income, which implies that economic growth benefits the poor. The authors find no evidence of a significant negative relationship between openness and average incomes of the poor. To the extent that openness is growth enhancing, Dollar and Kraay, therefore, conclude that trade benefits the poor.

The International Labour Organization recently carried out a number of country studies to analyse the social dimensions of globalization. The case studies of Bangladesh and Chile illustrate how increases in income inequality can go hand in hand with poverty reduction. In Bangladesh trade liberalization gathered momentum from the end of the 1980s and has been associated with a considerable intensification of trade flows.[73] The Gini coefficient of income inequality increased between 1988/89 and 1995/96. Yet in the same period the percentage of the population living below the poverty line (based on an intake of 1,805 kcal per person per day) gradually declined from 28.4 per cent in 1988/89 to 25.1 per cent in 1995/96. These figures reflect an important decrease in poverty among the rural population, while poverty among the urban population showed a slight increase.

Chile went through a second phase of trade liberalization in the second half of the 1980s, which was accompanied by a marked increase in trade and investment flows.[74] The ratio between the income of the 20 per cent richest households and the income of the 20 per cent poorest households first decreased from 13.3 in 1987 to 12.2 in 1992 and then increased to 13.8 in 1996. Inequality thus increased in the second period. Absolute poverty, however, declined from 17.4 per cent of the population in 1980 to 12.9 per cent in 1990 and 5.8 per cent in 1996.

The discussion so far has focused on the long-term effects of trade liberalization on the poor. But trade liberalization can also lead to temporary strains that may be particularly painful to the poor. Trade liberalization is beneficial because it allows countries to specialize in activities in which they are more competitive. This is why trade liberalization is typically followed by a restructuring of economic activities. While less productive, typically import competing companies shrink or close down completely, competitive exporting activities flourish and expand. In practice, this implies that some people lose their job in the aftermath of trade liberalization. Though they may end up finding a better-paid job in the expanding exporting sector, they may nevertheless have to go through a period of unemployment before finding another job. Being unemployed may be less difficult to manage in industrialized countries, where benefit schemes guarantee that the unemployed also receive an income. But in developing countries, social safety nets often do not exist or are inadequate.[75] Their coverage may be limited if not non-existent, or if available such social safety nets may be far below demand during a crisis or adjustment period. Adjustment processes can have harsh consequences in those countries, particularly for the poorest. As Winters (2000) puts it, "even switching from one unskilled informal sector job to another could cause severe hardship" for the poor.

Increased openness can increase a country's exposure to external risk. At the same time, integration in the global economy may reduce risks associated with fluctuations in domestic production. If a flood destroys the harvest of the main food crop, for instance, consequences are more disastrous in a closed economy than in a country where people can import crops. The question, then, is how the combination of increased exposure to external risks and reduced dependency on internal risks affects aggregate risk levels in an economy. Rodrik (1998) argues that external risk is positively associated with aggregate income volatility. If the population is to be protected from increased volatility, the role of the government as a provider of social insurance becomes more important in more open economies. Rodrik argues that this explains why governments have expanded fastest in the most open economies.

Critics have pointed out that it will be difficult for developing country governments to respond to an increased need for social insurance if the removal of tariff barriers leads to a reduction of government revenue. Yet it is not necessarily the case that trade liberalization lowers government revenue. Although tariff rates are lower, trade volumes are higher and these two effects work in opposite directions. Likewise, lower tariffs may reduce the incentive to evade tariffs. Over time, government tariff revenue can be substituted by revenue from other forms of taxation. The poor do not need to lose from this. It is a political decision whether new taxation or cuts in public expenditure will disadvantage the poor.

73 Paratian and Torres (2001).

74 Reinecke and Torres (2001).

75 See for instance Ferreira et al. (1999).

To sum up, it has been long recognized that not everyone benefits from trade liberalization. Certain segments of the population will, at a minimum, face a period of adjustment; others may experience longer-term reductions in income. In developing countries, the effects of adjustment to trade liberalization on the poor have been a source of particular concern. While the distributional consequences of increased openness may influence the sequencing and pace of liberalization, as well as the range of policies that governments may choose to mitigate the adverse effects of change for some, no convincing case has been made for eschewing openness altogether as a policy option. This is because the benefits of trade and economic openness for an economy and society as a whole are well understood.

Box IIA.7: Trade liberalization and tariff revenue

Tariff reductions are an element of trade liberalization which is of particular concern to many developing countries due to their negative impact on tax revenue. For many of them, tariff revenues are still an important source of tax revenue. In the mid-1990s, tariff revenue exceeded 30 per cent of the government's total tax revenue in more than 25 developing countries. This contrasts sharply with the situation in high-income countries for which tariff revenues typically represent less than 2 per cent of total tax revenue.

Developing countries have also expressed concern about the revenue implications of the introduction of the WTO's Agreement on Customs Valuation. The view has been expressed that the shift from "reference prices" to "transaction values" for the determination of tariff payments could lead importers to declare transaction values that are considerably lower than the "real" value of the imported good or the traditional reference price, and that customs administrations, unable to detect or prove false declarations of the transaction value, would be unable to stem the consequent loss in revenue. Empirical evidence to substantiate these claims is not available. In cases where the implementation of the Customs Valuation Agreement implied a shift to transaction values, general reform and modernization of custom administrations were often undertaken in parallel. The impact of the shift to "transaction values" is therefore blurred by the repercussions of other changes.

In evaluating the net revenue implications of trade liberalization, at least two crucial features have to be borne in mind: first, trade liberalization which substitutes tariffs for non-tariff barriers (quotas, restrictive licensing requirements, etc.) may have a positive revenue impact. Second, once trade protection is based on tariffs, the revenue implications of reductions in applied rates depend on the price elasticity of imports.[1] According to a recent study, price elasticities in open economies have to be much higher than empirically observed elasticities in order for trade liberalization to be self-financing. These findings imply that significant tariff reductions should be accompanied by reform of the general tax system to avoid the emergence of fiscal deficits or curtailment of government expenditure.[2]

Empirical evidence on the impact of major trade liberalization programmes (which were not exclusively focused on tariff reductions) show that revenue implications are not necessarily significant. For Bangladesh, Chile and Mexico, trade liberalization since the mid-1980s involved cuts in applied tariffs by more than 10 percentage points, reducing the ratio of duties to total tax revenue significantly in Bangladesh, but only slightly in Chile and Mexico. In each case, import growth accelerated sharply. Interestingly, in the initial years of trade liberalization in Chile and Mexico, the ratio of import duties to total tax revenue rose, but declined steadily thereafter.

[1] An IMF study (Ebrill et al, 1999) provides interesting insights: the flattening of tariff rates toward uniform levels, followed by the elimination of exemptions can actually increase external tax returns.

[2] Devarajan et al. (1999).

4. OPENNESS AND ENVIRONMENTAL SUSTAINABILITY

The relationship between trade and environmental sustainability is often posed in terms of a conflict between the goals of environmental protection and freer trade. But there is no inherent conflict between openness and environmental sustainability and there are many instances where measures that promote one objective also promote the other.

The level of economic activity and the degree to which it is environmentally sustainable can affect environmental quality. But trade is only one aspect of economic activity and can play both a negative and a positive role in protecting the environment. There is no *a priori* assumption that trade is less environmentally friendly than activities in the rest of the economy. In 2000, the share of merchandise trade to global gross domestic product was about 20 per cent. This shows that while trade is an important component of global economic activity, it is dwarfed by the size of the rest of the world economy. In any given country, domestic monetary and fiscal policy are bound to have a bigger impact on the aggregate level of economic activity, and hence on environmental quality, than trade.

The standard way to examine the impact of trade on the environment is to decompose the scale, technique and composition effects (Grossman and Krueger, 1993). The scale effect refers to the environmental consequences of increased output or economic activity which results from more trade. The general presumption is that an increase in output will result in more pollution or degradation of environmental resources. However, it turns out that the relationship between economic growth and environmental quality is neither linear nor the effects of growth on the environment so detrimental.

One striking finding is that while various measures of environmental quality initially deteriorate as per capita income rises, once a threshold level of income is crossed, further increases in per capita income may raise environmental quality (Grossman and Krueger, 1993; 1995). The shape and strength of the environmental Kuznets curve (EKC), as this relationship is called, seems to vary according to the environmental medium being examined, with the effect being strongest for air quality. The environmental Kuznets curve has been well documented by other studies, with some recent investigations (Dasgupta et al., 2002) suggesting that the income threshold at which the turning point occurs may actually be decreasing over time.[76]

It is important to emphasize that increases in per capita income will not automatically translate to improved environmental quality. With higher incomes, citizens demand better environmental quality from governments and are able to afford more easily the resulting abatement costs. Increased demand for environmental standards or regulations has to be supplied by national governments. And in this regard, societies with better income distribution and more civil and political liberties may do better in traversing the upward sloping part of the EKC (Torras and Boyce, 1998).

This increased demand for better environmental outcomes could also provide incentives for firms to improve production technologies so that a given level of output can be produced with less pollution. Freer trade may also prompt the transfer of environmentally-friendly goods, services and technology to countries. These forces work to reduce the intensity of pollution per unit of output, which is the technique effect.

The composition effect refers to the way that more trade changes the distribution of a country's production towards those products where it has comparative advantage. This re-allocation of resources is how trade improves efficiency in production. The effect on the environment of a given country will depend on how polluting are the expanding and contracting sectors. The composition effect will be positive on the environment if the expanding sector is less pollution intensive than the contracting sectors and vice-versa. For the world as a whole, pollution will be re-allocated from countries that have a comparative advantage in industries that are less polluting to countries that have a comparative advantage in industries that are more polluting. Hence, trade will result in an improvement in environmental quality in some countries but a deterioration in others.

[76] These include Antle and Heidebrink (1995), Cole, Rayner and Bates (1997), Cropper and Griffiths (1994), Hettige, Lucas and Wheeler (1992), Panayotou (1995; 1997), and Shafrik (1994).

In addition, the analysis of trade and environment is often extended to focus on the competitive pressures faced by firms or governments as a result of trade liberalization. These may lead governments to adopt less stringent environmental regulations (regulatory chill or race to the bottom hypothesis) or lead firms to locate their plants in countries with lax environmental regulations (pollution haven hypothesis). However, the empirical evidence suggests that the cost of complying with environmental regulations is usually not very high. Hence, the increased competition brought about by more liberalization need not lead to greater reluctance to adopt more stringent standards. Also, neither studies on international trade flows nor on FDI flows suggest that environmental regulations are an important factor in international location decisions, and that other factors (political risk, exchange rate uncertainty, labour costs, corporate taxes) are more important.[77]

But irrespective of the mechanisms through which trade affects the environment, what is important is for the right environmental policies to be put in place in the domestic economy so that the use of environmental resources (land, air, water, etc.) is appropriately priced. The right environmental policies may involve taxes, regulations, establishment of standards or the removal of subsidies. Provided that governments address negative environmental effects that otherwise are not properly accounted for (negative externalities), international trade can promote better environmental quality by increasing efficiency in resource use. Freer trade results in the reallocation of resources towards sectors of comparative advantage, thereby reducing or eliminating waste.

Where negative externalities are not corrected, trade may exacerbate environmental damage or accelerate the use of non-renewable resources. But even in these situations, measures that restrict trade are not necessarily the optimal instruments to use. The basic principle is that corrective measures are best addressed at the source. If the objective, for instance, is to reduce deforestation of tropical rain forest, it may be far more effective if local people are given incentives to protect their forests or timber companies pay the full cost of forest concessions. Restricting trade through a higher tariff or an import ban in the consuming country will not resolve the externality problem at its root and will cause other deadweight losses.

Where negative externalities are trans-boundary in nature, e.g. global warming, national governments may not face the proper incentive structure to curb their pollution problems. This is because part of the costs is borne by foreigners. In this case, there is clearly scope for international co-operation. But even here the first best solution would be for a multilateral agreement to face producers in all countries with the true social price of their polluting activities.

But what if environmental preferences, and therefore regulations, differ across nations? This has prompted fears that more open trade, by enhancing competition among countries, will lead them to reduce environmental standards or prevent the adoption of more stringent regulations. In a world of sovereign nations, it would not be possible to impose a universal set of environmental standards if individual countries were not willing to accept them. In fact, many economists see differences in environmental preferences as laying a legitimate basis for comparative advantage. Nevertheless, scope no doubt exists for closer governmental co-operation on environmental matters with international import, not least because the alternative will likely be mutually destructive recrimination and retaliation.

[77] See WTO (1999a) for a comprehensive survey of the literature on these issues.

Box IIA.8: Environmental assessments of trade agreements

Since the mid-1990s, a growing number of frameworks or methodologies have been developed for undertaking environmental assessments of trade agreements. They have been developed by national governments, non-governmental organizations, regional institutions and international organizations. Assessments have been performed on, among others, the Uruguay Round Agreements, the European Union single market, the North American Free Trade Agreement and a number of bilateral free trade arrangements involving the US and the European Communities. Canada, the United States and the European Communities have required environmental assessments of certain trade agreements and are now using these frameworks to review various scenarios of current WTO negotiations. The growth of the literature reflects the greater attention paid by the trade community to environmental matters and its willingness to respond to these concerns. The success of trade liberalization initiatives in the 1990s, in an era of greater national and international awareness of environmental and sustainable development issues, contributed to the increased demand for environmental objectives to be taken into account in trade negotiations. The establishment of a binding dispute settlement mechanism in the WTO was seen to have the potential of circumscribing the autonomy of national authorities to take actions in other areas, if these actions had negative trade impacts on another WTO Member.

Environmental assessments of trade agreements seem to pursue several objectives: at the broadest level, they are to ensure better coherence of trade and environmental policies. Second, assessments provided to a country's trade negotiators may allow the negotiating position to be adjusted accordingly. Third, the results of the assessment could be used to design mitigation measures to minimize adverse social or environmental consequences. Last and not least, the conduct of an assessment can allay possible public concerns by showing that the government is giving due importance to environmental concerns in the negotiations.

In some of the frameworks, there is a preparatory phase in which either specific hypotheses about the trade-environment linkage are identified for investigation or trade negotiation scenarios are constructed. However, the first step is usually to determine what provisions of the trade agreement may have significant environmental impacts (screening). The second step is to evaluate the likely economic, environmental or social consequences. By environmental impacts, what is usually meant are the effects on the quality of air, water, land, and on biodiversity. The third step will involve identifying specific sectors or issues to focus on (scoping) and the use of various tools (e.g. economic models, case studies) to derive specific impacts. This is complemented by the conduct of a legal analysis of the possible regulatory impact of the trade agreement. The basic question is whether the trade agreement requires changes to environmental measures of the country or limits its ability to develop and implement environmental regulations. The final element is the design of mitigation or flanking measures to limit potential adverse environmental consequences of the agreement. This may entail changes in the negotiating position of the country or the enactment of complementary measures after the agreement is implemented. All methodologies contain specific provisions and procedures for public consultations at various junctures of the assessment.

Since the literature on environmental assessments of trade agreements is barely a decade old, there are some acknowledged methodological difficulties and data constraints faced by the various frameworks. First, there are severe data limitations on environmental indicators. Good environmental statistics at the national level, and more importantly at the local or regional level, are lacking. Second, few quantitative tools have been used in the assessments contributing to a lack of rigour in the process despite the rapid development of computable general equilibrium (CGE) models incorporating economy-environment interactions in recent years. They could be deployed in the scoping exercise or made more useful by incorporating regional or local conditions. Third, the theoretical framework underpinning trade and environment is still being developed; the empirical evidence for many of the hypothesized links is often inconclusive. The difficulty is far more severe in the case of the relationship between trade and sustainable

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development since a rigorous definition of the concept remains elusive. Finally, most of the frameworks fail to include cost-benefit analyses, making it difficult to undertake an integrated assessment of the economic, social and environmental impacts and to know upon what basis decisions would ultimately be made. The presumption that mitigation or flanking measures would be put in place does not provide sufficient justification for such an omission. Mitigation measures may not always be feasible, or they may be too costly; or they may be unable to completely offset the negative environmental or social impacts. Environmental impact assessment frameworks require improvement in a number of important areas – in modelling trade and environmental linkages, in the collection of environmental data, in the use of quantitative methods and in the valuation of environment resources. These improvements are essential in order to arrive at precise, robust and relevant assessments regarding the environmental impacts of multilateral trade agreements.

B THE DOHA DEVELOPMENT AGENDA

1. INTRODUCTION

An underlying objective of the WTO is to promote economic development through effective participation in world trade. Three aspects of the WTO's structure and rules are relevant to the question of how developing countries can derive greater benefits from participation in the trading system. First, the rules themselves, together with permitted exceptions and interpretations, are the foundation of the system and play a key part in determining the conditions and opportunities of trade. Second, there is the question of the coverage of the system. No examples exist of topics that the WTO has taken up and then discarded, so this is about the inclusion of new areas. Third, the pattern of protection facing a country's exports also goes a long way in defining trading conditions and opportunities. In short, the nature of WTO rules, the reach of these rules, and conditions of market access are the three major areas that determine the quality and utility of the WTO for its Members. Not surprisingly, each of these three elements features prominently in the Doha Development Agenda.

In considering the development dimension of the WTO and how to make trade work more effectively for developing countries, two additional issues linked to developing country participation in the trading system deserve mention. The first concerns efforts that the international community needs to make in helping developing countries to strengthen their capacity to participate more effectively in the trading system. There are several aspects to this question and these will be discussed in Section IIB.3. Second, there is the issue of the working methods of the institution and the challenge of ensuring that all parties to the WTO agreements are given an adequate opportunity to participate in deliberations, make their voices heard and influence outcomes. This issue, sometimes referred to under the rubric of "transparency", will not be taken up in any detail in this Report, but it is one that has attracted attention as growing numbers of Members take an active interest in the WTO.

Much has been written on the historical origins of the GATT/WTO and the development of international economic relations over the last five decades or so.[78] Similarly, an abundant literature exists on the growth of international trade and increasing economic inter-dependency among nations in the post-war period. It is not the intention to repeat this history here.[79] However, an understanding of the challenges currently facing the WTO does require some appreciation of key elements in the evolution of international trade and investment, and of the trading system.

Trade has assumed growing importance as a source of global economic activity and has expanded rapidly.[80] These observed trends in trade and FDI growth are part of the underlying story that animates the current debate on globalization, although of course international trade and investment growth are merely a manifestation of a process which is driven primarily by a mix of technological and policy factors. For the present purposes, what is crucial about increased inter-dependency among nations is the pressure that this exerts on the trading system. In a world of greater economic inter-dependence, the policy stance of one country becomes a more direct matter of concern to other countries. This deepening sense, at least in policy circles, that it is legitimate for one government to have a say in respect of the policy stance of another intensifies the pressure for co-operation. The implications of this for the WTO are obvious.

The WTO and the GATT before it have presided over two important developments that flow directly from the evolution of the world economy and growing inter-dependency. One is the rapid growth in membership of the institution, reflecting increasing engagement by dozens of nations in world trade. The GATT started with 23 Members. The WTO now has 146 and another 27 are seeking to join. Chart IIB.1 shows the evolution of GATT/WTO membership over time. Increased membership in recent years has been accounted for entirely by developing countries and countries in transition. A fundamental challenge for the multilateral trading system is how to manage the growing diversity in economic characteristics, needs and priorities implicit in

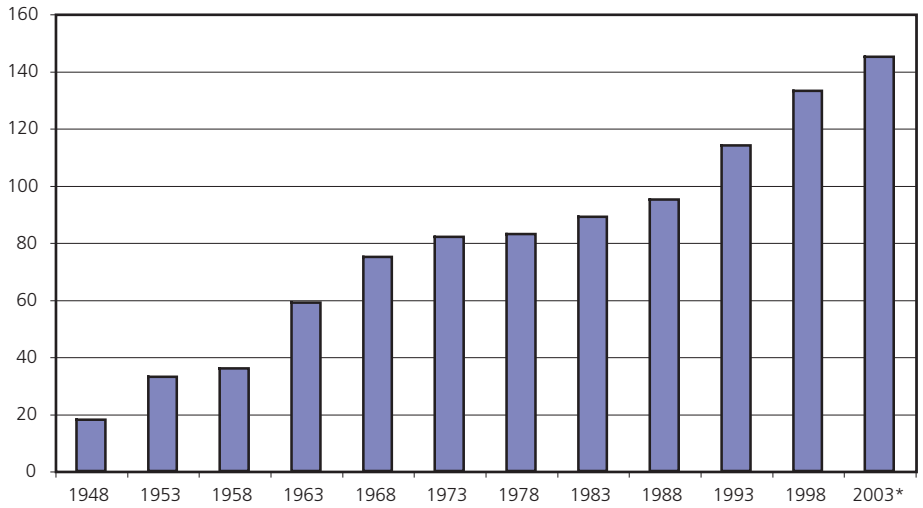
78 Standard references include Diebold (1952), Curzon (1965), Jackson (1969, 1996), Hudec (1975, 1987, 1991), Dam (1977).

79 See chapter 1 of Hoekman and Kostecki (2001).

80 Maddison (1989) traces trade growth in the twentieth century. The most recent developments in international trade and investment growth are systematically recorded in the annual publications of international agencies, including the WTO.

this expansion of membership. The viability of the system requires that this diversity be managed to ensure that all parties believe they are better off within the system than outside it. And for the system to do well, this sense of gain should be positive such that governments believe they score welfare improvements through participation rather than merely avoiding something worse as a result of being outside. At the most basic level, this is the challenge of Doha, as it has been for every negotiation that has preceded the present one.

Chart IIB.1
GATT/WTO membership, 1948-2003
(Number of Members)



* February

Source: WTO.

The second notable development in the GATT/WTO has been the expansion of the agenda and areas of allocated competence of the institution. This has been a gradual and sometimes contentious process. Up until the sixth round of multilateral trade negotiations – the Kennedy Round (1964-1967) – negotiations had focused exclusively on mutual tariff-cutting exercises. In the Kennedy Round, a mild foray was made into rule-making in the area of anti-dumping. The Tokyo Round (1973-1979) built on the beginnings of this rule-making trend, but for the most part the non-tariff measure agreements struck at this time elaborated existing GATT provisions rather than extending them into new policy areas. This was true for the Agreements on subsidies and countervailing measures, anti-dumping, technical barriers to trade, customs valuation and import licensing. It was less true for the Agreement on Government Procurement, which was an explicit extension of the GATT. But like all the new non-tariff measure agreements, that Agreement only applied to those governments that had signed it.

The real break with the past came with the Uruguay Round (1986-1994). Among the major outcomes of this negotiation were the establishment of the World Trade Organization and the inclusion of trade in services and trade-related intellectual property rights within the ambit of the WTO. Many other rules were revised and strengthened at the same time. The Single Undertaking brought many new obligations and a much deeper level of involvement in the system on the part of developing countries. The Single Undertaking required that all WTO Members accepted the whole package of Uruguay Round results – Members were not at liberty to accept some obligations but not others. This aspect of the Uruguay Round results meant that developing countries assumed significantly higher levels of obligation in a range of areas where this had not previously been the case. The process of redefining and expanding the WTO's programme of work has continued since the end of the Uruguay Round and this shall be taken up in subsequent discussions of the Doha Agenda.

Most initiatives aimed at expanding the GATT/WTO's work programme and negotiating mandates have emanated from developed countries. More recently, however, developing countries have also become more active, seeking modifications to a wide range of existing provisions in an effort to make them more responsive to development

needs, as well as introducing such topics as trade and technology transfer and trade, debt and finance onto the agenda. As with any set of co-operative arrangements, the objective must be to find a balance among diverse needs and priorities. The WTO must be encompassing enough to address the increasingly wide set of issues that are relevant to international economic relations. Without this, the institution will become less relevant to an important segment of the more economically advanced membership. But at the same time, the WTO has to respond effectively to the immediate needs of developing countries as they seek to engage further in the international economy in order to address the immediate imperatives of development and poverty alleviation.

(a) The case for intensified engagement in the multilateral trading system

Article III of the Marrakesh Agreement Establishing the World Trade Organization identifies five key functions of the WTO. These, essentially, refer to the responsibilities of the WTO in terms of providing a set of trading rules for trade, a forum for negotiations, and a dispute settlement mechanism. In addition, the WTO is responsible for administering the Trade Policy Review Mechanism and achieving greater coherence in global economic policy-making through co-operation with the World Bank and the International Monetary Fund.

These designated functions broadly describe the activities of the WTO and are not contentious. A prior question that might reasonably be posed, however, is why governments should take the trouble to participate in the WTO. Governments generally know what policies they would like to pursue in the trade field. And if they do not, participation in the WTO is unlikely to be of much use. Indeed, many governments, especially in developing and transition economies, have undertaken significant trade liberalization programmes with no recourse or reference to the WTO. Given the time and money required for effective participation in the WTO, the fact that governments rarely obtain quite what they want, and that they have plenty of scope for autonomous action, why do they engage? What is to be lost by regarding trade policy as an internal matter to be decided at the national level? The existing literature on international relations and the theory of politics would offer many rich hypotheses and explanations as to why governments might favour international co-operation.

For the present purposes, however, four reasons can be identified as to why turning away from international engagement and co-operation in trade policy will make a country worse off. The first of these relates to reciprocity in trade liberalization negotiations, and why governments have almost always seen an advantage in moving together in opening up their markets to import competition. No rule in the WTO requires that Members make reciprocal commitments to open their markets to trading partners, but reciprocity, or at least some degree of reciprocity, is an article of faith in negotiations.[81] Many commentators have criticized insistence on reciprocity as mercantilist and poorly reasoned because the greatest beneficiaries of liberalization are most likely to be the liberalizing countries themselves. On the basis of this argument, market-opening initiatives should not be constrained by an unwillingness of trading partners to do the same.[82]

In effect, countries do not only benefit from their own liberalization, but that of others as well. Any possibility of joint action on the liberalization front is mutually beneficial. This is a reason for seeking reciprocity (although not a reason to eschew unilateral liberalization). More importantly perhaps, in a political economy sense governments will find it easier to persuade domestic interest groups to go along with trade liberalization, notwithstanding adjustment costs, if they can demonstrate that their trading partners are engaged in a comparable exercise. Under a reciprocal scenario, domestic export industries will reap advantages at the same time as import-competing industries face new competition from abroad. This makes for a stronger pro-liberalization coalition, involving producers as well as consumers. Economic gains are thus augmented through co-operative international action because it offers more liberalization than might otherwise be the case.

A second reason for favouring co-operation involving participation in a system of binding international rights and obligations relates to transactions costs. The costs of production and of doing business across frontiers can be

[81] An important exception to this notion of reciprocity, contained in the GATT and other legal texts, is that developing countries are not expected to offer reciprocity to developed countries where this would be inconsistent with their individual development, financial and trade needs.

[82] One economic reason for insisting on reciprocity could be a fear that unilateral liberalization will lead to terms of trade losses. This can only be true where countries are large enough in the market to affect prices. The point is not pursued further here since it is not central to the argument.

greatly reduced through co-operative arrangements that produce more harmonized approaches in such areas as standards and technical regulations, or where governments agree to accept one another's conformity assessment procedures aimed at ensuring that standards are being met. Similarly, uniform administrative procedures associated with trade can lower costs and increase the scope for profitable trade. Some may argue that costs of transactions across frontiers could be lowered through a system of mutual recognition which over time would likely lead to greater uniformity through "regulatory competition". This may be so, but mutual recognition would also need to be negotiated at some level, and experience suggests that in many circumstances governments will prefer explicit understandings and commitments in regulatory matters. This suggests limits to the unilateral harvest of trade-facilitating benefits, and argues for co-operation with trading partners.

Third, trade is likely to expand and be more profitable under conditions of certainty and security as to the terms of market access and the rules of trade. A shared commitment among trading partners to specify *ex ante* the terms and conditions upon which products may be sold in their markets can give a significant boost to trade. A willingness to pre-commit on the characteristics of a policy regime in this manner means that arbitrariness or unrelated elements of conditionality and discrimination are removed from the picture. The dispute settlement system in the WTO also plays an important role in this context, since it allows governments to seek recourse in circumstances where they believe a trading partner has failed to respect its obligations. Once again, however, these benefits cannot be acquired in the absence of explicit co-operation among governments in trade matters.

A fourth reason for entering into internationally binding commitments is not always openly discussed, but can be important. Governments are under constant pressure from domestic interest groups. These interests are sometimes powerful and may seek outcomes that would diminish economic welfare for the nation as a whole. The sheer complexity involved in pursuing multiple national objectives and seeking to balance competing interests means that governments may find it hard to pursue policies unpopular with some, but which they know to be in the national interest. One way of strengthening the hand of a government is through internationally binding obligations. Such obligations raise the costs of adopting contrary policies or of reversing existing policies, and provided the obligations in question reflect the national interest, international co-operation of this kind will increase national well-being.

These arguments suggest a strong case for co-operating through a multilateral institution like the WTO, and in today's increasingly interdependent world, of intensifying engagement. Co-operation involving international rights and obligations should not be seen as a necessary evil, or the least undesirable option. Governments have a responsibility to define and defend their national interests in the WTO, and a lack of effectiveness in this regard is a recipe for discord, confusion and forgone opportunity. Effective participation in the national interest may well mean opposing or seeking to modify someone else's agenda, not in the spirit of blocking merely to defend the status quo, but on the basis of reasoned national interest.

(b) An overview of the Doha Agenda

Much of the rest of this Report will discuss aspects of the Doha Agenda, with particular emphasis on the development dimension of the work programme and negotiations. The intention here is to provide a brief overview of the Doha Declaration and its salient themes as background for the more detailed treatment of some issues to follow. The Doha Ministerial Declaration spelled out a number of key principles and procedures intended to inform the entire negotiation. First, the negotiations are to be conducted in a transparent manner that facilitates effective participation of all parties, with a view to ensuring benefits to all participants and achieving an overall balance in the outcome of the negotiations. Second, the negotiations and other aspects of the work programme are to take fully into account the principle of special and differential treatment for developing and least-developed countries. Third, the Committee on Trade and Development and the Committee on Trade and Environment are to identify and debate developmental and environmental aspects of the negotiations, in order to help achieve the objective of having sustainable development appropriately reflected. Fourth, the negotiations comprise a single undertaking, with the exception of work on the Dispute Settlement Understanding. Finally, while there is a clear distinction in the Doha Ministerial Declaration between negotiations and the work programme, issues covered by the latter are also to be accorded high priority, pursued under the overall supervision of the General Council and reported on at the Fifth Session

of the Ministerial Conference in Cancún in September 2003. Members can invoke any of these underlying principles and procedures at any time if they feel they are not being accorded adequate attention.

One way of taking a schematic overview of the Doha work programme and negotiating agenda is to divide the Doha Declaration into four main components which give a broad idea of the areas in which Members are working. These are the development dimension and technical assistance and capacity building issues, market access, rules-related issues and dispute settlement. Each element of the work programme fits within these categories.

Development-related issues have been placed at the centre of the Doha Declaration. At the Doha Ministerial Meeting the name coined for the entire work programme was the Doha Development Agenda. In the eyes of many, this is not only a description reflecting the pervasiveness of the focus on development in the Declaration and associated decisions and texts, but also a benchmark against which the results of the negotiations will be judged. Most, if not all, work programmes and negotiating mandates in the Declaration refer to such matters as the importance of the development dimension, special and differential treatment, the priorities of developing countries, and the need for technical assistance and capacity building. In addition, specific sections of the Doha Declaration deal with technical co-operation and capacity building, least-developed countries and special and differential treatment. Work programmes have also been launched on small economies, trade, debt and finance, and trade and transfer of technology. Other development-related work includes the ongoing examination of specific proposals for modifications to WTO provisions and procedures made in the context of the post-Uruguay Round implementation discussions.

Since development concerns suffuse the entire text, the real challenge will be to find ways that genuinely respond to the development needs of developing countries. This means avoiding the twin traps of mere lip service and an attitude of tokenism to development issues on one hand, and the misguided assumption on the other that disengagement and minimal commitments are the best recipe for supporting the development process through the WTO. Succumbing to either temptation will make the results less meaningful and the WTO less useful to all parties. These matters will be discussed further in Section IIB.3.

Market access negotiations, the second element of the Doha work programme identified above, encompass trade in services, agriculture and non-agricultural tariffs. Market access negotiations are the traditional fare of the GATT/WTO trading system and despite many years of real progress in lowering barriers to trade, much remains to be done. Significant tariff peaks and escalating tariff structures remain in the schedules of many industrial countries. Bound average tariffs remain high in many developing countries. There is also the promise of expanded South-South trade under liberalized trade regimes. In services, much scope remains for opening up sectors through the assumption of specific commitments in respect of market access and national treatment. A feature of market access negotiations that may partly explain the historical success of the GATT was that all parties to the negotiation wanted something and had something to give. This facilitated exchange. The same is true today – there is something for everyone in market access negotiations.

Third, the Doha work programme and negotiations include many rules-related issues, some of which are linked and others stand alone. Only some of these issues will be discussed further in subsequent sections of this Report. Negotiations have been engaged on anti-dumping and subsidies and countervailing measures. Disciplines and procedures applying to regional trade agreements are also under negotiation. In the area of TRIPS, work is proceeding on the establishment of a system of notification and registration of geographical indications for wines and spirits. Some Members are also seeking to extend the protection of geographical indications beyond wines and spirits. Of particular interest to developing countries in the area of TRIPS is the Declaration on the TRIPS Agreement and Public Health, upon which work is continuing. These efforts are intended to ensure that developing country governments are better able to address medical emergencies and to acquire medicines more easily and at lower prices. This work is crucial from a development perspective. Also under examination is the relationship between the TRIPS Agreement and the Convention on Biological Diversity, as well as the protection of traditional knowledge and folklore. Other rules-related elements of the Doha Agenda cover trade and environment, electronic commerce, and the full range of the Singapore issues – trade and investment, trade and competition, transparency in government procurement and trade facilitation. The key question confronting governments as far as the Singapore issues are concerned is the nature of any

negotiating process that will go forward pursuant to an explicit consensus decision on modalities to be taken at the Fifth Session of the Ministerial Conference in Cancún in September 2003.

The rules-related issues to be addressed under the Doha Agenda are diverse and complex. A major challenge for Members, especially developing countries, is to identify where national interests lie with respect to all of these subjects. Inevitably, a serious analysis of the national interest will need to look at both the implications of engagement for national policies as well as for the policies that trading partners would be expected to pursue as a result of commitments. In the simpler negotiations of the past it was easier to think in terms of a clear distinction between developing and developed countries. Today, with a far more complex agenda and a growing WTO membership of highly diverse countries, broadly defined groups are unlikely to share common positions beyond a rather general level of specificity. Divergent experiences, needs, priorities and realities make it much more challenging to find a common cause, and effective alliances will inevitably shift across issues. But alliances and coalitions can be highly effective in pressing particular positions, and this places a premium on creative flexibility when it comes to striking mutually supportive negotiating bargains among sub-sets of Members.

Finally, dispute settlement has been treated separately as the fourth element of the Doha Agenda because in many ways it is the glue that keeps the system together as a coherent whole. It is the ultimate arbiter of good faith among trading partners, the guarantor of security under international agreements embodying enforceable rights and obligations. The negotiations on dispute settlement are not part of the single undertaking, and were scheduled for completion by the end of May 2003. This deadline was not met.

The sections that follow will examine specific aspects of the Doha Agenda from a development perspective, drawing on the analysis in earlier parts of this Report of a range of trade and development issues. The discussion is organized around functional aspects or objectives of the multilateral trading system. Four of these have been identified: i) removing impediments to greater openness; ii) facilitating openness for development; iii) managing openness within WTO rules; and iv) deepening global integration and the multilateral trading system. In each case, the intention will be to consider, from a national interest perspective, what insights development-related analysis and empirical work might offer in regard to potential gains and pitfalls that may be encountered as Members work their way through the Doha Agenda.

Removing impediments to greater openness: unfinished business. This section will analyse barriers to trade in goods and services with a view to identifying opportunities for expanding trade. The section on merchandise trade will include agricultural and manufactured goods. It will address tariffs and non-tariff measures, as well as domestic support measures and export subsidies in the case of agriculture. Aspects of trade in services will also be covered. Finally, trade facilitation and transparency in government procurement will be discussed as policy areas that affect conditions of market access.

Facilitating openness for development. The purpose of this section is to focus on developing country interests and priorities. The issue of special and differential treatment will be taken up, along with technical assistance and capacity building. In addition, certain areas of the Doha negotiations and work programme of particular interest to developing countries will be discussed. These include trade and the transfer of technology, trade, debt and finance, and small economies. Finally, issues of access to medicines as well as access to genetic resources and the protection of traditional knowledge will be considered briefly, bearing in mind that these are aspects of current work on TRIPS of particular interest to developing countries.

Managing openness within WTO rules. The viability of the trading system requires that the principle of non-discrimination and market access commitments are protected by a series of rules that guard against policy slippage or erosion. The principal mechanism to fulfil this objective is the dispute settlement system. A second function of the rules is to allow governments to mitigate sudden unanticipated changes in economic conditions and also to guard against unfair trade practices. The rules relevant here are safeguards, anti-dumping, and subsidies and countervailing measures. Finally, other policies may have an impact on trade and give rise to questions of compatibility with WTO rules, for instance in the field of trade and environment. All these different policy areas will be examined, with additional emphasis on those elements that are the subject of attention in the Doha Agenda.

Deepening global integration and the multilateral trading system. This section will consider the issues of trade and investment and trade and competition in terms of proposals by some Members for the inclusion of these items as part of the Doha negotiations after the Fifth Session of the Ministerial Conference.

2. MARKET ACCESS ISSUES

Market access issues for international trade in goods and services remains a core area of work for WTO Members. The General Agreement on Tariffs and Trade (1947), established the rules for market access and subsequent rounds of negotiations related to merchandise trade. This Agreement was complemented by the Agreement on Agriculture, the Agreement on Textiles and Clothing and the General Agreement on Trade in Services (GATS), which came into force in 1995. Taken together, they cover all trade in goods and services.

The market access agenda can be defined more or less broadly. It includes tariffs and measures that are traditionally defined as non-tariff measures such as to control the volume and price of imports. It is also possible to add to this list measures that condition market access through their application at the border such as standards, as well as measures that distort competition in world markets such as domestic support and export subsidies. Market access is also conditioned by inefficient administrative trade practices and lack of transparency at customs ports. Terms and conditions attached to the procurement of goods and services by governments also determine market access conditions. The discussion that follows covers manufactures, agriculture, services, trade facilitation and transparency in government procurement.[83] The section is structured so as to emphasize the instruments of market access.

(a) Tariffs

Before proceeding with the analysis it would be useful to clarify the various definitions of a tariff. Multilateral trade negotiations address what are known as bound tariffs that are applied on a most favoured nation basis (MFN). These rates are called concessions, which are granted to each Member of the WTO on a most favoured nation basis. They are not necessarily the same rates that are applied at customs points, which are called MFN applied rates. They also differ from preferential rates applied on a reciprocal basis such as in regional trading agreements, or non-reciprocal schemes such as the Generalised System of Preferences. This distinction between bound and applied rates is important in the context of discussing the role of the WTO as an institution since, as will be shown below, in some cases the gap between the bound and the applied rates is such that negotiations could conclude without any meaningful change in market access. Furthermore, the principle of binding tariffs at the WTO has both a legal and economic value. In the legal sense a binding is a concession, which a Member has granted to other Members. In the economic sense a binding of a tariff – that is, the commitment not to raise tariffs above a certain level – is of value since it promotes stability and certainty in a tariff regime.

(i) Stylized characteristics of tariffs

The starting point for analysing the landscape of tariffs is to examine the extent to which tariffs persist. Two measures can be used for this purpose. The first is the percentage of world imports that is traded duty-free and the second is the percentage of tariff lines that are duty-free.[84] Both indicators reveal that tariffs remain an important issue if the objective of the system is duty-free trade (Chart IIB.2). At one extreme are WTO Members which are completely duty-free such as: Hong Kong, China; Macao, China and Singapore. At the other extreme are a number of predominantly developing countries. It is important to note that except where all imports are duty-free, no exact correspondence can be expected to exist between the share of tariff lines that are duty-free and the share of imports that enter a country duty-free. Duty-free tariff lines may attract a proportionately greater share of trade than lines bearing a positive duty rate, or vice-versa. Countries with relatively low percentages of duty-free lines may have higher percentages of duty-free imports than suggested by the tariff line count. This is apparent from Chart IIB.2, and Kenya is a prominent example of such a country.

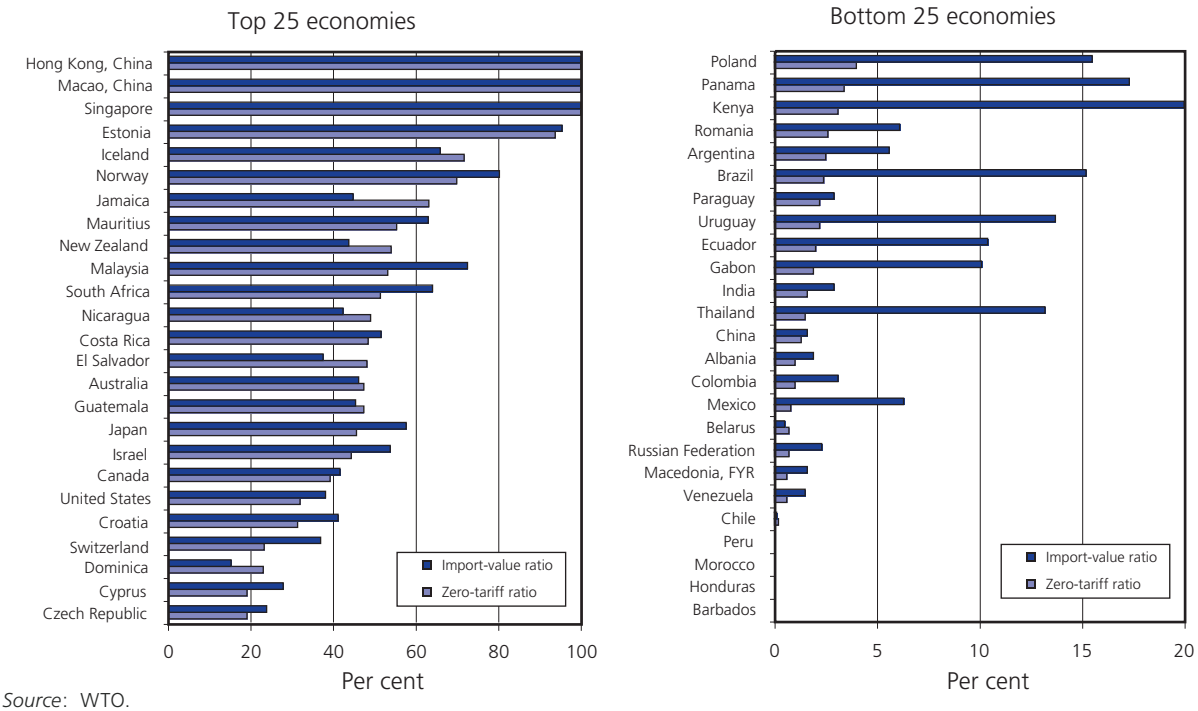
[83] The section draws on a number of recently completed studies that examine the issue of market access, especially WTO (2001a). Other studies include: Bacchetta and Bora (2001, 2003) and UNCTAD (2002a) on industrial tariffs; Hoekman, Ng and Olarreaga (2002a, b), OECD (2002a) and USDA (2001) on agriculture; Bora (2002a), Bora, Cernat and Turrini (2002) and UNCTAD (2001a) on Least-Developed Country issues.

[84] The nature of the duty, that is *ad valorem* or non *ad valorem* does not matter, just as long as its value is zero.

A further observation on the interpretation of the indicators depicted in Chart IIB.2 is that they do not tell us anything about average tariff levels in different countries, the spread of tariff rates, nor the degree to which tariffs are bound. In the case of Chile, for example, virtually all applied tariffs are set at 9 per cent. The absence of duty-free imports does not necessarily indicate a more trade-restrictive or distorting tariff structure than one in which many applied rates are free of duty. More detailed information on such tariff schedule characteristics as averages, spread and bindings is provided in Appendix Tables IIB.1-IIB.6.

At the global level, slightly more than 50 per cent of world imports are traded duty-free, while approximately a third of tariff lines are bound duty-free. These figures do not take into account the network of preferential trading agreements within the trading system (see Section IB.3), so in reality the figure for world trade that is duty-free is likely to be higher, but not so much higher as to suggest that tariffs are not significant. The above figures also do not take into account the issue of preferential market access into developed countries for products originating from developing and least-developed countries (LDCs). A number of recent initiatives such as from the European Union through its Everything But Arms initiative and the United States' African Growth and Opportunity Act have improved market access for LDCs (Box IIB.1).

Chart IIB.2
Per cent of duty free MFN lines and duty free MFN imports, selected economies



Source: WTO.

There are a number of features of the tariff profile (both bound and applied) of the multilateral trading system that should be borne in mind in the context of trade negotiations and pressures on the trading system (Appendix Tables IIB.1-IIB.6). First is the fact that developed countries in general have lower applied and bound average tariffs. The relationship between per capita GDP and the level of average applied MFN tariffs is negative. Second, in terms of percentage of tariff lines that are above 15 per cent there is again a clear negative relationship. The lower the per capita GDP the higher the percentage of lines above 15 per cent. Furthermore, when the calculation is repeated using bound rates, the percentage of lines above 15 per cent increases for most Members. The remainder of this subsection on tariffs will develop these common themes in the context of both agricultural and non-agricultural products, but at a more disaggregated level.

Box IIB.1: Market access for LDCs

Least-Developed Countries (LDCs) account for less than one half of one per cent of world trade. In the Doha Ministerial Declaration, Ministers committed themselves to considering additional measures to progressively improve market access for LDCs and to the objective of duty-free and quota-free access for products originating in LDCs.[1] Paragraph 7 of the WTO Work Programme for LDCs lists elements for review and further examination.[2] This mandate confirms earlier calls for improved market access for LDCs contained in the Plan of Action resulting from the Third United Nations Conference on LDCs 2001[3] and is also one of the indicators in the context of the eighth Millennium Development Goal.[4]

In 2000, the distribution of markets for LDC products remains heavily concentrated. Sixty-three per cent of all exports go to the European Union (EU) and the United States. In addition to the EU and US, the major developed country markets are Australia, Canada, Japan, Norway and Switzerland. Together the developed countries import 69 per cent of total LDC exports. Of particular note is that three of the top five markets are developing countries in East Asia: China, Republic of Korea and Thailand. These countries account for 20 per cent of total LDC exports. The remaining top 10 markets are: Canada, India, Japan, Singapore and Chinese Taipei. The market penetration of LDC exports is greatest in India and Thailand at 2.1 per cent, followed by the European Union at 1.4 per cent.

Duty-Free imports into developed countries from developing countries and LDCs, 1996-2001 (per cent)

	1996	1997	1998	1999	2000	2001
Excluding arms						
Developing countries	54.8	50.5	49.9	57.2	62.8	65.7
LDCs	71.5	67.2	77.7	77.1	75.4	75.3
Excluding arms and oil						
Developing countries	56.8	51.5	49.9	58.1	65.1	66.0
LDCs	81.1	75.5	75.0	73.6	70.5	69.1

Source: Interagency input for monitoring implementation of the Millennium Development Goals, April 2003.

The above table indicates the dimensions of the task to achieve the stated goal of duty-free and quota-free market access. In overall terms, the share of the value of LDC exports, excluding arms, that enters developed country markets duty-free has increased since 1996. However, when the figure is further adjusted for oil there is a clear downward trend. This downward trend reflects the shift in LDC exports to products and export markets that are not duty-free. In fact, the trade values show that there is basically no increase in the value of duty-free imports from LDCs while at the same time there is a significant increase in the dutiable imports from LDCs.

In 2001, the average trade weighted tariff facing LDC agricultural exports into developed country markets is 3.2 per cent. The equivalent figures for textiles and clothing are, respectively 4.5 and 8.5. These figures take into account preferences granted to LDCs but they do not take into account actual preference utilization. For a variety of reasons, such as rules of origin requirements, preferential access offered to LDCs may not be fully utilized.

1 Paragraph 42 of the Doha Ministerial Declaration, WTO document, WT/MIN(01)/DEC/1.

2 WTO document, WT/COMTD/LDC/11.

3 Held in Brussels in May 2001.

4 Goal 8 is to establish a global partnership for development. An indicator to achieve one of the targets of this goal is duty-free and quota-free access for products originating from LDCs.

(ii) Agricultural products

Although the share of agricultural products in world trade has declined over the years to 9.1 per cent, it is still an important export for many developing countries. For example, agricultural products account for more than 50 per cent of the total exports of 12 LDCs (Bora, 2002a). For these countries, the range and magnitude of tariff barriers to agricultural products has a particularly disproportionate impact on their ability to compete in the world market. The importance of tariffs has also been underlined by recent studies examining the benefits to developing countries from liberalizing domestic support and tariffs, which found tariffs to be relatively more important (Hoekman et al., 2002a; IMF, 2002).[85] For example, if industrial countries simultaneously remove both tariffs and subsidies on agricultural products, the benefits from the tariff removal would account for approximately 86 per cent of the total benefits.[86]

A number of features of the tariff profile for agriculture can be contrasted with that of industrial products. First, binding coverage is not an issue since one of the commitments under the Agreement on Agriculture is a 100 per cent binding coverage.[87] Second, the overall average level of tariffs in this category is higher. One estimate is that the world average agricultural bound tariff is 62 per cent, compared to 29 per cent for industrial products.[88] The world average of MFN applied tariffs for agricultural products is 17 per cent[89] and for industrial products it is 9 per cent.[90] Third, the dispersion of the bound tariff rates is very low, since many countries set uniform tariff rates across all commodities (USDA, 2001; WTO, 2001b). Fourth, considerable variation exists across agricultural products. Tariff rates in categories with low average rates in the agricultural sector, such as coffee, fibre, spices and live horticulture are still high relative to industrial products. As a consequence, the agricultural sector is characterized by the highest tariffs in the trading system.

The bias in the tariff profile in agriculture towards higher tariffs is a reflection of the difficulty in negotiating liberalization in the sector both prior to and during the Uruguay Round. Until the Uruguay Round, agriculture, like textiles and clothing, was insulated from successive rounds of multilateral trade negotiations. The modality agreed upon during the Uruguay Round was to apply the agreed formula for cutting tariffs to a profile that resulted from converting non-tariff barriers into tariff barriers.[91] However, the reduction formula along with flexibility to establish initial tariffs at high rates resulted in the current pattern of protection in agricultural subsectors relative to non-agricultural sectors.[92]

85 The USDA (2001) study concludes, "high protection for agricultural commodities in the form of tariffs continues to be the major factor restricting world trade".

86 IMF (2002), Table 2.4. Benefits in this case are defined as welfare effects. The same study also notes that for developing countries the benefits from tariff removal are positive, whereas for subsidy removal they are negative.

87 Twenty-three WTO Members have not bound 100 per cent of their lines, although of these most have binding ratios of approximately 99 per cent.

88 The estimate for agricultural products is based on the USDA (2001) data that included *ad valorem* equivalents and the estimate for non-agricultural products is based on the WTO's Consolidated Tariff Data Schedule without *ad valorem* equivalents. As noted above the incidence of non *ad valorem* duties on non-agricultural products is considerably less than in the agricultural sector.

89 Based on UNCTAD TRAINS data, which uses information from the Agricultural Market Access Database (www.amad.org) to calculate *ad valorem* equivalents for non *ad valorem* lines.

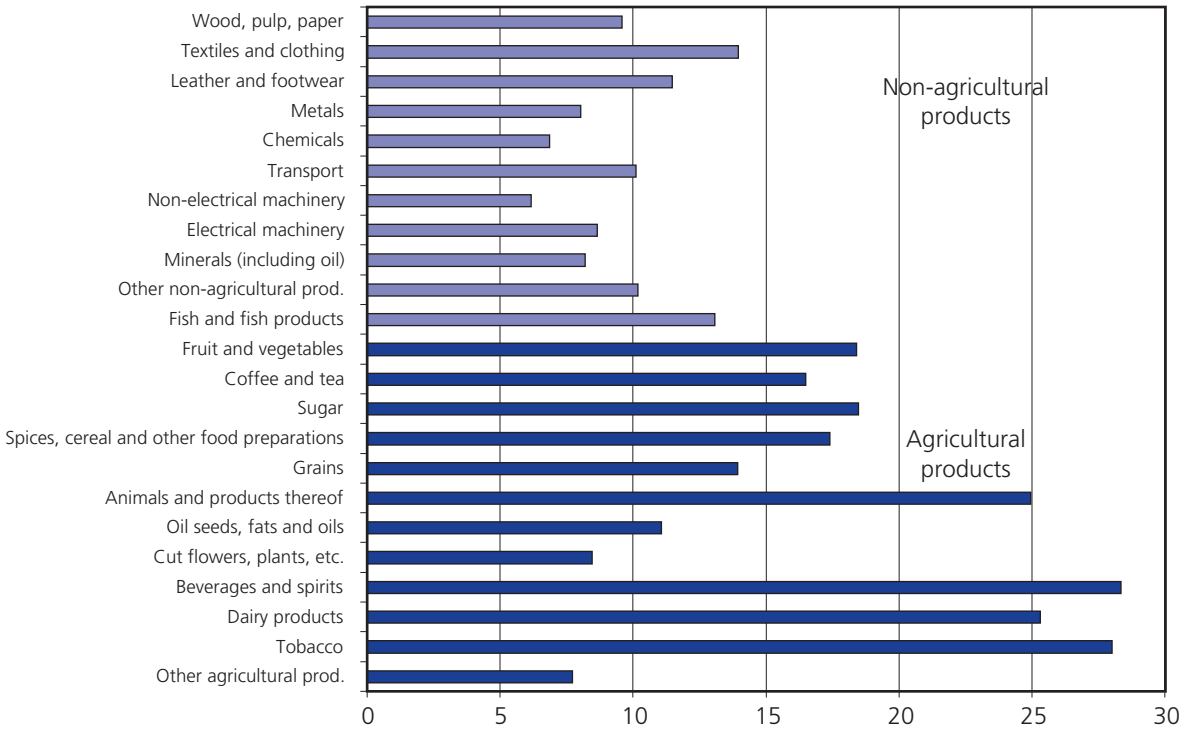
90 Calculated using data from Appendix Table IIB.6.

91 The so-called tariffication process.

92 The Uruguay Round approach for developed countries was a reduction of 36 per cent on a simple average basis over the entire agricultural sector with a minimum reduction of 15 per cent on each line. For developing countries the applicable figures were a 24 per cent cut with a minimum of 10 per cent per line (WTO, 2001b; Table III.1). This means that large tariff cuts on imports that do not compete with domestic products could be combined with large cuts on low tariffs to achieve the desired result with a minimum level of effective liberalization. See www.ers.usda.gov/briefing/wto/tariffs.htm for an analysis of this point (Figure 1 in particular).

The average applied tariff across 23 categories used during the Uruguay Round shows that the average tariff in the agricultural categories is higher than that in most of the industrial categories (Chart IIB.3). The highest rates are applied to animals, beverages and spirits, dairy products and tobacco. In general, the pattern of protection is lower on lower value-added products such as cut flowers, fruits and vegetables, coffee and tea.

Chart IIB.3
Average MFN applied rates by product category
(Per cent)



Source: WTO.

The incidence of high tariffs in agricultural products poses a particular challenge to negotiators. Furthermore, some developed countries have insulated sensitive sectors from international trade reform. Of particular note in this case is the United States (peanuts), Canada (dairy and poultry), Japan (rice) and the Republic of Korea (rice) (USDA, 2001). One element of the difficulty in addressing the problem of such high rates of protection is the use of non *ad valorem* rates, especially by some developed countries.

The tariff profile for agricultural products is complicated by the use of specific (non *ad valorem*) duties for both bound and applied rates. For example, Norway and Switzerland have non *ad valorem* bindings on more than 70 per cent of their agricultural tariff lines.[93] Eight Members, including the Quad Members (Canada, European Union, Japan and the United States) express 20 to 50 per cent of their bindings as non *ad valorem* duties (Appendix Table IIB.2). A similar pattern exists for applied rates (Appendix Table IIB.5).

A number of initiatives have been undertaken to convert the non *ad valorem* rates used by some countries in the agricultural sector into *ad valorem* rates in order to clarify the landscape of protection. The dispersion of non *ad valorem* lines across the tariff schedules shows that the developed countries predominantly make use of such duties in respect of animals, dairy, grains and food preparations such as flours and starches and confectionery sugar. The extent to which such forms of protection materially alter the structure of tariffs can be examined with the use of calculated *ad valorem* equivalents (AVEs).

[93] Based on data from the WTO Integrated Database.

The European Union and the United States supplied the WTO Secretariat with AVEs for a number of years, the latest being the year 2000. These data show that the simple average rate for agriculture, including AVEs, is 18.3 per cent for the European Union and 10.1 per cent for the United States. However, the dutiable trade-weighted average is considerably lower for the United States, at 4.9 per cent, but much higher for the EU, at 23.3 per cent.[94] The maximum tariffs in agriculture for the EU, again according to their data, is 470.9 per cent (milk and cream), whereas the maximum for the United States is 350 per cent (tobacco products).[95] A general conclusion is that in cases where there is a high concentration of non *ad valorem* lines, conversion of the rates to AVEs raises the overall average. This is particularly true for dairy and meat. However, in some instances the use of AVEs results in a decline in the overall level of protection or no change, as is the case of meats, cereals and grains in the United States.[96]

Tariff rate quotas

Tariffication in the Uruguay Round entailed the use of tariff rate quotas in certain circumstances, which are price based, not quantity based restrictions, since there is no limit imposed on the volume or value of imports.[97] Their overall trade restrictiveness effects depend upon the value of the tariff and the quota. A low quota combined with a high, or prohibitive tariff for imports beyond the quota level would have the effect of substantially restricting trade. The economic effect, however, depends upon world prices, domestic demand, the size of the tariff quota, the gap between the in-quota and out-of-quota tariff rate, the administration of the tariff rate quota and other factors.

The use of this instrument is heavily concentrated in the fruits and vegetables, cereals and meat sectors. Tariff quotas are used on 6 per cent of all tariff lines by 44 Members. Six Members with the highest quotas are from Europe. The fill rate of these quotas is on average very low, but varies across categories. It is low for egg and egg products, but high for tobacco, sugar, fruits and vegetables.

Methods used for giving exporters access to quotas include first-come, first-served allocations, import licensing according to historical shares and other criteria, administering through state trading enterprise, bilateral agreements and auctioning. The terms can also specify time periods for using the quotas, for example periods of time for applying for licences, or for delivering the products to the importing countries. Exporters are sometimes concerned that their ability to take advantage of tariff quotas can be handicapped because of the way the quotas are administered. Sometimes they also complain that the licensing timetables put them at a disadvantage when production is seasonal and the products have to be transported over long distances.

Each method has advantages and disadvantages, and many WTO Members acknowledge that it can be difficult to say conclusively whether one method is better than another. Several countries want the negotiations to deal with tariff quotas: to replace them with low tariffs, to increase their size, to sort out what they consider to be restricting and non-transparent allocation methods, or to clarify which methods are legal or illegal under WTO rules in order to provide legal certainty.

94 One possible reason for this difference is an underfill of quotas on US imports, so that a lower tariff rate applies to the products concerned.

95 In contrast to the figures provided by the EU and the United States, Stawowy (2001) finds *ad valorem* equivalent rates as high as 1,000 per cent in the EU, 700 per cent in Canada, near 2000 per cent for Japan and 337 per cent for the United States.

96 These observations hold true for Canada and Japan as well, based on data from Stawowy (2001).

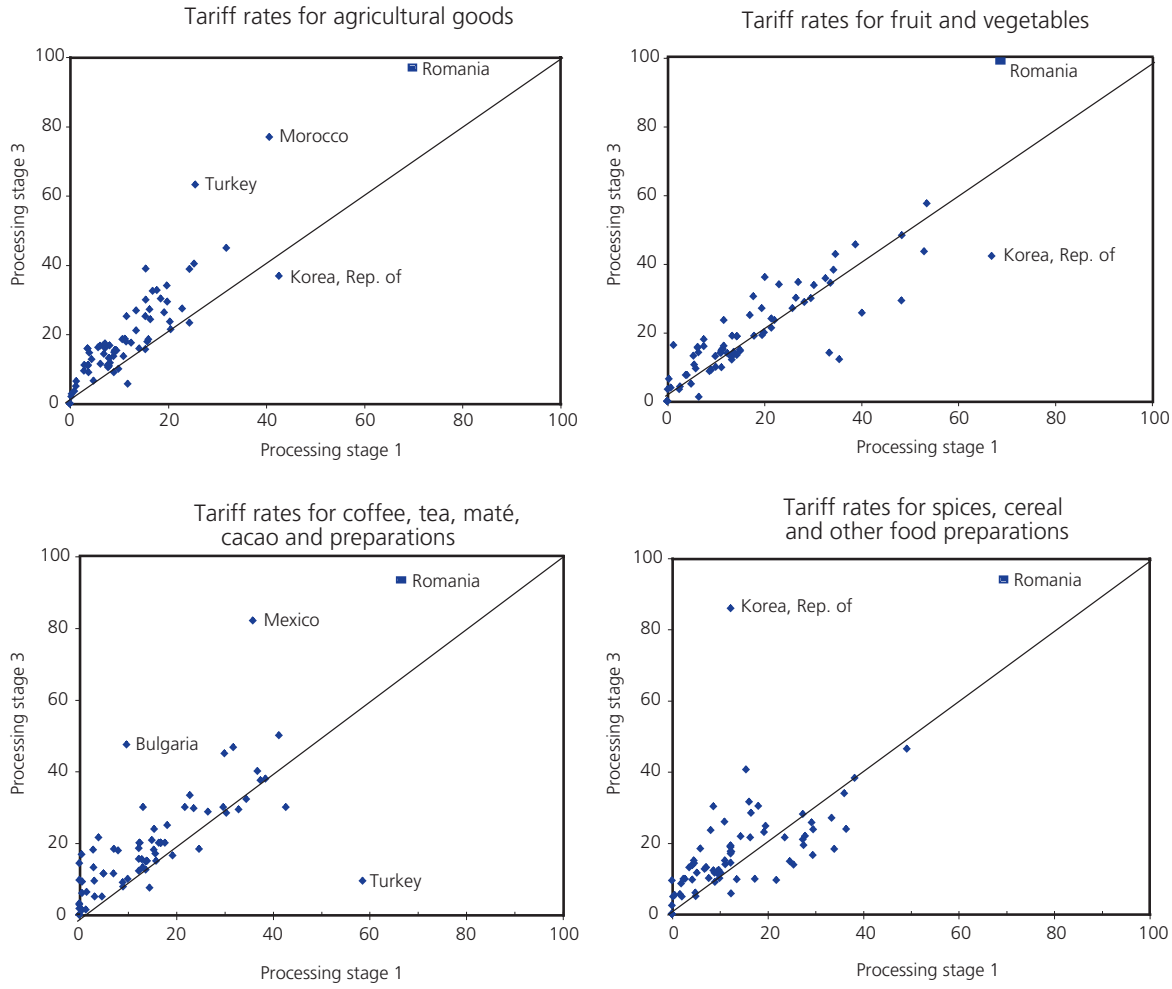
97 A tariff quota is a scheme that applies a different tariff to an imported product depending on whether or not the imports are within the defined quota, or outside the defined quota. Usually, a low tariff is applied, but the volume, or value of imports is subject to a quota. Further imports are imported beyond the quota level; however, these imports would be subject to a tariff (out of quota tariff), which is higher than the value of the tariff if the import was within the quota limits. For further information on the economics of tariff rate quotas see Box III.2 of WTO (2001b).

The question whether the allocation method affects the fill rate was investigated in WTO (2001b). The conclusion of that study was that administration methods have only a limited influence on the fill rates of quotas. Even in cases where the allocation method was simple and transparent, such as "first come, first served", fill rates were low.

Tariff escalation

Tariff escalation (increasing tariff rates with the stage of processing) does not appear to be a general problem across a wide range of agricultural products and markets (Chart IIB.4). The degree of aggregation, however, hides substantial variation across categories. As noted in Section IB.2 tariff escalation is of concern to developing countries in the context of certain commodities. For example, escalation within both lower and higher duties is prevalent in fruits and vegetables, coffee and tea, and spices, cereals and other food preparations (Chart IIB.4). Processed products in which escalation is most pronounced include sweeteners based on sugar, vegetable oils and vegetable juice. The incidence of tariff escalation is not confined to developed countries. Developing countries in some cases have the most significant differences in duties between processed and unprocessed products (Bora et al., 2003; USDA, 2001).

Chart IIB.4
Tariff escalation in agricultural products and in selected agricultural categories, applied tariffs



Source: WTO.

(iii) Industrial products

Although tariffs are less of an issue for market access in industrial products, they are still important impediments to trade. The overall tariff profile for world markets in industrial products is characterized by very low overall average applied rates in developed countries and considerably higher rates in some developing countries (Appendix Table IIB.3).

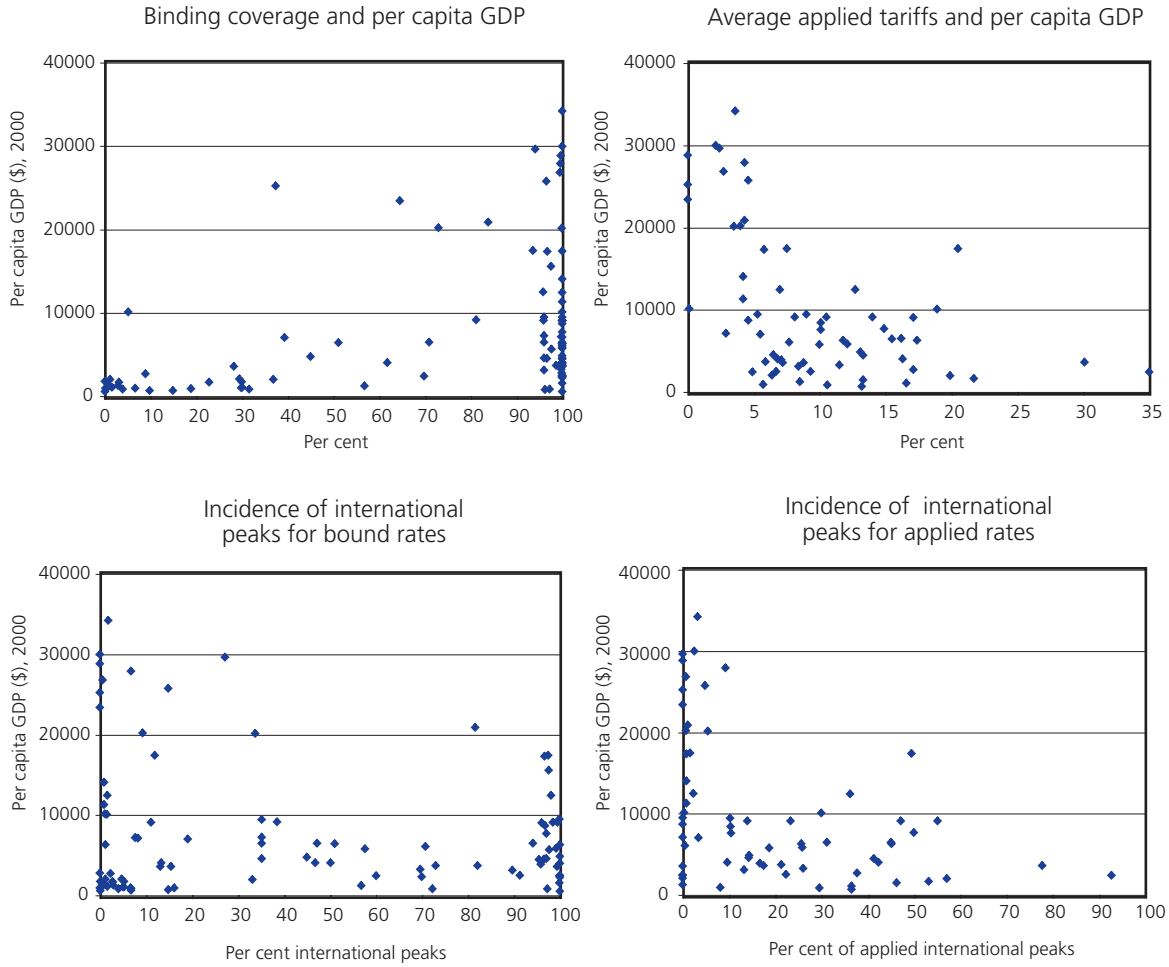
In contrast to agriculture, the binding of tariffs in industrial products is a negotiating issue, since some Members have chosen not to bind all their tariff lines. Developed countries have bound most of their tariffs. Turkey has bound far less than half of its tariff lines and several Asian countries have only bound between 60 and 70 per cent of their tariff lines. Most developing countries also have a higher simple average bound tariff and more dispersion as measured by the standard deviation than developed countries.

Developed countries tend to have the largest share of bound duty-free lines. Japan leads the way with 57.1 per cent followed by Norway (45.5 per cent), New Zealand (41.1 per cent), the United States (38.5 per cent), Canada (29.4 per cent) and the European Union (23.4 per cent). Singapore and Hong Kong, China have bound fewer lines than the Quad. Hong Kong, China has more than three quarters of its lines bound duty-free, and the comparable figure for Singapore is about 50 per cent.

While developed countries, most transition economies and most Latin American countries have bound all, or almost all, of their industrial tariff lines, many African and Asian countries have bound only a limited number of tariff lines (Bacchetta and Bora, 2003). Chart IIB.5 shows the distribution of binding coverage for WTO Members by per capita GDP. The figure shows that for many poorer countries, mostly in Africa, the distribution of binding coverage is concentrated in the extremes. More than half the countries have bound less than half their tariff lines. Fourteen out of a total of 41 African countries have bound less than 10 per cent of their industrial tariff lines. Of those, 11 have even bound less than 5 per cent of their lines. At the same time, 11 countries have bound between 90 and 100 per cent. In Asia, one third of the 21 countries in our sample have consolidated less than half their lines and only 9 countries have consolidated more than 90 per cent of their lines. In Latin America, the situation is strikingly different, with only 4 out of 32 countries with a binding coverage of less than 90 per cent.

The simple average bound rate for the Quad members is less than 5.3 per cent. Developed countries with high average bound rates are Australia and New Zealand, at 11 per cent. Norway's average is 3.1 per cent. The highest averages for developing countries are in India and Turkey, which also have the largest spread or dispersion of rates. Furthermore, when comparing tariff structures and taking 15 per cent as a benchmark, Members with high national averages also have a high percentage of lines above that benchmark. On the other hand, the Quad members have both low averages and low percentages of lines above 15 per cent.

Chart IIB.5
Tariff profile of non-agricultural products



Source: WTO.

While aggregate data provide useful information, they also mask a number of key issues in the context of industrial policy and in multilateral negotiations. Bacchetta and Bora (2003) calculate the simple average of bindings at the Multilateral Trade Negotiations (MTN) category level.[98] In their analysis, four categories of products stand out as having higher tariff averages than the others in both developed and developing countries.[99] These are: textiles and clothing; leather, rubber, footwear and travel goods; transport equipment and fish and fish products.

[98] See WTO (2001b) for definitions of the product categories.

[99] These four categories also turn out to have the highest standard deviation and the highest share of high tariffs in most of our sample countries. See WTO (2001b).

As indicated earlier, it is applied rates that matter for commerce. In developing countries these rates are often far below the level of bindings. Simple applied tariff averages at the MTN category level are presented in Appendix Table IIB.7. Textiles and clothing have the highest or the second highest tariff average in most countries. More generally, for all countries the two sectors with the highest applied tariff averages across categories are among the four sectors identified as the most protected based on the level of their bindings. Textiles and clothing are also the sectors with the largest proportion of lines with tariffs above 15 per cent. In many countries, including the European Union, the largest share of peaks is found in the fish and fish products category. For Japan, the largest share of peaks is in the leather, rubber, footwear, and travel goods category.[100]

Furthermore, the four sectors identified as having the highest average bindings also have lower shares of bound tariffs (Bacchetta and Bora, 2003). Several countries have bound only a limited proportion of lines in the transport equipment category. Thailand, for instance, has bound less than a quarter of its transport equipment lines. Similarly, in the textiles and clothing category, Turkey has bound only 11 per cent and India 26 per cent of tariff lines, while Poland has bound only 13 per cent of the tariff lines in fish and fish products.

Trade in textiles and clothing products will continue to be subject to the Agreement on Textiles and Clothing (ATC) until 1 January 2005. Until that time a significant share of world trade in textiles and clothing remains distorted by the complex set of quantitative restrictions inherited from the Multi-Fibre Agreement (MFA). The ATC establishes a roadmap for phasing out quantitative restrictions and integrating the sector into the mainstream GATT/WTO system of rules. It began in 1995 and consists of four phases. Members carrying over quotas into the ATC – Canada, the European Union and the United States – were required to integrate 51 per cent of their textile and clothing imports into WTO rules by the end of the third stage in December 2001. The fourth and final phase will result in product integration and quota removal of the remaining 49 per cent of imports.

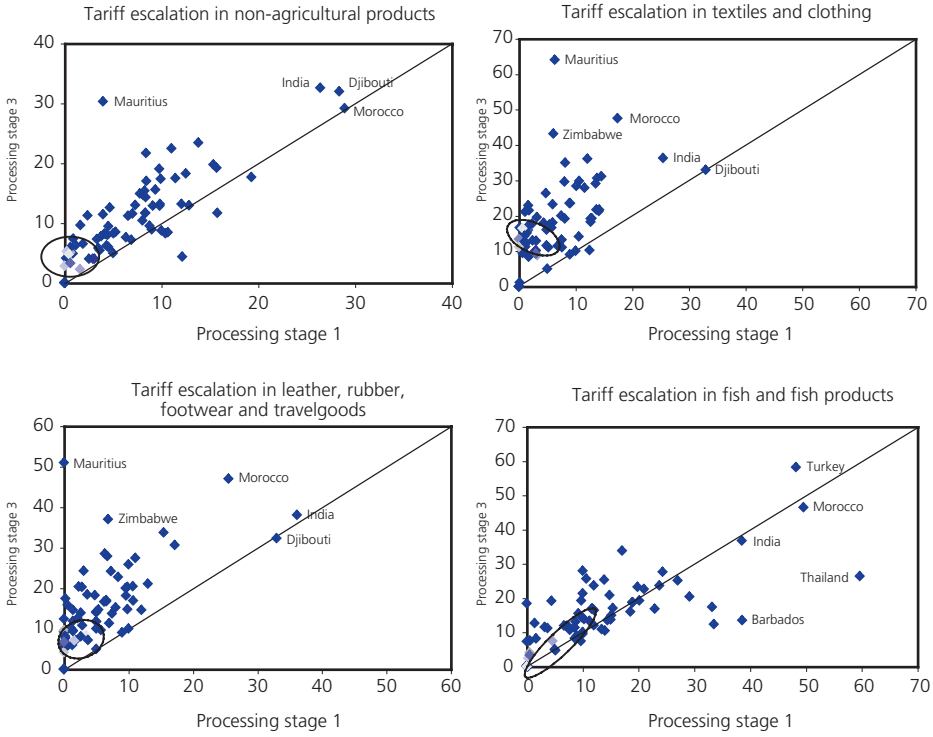
The final implementation phase will result in a substantial adjustment and restructuring of the industry. Approximately 80 per cent of the quotas, consisting of a total of 239 quotas maintained by Canada, 167 by the European Union and 701 by the United States, are left to be eliminated by the end of 2004.

Existing quantitative restrictions, however, should not conceal the prevalence of high tariffs in the textiles and clothing sector. As noted above, in most major markets imports of textiles and clothing face above-average bound and applied tariff rates, and a large number of tariff peaks. The Agreement on Textiles and Clothing does not address the issue of tariff protection.

100 Generally speaking, non-*ad valorem* tariffs are much more frequent in the agricultural sector. Thailand has the highest share of non-*ad valorem* tariff lines with no *ad valorem* equivalent – over 30 per cent in wood and furniture, textiles and clothing and leather and travel goods. The shares of Chinese Taipei in fish and fish products, the United States in "not elsewhere specified" articles, and Thailand in chemicals and photographic supplies, mineral products and precious stones, and metals are all over 15 per cent.

The textiles and clothing sector includes more than 150 4-digit subgroups, a considerably higher number than in other product categories. The tariff structures of WTO Members have certain characteristics in common. First, with some exceptions all countries apply higher tariffs to clothing than to textile products. Some countries such as Poland, Brazil and Mexico apply the same higher tariff to all clothing products, while others impose higher non-uniform tariffs on clothing products. Second, in most cases, the dispersion of tariffs across 4-digit subgroups in the textiles sector is significant. In absolute terms, inter-group dispersion is high in Malaysia, Thailand and Turkey. Among developed countries, it is the highest in Australia, Canada and the United States, where tariff averages range between zero and more than fifteen per cent.

Chart IIB.6
Tariff escalation in non-agricultural products and selected categories



Note: Inside the oval: EU, USA, Japan, Canada, Australia, Norway and New Zealand.

Source: WTO.

Tariff escalation

The previous section indicated that the overall level of protection is high in four of eleven categories. However, within these categories scope exists for a considerable degree of processing and value-added activities. Chart IIB.6 shows the overall incidence of tariff escalation and escalation in three of the four product categories of export interest to developing countries – textiles and clothing; leather, rubber, footwear and travel goods; and fish and fish products. The first panel in Chart IIB.6 shows that average tariffs in many countries are higher on goods subject to higher levels of processing. But the picture varies somewhat by sector. Less tariff escalation is apparent in respect of fish and fish products than in the textiles and clothing, and leather, rubber and footwear sectors. The figures in the Chart also confirm that escalation is more prevalent in sectors subject to higher overall average tariff rates.

(b) Non-tariff measures

Even if countries were to bind all their MFN tariffs at zero, this would not guarantee unfettered trade. Other measures affecting trade flows are used for a range of different reasons. Such measures may be straightforwardly protectionist in intent, or they may focus on other objectives but nevertheless have an impact on trade. The incidence of non-tariff measures varies greatly across sectors, particularly where they are protectionist. Other non-tariff measures are of more general application, designed to serve particular public policy objectives. In the field of trade protection, we have already considered quantitative restrictions in the textiles and clothing sector. Production and export subsidies may also be used to strengthen the market position of less competitive suppliers, as is the case for agriculture in many countries.

Government regulations designed to defend or promote a particular public interest, such as health, safety or the environment, can be designed in many different ways, with quite different effects on trade. WTO rules in the area of public policy seek to ensure that regulation is non-discriminatory and not unnecessarily restrictive of trade.[101] Measures necessary to administer a trade regime, such as licensing procedures and valuation rules, can also unduly frustrate trade if they become restrictive measures in their own right. Again, the WTO seeks to avoid such surreptitious protectionism through a series of rules and procedural requirements. The remainder of this subsection will focus on subsidies, particularly as these affect conditions of market access in the agricultural sector.

(i) Domestic support for agricultural products[102]

In recognition of the trade-distorting potential of domestic subsidies, the Uruguay Round negotiations established a system to constrain the use of such measures. The WTO Agreement on Agriculture uses a "traffic light approach" to categorise different types of domestic support policies. Amber box[103] policies are subject to limitations, green box[104] policies are exempt from any limitations as are blue box[105] policies which cover payments aimed at limiting production. Amber box policies are deemed to be the most trade distorting.

WTO Members that committed to reducing domestic support agreed to reduce their Aggregate Measure of Support (AMS) below the level that existed during the 1986-1988 base period.[106] The total AMS reduction commitments have not been binding, since 75 per cent of Members have notified support levels that are less than 80 per cent of their respective ceilings. The only Members that are close to their ceilings (defined as above 80 per cent) are Argentina, Israel, Republic of Korea, Norway, Slovenia, South Africa and Tunisia.

Two key issues arise with respect to domestic support. The first is that while trade distorting domestic support measures that fall in the amber box category have declined, expenditures in the blue box category have increased. The second, and related issue, is the extent to which certain Members are affected disproportionately by the use of domestic support.

101 These basic principles are set out in the original GATT Agreement, and supplemented by other provisions, such as those contained in the Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phytosanitary Measures.

102 For more detail on the negotiating positions of Members with respect to domestic support see WTO (2002d).

103 All domestic support measures considered to distort production and trade (with some exceptions) fall into the amber box. The total value of these measures must be reduced. Various proposals deal with how much further these subsidies should be reduced, and whether limits should be set for specific products rather than having overall "aggregate" limits.

104 In order to qualify for the green box, a subsidy must not distort trade, or at most cause minimal distortion. These subsidies have to be government-funded (not by charging consumers higher prices) and must not involve price support. They tend to be programmes that are not directed at particular products, and include direct income supports for farmers that are not related to (are "decoupled" from) current production levels or prices. Green box subsidies are therefore allowed without limits, provided they comply with relevant criteria. They also include environmental protection and regional development programmes (for details, see Article 6 and Annex 2 of the Agriculture Agreement).

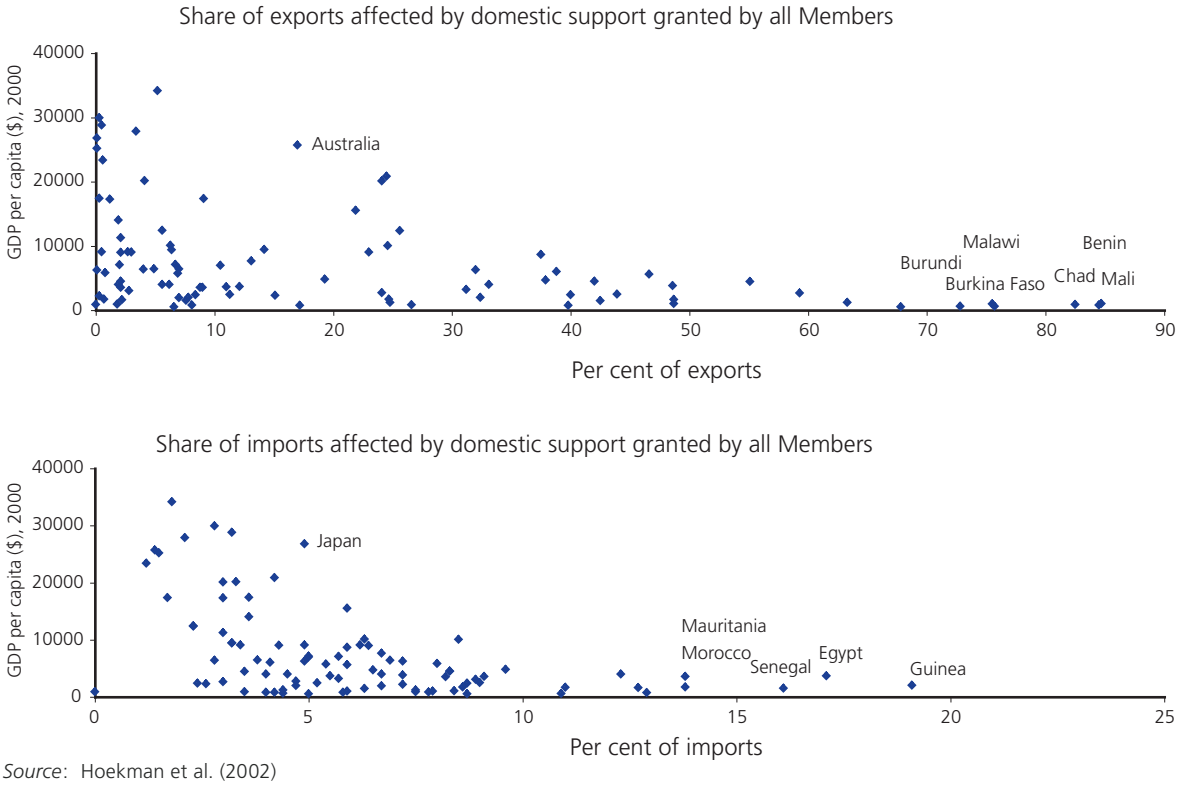
105 The blue box is an exemption from the general rule that all subsidies linked to production must be reduced or kept within defined minimal (*"de minimis"*) levels. It covers payments directly linked to acreage or animal numbers, but under schemes which also limit production by imposing production quotas or requiring farmers to set aside part of their land.

106 A widely used index to measure government support to producers is the Producer Support Estimate (PSE) provided by the OECD. This index measures the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm-gate level, regardless of their nature, objectives or impact on farm production. A corresponding index is the Total Support Estimate (TSE), which is the net estimate of transfers taking into account budgetary receipts. The OECD estimated the TSE to be $311 million in 2001. The PSE for OECD countries amounts to 31 per cent of total farm receipts (OECD, 2002a).

With respect to the first question, total support as notified to the WTO is $104 billion, of which the Quad countries account for 84 per cent. Developing countries account for 12 per cent[107], with the remaining portion accounted for by other industrialized countries. The major products affected are meat, dairy, cereals and sugar, which account for 82 per cent of all reported non-exempt domestic support. There also appears to be a high correlation across categories in terms of the use of domestic support by developed and developing countries (Hoekman et al., 2002b; OECD, 2002a).

While the Quad Members are the heaviest users of domestic support, it is developing countries, especially least-developed countries that are disproportionately affected by such policies. Between 60 per cent and 80 per cent of the exports of countries such as Benin, Burkina Faso, Burundi, Chad, Malawi, Mali, Rwanda, Sudan, Tanzania, Uganda and Zimbabwe are affected by domestic support granted by Members (Chart IIB.7). At the same time, several poorer countries face lower import prices as a result of domestic support measures (for example, Egypt, Guinea, Morocco and Mauritania), although affected import shares are lower than affected export shares (Chart IIB.7).

Chart IIB.7
Share of Members' trade affected by domestic support granted by all Members



Source: Hoekman et al. (2002)

The main focus of the negotiations under the Doha Development Agenda is on substantial reductions in trade distorting domestic support. Indeed, a number of developing countries have stated that substantial reductions in domestic support and elimination of export subsidies are needed before they can consider improving access to their markets. In addition to reductions a number of proposals have been made relating to rules. The objective of these proposals has been to restrict flexibility for switching support from one product to another or from one subsidy category to another. Many countries, both developed and developing, are in favour of reducing trade distorting support entirely, or to *de minimis* levels, and limiting the value of subsidies with a

[107] The major developing country users of domestic support are Brazil, Thailand and Venezuela.

minimal trade-distorting effect. On the other hand other countries, including some transition economies, have stressed that some level of trade distorting domestic support is needed in order to address non-trade concerns, such as those relating to the environment, rural development and food security. They have also pointed out that strict rules on domestic support and limits to the value of subsidies that cause only minimal trade distortion would make it more difficult for them to agree to reductions in trade-distorting supports.

(ii) Export subsidies[108]

Export subsides are a core concern of the multilateral trading system. The Agreement on Subsidies and Countervailing Measures prohibits export subsidies, except in the case of developing countries falling below a threshold per capita income level in 1986-1990. But exceptions are made for agriculture. Under the Agreement on Agriculture, Members previously applying export subsidies were required to enter into reduction commitments. Developed country Members were required to reduce their base period volume of subsidized exports by 21 per cent and the corresponding budgetary outlays for export subsidies by 36 per cent. The figures for developing country Members are 14 per cent and 24 per cent respectively. Despite these reduction commitments, the use of export subsidies is still quite significant in value terms. A total of 208 tariff lines receive export subsidies in at least one Member country. The total value of agricultural export subsidies notified by Members between 1995 and 1998 was $10 billion. Developed countries accounted for 80 per cent of the total. More than 50 per cent of the total exports of the following African countries are affected by export subsidies granted by all Members:[109] Benin, Burkina Faso, Burundi, Chad, Côte d'Ivoire, Malawi, Mali, Rwanda, Tanzania and Uganda (Chart IIB.8). As far as imports affected by other countries' export subsidies are concerned, a number of poorer countries also figure more prominently than richer ones (Chart IIB.8).

Further reform of export subsidies would, however, have both positive and negative impacts. Reductions in export subsidies would increase world market prices benefiting net exporting economies of unsubsidised products (OECD, 2002a; UNCTAD, 2002a).[110] This would also have an impact on producers of such products regardless of whether or not they are exporters due to the pass-through effect of world prices onto domestic prices. This price increase will have the effect of raising the income of individuals that derive their living from producing these products. At the same time further reform will increase the costs of imports, thereby negatively impacting net importing economies of subsidised products.[111] The main outstanding issue in this area is the depth of reform.

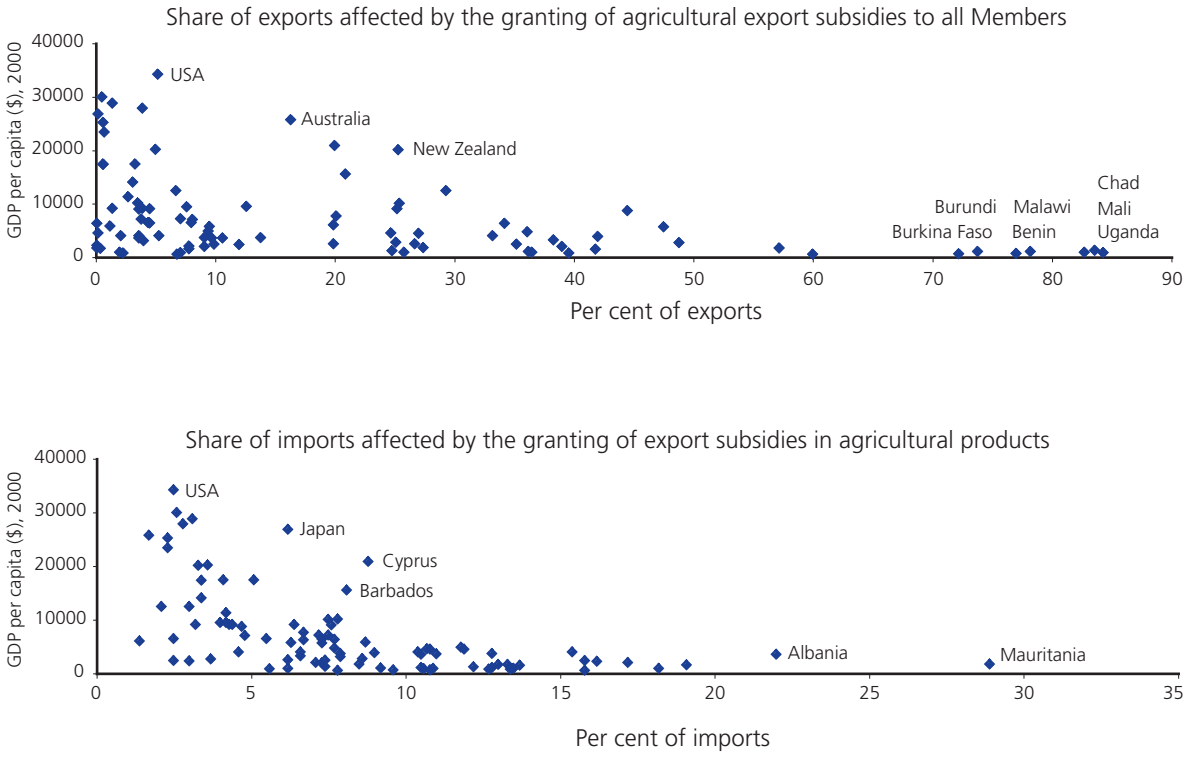
108 For more information on the negotiating positions of Members with respect to export subsides for agricultural products see WTO (2002d).

109 It should be noted that export subsidies granted by some developing countries also have an impact here.

110 As noted before, in some cases the disciplining of domestic support and export subsidies would have a negative welfare effect on some developing countries.

111 The impact of the reform program on agriculture agreed to in the Uruguay Round on least-developed and net food-importing countries is recognized in the "Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries".

Chart IIB.8
Share of Members' trade affected by the granting of agricultural export subsidies



Source: Hoekman et al. (2002)

(c) Trade facilitation

As formal barriers to trade have fallen in many countries, the objective of ensuring that trade can flow with a minimum of regulatory and administrative impediments has attracted increasing attention. The WTO trade facilitation agenda focuses on how to expedite the movement, release and clearance of goods. This calls for simplification and harmonization of international trade procedures, including practices and formalities involved in collecting, presenting, communicating and processing data required for the movement of goods in international trade. A comprehensive approach to trade facilitation would focus attention on a wide array of administrative, technological and infrastructural issues. An efficient, well governed, and modern regulatory structure for administering trade avoids dead-weight costs that, unwittingly or otherwise, constitute barriers to trade. Similarly, efficient port facilities and services lower the costs of doing business. All these benefits from trade facilitation are conceptually very similar to the benefits of trade liberalization.

The work on trade facilitation in the WTO has touched on the following obstacles to smooth trade flows:

- Excessive documentation;
- A lack of automation and inadequate use of information technology;
- A lack of transparency, with unclear and unspecified import and export requirements;
- Inadequate procedures, especially a lack of audit-based controls and risk-assessment techniques; and
- A lack of cooperation among customs and other government agencies, which thwarts efforts to deal effectively with increased trade flows.

Certain provisions in GATT 1947 already address matters relevant to trade facilitation. Article V deals with freedom of transit, Article VIII with fees and formalities connected with importations and exportation, and Article X with publication and administration of trade regulations. Some Members believe that these provisions could be built upon with a view to harmonizing laws and regulations, simplifying administrative and commercial formalities, procedures and documents, and standardizing aspects of transportation services.

An issue to be resolved is whether a contribution to trade facilitation by the WTO should involve the elaboration of new legal rights and obligations, or whether some other approach should be pursued. A prior question for some Members is whether explicit consensus will be achieved on modalities to allow negotiations to go forward after the Fifth Ministerial Session.[112]

Estimates of the gains from trade facilitation vary depending upon the model used and the approach to quantifying the costs of inefficient practices. Estimates are generally based on the value of cost savings from facilitation.[113] These estimates range from 4 to 10 per cent of the value of trade. These results should be treated with some caution, however, as in part they capture technological improvements in transportation. The latter is not directly related to the Doha Agenda on trade facilitation, although no doubt those issues that are being discussed in a WTO context also entail changes offering significant gains.

(d) Transparency in government procurement

In an era when many government budgets are stretched to the limit, obtaining value for money is often an important objective of state procurement policy. Failing to attain this goal compromises the welfare of the poor, in particular, as they tend to be more dependent on state-provided health, education, and social services. Procurement policy can, therefore, support a nation's overall policies towards poverty alleviation and development strategy. On the other hand, governments sometimes want to use the patronage implicit in awarding contracts for goods or services to achieve other objectives. In some countries procurement is an instrument of industrial policy and particular suppliers are awarded contracts on a preferential basis. In other cases, procurement decisions may be determined by political considerations, including national security.

Competition for government contracts can come from foreign as well as domestic firms, and research has amply demonstrated that certain state measures can reduce competitive pressures from both sources (see Arrowsmith and Trybus, 2003, and Evenett and Hoekman, 2002). Opaque tendering procedures and poor governance tend to discourage potential bids from both domestic and foreign firms, often leaving governments dependant on bids from a small group of "insider" firms. In such circumstances contract prices tend to be higher. Quality may be lower, and delays and cost over-runs more common. Needlessly stringent pre-qualification requirements may shut out bidders. Procurement reform can be difficult to accomplish, as vested interests undermine attempts to improve procedures and transparency (Hunja, 2003).

International trade agreements, including the plurilateral WTO Agreement on Government Procurement, have contributed to the contestability of national procurement markets in at least two ways. First, they have reduced the explicit discrimination against foreign bidders, so enhancing market access. For example, the WTO Agreement bans the use of price preferences against foreign bidders on contracts whose value exceeds certain specified threshold levels. Second, international trade agreements typically include provisions to enhance the transparency of procurement processes and this increases the number of bids from all sources – domestic and foreign (see Evenett and Hoekman, 2003, for evidence on this matter). The transparency of tendering procedures is also enhanced by trade rules that require signatories to follow specified – sometimes public – steps when soliciting bids, evaluating submissions, and awarding contracts. The WTO Agreement on Government Procurement has only twenty-eight signatories and does not cover all the potentially eligible public procurement entities of the signatories.[114]

The few empirical analyses of the costs and benefits of trade-related procurement reform point to tangible gains. In the case of the Republic of Korea's accession to the WTO's plurilateral Agreement on Government Procurement in 1994/5, Choi (2003) estimated that the cost savings to the Korean government from goods

[112] A related issue is the applicability of the term modalities to trade facilitation. While the term fits within the discussions on investment and competition policy it does not fit neatly into the trade facilitation discussions since the discussions are focussing on the certain provisions in GATT 1947 as opposed to negotiating a new set of binding obligations.

[113] See, for example, Dee, Geisler and Watts (1997).

[114] A study by Audet (2002) has estimated the value of potentially contestable government procurement markets at $2.1 trillion in 1998.

sourced abroad increased from 18.5 per cent to 23.1 per cent after accession. The use of limited tendering procedures, which reduce the number of potential bidders, also fell (from over 27 per cent to 23.1 per cent in 1996-1998). Likewise, Srivastava (2000) estimates that if India joined this WTO Agreement the welfare gains would be equivalent to between 0.3 per cent and 1.7 per cent of national income.

In the context of the WTO work programme, WTO Members are discussing whether to strengthen rules on transparency in government procurement practices. This agenda focuses on procedural aspects of procurement and not on preferences granted to a subset of potential suppliers. In other words, this approach does not challenge the use of procurement as a mechanism to protect particular suppliers. Some of the hesitation among a number of developing countries in embracing the transparency agenda arises from concern that the possibility of using procurement preferentially will eventually be undermined, particularly in relation to foreign suppliers. This could occur if improved transparency encourages more foreign firms to bid for state contracts. Yet it is worth noting that the same improvements in transparency will encourage more domestic firms to bid, potentially reducing the number of contracts awarded to foreign firms. The impact of greater transparency on market access is ambiguous. Irrespective of the impact on the latter, the beneficiaries of enhanced competition for government contracts will be taxpayers and those most dependant on state-provided goods and services, the poor. Like trade facilitation (and investment and competition), the treatment of transparency in government procurement after the Fifth Ministerial Session depends on a decision on modalities to be taken on the basis of explicit consensus.

(e) Services

The General Agreement on Trade in Services (GATS) provides for a multilateral set of rules and principles governing trade in services.[115] The intangibility of services, the need for direct interaction between supplier and consumer/user in many cases, and the importance of appropriate regulatory control and supervision have rendered rule-making in services a challenging undertaking. The entry into force of the Agreement in January 1995 thus constituted a landmark event in the history of the multilateral system, comparable to the inception of GATT in 1948. However, this was only a first step. In terms of actual trade liberalization, relatively little has been achieved to date. Observers tend to agree that the commitments undertaken by Members remained mostly confined to confirming *status quo* conditions. Moreover, some negotiating mandates in rule-making areas have remained open (domestic regulation, safeguards, government procurement of services, and subsidies). With a view to inspiring the ongoing negotiations on specific commitments, the following discussion focuses on existing barriers to services trade. A note of caution appears necessary, however. Trade barriers may not only result from measures falling under the market access and national treatment provisions of GATS, but from a variety of factors, including licensing and qualification requirements, and technical standards in pursuit of legitimate national policy objectives. Such objectives, of course, will not be the subject of multilateral negotiations.

(i) Quantifying impediments to services trade

Measuring impediments to international trade in services is not a simple task for several reasons, since service transactions take a variety of forms. Establishment and cross-border delivery are different (sometimes substitutable) means of supply, and consumers might also cross frontiers to consume foreign-supplied services. Suppliers are sometimes firms, and sometimes individuals. Some services cannot be delivered at arms-length. Production and consumption may need to be simultaneous. Services are invisible, without physical form and often non-homogeneous. A vast array of government regulations affect trade in services. In the absence of data on the *ad valorem* effect of restricting competition from foreign suppliers, barriers to services trade have to be estimated through a variety of techniques. These techniques often employ a frequency count of measures that affect services trade (Findlay and Warren, 2000). There has also been some progress in estimating the price effects of restrictions, which yield interesting insights.

Measurement of impediments to trade in services is also complicated by diversity of the services sectors in terms of their tradability, importance and the relative importance of different modes of supply.

[115] See the collection of articles in WTO (2001c) on the relevance of the GATS to specific service sectors.

Since international trade in services is invisible, the basic restrictions are in the form of limited market access for foreign suppliers and access to foreign services. One possible framework[116] for identifying impediments to trade in services is to categorise barriers as quantitative restrictions, price based instruments, standards, licensing and procurement and discriminatory access to distribution networks. Even with a taxonomy of this kind, measurement of barriers to trade has proven quite difficult. The results that have been obtained typically focus on relative measurements as opposed to absolute measurements. Relative measurements allow for a comparison between countries without the ability to quantify the magnitude of the differences in barriers. They are not *ad valorem* equivalents and have only limited economic value.[117]

Recent studies attempting to estimate *ad valorem* tariffs for the service sector have been completed for a number of sectors and are surveyed in Findlay and Warren (2000). Of particular note is the work on the banking sector, which tries to estimate the "net interest margin" of banks in different countries. In contrast to this price based approach, Warren (2000) and Francois (1999) use a quantity based approach.

As already noted, an important element of difficulty in the quantification of barriers is the role played by domestic regulation. The GATS specifically recognises 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". Since most services are subject to some form of domestic regulation, the challenge for policy-makers is to liberalize trade in a manner consistent with other public policy objectives.

(ii) Sectoral patterns

Measures of trade restrictiveness in services focus either on the net impact on firms or on the policies themselves. The restrictiveness index used by Hardin and Holmes (2001), for example, and the approach used by Hoekman (1996) focus on measures rather than their impact on trade. For the purposes of this subsection these studies are of particular interest in terms of their ability to chart the landscape of barriers to services trade and hence the parameters of the services negotiations.

The general conclusion that one can draw from these studies is that business services, consultancy, distribution, environmental and recreational services face lower levels of restrictions (Hardin and Holmes, 1997; Hoekman, 2000) than other sectors. By way of illustration, a services trade restrictiveness index, which is calculated using data on the policy regimes in selected countries is presented in Table IIB.1.[118] The index is essentially a sophisticated frequency measure that estimates the restrictiveness of an economy's trading regime for services based on the number and severity of restrictions.[119] The value of the index is between 0 and 1, with 1 being more restrictive. It is calculated separately for domestic and foreign service suppliers. The *foreign index* is calculated to measure all the restrictions that hinder foreign firms from entering and operating in an economy. It covers both *discriminatory* and *non-discriminatory* restrictions. The *domestic index* represents restrictions that are applied to domestic firms and it generally only covers *non-discriminatory* restrictions (for most services, restrictions do not discriminate against domestic firms). The *difference* between the foreign and domestic index scores is a measure of discrimination against foreigners.

116 This section is based on the survey by Stern (2002).

117 Studies of this nature include Hoekman (1996) and PECC (1995a, b). The gravity model approach used by Francois (1999) also falls within this class of models.

118 The data are available from the Productivity Commission of Australia website: www.pc.gov.au. See the articles in Findlay and Warren (2000) for individual studies that employ this methodology.

119 The index methodology classifies restrictions in two ways. The first is by whether a restriction applies to: *establishment* – the ability of service suppliers to establish a physical outlet in a territory and supply services through those outlets; or *ongoing operations* – the operations of a service supplier after it has entered the market.

Restrictions on *establishment* often include licensing requirements for new firms, restrictions on direct investment in existing firms and restrictions on the permanent movement of people. Restrictions on *ongoing operations* often include restrictions on firms conducting their core business, the pricing of services and the temporary movement of people.

The second way a restriction is classified is by whether it is: *non-discriminatory* – that is, restricting domestic and foreign service suppliers equally; or *discriminatory* – that is, restricting only foreign or only domestic service suppliers.

Table IIB.1
Services trade restrictiveness index, selected industries and countries

	Accountancy		Architectural		Banking		Distribution		Engineering		Legal		Maritime	
	Domestic index	Foreign index	Domestic index	Foreign index	Domestic index	Foreign index	Domestic index	Foreign index	Domestic index	Foreign index	Domestic index	Foreign index	Domestic index	Foreign index
Argentina	0.11	0.29	0.03	0.16	0.00	0.07	0.05	0.09	0.01	0.15	...	...	0.10	0.33
Australia	0.16	0.41	0.03	0.15	0.00	0.12	0.03	0.10	0.04	0.08	0.27	0.42	0.13	0.42
Austria	0.27	0.57	0.22	0.44	0.00	0.07	0.05	0.19	0.20	0.39	0.33	0.57	0.13	0.35
Belgium	0.28	0.40	0.13	0.29	0.00	0.07	0.18	0.32	0.01	0.02	0.21	0.31	0.15	0.35
Brazil	0.20	0.39	0.07	0.16	0.01	0.51	0.01	0.23	0.04	0.23	...	...	0.23	0.52
Canada	0.22	0.42	0.25	0.33	0.00	0.07	0.05	0.19	0.11	0.16	0.31	0.52	0.09	0.32
Chile	0.10	0.35	0.05	0.14	0.29	0.40	0.06	0.13	0.00	0.24	...	...	0.12	0.50
Colombia	...	...	...	...	0.05	0.23	0.12	0.19	...	...	...	...	0.18	0.47
Denmark	0.20	0.41	0.01	0.02	0.00	0.07	0.09	0.27	0.01	0.04	0.15	0.43	0.08	0.28
Finland	0.10	0.14	0.01	0.02	0.00	0.07	0.05	0.24	0.01	0.06	0.03	0.14	0.11	0.32
France	0.24	0.31	0.12	0.14	0.00	0.07	0.18	0.33	0.03	0.03	0.22	0.58	0.13	0.33
Germany	0.22	0.39	0.15	0.15	0.00	0.07	0.10	0.24	0.20	0.28	0.29	0.49	0.19	0.39
Greece	0.18	0.32	0.05	0.29	0.00	0.07	0.05	0.27	0.05	0.20	0.10	0.37	0.13	0.28
Hong Kong, China	0.20	0.32	0.09	0.22	0.04	0.09	0.03	0.05	0.08	0.13	0.08	0.27	0.09	0.40
India	0.31	0.44	0.02	0.08	0.05	0.60	0.15	0.32	0.00	0.10	0.09	0.40	0.25	0.61
Indonesia	0.00	0.56	0.04	0.30	0.07	0.55	0.09	0.32	0.05	0.24	0.17	0.57	0.21	0.56
Ireland	...	...	...	...	0.00	0.07	0.05	0.19	...	...	...	...	0.15	0.35
Italy	0.13	0.43	0.13	0.30	0.00	0.07	0.14	0.29	0.16	0.17	0.18	0.54	0.18	0.38
Japan	0.28	0.43	0.08	0.19	0.13	0.19	0.20	0.25	0.14	0.18	0.33	0.52	0.15	0.41
Korea, Rep. of	0.24	0.48	0.00	0.19	0.19	0.43	0.26	0.33	0.00	0.12	0.11	0.44	0.28	0.58
Luxembourg	0.12	0.31	0.00	0.08	0.00	0.07	0.05	0.17	0.08	0.11	...	...	0.10	0.25
Malaysia	0.09	0.51	0.04	0.33	0.27	0.65	0.09	0.40	0.08	0.26	0.13	0.54	0.25	0.52
Mexico	0.14	0.36	0.04	0.31	0.00	0.17	0.00	0.11	0.04	0.33	0.22	0.49	0.17	0.48
Netherlands	0.19	0.22	0.00	0.03	0.00	0.07	0.09	0.24	0.09	0.10	0.10	0.25	0.15	0.35
New Zealand	0.21	0.39	0.03	0.34	0.00	0.06	0.00	0.06	0.00	0.19	0.13	0.47	0.10	0.35
Philippines	0.29	0.63	0.05	0.33	0.14	0.53	0.06	0.37	0.00	0.15	0.10	0.54	0.17	0.64
Portugal	0.26	0.41	0.13	0.39	0.00	0.07	0.05	0.21	0.18	0.33	0.21	0.41	0.08	0.26
Singapore	0.18	0.41	0.00	0.08	0.11	0.37	0.03	0.07	0.01	0.11	0.08	0.42	0.10	0.21
South Africa	0.10	0.44	0.00	0.11	0.00	0.19	0.03	0.07	0.01	0.10	...	...	...	...
Spain	0.20	0.31	0.18	0.35	0.00	0.07	0.08	0.22	0.17	0.24	0.31	0.45	0.19	0.39
Sweden	0.18	0.44	0.00	0.17	0.00	0.07	0.07	0.21	0.01	0.17	0.12	0.27	0.17	0.42
Switzerland	0.08	0.27	0.04	0.18	0.00	0.08	0.16	0.33	0.05	0.15	0.24	0.50	0.10	0.35
Thailand	0.19	0.49	0.00	0.12	0.00	0.39	0.06	0.39	0.04	0.11	0.10	0.44	0.13	0.60
Turkey	0.09	0.41	0.17	0.39	0.05	0.37	0.06	0.13	0.18	0.37	0.26	0.58	0.08	0.49
United Kingdom	0.18	0.19	0.00	0.07	0.00	0.07	0.05	0.19	0.03	0.07	0.18	0.31	0.06	0.24
United States	0.20	0.33	0.13	0.23	0.00	0.06	0.00	0.16	0.12	0.19	0.24	0.48	0.17	0.60
Uruguay	...	...	...	...	0.14	0.46	0.02	0.06	...	...	...	...	...	...
Venezuela	...	...	...	...	0.00	0.17	0.11	0.26	...	...	...	...	...	...

Source: Productivity Commission of Australia, http://www.pc.gov.au/research/memoranda/servicesrestriction/traderestrictivenessindexes.xls.

In terms of differences across the selected industries, the banking sector appears to be one of the most restrictive overall. Most studies, even controlling for different methodologies, find that the core infrastructure services, including financial services, telecommunications and transport are among the most restricted sectors.[120] In some cases, these results are confirmed when compared against available results that adopt a methodology which estimates the effect of trade restrictions on price (Table IIB.2). This would suggest that despite the limitations of such methodologies, they are still useful in identifying the relative trade restrictiveness of various sectors.

Table IIB.2
Price effects of trade restrictions, selected industries and countries

	Banking		Distribution		Engineering		Telecommunications	
	Domestic price effect	Foreign price effect	Domestic price effect	Foreign price effect	Domestic price effect	Foreign price effect	Domestic price effect	Foreign price effect
Argentina	0.00	0.05	...	...	...	...	0.04	0.04
Australia	0.00	0.09	0.00	0.01	0.02	0.03	0.00	0.00
Austria	0.00	0.05	...	...	0.07	0.15	0.01	0.01
Belgium	0.00	0.05	0.07	0.05	0.01	0.01	0.01	0.01
Brazil	0.01	0.46	...	...	...	...	0.04	0.06
Canada	0.00	0.05	0.01	0.03	0.03	0.05	0.01	0.03
Chile	0.23	0.34	0.02	0.01	...	...	0.02	0.02
Colombia	0.04	0.18	...	...	...	...	0.11	0.24
Denmark	0.00	0.05	...	...	0.01	0.01	0.00	0.00
Finland	0.00	0.05	...	...	0.01	0.02	0.00	0.00
France	0.00	0.05	0.07	0.05	0.01	0.01	0.00	0.01
Germany	0.00	0.05	...	...	0.03	0.10	0.00	0.00
Greece	0.00	0.05	0.00	0.00	...	...	0.03	0.05
Hong Kong, China	0.03	0.07	0.00	0.00	0.02	0.05	0.01	0.01
India	0.04	0.55	...	...	...	...	5.61	10.00
Indonesia	0.05	0.49	0.00	0.04	0.03	0.10	0.71	1.38
Ireland	0.00	0.05	0.00	0.03	...	...	0.01	0.03
Italy	0.00	0.05	...	...	...	...	0.01	0.01
Japan	0.10	0.15	0.07	0.02	0.02	0.07	0.00	0.00
Korea, Rep. of	0.15	0.37	...	...	...	...	0.04	0.08
Luxembourg	0.00	0.05	...	...	...	...	0.01	0.01
Malaysia	0.22	0.61	0.04	0.08	0.05	0.12	0.07	0.16
Mexico	0.00	0.13	...	...	0.02	0.14	0.06	0.14
Netherlands	0.00	0.05	0.00	0.03	0.05	0.04	0.00	0.00
New Zealand	0.00	0.05	0.00	0.01	...	...	0.00	0.00
Philippines	0.11	0.47	...	...	...	...	0.21	0.73
Portugal	0.00	0.05	...	...	...	...	0.04	0.06
Singapore	0.08	0.31	0.00	0.00	0.01	0.05	0.02	0.03
South Africa	0.00	0.15	0.00	0.00	0.01	0.04	0.14	0.21
Spain	0.00	0.05	...	...	0.04	0.09	0.02	0.04
Sweden	0.00	0.05	...	...	0.01	0.07	0.01	0.01
Switzerland	0.00	0.06	0.08	0.05	...	...	0.01	0.01
Thailand	0.00	0.33	...	...	...	...	0.30	0.55
Turkey	0.04	0.32	...	...	...	...	0.20	0.34
United Kingdom	0.00	0.05	0.00	0.03	...	...	0.00	0.00
United States	0.00	0.05	0.00	0.02	...	...	0.00	0.00
Uruguay	0.11	0.40	...	...	...	...	0.08	0.12
Venezuela	0.00	0.13	...	...	...	...	0.10	0.15

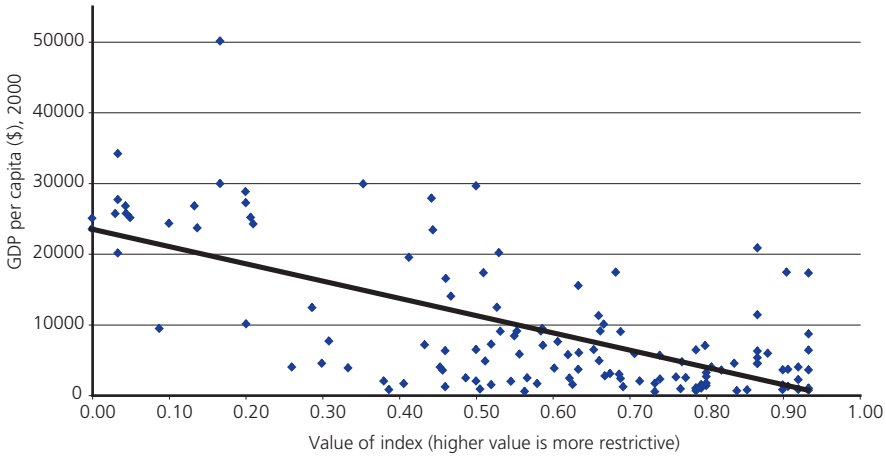
Source: Productivity Commission of Australia, http://www.pc.gov.au/research/memoranda/servicesrestriction/traderestrictivenessindexes.xls.

[120] Francois (1999) finds very high levels of restrictiveness in construction services across various geographic regions. In some cases his estimates for this sector are double that of business and financial services.

Another common result across various studies is that public sector services such as health and education have not been the subject of far-reaching liberalization. Reservations about liberalizing these sectors are well known, bearing in mind the social and distributional issues underlying these particular services (Adlung et al., 2002). Part of the concern relating to liberalization of social and other essential services (such as health, education, water supply, and refuse collection) and network-based services (such as telecommunications and transport) is that public monopolies may simply be replaced by private ones, with little regard for price-related concerns and universal access. If benefits are to be gleaned from a non-discriminatory and open regulatory regime, pro-competitive deregulation may be a prior requirement (Hodge, 2002), along with universal service obligations of one kind or another.

Despite the diversity of service sectors, another general conclusion is that where estimates of trade restrictiveness are available, these seem to indicate higher levels of restriction in countries with lower per capita GDP. Chart IIB.9 illustrates this point for telecommunications using the trade restrictiveness index. Different factors may explain this, including the difficulties of engendering genuine competition in small markets with few suppliers, but it does raise the question whether developing countries could gain more by opening up in some sectors.

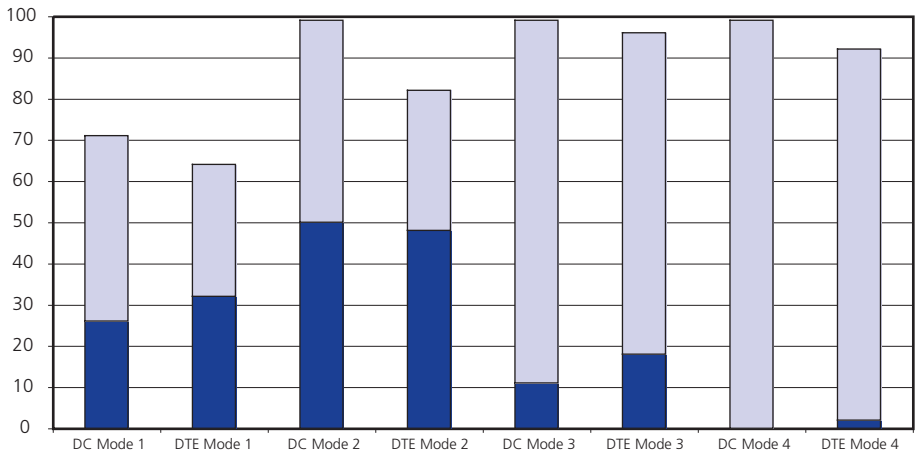
Chart IIB.9
Index of trade restrictiveness in telecommunications and per capita GDP



Source: Productivity Commission of Australia, www.pc.gov.au/research.

A final point to note on the pattern of protection in the services sector concerns differences among various modes of supply. Data on specific commitments under the GATS suggest that consumption abroad and cross-border supply are the most open Modes, while commercial presence and the temporary movement of labour are the most restricted (Chart IIB.10). This is despite the importance of movement of natural persons (Mode 4) for developing countries (Box IIB.2). These data should be treated with great caution, since they simply measure openness by entries in WTO Schedules of specific commitments, without gauging the relative commercial or economic significance of commitments, nor whether commitments reflect the actual degree of openness.

Chart IIB.10
GATS commitments by mode of delivery
(Per cent)



The upper part of each bar represents partial commitments, the lower part full commitments
DC = Developed countries, DTE = Developing and transition economies

Source: WTO.

Box IIB.2: Movement of natural persons (Mode 4)

Mode 4 is defined as the supply of a service through presence of natural persons of a Member in the territory of another Member. The Annex on Movement of Natural Persons Supplying Services under the Agreement clarifies that the movement of natural persons for the supply of a service does not encompass persons seeking access to the employment market, and stresses that Members remain free to apply measures regarding citizenship, residence or employment on a permanent basis.

Unlike for other Modes of supply, no Member has fully liberalized services supplied through Mode 4. Most liberalization commitments are connected to movement and employment of personnel necessary for establishment and maintenance of a commercial presence (i.e. executives, managers, specialists). Business in both developed and developing countries considers Mode 4 movements as necessary supplements to commitments in the other Modes of supply.

Barriers to the movement of natural persons include discretionary economic needs tests, quotas, pre-employment requirements and lack of recognition of qualifications obtained in the home country.

It is not possible to estimate precisely the relevance of Mode 4 movements relative to the other Modes of supply under GATS or relative to total migration flows. It is, however, clear that the relative importance is small. Global labour migration numbered about 120 million people in 1996, or 2.3 per cent of the world population, and Mode 4 movements represent just a small fraction of this group. A survey by Pricewaterhouse Coopers looked at intra-company movements in 1997 and 2000 and found that there was almost a doubling of the number of movements in that period (OECD, 2002c). Important reasons for the sharp increase are globalization of production and the need to be able to move key personnel for shorter periods in order to support foreign production, marketing, sales, after-sales services and maintenance.

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In the current services negotiations, both developed and developing countries have demonstrated strong interest in Mode 4 liberalization. In general, developed countries have put more emphasis on Mode 3 related movements, while developing countries have shown greater interest in movements independent of the establishment of commercial presence. Over the past decade, Mode 4 has become more widespread due to local shortages of skills in both developed and developing countries, and the proliferation of global business networks. Local skills shortages can be filled by migrant workers - nurses and ICT staff are prominent examples of this. However, labour market conditions change rapidly as we have seen in the ICT sectors of late. Therefore, one major challenge for the ongoing negotiations may be to reconcile the permanency of GATS commitments with rapidly changing labour market conditions and the flexibility required by technical and organizational changes in the business environment. Other important challenges relate to transparency of immigration regulations, and the concern that temporary Mode 4 movement may lead to *de facto* permanent migration.

What is certain, however, is that the movement of natural persons has been subject to limited opening relative to other Modes of supply (Chanda, 2002). One hundred WTO Members have made commitments under Mode 4. Of a total of 328 entries, 135 relate to intra-company transfers of executives, managers and specialists (one entry is for "others"), while 70 relate to business visitors. Only 17 entries relate to worker categories other than highly-skilled or managerial staff. From a developing country perspective, there is a certain asymmetry in this pattern of protection since developing countries stand to gain significantly through the liberalization of the movement of labour, whereas for commercial presence, it is the developed countries that are the principal sources of capital.

(iii) Gains from services liberalization

Four service sectors of importance to development are business, finance, telecommunications and transport. The potential returns to addressing impediments to trade in these sectors are examined in this subsection. Due to lack of data, there are few good empirical studies of the gains from liberalization of trade in services. There is, however, a growing literature that simulates the impact of liberalization using stylized, but realistic models based on protection data of the type surveyed in the previous section.

Business services

Business services are skill-intensive and offer specific solutions for customers that enhance innovation capacity, productivity and competitiveness. In some cases business services provide a "missing" input that unlocks export potential. Examples are geological and engineering services necessary to produce and export oil and minerals, designer and marketing services necessary for entering fashion markets, and internet services for exporting labour-intensive back-office services.

Foreign direct investment (FDI) and the movement of natural persons are complementary in these services, since key personnel often cannot be found locally due to a scarcity of skills in the host country, but also because skills are to some extent firm specific as each firm specializes in a particular niche of the market. Thus, liberalizing FDI (Mode 3) in these services will not have all the desired effects unless Mode 4 is also liberalized. Markusen et al. (2000) analyse the impact of FDI liberalization in business services in developing countries.[121] They find that entry of foreign business service firms encourages modern manufacturing in the host country. The availability of sophisticated business services provided by foreign firms increases the competitiveness of local manufacturers in their home market, and in some cases also in export markets. The study also finds that even if foreign business service firms bring in many expatriates, these are complementary to local skilled workers. Demand for local skilled workers increases, particularly in the manufacturing firms that switch to modern manufacturing technologies, and the wages of skilled workers increase.

[121] They model FDI in business services and assume that foreign companies must import a specific input in order to set up a business. This specific input can reasonably be interpreted as visits or temporary employment of professional staff.

Financial services

As stated earlier in this report, the way a country utilizes its resources (in contrast to its resource endowment) is by far the most important determinant of its income level and economic growth. The financial sector plays a pivotal role in the efficient allocation of resources across time and space in an uncertain environment. The sector's role in the economy can be summarized in terms of five functions: facilitating the trading, hedging, diversification and pooling of risk; allocating resources; monitoring managers and exerting corporate control; mobilizing savings; and facilitating the exchange of goods and services (Levine, 1997).

In a world of perfect information and no risk, there would be little need for financial intermediaries. However, in the real world information is costly to obtain and there is a considerable amount of risk. Furthermore, there is a trade-off between the risk of projects and their return. Projects with a high rate of return are also often large-scale undertakings with significant gestation periods. In such a world the best projects would most likely not be realized without financial services that can provide long-term funding at the same time as they provide liquidity and savers can easily convert their assets into purchasing power when desired. In those developing countries where the financial sector is shallow and largely confined to providing short-term lending such as working capital, investment projects have to be funded through retained earnings, probably resulting in a number of lost opportunities. It has further been argued that a precondition for the industrial revolution was a preceding development of the financial sector and that financial sector development is a good predictor of future economic growth (Levine, 1997).

The financial sector's relevance for economic development is beyond doubt. But does openness to trade in financial services improve the functioning of the financial services sector? If the answer is yes, trade liberalization in financial services will improve the performance of the liberalizing economy as a whole. For the banking sector, the evidence points to the affirmative. Case studies and cross-sectional econometric analysis surveyed by Levine (2001) find that the presence of foreign banks exerts competitive pressure on local banks and that there is a significant decline in their overhead costs following the entry of foreign banks. In addition, foreign banks often bring new products and may stimulate improvements in domestic supervision and regulation. Thus, although foreign banks often limit their activities to niches in the local market, their mere presence increases competition and improves the performance of local banks, forcing them to improve the range and quality of services provided. Moreover, entry of foreign banks also stimulates the improvement of bank supervisory and legal frameworks.

Poor countries tend to have small financial sectors, characterized by concentrated risks, they have relatively high costs and a narrow range of services. These deficiencies follow from their small markets and the presence of economies of scale in the financial system. As in other sectors discussed in the report, openness to trade allows firms to exploit economies of scale and broaden the service spectre, given that the local and foreign markets are sufficiently integrated. Otherwise foreign banks will face the same problems stemming from a small market as local banks. A recent study (Claessens et al., 2001) indeed finds that foreign banks have higher overhead expenses in low-income countries than in high-income countries. Furthermore, the study finds that foreign banks have higher net interest margins and overhead than local banks in low-income countries (except in Africa). The gains from liberalization in poor countries thus depend on the extent to which liberalization expands the financial market and on the quality of financial sector regulation. Finally, in the financial service sector trade liberalization may increase the exposure to risks related to external shocks and to exchange rate volatility. For these reasons in developing countries with less well-developed financial sectors, poor prudential provisions, and non-market arrangements such as administrative credit rationing and interest rate controls, setting the regulatory framework right is likely to be as important a step as fostering competition from foreign suppliers, and perhaps one that should precede the latter.

Telecommunications

Effective telecommunications provide a low-cost channel for searching, gathering and exchanging information, which in turn is a key input in all economic activities as well as in social interactions. One would therefore expect that the quality and availability of telecommunications services have a significant impact on both the productivity level in the economy and the quality of life. Telecommunications are subject to network effects – the value of a telephone line or an internet connection for one person or firm depends positively on how many other persons or firms are also connected. Therefore the number of connections needs to reach a critical level before there is a significant impact on productivity. A recent study on the impact of telecommunications on economic growth in 21 OECD countries during the period 1970-90 finds a significant and positive linkage between investment in telecommunication infrastructure and economic growth. It also found that the impact was higher in countries with universal services.[122] Because of this, investments in telecommunications tended to have a larger growth effect in more developed economies, although there was a positive growth effect in the entire sample (Röller and Waverman, 2001).

Having established that investments in telecommunication had a positive (but non-linear) impact on growth, and a larger impact than just any investment in equipment in the OECD countries during 1970-90, the next question is whether trade liberalization can affect the telecommunications penetration rate. During the 1990s, most OECD countries and many developing countries liberalized their telecommunications sector. Warren (2000) has estimated the impact of liberalization on telecommunications penetration as measured by the number of mobile and fixed lines per 100 inhabitants. The estimates controlled for other variables, most notably the level of income and population density. He found that the impact of opening to new entrants (domestic or foreign) in the domestic fixed line market had little effect on the penetration rate in countries that already had universal services, although opening did improve the quality of the service (Trewin, 2000). In developing countries, however, the penetration rate increased up to a hundred per cent (in China) as a direct result of liberalization. Similar results are found for mobile networks, and here the gains are even higher.

Using Warren's methodology of estimating the impact of trade liberalization on mobile phone penetration rates, it is found that least-developed countries are much more likely to have a mobile telephone network if they allow foreign companies to enter than if the market is reserved for local companies, usually the incumbent fixed line operator. Furthermore, at GDP per capita levels below $3,500, the difference in penetration rates between closed and open markets is more than a hundred per cent, while the difference declines to about 12 per cent at an income level of $25,000.[123] As these estimates indicate, openness increases the service supply and more so for developing and least-developed countries. Increased service supply in turn improves efficiency in the economy at large, but here we recall that the impact is largest for rich countries.

Transport and other infrastructure services

Transport costs have until recently been largely ignored in trade policy analysis. However, as tariffs and non-tariff barriers to trade come down, transport costs are the remaining barrier to trade and have consequently received more attention. Clearly, transport costs are a function of distance, weight and value of the cargo, and frequency of call at the port, which are more or less given by geography and the properties of the goods being shipped. However, doubling the distance of sea transport only leads to a 20 per cent increase in transport cost. This indicates that there are substantial fixed costs related to infrastructure, port handling, customs clearance etc. that are at least as important as the physical distance between (potential) trading partners (Clark et al., 2001). Clark et al. find that being among the 25 per cent least effective ports is equivalent to being 60 per cent further away from the nearest major market, compared to being in the 75th percentile. It is likely that better regulation and more competition both domestically and from foreign service providers would improve port efficiency and thus lower transport costs (Venables, 2001).

122 Universal service is defined as more than 40 fixed telephone lines per 100 inhabitants.

123 Income levels are given at 1995 dollars in 2000 or latest year available.

Turning to the impact of transport costs on export volume, Radelet and Sachs (1998) have estimated how transport costs affect growth in exports for 43 developing countries, using the CIF/FOB ratio as an indicator of transport costs.[124] They find that an increase in the CIF/FOB ratio of 5 percentage points reduces the long-term annual growth rate of non-primary manufactured exports by 0.2 percentage points of GDP.[125] Clearly, high transport costs impede exports and by implication export-led growth. In addition, if the exporter is a price-taker in international markets, high transport costs lower the net export revenue and wages in the exporting country. It should be noted, however, that not all factors which raise transport costs are amenable to solution simply by introducing competition. Small and distant countries have little control over the behaviour of foreign shipping companies, and problems sometimes relate in the first instance to a lack of investment in basic infrastructure.

To summarize this subsection, financial services, telecommunications, business services and other infrastructural services provide the glue that holds the economy together and low-cost and efficient services improve the workings and productivity of the economy as a whole. The widely shared perception that information and communications technology is a general purpose technology that improves productivity and technological progress in the economy as a whole motivated the Information Technology Agreement. A similar case for well-conceived liberalization could be made for basic infrastructural services.

(f) Implications for the Doha Development Agenda

Market access issues are of primary importance for many WTO Members. Market opportunities, in parallel with the quality of the trading rules, set the stage for the engagement of countries in the trading system. A key issue for developing countries is action on residual levels of tariff and non-tariff protection in developed markets, which are relatively open to imports. This residual protection is to be found predominantly in products of export interest to developing countries, such as agricultural and labour-intensive industrial products. However, given the growing importance of South-South trade (as discussed in Section IB.1 above), developing countries also have an interest in addressing the issue of high tariffs within their own markets. These arguments are in addition to the standard and widely accepted propositions regarding the benefits that accrue to countries from their own liberalization efforts.

Negotiations in the WTO focus on bound tariff rates, which raises the question of the extent to which the current round of negotiations will yield sufficient improvements in market access if they do not target applied rates. Two elements of a development-oriented outcome would be to improve the coverage of bindings on industrial products and to reduce the gap between bound and applied rates. The latter could be achieved through a variety of modalities that would meet the level of ambition and guidelines set down in the Doha Ministerial Declaration (Box IIB.3).

A number of asymmetries permeate market access issues. In the context of tariffs, developing countries have significant scope to improve access to their markets (in addition to what was said above about residual tariff protection in developed countries). In the context of non-tariff measures such as domestic support and export subsidies, it is action by the developed countries that will be of particular benefit both to them and their developing country trading partners.

In other aspects of market access, including trade facilitation, such asymmetry does not exist as a basis for mutually beneficial bargains involving the exchange of tariff and non-tariff measure concessions. Rather, the gains arise from mutual cooperation in increasing transparency and efficiency, subject to ensuring adequate implementation capacity for developing countries.

As far as services is concerned, much scope exists for further liberalization, both autonomously and to take advantage of the value of binding commitments available under the GATS (Gamberale and Mattoo, 2002). The positive list approach of the GATS allows Members to work progressively towards market-opening, at different speeds for different sectors and modes of delivery. The importance from a development perspective of well-priced, efficient and generally available infrastructural services such as transport, telecommunications and financial services has been emphasized. The need for accompanying regulatory reforms at the domestic level, and in some cases reforms that precede liberalization, has also been discussed.

[124] CIF represents the cost of an imported item at the point of entry in the importing country, including insurance, handling and freight costs, while FOB represents the costs of an imported item at the point of shipment by the exporter.

[125] They control for sea distance to the nearest major world market, being landlocked and the initial level of GDP.

Box IIB.3: Modalities for tariff negotiations

A variety of approaches have been used in the past to negotiate the reduction of bound tariffs starting with the request and offer approach. This technique, grounded in the selected product by product approach proved cumbersome and yielded results that were not particularly ambitious. Two significant departures from this approach occurred during the Kennedy Round: industrialized countries adopted a linear tariff reduction technique and developing countries were granted "less than full reciprocity" (Hoda, 2001).

In the Tokyo Round an explicit reference was made to "appropriate formulae". A number of proposals were submitted in response to the mandate, including some that had the effect of higher reductions for higher tariff rates in contrast to a linear reduction.[1] The proposal from Switzerland was ultimately adopted by some countries, which specified the new tariff rate to be calculated as follows:

$$t_1 = \frac{\alpha \times t_0}{\alpha + t_0}$$

where α is a coefficient to be agreed upon by the participants in the negotiations, t_0 is the initial tariff rate and t_1 is the final tariff rate.

In applying this formula some countries used a coefficient equal to 14, others adopted 16. It should be noted that the formula was not universally applied by all countries and those that did apply it did so with exceptions.

The mandates for the Uruguay Round negotiations and the Doha Development Agenda did not specifically mention the use of formulae as the core modality. However, during both negotiations proposals for modalities based on formulae have figured prominently. In the current Doha agriculture negotiations some Members proposed the Swiss formula as stated above with a coefficient of 25. In the non-agricultural market access negotiations the Swiss formula was proposed by the United States with a coefficient of 8 for certain phases of their proposed tariff reduction plan. In addition, variants of the Swiss formula that take into account the diversity of Members' profiles were proposed.[2]

The Chair's draft proposal for the Doha negotiations on agriculture followed the approach used during the Uruguay Round which was a target rate of reduction based on a simple average of out-quota tariff rates with a minimum cut per line.[3] The reductions would apply across three different bands of tariffs with a higher average reduction for tariffs in the high range. Developing countries were proposed a similar approach, but with higher thresholds for tariffs to be reduced and lower percentage reductions.

In the Doha non-agricultural market access negotiations the Chair proposed a number of elements for the reduction of tariffs.[4] The core element is the following formula to be applied on a line-by-line basis[5]:

$$t_1 = \frac{B \times t_a \times t_0}{B \times t_a + t_0}$$

where,
t_1 is the final rate, to be bound in *ad valorem* terms
t_0 is the base rate for negotiations
t_a is the average of the base rates
B is a coefficient with a unique value to be determined by the participants.

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Less than full reciprocity in this context is incorporated into the formula through the t_a coefficient. A higher coefficient implies a lower reduction and developing countries in general have higher average applied and bound tariffs (Chart IIB.5).

The Chair further proposed that Members could consider the elimination of tariffs in certain sectors of export interest to developing countries. As with agriculture, the Chair's proposal in non-agricultural market access takes into account the issue of special and differential treatment for developing countries.

Source: WTO

1 See WTO document, TN/MA/S3/R1 and Panagriya (2002) for more details on the general properties of formulas that have been used for reciprocal negotiations.

2 The various formulae that have been proposed in the Negotiating Group on Market Access are presented in WTO document, TN/MA/S3/ Rev.2.

3 See WTO document, TN/AG/W1/ Rev.1 for the full proposal, including for a possible approach to negotiate domestic support and export competition issues as discussed in the section on non-tariff measures.

4 See WTO document, TN/MA/W/35 for the full proposal.

5 A number of technical criteria are required before the formula can be applied including the definition of base rates and the conversion of *ad valorem* duties into non *ad valorem* duties. These details can be found in WTO document, TN/MA/W/35.

3. FACILITATING OPENNESS FOR DEVELOPMENT

As discussed in Section IIA trade is not an end in itself and neither, therefore, is unqualified trade expansion. But few dispute the proposition that trade can make a strong contribution to development and is a key accompaniment to growth. Specialization through trade allows for a more efficient allocation of resources and can spur greater efficiency through competition. Beyond these static gains, trade can engender technology transfer, deepen and diversify production structures and contribute to the modernization of the economy. These points are well enough known and need no elaboration here.

It is also well understood that developing countries often face constraints that impair their ability to benefit as rapidly from trade liberalization as higher income countries. The importance of an appropriate sequencing of policies and of accompanying trade liberalization with a sound macroeconomic environment and an adequate regulatory base has become better understood. Developing countries may find the burden of adjustment difficult to deal with where governments and individuals lack the resources to finance the transition of workers to other occupations, and where poorly functioning capital and labour markets inhibit necessary shifts in resource use. In some circumstances, trade liberalization may have a particularly negative impact on vulnerable groups within the economy. Moreover, low-income countries with weak institutions may find it hard to take full advantage of opportunities arising from trade liberalization. They will also experience difficulty in implementing certain WTO rules, raising the question of the balance between the resource costs of implementation and the benefits of certain agreements to the economy.

(a) Special and differential treatment

As discussed in Section IIA the evidence is strong that those countries which have sought engagement in the international economy and actively worked to overcome these constraints have done better than those which have tended towards defensive isolation. To the extent that developing countries face different constraints than industrialized countries, a case may be made for special and differential treatment (S&D) in the multilateral trading system. The issue is clearly one of balance and emphasis, which is what makes the identification of appropriate S&D provisions central to developing countries as they determine their national interests in relation to the WTO and the Doha Agenda. Special and differential treatment, however, is hardly a panacea if it is interpreted as an effort to minimize the extent of commitments on the part of developing countries. The idea that less engagement in the WTO means more development may seem foolish when thus stated, but some

critics of the WTO seem to work on the basis of this implicit assumption. Special and differential treatment provisions should focus on policy design and timing questions, and on aligning contractual commitments in the WTO with development needs and priorities. Just as efforts to accept as little as possible by way of commitments will offer scant contribution to development, so too will coercive WTO commitments de-linked from a properly articulated national economic interest.

(i) The history of special provisions for developing countries in the multilateral trading system

An appreciation of the evolution of provisions designed specifically for developing countries in the multilateral trading system provides a helpful perspective in considering the issue of S&D today in the context of the Doha Agenda. For this very brief account of how the S&D issue has evolved in the GATT/WTO system, four phases can usefully be distinguished. The first phase is from the creation of the GATT in 1948 to the beginning of the Tokyo Round in 1973. The second phase is the Tokyo Round itself, from 1973 to 1979. The third phase is from the end of the Tokyo Round to the end of the Uruguay Round, that is from 1979 to 1995. The fourth phase is from the end of the Uruguay Round until the present. These phases have been chosen because they each encompass significant events and tendencies in relation to the participation of developing countries in the multilateral trading system.

The *first phase*, up to the beginning of the Tokyo Round in 1973, was dominated by market access questions, in particular the conditions of access for developing country exports to developed country markets. A notable landmark during this period was the twelfth session of the GATT Contracting Parties, held at Ministerial level in 1957. At that meeting, agricultural protectionism, fluctuating commodity prices and the failure of export earnings to keep pace with import demand in developing countries were identified as undesirable features of the international trading environment. A Panel of Experts was established to examine trends in international trade in light of these concerns. The Panel was chaired by Professor Gottfried Haberler. The 1958 Haberler Report confirmed the view that developing country export earnings were insufficient to meet development needs and focused primarily on developed country trade barriers as a significant part of the problem, although the report also criticized some developing country trade barriers. In response to Haberler, GATT Contracting Parties established three committees to develop a co-ordinated Programme of Action Directed Towards an Expansion of International Trade. Committee III focused on barriers to exports maintained by developed countries. By 1963, Committee III had drawn up an eight-point Plan of Action, which among other things called for a freeze on all developed country trade barriers on products of interest to developing countries and the removal of all duties on tropical and other primary products. The Programme of Action became part of the Kennedy Round (1964-1967) and was never implemented to a significant degree. The impression of repetitious similarity between what was happening in this area forty years ago and the discussion today is unavoidable.

On the institutional front, the shift in development thinking initiated by the Prebisch-Singer thesis was enshrined in the United Nations Conference on Trade and Development (UNCTAD), established in 1964.[126] The birth of UNCTAD, the growing number of newly independent states following de-colonization in Africa, Asia and the Caribbean, the Cold War, and the success of developing countries in placing their issues centre-stage in the GATT all contributed to the decision to establish Part IV of the GATT in 1965.[127] Part IV consisted of three Articles on Trade and Development.[128] While designed to promote development and developing country interests in the trading system, Part IV was never more than a set of "best endeavour" undertakings with no legal force – a fact that has been the source of dissatisfaction among many developing countries to

[126] Developing countries were pushing hard in GATT for improved market access for their primary exports at the same time that "export pessimism" and fear of deteriorating developing country terms of trade resulting from reliance on primary product exports (the Prebish-Singer thesis) dominated the development debate. The latter reasoning provided part of the justification behind the argument that developing countries should diversify into manufacturing industry through import substitution policies.

[127] The numerical preponderance of developing countries was beginning to assert itself at this time. In 1960, 21 Members of GATT were developed countries and 16 developing countries. By 1970 the figures were 25 developed countries and 52 developing countries.

[128] Article XXXVI – Principles and Objectives, Article XXXVII – Commitments, and Article XXXVIII – Joint Action.

the present day. One particularly significant feature of Part IV, however, was the assertion of the principle of non-reciprocity in Article XXXVI:8. Non-reciprocity meant that developing countries would not be expected, in the course of trade negotiations, to make contributions inconsistent with their individual development, financial and trade needs. Non-reciprocity has never been more clearly defined than that, and just like the later and closely linked concept of S&D, a definition of reciprocity or its inverse has eluded the precision that might have avoided some of the debates which continue to dominate the discussion of developing country participation in the trading system.

By the time of the *second phase* in the evolution of this debate (Tokyo Round, 1973-1979), the pendulum in trade policy discussions had started to swing away from import substitution and towards favouring greater export orientation. The inherent limitations and trade-distorting effects of excessive reliance on import substitution were becoming better understood. The move towards a more neutral stance in respect of trade policy incentives implied opening up more to import competition as well as removing the policy bias against exports. From the institutional perspective, Part IV already presaged this second aspect of the trade and development debate in GATT, which was to focus increasingly on developing countries' own trade policies as well as market access for their exports. It was this tendency, coupled with a strong emphasis on non-tariff trade measures in the Tokyo Round that distinguishes the second phase from the first.

Much of the negotiating involvement of developing countries in the Tokyo Round aimed at limiting the extent to which the new agreements (the Tokyo Round "Codes") on non-tariff measures would impose policy limitations or undue administrative or financial burdens on developing countries. This objective, together with continued insistence on the importance of non-reciprocity in market access negotiations, led to three principal results for developing countries. First, developing countries agreed to limited market access commitments and relatively few tariff bindings. Second, the "Code approach" was adopted in respect of the new non-tariff measure agreements, meaning that the agreements only applied to signatories. Many developing countries refrained from signing the various Codes, which covered technical barriers to trade, customs valuation, import licensing, subsidies and countervailing measures, anti-dumping and government procurement.

Third, a new framework was established to define and codify key legal rights and obligations of developing countries under the GATT. The 1979 Decision on Differential and More Favourable Treatment, Reciprocity and Fuller Participation of Developing Countries, also known as the Enabling Clause, provided permanent legal cover for the Generalized System of Preferences, for S&D provisions under GATT agreements, for certain aspects of regional or global preferential agreements among developing countries, and for special treatment for least-developed countries. The Enabling Clause also restated the principle of non-reciprocity, as first spelled out in Part IV, and further stated that developing countries expected their capacity to make contributions or negotiate commitments to improve with the progressive development of their economies and improvement in their trade situation. This was the origin of the notion of "graduation".

Some commentators lauded the flexibility that the Tokyo Round results afforded developing countries, believing it supportive of their development needs. Others considered that the degree of non-engagement implied by these arrangements meant that developing countries gained little from the system. This argument was based on two points – that the GATT did not support developing countries in the formulation of better trade policies, and that because developing countries offered as little as they did in the negotiations, they received little in return from their trading partners. The problem with both these positions, which tended to inform a good deal of the debate during the post-Tokyo Round years, is that they over-simplified reality by failing to distinguish adequately among the dozens of developing countries in the system who faced very different situations and had very different needs. This is a tendency that has persisted to the present and underlies some of the difficulty that the WTO is currently experiencing in its efforts to address S&D issues.

The *third phase* in the evolution of developing countries in the trading system saw a change in direction in the S&D debate. By the end of this period in 1995, when the Uruguay Round was completed, developing countries had assumed a much higher level of commitments within the system than ever before. A number of factors explain this trend. First, some developing countries had enjoyed rapid growth and had succeeded in diversifying their economies, particularly in Asia and to some degree in Latin America. This made them better equipped

to participate more fully in the trading system and changed the nature of their interests in international negotiations. Second, the decade of the 1980s opened with a significant realignment in economic thinking in some major economies, especially the United States. This approach, while not always pursued consistently in the trade policy field by the large trading nations, nevertheless militated against government intervention and emphasized the role of markets, including for development.

A third factor was the sense that the trading system itself needed fixing. The system was trying to confront the challenge of contingency protection provisions, with the increased use of voluntary export restraint arrangements. Regionalism was appearing on the trade policy scene in a more significant way and governments were concerned about the multilateral consequences of this development. Some governments felt it was time for the GATT to tackle agriculture, something it had failed to do for the forty years of its existence. Similar sentiments applied in the case of textiles and clothing. In addition, some developed country governments wished to see the trading system encompass new areas, in particular investment, trade in services and intellectual property rights. Finally, the idea that developing countries ought to assume higher levels of obligation within the system was also increasing in currency.

The single undertaking of the Uruguay Round meant that all WTO Members had to accept all agreements,[129] in sharp distinction to the Code approach of the Tokyo Round. This alone meant an important range of new developing country commitments within the system. Many developing countries significantly increased their tariff bindings, especially in agriculture. In addition, new agreements in services and intellectual property applied to all through the single undertaking.

The *fourth phase* began with a significant challenge for developing countries as they prepared to absorb their new Uruguay Round obligations legislatively and administratively, although in many instances developing countries were accorded phase-in periods for the assumption of new obligations. This period also began with a sense among many developing countries that they had not been given an adequate opportunity to participate in the closing stages of the Uruguay Round and had been presented with a *fait accompli*, particularly as a result of the single undertaking. Linked to this feeling of exclusion was the conviction that not all the obligations assumed under the Uruguay Round package were consistent with national economic interests and development priorities.

Discussions have been held in different contexts over the last few years on how to improve the internal working methods of the WTO in order to ensure that all parties who wish to participate in negotiations and decision-making are able to do so. This matter is very important and will continue to be discussed, but does not explicitly form part of the Doha Agenda. On the policy side, however, the "implementation" debate was soon engaged and became a major element in the discussions at Seattle, at Doha and beyond. Two distinct elements inform the implementation discussions. One concerns the difficulty some developing countries are encountering as they seek to implement their obligations, bearing in mind the costs, administrative aspects and human capital requirements of implementation. Efforts are being made to address this aspect of implementation through augmented technical assistance and capacity building efforts. The other aspect of implementation relates to the substantive provisions of various WTO agreements. Developing countries are seeking modifications to many provisions on the grounds that they need to be made more operationally effective in order to support development and/or less restrictive in relation to the degree of policy flexibility afforded developing countries.

Some progress was made on implementation issues at Doha, but elements of this discussion are continuing. At Doha, another exercise was launched, focusing specifically on making S&D provisions more effective. At the same time, Paragraph 44 of the Doha Declaration calls for a review of all S&D provisions "with a view to strengthening them and making them more precise, effective and operational". Both the implementation and

[129] The only exceptions were the plurilateral agreements on government procurement, trade in civil aircraft and dairy and meat products.

S&D discussions have been the focus of many hours of meetings and many issues remain unresolved. This will be discussed further below. For the present, however, it is sufficient to note that these issues are going to be central to discussions throughout the Doha negotiations, and a successful outcome of the negotiations will require further progress on this front.

(ii) A typology of S&D provisions

Special and differential treatment provisions seek to address a lack of institutional capacity and resources for the management of trade policy. They also seek to render the trade policy regime as supportive as possible of the development aspirations of developing countries. How does this general formulation find expression in particular provisions and policy approaches? There are different ways of distinguishing among types of S&D provisions. The WTO Secretariat has developed a six-fold taxonomy of such provisions.[130] The six categories are: (i) provisions aimed at increasing the trade opportunities of developing country Members; (ii) provisions under which WTO Members should safeguard the interests of developing country Members; (iii) flexibility of commitments, of action, and use of policy instruments; (iv) transitional time periods; (v) technical assistance; and (vi) provisions relating to least-developed country Members. Each of these will be considered briefly.

The most prominent form of S&D treatment under category (i) is preferential access to developed country markets through such arrangements as the Generalized System of Preferences (GSP). Other references to measures aimed at increasing trade opportunities for developing countries can be found in various provisions and agreements, including Part IV, the Agreement on Agriculture, the Agreement on Textiles and Clothing and the General Agreement on Trade in Services. Most of these provisions are of a "best endeavour" nature.

Much has been said and written about preferences over the years, particularly the GSP. The picture is mixed. It appears that while some countries have been able to make good use of preferences at particular points in their development, schemes like the GSP have been of limited utility to most developing countries in terms of expanding their exports.[131] Among the explanations that have been offered for this situation are supply-side constraints in developing countries, administrative complexities attached to the schemes, and a lack of stability in schemes that are essentially voluntary in nature and sometimes discriminatory among potential beneficiaries. Additional factors are that schemes like the GSP are subject to "graduation" criteria defined by the importing countries and are eroded over time through MFN liberalization. To the extent that preferences have proved useful, there is always an additional risk that beneficiary countries may have specialized in areas where they do not possess comparative advantage. The erosion and eventual elimination of preference margins in these circumstances may imply adjustment costs and a need to reallocate resources. The above considerations suggest that while preferences may promote development in some circumstances, they may not be as useful as contractually based non-discriminatory liberalization, and should in any case be subject to careful assessment before too much negotiating effort is invested in seeking preferential access.

Category (ii) measures involve actions that may be taken or avoided by Members in order to safeguard or promote developing country interests. Provisions covering such measures are to be found in a wide range of agreements and instruments, and in some cases are mandatory in nature. According to WTO document WT/COMTD/W/77, there are 47 provisions of this nature contained in 13 WTO agreements and two decisions. These provisions vary a good deal in their potential impact and it is impossible to generalize as to their adequacy or utility. Similarly, category (iii) provisions, which offer greater flexibility to developing countries in terms of commitments and actions, span ten different WTO agreements and are some 50 in number. Again, the extent to which such provisions serve development objectives in developing countries can only be assessed in relation to the individual measures concerned and the capacity of individual developing countries to take advantage of them. Category (iv) provisions allow developing countries longer time-frames within which

130 WT/COMTD/W/77/Rev.1

131 See, for example, Brenton (2003), Mattoo, Roy and Subramanian (2002) and Özden and Reinhardt (2003).

to comply with their obligations. All of the 19 phase-in provisions of this nature relate to Uruguay Round agreements. In some cases, extensions of phase-in periods are envisaged. Implementation delays are intended to provide developing countries with extra time to develop institutional and human capacity to meet new obligations, as well as additional economic adjustment time to meet new policy conditions. Whether these delays are useful and sufficient from a development perspective will generally depend on specific conditions facing individual developing countries.

Category (v) provisions on technical assistance feature in six different agreements, where implementation costs and capacity requirements may be considered higher than in other agreements. It should be noted that technical assistance is made available not only in respect of those agreements where technical assistance is mentioned – it is generally available to developing countries in relation to their participation in the WTO, subject to resource constraints. Technical assistance and capacity building will be discussed separately in the next section. Finally, category (vi) provisions in favour of least-developed countries number some 24 in total and can be found in seven different agreements and three decisions. As with the provisions generally available to developing countries described above, the value of measures and dispositions envisaged exclusively for least-developed countries can only be judged in the specific context of the provisions themselves and the individual intended beneficiaries.

(iii) Special and differential treatment and the Doha Development Agenda

The prolonged discussions on implementation before and after Doha and on S&D since Doha have highlighted important issues that need to be addressed more effectively before real progress can be made in the negotiations.[132] The work done so far cannot leave any doubt about the importance for a significant segment of the membership of defining an appropriate approach to special and differential treatment and an adequate set of provisions thereon. The fact that there are more than 150 S&D provisions in the WTO agreements greatly complicates matters, not least because taken individually, these provisions vary greatly in their degree of importance from a development perspective. The tendency in discussions so far to place so many provisions on the table has rendered more difficult the analytical task of identifying what matters most.

Developing countries have shown some reluctance to allow the discussion to move in the direction of considering further the objectives, principles and modalities that should underlie the WTO's approach towards special and differential treatment. This reluctance is partly driven by the concern that such a discussion will deflect attention from the specifics of what developing countries believe S&D provisions should comprise. At the same time, developed countries have been unwilling to consider some of the more far-reaching proposals on how to improve S&D provisions outside a negotiating context. Movement will be required on the specifics of S&D provisions as well as on the broader systemic questions before Members can come to closure on this aspect of the Doha Development Agenda.

Who should benefit?

The notion that "one size does not fit all" is firmly embedded in S&D discussions. For some, this simply means that individual developing countries must enjoy the necessary flexibility to apply measures and exercise rights so that their involvement in the multilateral trading system responds fully to their trade, financial and development needs. But others are concerned that variable geometry will accord advantages to some developing countries at the expense of others. Clearly, the fewer Members that have access to S&D, or more precisely, the lower the per capita income levels of qualifying beneficiaries, the more far-reaching will be the provisions. The greater the differences in obligation levels, the more likely it is that countries will feel that exemptions for others are prejudicial to their own interests. Therein lies the challenge of achieving a balance that responds to the demonstrable needs of every Member. In light of these considerations, it is not surprising that a good deal of discussion has focused on which countries should enjoy access to S&D, and how much S&D individual countries should enjoy, rather than on the principle of flexibility. In other words, if

[132] For discussions on S&D, see for example, Kessie (2000), Michalopoulos (2000), Pangestu (2000), Whalley (1999), and WTO (1999b).

WTO provisions are to be tailor-made to respond to different priorities and needs among the membership, this implies a flexibility that distinguishes not just between developed and developing countries, but among developing countries. This is taken by some to mean "graduation" for certain developing countries. But what would graduation mean in practical terms?

The graduation issue has proved just as intractable as any effort to agree upon a formal definition of developing country status in the WTO.[133] For political reasons, if not economic ones, this situation is unlikely to change. An effective approach, therefore, would seem to require greater reliance on systematic analysis rooted firmly in developmental considerations. If it is true that "one size does not fit all", it follows that we require a frame of reference to define the content of S&D provisions and identify those Members for whom access to such measures is essential. The latter aspect of identifying appropriate S&D might be assisted by efforts to define provisions in a manner that automatically determines access thresholds for individual Members. This would also help avoid what many potential beneficiaries of S&D fear, which is that in trying to link S&D as closely as possible to particular development needs, an unwelcome element of discretionary decision-making could become part of the WTO approach in this area. An additional factor to bear in mind is that while individual Members may be reluctant to acknowledge explicitly a change in their development status, in practice it is not difficult to trace reduced recourse to S&D provisions in various developing countries over time. An implicit approach has the advantage of recognizing the evolutionary nature of the development process.

The design of S&D provisions

Some Members have argued that if "one size does not fit all", this must be understood in a time-specific context. In other words, S&D provisions should not define a permanent distinction among Members in terms of their WTO obligations, but only a temporary one. Special and differential treatment provisions should, therefore, be limited to phase-in periods. One problem with specified time periods is that they are a blunt criterion applied to a large number of countries facing quite different conditions. A uniform approach in the face of diversity creates contention. Moreover, even if that were not a problem, it is no easy matter to determine an appropriate phase-in period to match development needs. Mention has already been made of provisions that intrinsically define the beneficiaries of S&D through thresholds linked to a development benchmark. Provisions designed in this manner make any discussion of limited phase-in periods unnecessary. They also imply that if countries develop successfully, the same rules will fit all countries. An example of an S&D provision that automatically defines which Members benefit from it is the national income threshold in the Agreement on Subsidies and Countervailing Measures.

As noted above, the Tokyo Round agreements and arrangements elaborated various GATT rules on non-tariff measures which offered a choice to developing countries as to whether or not they would become signatories. These Tokyo Round "Codes" also contained S&D provisions, but the important point is that governments could simply decide not to be bound by particular agreements. This bifurcated approach to rule-making was eliminated through the single undertaking at the end of the Uruguay Round. A discussion of an "opt-in, opt-out" approach with respect to proposals on new areas of rule-making briefly took place during preparations for the Doha Ministerial Meeting. When the Tokyo Round Codes applied, a frequently heard concern was that selective membership of such agreements undermined the coherence of the trading system. The question whether the Codes were fully MFN-based in terms of the obligations they imposed on signatories was never resolved. Some developing countries were also concerned that if non-participation was an option, agreements might be less sensitive to the interests of potential non-signatories. In other words, the dynamic of negotiations involving the prospect of opt-out would not favour careful consideration of the interests and needs of poorer countries. Yet these countries would one day be expected to adhere to the agreements. Finally, treating S&D as a matter for discrete decision about participation rather than a continuing process of engagement over time did nothing to ease the difficulty of defining the circumstances in which countries should sign on. If an "opt-in, opt-out" approach is considered further, these are questions that will have to be addressed.

[133] The agreed definition of least-developed country status was established in the broader framework of the United Nations and later adopted by the GATT.

Another approach to defining differentiated levels of participation and commitment in the WTO emerged from the negotiations on basic telecommunications and financial services immediately following the completion of the Uruguay Round. The notion of "critical mass" was introduced and Members were willing to make MFN commitments to open further their markets even though the negotiations did not involve the full membership. To the extent that the telecoms and financial services negotiations dealt with market access, there was nothing very innovative about the approach, since tariff negotiations based on MFN and driven by reciprocity have always had to deal with the problem of free-riding. The final package in every tariff negotiation under the GATT/WTO has implicitly defined a critical mass of acceptable participation. However, an important development in these post-Uruguay Round services negotiations occurred in telecoms, where a legally binding, MFN-based "reference paper" defining regulatory principles for major suppliers of certain services was adopted on the basis of a judgement on acceptable critical mass. Those who did not accept the reference paper, or who accepted only part of it are expected to revisit the matter at a later date, including in the context of a future negotiation. A question that merits consideration is whether a similar approach might work in other rules negotiations. Such an outcome might not differ greatly from an "opt-in, opt-out" scenario, except that it does not draw such a sharp distinction between insiders and outsiders, and it is firmly anchored in a MFN approach.

How can the S&D discussion be moved forward?

Nobody challenges the legitimacy of arrangements seeking to ensure that developing country participation in the multilateral trading system contributes to development to the fullest extent possible. Little is to be gained, therefore, from continuing reiteration of matters of principle in relation to special and differential treatment. The challenge is how to define access to S&D in a manner that supports development. A practical, analytically clear and needs-driven approach is required. Two guiding principles suggest themselves.

First, in order for S&D provisions to be strengthened and made more precise, effective and operational, they need to be designed to respond to the specific development needs of individual Members. The challenge is to attain the requisite degree of flexibility in the design and application of special and differential treatment measures without according undue discretion either to beneficiaries or their trading partners, and without generating pressures for developing countries to forsake access to S&D treatment when this is still needed from a development perspective. A needs-based approach of this kind requires an examination of how far it makes sense to rely on provisions that are undifferentiated in respect of developing countries facing significantly different economic conditions.

Second, S&D provisions designed to respond to clearly articulated development needs are more likely to be effective. An emphasis on such precision is a necessary accompaniment of provisions that are designed to respond to specific needs. This approach avoids undue politicization and symbolism, tendencies that are unlikely to support the development of effective S&D provisions.

Measures defined to specify automatically the conditions that must be present in a country before it can benefit from S&D provisions combine three advantages. First, such measures are automatically flexible and able to respond to country-specific needs. Second, since this approach requires the identification of thresholds, it lends itself to economically based reasoning, thereby favouring analysis over a politically driven assertion of need or denial. Third, once the thresholds are established, it is unnecessary to consider further any differentiation among countries.

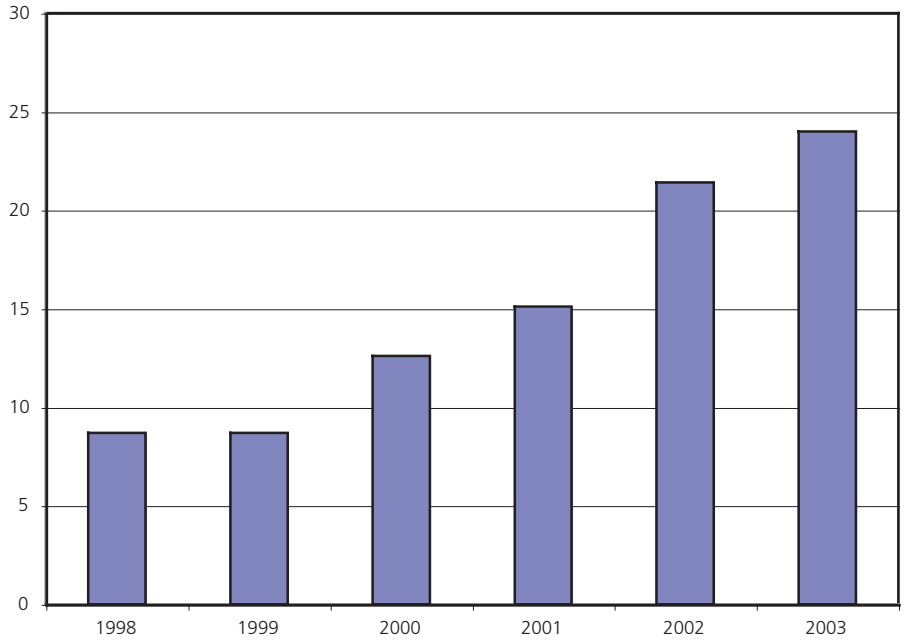
Not all S&D provisions readily lend themselves to this approach. But appropriate flexibility and needs-driven analysis will be no less important in such circumstances. Non-binding provisions, for example, are often "best endeavour" undertakings applied at the discretion of trading partners, with attendant uncertainty as to how and when they will provide benefits to developing countries. This is the reason that the Decision on Implementation-Related Issues and Concerns adopted at Doha contemplates the possibility of making non-binding S&D provisions mandatory. Discussions in the Special Session of the Committee on Trade and Development have revealed differences among Members on the question whether it is possible or desirable to make certain provisions mandatory. This discussion is likely to continue in one form or another after the Fifth

Ministerial Meeting. Where S&D provisions can be improved by being made mandatory, it would still be for consideration whether they could be designed to incorporate elements of development-related automaticity. In cases where transitional time periods are contemplated, the question would be whether a way could be found to link phase-in periods to a threshold condition.

(b) Technical assistance and capacity building

The Doha Declaration marked a new departure in the GATT/WTO approach to technical assistance and capacity building. While references to the need for technical assistance can be found in Part IV, the Tokyo Round agreements and arrangements and the Uruguay Round texts, the importance of this kind of support for developing countries is more strongly emphasized in the Doha Declaration. Paragraph 38 of the Declaration states that "technical cooperation and capacity building are core elements of the development dimension of the multilateral trading system". In addition, specific commitments on technical assistance and capacity building form an integral part of the negotiating mandates on market access for non-agricultural products and trade and environment, and of the work programmes on trade and investment, trade and competition policy, transparency in government procurement and trade facilitation. This is in addition to commitments on assistance in the mainstreaming of trade into national plans for economic development and poverty reduction, effective coordination with bilateral donors and international institutions, and the provision of secure and predictable funding. The overall result of these developments is a significant expansion in the technical assistance activities of the WTO (Chart IIB.11).

Chart IIB.11
WTO budget allocation for technical assistance activities, 1998-2003
(Million of Swiss francs)



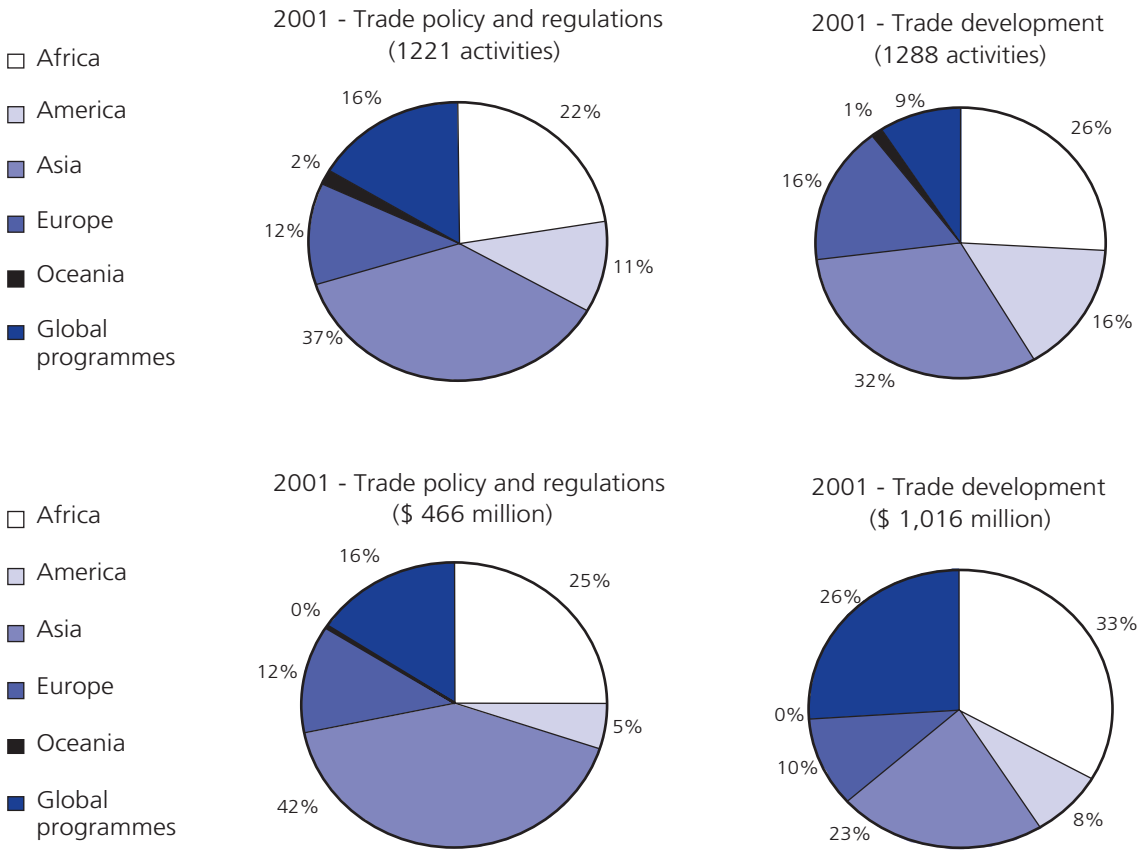
Source: WTO.

This intensified focus on technical assistance and capacity building was in no small part the result of the single undertaking in the Uruguay Round and the additional commitments that this implied for developing countries. It also arose from the proposals of some Members to incorporate the Singapore issues into the negotiations. Perhaps the most significant aspect of the current approach to technical assistance and capacity building is that it has acquired a certain negotiating overlay. The counterpart to technical assistance and capacity building commitments linked to particular negotiations and areas of work is that potential beneficiaries consider that their capacity to negotiate is conditioned by the extent and effectiveness of this kind of support. This reality emphasizes the importance of focusing on the quality rather than mere quantity of assistance, and of directing activities towards those areas where beneficiaries feel the most need.

Effective technical assistance and capacity building is multi-faceted, and the scope of the WTO's contribution is circumscribed by its functions and competence. Other agencies and governments offer complementary activities and support to developing countries. The WTO's efforts are focused on human capital development. This essentially concerns the acquisition of knowledge about international trade and the trading system, combined with the technical skills to identify, articulate and defend national interests in the field of trade. Other agencies and governments provide similar support in this area. Some of them are also engaged in other aspects of assistance and capacity building, such as providing physical infrastructure and support in other areas of economic policy. The joint provision of support makes coherence among agencies and governments involved essential for effectiveness.

Three fundamental challenges face the WTO as it continues to develop its technical assistance and capacity building programme. First, all technical assistance and capacity building efforts are ultimately judged on how effectively they transfer knowledge and skills on a durable basis. This means achieving a situation in which beneficiaries can both participate effectively in the WTO and take responsibility for their own training and capacity-building needs. In other words, what does WTO technical assistance and training activity leave behind? What does it build? Careful design of programmes in full consultation with beneficiaries, partners and donors is essential. Following the expansion of its technical assistance and capacity building activities, the WTO, other international agencies and governments have been working with some success to provide improved services that respond to the needs of Members (Chart IIB.12).

Chart IIB.12
Distribution of trade related technical assistance and capacity building by number of activities and value
(Million of Swiss francs)



Source: OECD/WTO Doha Development Agenda Trade Capacity Building Database.

Second, if trade policy and WTO commitments are super-imposed onto the domestic policy structure rather than being integrated into that structure, it is very likely that policy contradictions will arise and the WTO will come to be regarded as an unwelcome harbinger of obligations imposed from the outside. Sound trade policy and effective participation in the WTO require that trade considerations become an integral part of a country's overall policy framework. Many factors determine the success of countries in attaining their development objectives. If governments fail to take account of how policies interact and the ways in which different economic and social policies contribute to national objectives and priorities, incoherence will temper success. Growing appreciation of this reality has led to a new emphasis on "mainstreaming" trade policy into the domestic policy framework. The WTO has a role to play in its technical assistance and capacity building efforts, along with other agencies and governments. The Integrated Framework for Trade-Related Technical Assistance to Least-Developed Countries is a major programme in which the WTO has participated with other agencies to develop a fully integrated approach to meeting the challenges of development (Box IIB.4).

Box IIB.4: Integrated Framework

The Integrated Framework (IF) was launched at the High Level Meeting on Integrated Initiatives for Least-Developed Countries' Trade Development in October 1997. At the original launching of the IF, the objective was to increase the benefits that LDCs would derive from the trade-related technical assistance available to them from the six core agencies involved in the IF (IMF, ITC, UNCTAD, UNDP, World Bank and WTO) as well as from their other (bilateral and multilateral) development partners, and to deliver such assistance in response to LDCs' needs assessments. The IF sought to assist the LDCs in enhancing their trade opportunities and in responding to market demand as well as to integrate them into the multilateral trading system. In the first three years of its operations, the IF made modest contributions to meet the original objectives established by the 1997 High Level Meeting. The Framework was reviewed in 2000 and reshaped subsequently.

The two objectives of the redesigned IF are: the use of the IF as a mechanism to "mainstream" (integrate) trade into the national development plans or poverty reduction strategies of least-developed countries; and, (ii) the use of the IF as a mechanism to assist in the coordinated delivery of trade-related technical assistance in response to needs identified by the LDC.

The revamped IF defines three broad steps for mainstreaming and subsequent presentation by the LDC of its prioritized list of trade-related sectors in need of assistance to its development partners. First, a diagnostic trade integration study (DTIS) is prepared for each country. The DTIS assesses the competitiveness of the economy and identifies the impediments to the effective integration into the multilateral trading system and the global economy. Second, based on the findings of the study, an Action Matrix is developed, in consultation with all stakeholders at a national IF Workshop. The Action Matrix spells out a set of policy recommendations and priority technical assistance needs to overcome the constraints identified in the study. These technical assistance needs may cover a wide range of activities such as: assistance for private investment promotion activities, study of craft work exportable potential, institutional capacity building, implementation of customs modernization, development of tourism, fisheries products promotion centre, trade negotiations capacity building, quality control and improvement of quality of exports, land access, measures to strengthen the competitiveness of public utilities, improvement of the judicial system, improvement of sectoral competitiveness. Lastly, the trade policy priorities are incorporated into the national Development Plan, such as the Poverty Reduction Strategy Papers (PRSPs), and the priority technical assistance needs are fed into donors' financing fora, such as the Consultative Groups (CGs) or UNDP Round Tables, which provide the LDC with the platform to present its trade-related technical assistance needs to its traditional development partners.

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The implementation of the revamped IF began with a Pilot phase of three countries in May, 2001 – Cambodia, Madagascar and Mauritania – and was extended to eleven LDCs before the Doha Ministerial (Burundi, Djibouti, Eritrea, Ethiopia, Guinea, Lesotho, Mali, Malawi, Nepal, Senegal and Yemen). Heads of Agency at their first meeting of February 2001, had noted that additional IF DTIS would be preceded by a thorough evaluation of the IF. Accordingly, a decision on extension has been deferred and will be taken within the context of the evaluation of the IF. The second evaluation of the IF will take place this year. In addition, implementation of follow-up activities to the IF Round Table Meetings held under the "old IF" scheme in five countries is on-going: Bangladesh, the Gambia, Haiti, Tanzania and Uganda.

In 2002, of the fourteen LDCs to which the "revamped" IF has been extended, pilot DTIS studies were completed for Cambodia, Lesotho, Madagascar, Malawi, Mauritania, Senegal and Yemen and initiated for Burundi, Djibouti, Ethiopia, Guinea, Mali and Nepal. Completion workshops were held in 2002 for Cambodia, Mauritania and Senegal, while Lesotho held its national IF Workshop in February 2003.

The management structure of the IF includes the Integrated Framework Working Group (IFWG), which is responsible for the day-to-day management of the IF. The IFWG is chaired by the WTO and consists of representatives of the six agencies and two special representatives each from least-developed countries and the donor community. The Integrated Framework Steering Committee (IFSC) was established to improve transparency of the operations of the IF. The IFSC is a tripartite arrangement and consists of equality representation by the six agencies, donors and LDCs. In practice, all WTO Members and Observers are invited to attend IFSC meetings. The WTO, which houses the IF Secretariat, services both the IFWG and the IFSC.

The IF has a Trust Fund, established in March 2001 by voluntary contributions from multilateral and bilateral donors. The Fund finances the preparation of the DTIS but also follow-up activities from the studies. Consultations on this latter function are on-going with a view to clarifying its terms of reference. As of 10 March, 2003, total pledges to the IF Trust Fund amount to $11.8 million.

The third basic challenge facing the WTO is how to forge effective partnerships with other agencies to provide trade-related support to Members. The need for this kind of co-operation is obvious from the above discussion on the importance of fully integrated policy approaches – agencies have different but related mandates and expertise. Effective co-operation among agencies and governments involved in technical assistance and capacity building is also vital because of the costs that arise from unco-ordinated activities in terms of duplication and additional demands made on the intended recipients of assistance. In addition to the Integrated Framework, the WTO is part of the inter-agency Joint Integrated Technical Assistance Programme to Selected Least-Developed and Other African Countries (Box IIB.5). In addition, the WTO is working with the OECD to establish a comprehensive data base of trade-related technical assistance provided by governments and international agencies. This data base is a valuable tool for supporting coherence.

In addition to the IF and JITAP programmes, the WTO, in many cases with other international agencies, is engaged in a range of other technical assistance activities, both at the regional and national levels. These activities tend to focus increasingly on providing support in respect of specific aspects of the WTO's activities, in particular issues subject to negotiation or included in the Doha work programme. These activities are organized in response to specific requests from Members. They are frequently of short duration, aimed at officials that are already specialists.

Box IIB.5: Joint Integrated Technical Assistance Programme

JITAP – the Joint Integrated Technical Assistance Programme – mobilizes the expertise and support of the World Trade Organization (WTO), the United Nations Conference on Trade and Development (UNCTAD) and the International Trade Centre (ITC) to help African country partners benefit from the multilateral trading system (MTS). JITAP is the first programme that the three organizations have established to deliver jointly a broad range of selected technical assistance inputs to a number of countries simultaneously, focusing mainly on capacity-building.

Between 1998 and 2002, the Programme covered eight countries, namely Benin, Burkina Faso, Côte d'Ivoire, Ghana, Kenya, Tunisia, Uganda, and Tanzania. Thirteen donors contributed $10 million to the overall budget.

A new phase of the Programme which begins in January 2003 will run for four years and cover eight additional countries namely, Botswana, Cameroon, Malawi, Mali, Mauritania, Mozambique, Senegal and Zambia. The estimated budget is $12.6 million. The 16 countries in the new phase represent a careful balance among LDCs, non-LDCs, different sub-regions of Africa, and different linguistic groupings.

JITAP's three objectives are to:

- build national capacity to understand the evolving MTS and its implications for external trade;
- adapt the national trading system to the obligations and disciplines of the MTS;
- seek maximum advantage from the MTS by enhancing the readiness of exporters.

The Programme is based on a partnership among the executing organizations and the participating countries, with a close supervision of the donor countries on the progress made and outstanding issues. As much as possible, it favours using national human resources to undertake the planned activities, including the experts and trainers trained under the programme itself. JITAP also promotes networking as a guarantee for the sustainability of the capacity built. The institutional support is also part of the programme priorities, namely in the form of setting up Reference Centres and strengthening the Inter-Institutional Committees (IICs) as frameworks to coordinate MTS issues in the countries, and to prepare negotiations.

The Institute of Training and Technical Cooperation of the WTO Secretariat, in cooperation with other Divisions, has been expanding its training activities. The capacity to deliver the WTO's three-month residential trade policy courses was doubled in 2002. The WTO has also begun to work in partnership with local institutions in developing countries to deliver three-month trade policy courses in different regions. Two such courses were held in 2002, one in Kenya for English-speaking African countries and another in Morocco for French-speaking African countries. Additional courses of this kind are planned. The regional courses represent a new departure for the WTO in that they are intended not only to train government officials, but also to act as a vehicle for building lasting knowledge and training capacity in developing countries. The courses are taught jointly by WTO Secretariat officials (and other specialists from outside the region) and specialists with some WTO expertise from different universities and policy institutions within the region in which the courses are held. The joint teaching is intended to build a partnership that involves a continuing transfer of responsibility for the courses to the local partners. Other activities with the specialists from developing countries include periodic meetings to discuss the design and evolution of the courses and the development of a research network that includes other international agencies besides the WTO. The WTO also organizes "training of trainers" events which share the same objective of transferring trade-related knowledge and skills to developing countries.

(c) Other policy areas of particular interest to developing countries

(i) Trade and technology transfer

Technology transfer is a core development issue, a fact which was recognized by Ministers at the Fourth Ministerial Meeting when they agreed to establish the Working Group on Trade and Transfer of Technology. The objective of the group is to examine the relationship between trade and transfer of technology and any possible recommendations on steps that might be taken within the mandate of the WTO to increase flows of technology to developing countries. Technology transfer had never been included explicitly on the GATT/WTO agenda before.

Basic issues relating to the developmental significance of the effective transfer, diffusion and absorption of technology have been discussed above in Section IIA.[134] The role that the WTO might play in enhancing the transfer of technology to developing countries relates, *inter alia*, to the potential impact of liberalization on high technology, intermediary sectors and relevant service sectors. It also concerns issues related to investment, design of competition policies, intellectual property rights, government procurement, technical assistance and capacity building. It is important to ensure that provisions in such areas as TRIPS, GATS and in other WTO agreements support the creation of an environment that promotes effective technology transfer.

(ii) Trade, debt and finance

Following proposals by a group of developing countries during the preparations for the Fourth Ministerial Conference at Doha (WTO documents, WT/GC/W/444, WT/GC/W/445), Ministers agreed to establish a Working Group on Trade, Debt and Finance under the auspices of the General Council.[135] In accordance with its mandate, the Working Group examines from an analytical point of view the relationship between trade and finance as well as trade and debt with a view to developing a better understanding of such linkages, and possibly making recommendations that fall within the WTO's remit. Developing countries feel that a better understanding of the – often indirect or insufficiently clear – role of trade in the prevention/remedy of financial crises and the easing of debt burdens on the one hand, as well as of the effects of financial instabilities and excessive debt on developing countries' trade on the other, is necessary in order to better harness the process of further multilateral trade liberalization for development.

The role of trade in addressing problems of debt and finance

The role that trade can play in addressing financial problems was borne out during the recent Asian financial crisis. During that period, it was crucial that affected countries – characterized by excess capacity and depreciating exchange rates – were able to increase exports, even of sensitive products (e.g. steel, semi-conductors, electronics), as trading partners were bound by WTO rules and commitments and could not simply respond with a tightening of restrictions (WTO, 2002e). For indebted countries, increased trade secures reliable inflows of foreign exchange to service debt. A liberal trading regime is equally important in the prevention of financial crises and excessive debt burdens. Open trade is conducive to an efficient allocation of resources, the elimination of anti-export bias and the strengthening of the resilience of an economy to external shocks. It helps to preserve healthy corporate balance sheets and prevent non-performing loans in the banking sector. Financial services liberalization and the presence of foreign services providers strengthens the stability of the financial system through a variety of factors that improve financial intermediation (Kono et al., 1998). It is also likely to broaden the range of debt instruments with a more balanced maturity structure, reducing short-term

134 See WTO documents WT/WGTTT/W/1 and WT/WGTTT/W/3 for a deeper discussion on these topics.

135 The mandate of the Working Group, as set out in Paragraph 36 of WTO document, WT/MIN/(01)/DEC/W/1, reads as follows: "We agree to an examination, in a Working Group under the auspices of the General Council, on the relationship between trade, debt and finance, and of any possible recommendations on steps that might be taken within the mandate and competence of the WTO to enhance the capacity of the multilateral trading system to contribute to a durable solution to the problem of external indebtedness of developing and least-developed countries, and to strengthen the coherence of international trade and financial policies, with a view to safeguarding the multilateral trading system from the effects of financial and monetary instability. The General Council shall report to the Fifth Session of the Ministerial Conference on progress in the examination.".

loans that have exacerbated financial difficulties in many countries in the past (WTO, 1999). In the longer term, higher incomes as a consequence of trade can pave the way to a more advantageous debt structure and improved credit ratings.

The impact of debt and financial difficulties on trade

By the same token, financial instability and excessive debt are undesirable in view of their individual and combined impact on production and trade. A crunch for credit during financial crises can adversely affect production, investment and export and import volumes by increasing costs of financing and making it more difficult to get capital at all (WTO, 1999a). Financial turmoil and the concomitant decline in domestic demand have a negative effect on exports by third countries, possibly undermining growth in the latter as well (WTO, 1999a). Sustained exchange rate movements triggered through capital flight can translate into changes of relative prices and lead to a reallocation of resources between sectors (Dell'Ariccia, 1998). Production structures can be destabilized in countries relying on a given set of price-based measures, such as tariffs, for the protection of industries. This can increase the pressure to employ quantitative restrictions on trade. Indebted countries may not only see their foreign-currency-denominated debt soar, but also find it harder to attract other forms of capital. They may be faced with worsening terms of new debt if real exchange rates depreciate. In addition, excessive external debt has to be serviced with foreign exchange that could otherwise be used for imports.[136] Given the high import content of many developing countries' exports, their overall trade performance can be severely affected (WTO, 2002f).

Coherence in global economic policy-making

Besides studying interlinkages of this kind, the Working Group has also undertaken to consider the issues of debt and finance from a coherence point of view. Achieving greater coherence in global economic policy-making through cooperation with the IMF and the World Bank is one of the five core functions of the WTO (WTO, 2002g). A better understanding of trade, debt and finance issues may encourage coherence efforts in a number of ways. Most notably, it may give further impetus to meaningful improvements in market access for products of particular export interest to developing and least-developed countries – and, in particular, a reduction of tariff escalation to allow for diversification of production – in order to help them secure adequate foreign exchange reserves and sustainable levels of debt.

Coherence in trade, debt and finance issues also refers to the question of how and when to liberalize the financial sector. In view of the lessons learnt from the Asian crisis, it seems advisable that appropriate financial sector reform – and the putting in place of adequate prudential regulation and supervision in particular – not lag behind the pace of liberalization. Coordination, especially with the IMF, and an assessment of the capacity to adopt internationally accepted standards for financial systems are important in this regard (Kenen, 2001; Wijnholds et al., 2001). At the same time, financial sector liberalization ensures competition as well as the transfer of skills, technology and management techniques needed to achieve higher efficiency, lower costs of financial transactions and a wider choice of financial instruments (WTO, 1998; WTO, 1999a). As noted above, Kono et al. (1998) conclude that, even in a weak policy environment, the liberalization of financial services, can make an important contribution to the strengthening of financial stability.

As financial services and capital account liberalization are two distinct but closely related matters, ongoing discussions in the Working Group on Trade and Investment on the practicalities of distinguishing short-term from long-term flows, such as FDI, are also relevant in this context (WTO, 2002h). While the availability of other forms of capital reduces the need to engage in risky external borrowing and can therefore contribute decisively to the avoidance of excessive debt, the case for temporary capital controls in crisis prevention and resolution has also been made (Eichengreen, 1998). As a new, but related coherence matter, for which the

[136] It should be noted that reasonable levels of foreign borrowing are likely to enhance growth. It is, however, important that borrowed funds are used for productive investment that generates a sufficient return to cover debt repayment.

appropriate institutional mechanisms still need to be found, it may be useful to consider appropriate means of securing short-term trade-financing in exceptional circumstances, such as the Asian financial crisis, when it is difficult to gain access to traditional financing instruments for export, such as letters of credit (WTO, 2002g; Stephens, 1998).

The role of the WTO in issues of debt and finance

The WTO is certainly not in a position to correct major exchange rate disequilibria or forgive excessive debt burdens. However, it can improve its complementarity with other relevant institutions by building on its role in absorbing and preventing financial shocks and the build-up of unsustainable debt levels. Its key activity will likely remain to provide stability and economic security in periods of financial difficulty by making recourse to protectionism more difficult and by keeping markets open in areas of interest to developing and least-developed countries. At the same time, coherence activities in specific areas, both traditional and new, such as financial liberalization and trade financing, can be further strengthened.

(iii) Small and vulnerable economies

The WTO membership comprises a significant number of small economies, many of which are developing or least developed countries. There is concern that some of these countries face particular difficulties to integrate into the global trading system. This concern had already been expressed at the Second WTO Ministerial Conference in 1998 and led to the establishment at Doha of a work programme on small economies.

Economic size can have a number of effects on the production structure of countries and their participation in international trade. In particular, "smallness" is likely to limit an economy's possibilities to diversify production. As a consequence, small economies tend to rely more heavily on imports than larger economies. Data indeed show that smaller countries are characterized by a higher ratio of trade to GDP. At the same time, limited scope for diversification tends to be reflected in a highly concentrated export structure.[137]

No agreement has been reached so far in the economic literature as to whether this lack of diversification on the export side systematically leads to more volatility in export earnings in small economies. However, residents of small states do tend to experience higher volatility in their incomes. This is to a large extent due to the very openness of small economies, as any given level of volatility on the export side has stronger repercussions on the local economy.[138] Changes in the trading environment may also represent a bigger challenge to small economies than to large ones, because of the concentrated production and export structure. If such a change leads to a shrinkage in a small economy's main export sector, this is likely to have repercussions for private sector activity in general. At the same time, it may be more difficult for a small economy to expand exports in alternative activities.

WTO Members have made specific proposals as to how to address these and other problems affecting the trade of small economies. There is particular concern about the possible erosion of existing preferences governing the trade relations between a number of small economies and their trading partners. There are also requests for increased flexibility in the application of subsidies, which have been argued to be a crucial policy instrument for the development process of certain small economies. These and other proposals are currently under discussion in the relevant WTO bodies.[139]

137 See WTO document WT/COMTD/SE/W/5.

138 Easterly and Kraay (1999) and Commonwealth Secretariat/World Bank Joint Task Force (2000).

139 See WTO document WT/COMTD/SE/W/3.

It has also been pointed out by the WTO membership that some small economies encounter difficulties in participating effectively in WTO activities because of administrative constraints. A number of small countries have no missions in Geneva or very small ones, which obviously limits their possibilities of influencing the negotiations. Some of these countries also have very limited capacity in their capitals to formulate and administer trade policy, leading to difficulties in the implementation of certain WTO provisions. Areas that have been explicitly mentioned in this context include antidumping and countervailing measures, safeguards, and standards (sanitary and phytosanitary measures and technical barriers to trade). Two important issues arise. The first concerns what action or provisions might be contemplated to ensure that WTO membership contributes to the well-being of small economies and does not impose undue burdens upon them. The second question is how any dispositions developed in this regard might be given effect, bearing in mind the explicit rider in the Doha work programme against the creation of a new sub-category of WTO Members.

(iv) Intellectual property

Intellectual property rights have steadily gained in significance in international trade transactions, especially in relation to high-tech goods and intellectual property rights-related services (e.g. software production, publishing and entertainment). Strengthened intellectual property right regimes are an important factor in attracting certain kinds of foreign direct investment (FDI) in some countries, and in fostering technology transfer, know-how and improved management skills.

The considerable potential that strengthened intellectual property rights carry for the growth prospects of developing countries is widely recognized, but so are the non-negligible short-run adaptation costs that explain much of the reluctance in developing countries to improve their intellectual property rights regimes. Where technology can be readily copied or reverse engineered, strengthened intellectual property rights can raise the costs of such imitation and reduce the concomitant diffusion of technological information. Alternative employment may need to be found for those involved in copying activities. Another cost consideration relates to the establishment or reinforcement of effective administration and enforcement institutions of intellectual property rights. Building institutional infrastructure can involve significant fixed costs.

On the other hand, initial prices of products covered by intellectual property rights will tend to be set lower the more competitive the environment into which they are introduced. Where technology is not readily copiable, strengthened intellectual property protection could induce more rather than less transfer of technology. Taking into account the considerable flexibility in designing and implementing national standards to implement the requirements of the TRIPS Agreement, Maskus (2000) concludes that it is possible to be optimistic about the potential long-run effects of this Agreement "even in countries that currently lag well behind the technological frontier, as long as ... growth-enhancing supplemental policies [are pursued]".[140] Institutional outlays may, for the most part, be kept under control through a combination of fees charged by intellectual property offices, technical and financial assistance, including on a bilateral basis, and perhaps, regional cooperative arrangements that help cut examination costs.

Despite good progress towards establishing efficient and reliable institutions for administering and enforcing intellectual property rights, many developing countries continue to voice concern over the TRIPS Agreement in two major respects.[141] First, they have pointed to the need to secure access to patented drugs at prices consistent with their limited purchasing power. This issue was successfully addressed in the Doha Declaration on the TRIPS Agreement and Public Health, but work remained to be done in order to find a solution to the problem faced by countries lacking manufacturing capacitiy in making effective use of compulsory licences in the pharmaceutical sector. Secondly, developing countries continue to attach considerable importance to the question of adequate protection of genetic resources and traditional knowledge, which are seen as constituting a source of significant potential wealth in the developing world. This discussion is ongoing under the Doha work programme.

[140] The author provides a comprehensive survey of the literature on the relationship between intellectual property rights and economic development in the global economy.

[141] Another important demand being made by some developing countries, along with others, in the work programme of the TRIPS Council is the extension of the higher level of protection of geographical indications to products other than wines and spirits. This subject has not been dealt with in this Report.

Access to medicines

The WTO is not the primary international institution responsible for addressing the public health needs of developing countries. The World Health Organization (WHO) and the UN Global Fund, for instance, have a major role to play in implementing appropriate policies and securing resources to deal with major disease threats in the developing world. While access to patented drugs at affordable prices is vital, a major challenge also exists in ensuring that drugs, whether patented or generic, reach those who need them (WHO, 2000).

The WHO has identified four components of an "access framework", each of which is necessary for ensuring access to drugs in developing countries: rational selection; affordable prices; sustainable and adequate financing; and reliable health care and supply systems. It stresses that any effort to expand and secure access should ensure that all four "legs of the access table" are adequately addressed. This includes the provision of local health services that are adequately staffed, equipped, managed and financed, and oriented to local needs and priorities, as well as efficient and tariff and tax-free distribution systems (WHO and WTO Secretariats, 2001). Since these points are relatively uncontentious, international attention has tended to focus on drug prices and the role of compulsory licensing.

Compulsory licensing takes place when a government allows a third party to make, use or sell a patented product or a product obtained through a patented process without the consent of the patent owner. The TRIPS Agreement allows compulsory licensing as part of its overall attempt to strike a balance between promoting access to existing drugs and promoting research and development into new drugs. The Doha Declaration on the TRIPS Agreement and Public Health has clarified that each WTO Member has the right to grant compulsory licences and the freedom to determine the grounds upon which such licences are granted. The Declaration also confirmed each Member's right to determine what constitutes a national emergency or other circumstances of extreme urgency, in which case the requirement first to seek authorization from the patent holder to use the patented invention on reasonable commercial terms and conditions may be waived.

In addition, paragraph 6 of the Doha Declaration instructed WTO Members to find a solution to the difficulty faced by countries lacking manufacturing capacity in the pharmaceutical sector to make effective use of compulsory licensing under the TRIPS Agreement. Countries may use compulsory licences either to produce locally or to import the products covered by a patent. Discussions at the WTO have concentrated on the conditions under which countries with export potential in generic drugs could issue a compulsory licence in order to respond to public health problems in another country.

Thus, the key concern has related to the provision under Article 31(f) of the TRIPS Agreement which states that countries need to ensure that compulsory licencees in their territories sell a predominant part of their total production in the domestic market. Some have understood this to mean that the export of compulsorily licensed drugs would have to be limited to less than half of the total production. In a draft decision put forward on 16 December 2002 by the Chair of the TRIPS Council, this obligation would have been waived for the production and export of drugs to an eligible Member country lacking manufacturing capacity, subject to a set of conditions for both the exporting and importing country. These would include specific notification requirements by both countries relating, among other things, to the precise quantities to be shipped. In addition, exporting countries would be obliged to provide special labelling or marking and would be encouraged to use special colouring, shaping or packaging of the drugs themselves if feasible, and without significant impact on price. Such differentiation of drugs would be an important measure to prevent trade diversion to other countries, where these drugs could be sold at higher prices. All WTO Members would have the obligation to ensure the availability of effective legal means to prevent the importation into, and sale in, their territories of products produced under this system, using the means already required under the TRIPS Agreement.

The ultimate sticking point preventing a decision on the basis of the 16 December 2002 draft turned out to be the question of scope of public health problems or diseases to be covered by the proposed solution. The issue was whether the new provisions would only apply to the more serious infectious epidemics plaguing developing countries or whether the scope of the arrangements should be governed by paragraph 1 of the

Doha Declaration on the TRIPS Agreement and Public Health, which refers to the "gravity of the public health problems afflicting many developing and least-developed countries, especially those resulting from HIV/AIDS, tuberculosis, malaria and other epidemics". Notwithstanding the failure to reach an agreement in the WTO by the end of 2002, Members have confirmed that they remain committed to finding a multilateral solution to the problem as expeditiously as possible. Pending such an agreement, the United States, Canada, the EU and Switzerland have declared unilateral moratoria on bringing WTO dispute cases against countries that export drugs under compulsory licences, subject to varying conditions and limits on scope. The need for a multilateral solution is becoming increasingly urgent, given the imminence of the end of the transition period for the introduction of pharmaceutical product patent protection in some developing countries at the end of 2004.

As noted above, under the TRIPS Agreement an importing country can issue a compulsory licence for the importation of generic drugs. In accordance with Article 31(h) of the TRIPS Agreement, compensation for patents subject to licensing would normally need to be paid in such cases in both the exporting and importing country. Under the text of 16 December 2002, the obligation for importing countries to compensate patent holders would be waived, provided that adequate remuneration was provided by the exporting country. It was also noted that compensation would be calculated on the basis of the value of the licence to the importing country.

Despite the focus on drug prices and the role of compulsory licensing, it should be noted that even with full patent protection, drugs may be sold in low-income countries at reduced prices if patent-holding pharmaceutical companies pursue a certain form of price discrimination, often called differential pricing. Different markets can be served at the prices that reflect local demand conditions. Even by setting prices in low-income markets close to marginal costs, a pharmaceutical company can still earn a contribution towards its R&D and other fixed costs. However, in order for pharmaceutical companies to engage in differential pricing, markets need to be effectively segmented. Otherwise, there would be a substantial risk that medicines are re-imported into high-income countries in what is known as "parallel trade". Such a system would also depend on a willingness on the part of the consumers and tax payers in such countries not to seek the low prices (WHO and WTO Secretariats, 2001). Of course, the poorest residents in the world's least affluent countries may not be able to pay even the marginal cost of drugs, and supply may need to be subsidized in one way or another.

In sum, Members need to complete the task of ensuring that the WTO is part of the solution to this development challenge, and is seen to be so. This objective underlies the considerable efforts made so far to find ways of interpreting and implementing the TRIPS Agreement in a manner that balances two fundamental objectives – promoting access to medicines for all and securing the conditions that ensure new medicines will be available in the future. Successful closure on the access to medicines debate will send a valuable message to communities everywhere about the WTO's commitment to development.

Access to genetic resources and traditional knowledge[142]

With the rise of modern biotechnology, the preservation, management and use of genetic resources and associated traditional knowledge has been perceived to be an issue of increasing commercial significance, especially in developing countries, where much of the world's biodiversity is located. Traditional knowledge evolves and is not produced systematically. It is passed on, often orally, from generation to generation and is generally held collectively (WIPO, 2002). Many areas of knowledge are involved, including cultural expressions, such as folklore. An active debate on all aspects of traditional knowledge and folklore is going on at WIPO. Some developing countries have nevertheless pressed for a parallel discussion in the WTO. Much of the attention at the WTO is currently directed towards genetic resources preserved and managed over time by traditional communities and the biotechnological inventions derived therefrom by third parties. If its invention qualifies under patentability criteria, the owner of a biotechnological invention can enjoy patent protection pursuant to TRIPS, provided it does not fall under the permissible exclusion for plant and animal inventions other than micro-organisms and microbiological processes. On the other hand, traditional knowledge may not qualify for such protection where it does not meet the criteria of patentability, for example novelty.

142 A fuller summary of the on-going discussion in the WTO on this and related subjects can be found in WTO documents IP/C/W/368, 369 and 370.

The discussion on this matter takes place in the TRIPS Council under the mandate contained in paragraph 19 of the Doha Ministerial Declaration to pursue its work programme, including under the review of Article 27.3(b) (which refers to exceptions from patentability), the review of the implementation of the TRIPS Agreement under Article 71.1 and the work foreseen on implementation-related issues and concerns pursuant to paragraph 12 of the Declaration. In order to secure benefits from genetic resources and related traditional knowledge, many developing countries are seeking an amendment of the TRIPS Agreement that would require patent applicants to disclose the source of such material and knowledge used in a claimed invention, as well as to provide evidence of prior informed consent and benefit sharing arrangements in the country of origin, as foreseen in the Convention on Biological Diversity. These countries regard national legislation as an insufficient protection against bio-piracy. In their view, governments could require the conclusion of contracts to require informed consent and adequate benefit-sharing arrangements prior to providing access to genetic resources and related traditional knowledge. Bio-prospecting might still take place without authorization under national law, whose reach once the genetic material and traditional knowledge are used outside a country's jurisdiction, would be limited.

Some Members have expressed the view that national law and contracts based on it, can adequately ensure respect of prior informed consent and benefit sharing. They doubt the relevance of the TRIPS Agreement, arguing that the protection of intellectual property rights is about rewarding investment in innovation and subsequent commercialization, and not about the possession of natural resources and related traditional knowledge, which in any event may exist in a number of locations and not easily be attributable to any one source.

Some developing countries are also concerned that the application of the criteria for patentability in some countries is blurred to the extent that mere discoveries of micro-organisms or other biological material may qualify as inventions and lead to the grant of patents covering genetic material in its natural state. This, it is felt, would amount to an appropriation of genetic resources by private parties inconsistent with countries' sovereign rights over genetic resources within their territories. They believe that disclosure of origin of any genetic material would facilitate the monitoring of potentially inappropriate patent grants.

Not all WTO Members share this view. Some argue that, provided there is sufficient human intervention, such as the isolation or purification of genetic material whose existence was not previously recognized, the criteria of patentability, including inventive step, could be fulfilled. Such a patent would not amount to ownership of the original material nor interfere with property rights over the source of the material. A requirement to disclose the source of origin of genetic resources and traditional knowledge is also resisted on the grounds that it can be complicated to determine origin, additional costs and administrative burdens would be placed on inventors, and secrecy would be encouraged as inventors might avoid seeking patents. A further argument is that the main purpose of disclosure requirements in TRIPS is to enable others to reproduce the patented technology and learn from it, and that the proposed approach would be contrary to these and other related objectives.

Another approach by some developing countries to prevent what they see as potentially improper patenting of genetic resources and related traditional knowledge, is to press for the extension of exceptions from patentability contained in Article 27.3(b) to cover all life forms. This would include micro-organisms and all other living organisms and their parts, such as genes, as well as natural processes producing living organisms. Alternatively, it has been suggested that patentable "micro-organisms" could be defined to exclude genes, enzymes, cell-lines, etc. A key element of the reasoning behind these suggestions is ethical. Some opponents of this view argue that an extension of exceptions to patentability, or for that matter the existence of any exceptions, is unnecessary to meet ethical concerns because the exploitation of patented inventions is subject to the ethical exceptions provided for in Article 27.2 of the TRIPS Agreement. Moreover, it is argued that excluding particular subject-matters from patentability will not in itself prevent either research or exploitation of such technology, but rather make such activity more difficult to control should it move into secrecy.

Developing countries point to the Convention on Biological Diversity (CBD) and its provisions related to sovereignty of countries over their genetic resources, prior informed consent and benefit-sharing. They argue that the TRIPS Agreement should be made supportive of these provisions in the ways discussed above. Other countries see no conflict between TRIPS and CBD provisions, which they say can be implemented in a mutually supportive manner, in particular given their different objectives and purposes. As noted earlier, developing countries believe that if they could secure the inclusion of disclosure obligations as a condition of patentability in the TRIPS Agreement, this would allow them to challenge patents awarded in other countries or help in securing appropriate arrangements for the sharing of benefits.

In the area of plant variety protection, many developing countries seek to avoid any reduction in the flexibility provided under Article 27.3(b) of TRIPS, which allows countries to protect plant varieties either by patents or by an effective *sui generis* system. They have argued that the re-use and exchange of seeds by farmers, access to new seeds and the cost of obtaining new seeds could be significantly affected, depending on the type of protection granted. Accordingly, they insist that flexibility provided under the TRIPS Agreement in regard to the provision of effective *sui generis* protection should be maintained, as no specific criteria have been provided to judge such effectiveness. Discussions on the most effective *sui generis* systems of protection have also revealed differences which turn on the degree of flexibility provided.

The concern has also been expressed that, since food security in local communities in many developing countries depends largely on the saving, sharing and replanting of seeds from previous harvests, poor communities could be negatively affected by having to pay fees to plant breeders for engaging in such activities. The argument has also been made that traditional farmers have made a contribution over many decades to biodiversity and the development of new plant varieties.

Other Members have, on the other hand, emphasized the heavy investments required for the development and exploitation of new plant varieties, the potential to meet the needs of an expanding population and to enhance farmers' incomes as well as the need for an effective system of protection to encourage such investment.

Intellectual property protection in the multilateral trading system and economic development

The above discussion has focused on some aspects of the intellectual property debate close to developing country interests which have received most recent attention in the WTO. These topics illustrate the economic issues underlying the design of any system for intellectual property protection. Finding a balance at the national level between producers and users of intellectual property that maximizes national economic welfare and development, is itself a difficult task and may generate losers as well as winners. This becomes an even more difficult exercise when transposed to the multilateral level, where even under a system that increases world welfare there may still be winners and losers.

It is the same with trade liberalization. Winners and losers emerge, but in most circumstances all countries gain from trade liberalization and so the problems of those who lose can be more easily dealt with against a background of overall gain in a national context. Even where countries gain from the results of international trade negotiations as a whole, they may remain conscious of themselves as net losers of the intellectual property component of such negotiations.

The task of finding a proper balance between incentives for innovation and creativity on the one hand and the costs of access facing users on the other, especially in the light of the very differing levels of development of countries, was very much to the fore in the negotiations that led to the formulation of the TRIPS Agreement. While, inevitably, any multilateral rules will not mirror exactly what each country would determine left to itself, given that they seek to take account also of the interests of other countries, the end result was the incorporation into the TRIPS Agreement of a considerable amount of flexibility. Issues in this connection have been discussed earlier in this report in connection with public health and access to medicines, but options

regarding the form and level of protection to be afforded can be found throughout the TRIPS Agreement. The challenge facing each WTO Member is how to make the best use of this flexibility in the light of its particular national development situation.

It would be inappropriate for developing countries to see intellectual property protection as simply a zero-sum game. Not only does each developing country have to be conscious of the scope for intellectual property protection to promote its own development-enhancing creativity and innovation, but also of the role that intellectual property protection can play in providing conditions for promoting foreign investment and the transfer of the latest technologies, especially those for which co-operation with the developers of such technology may be essential.

The extent to which countries can maximize the use of the intellectual property system for developmental purposes will of course depend very much on synergies with a range of other policies which affect domestic creativity and innovation, adaptiveness and receptiveness to technology, foreign investment, industrial development, agriculture, etc. There is evidence that the welfare gains of intellectual property protection to countries with open trading systems are higher than those to more closed economies.[143] One policy area which is particularly closely related to the costs and benefits of intellectual property protection is that of competition law and policy. A well-functioning competition law can be valuable in alleviating the adverse effects of the abusive use of intellectual property while preserving the intended positive consequences. Increasingly, developing countries are introducing or improving their competition law frameworks. In this regard, the Doha Ministerial Declaration has recognized the case for a multilateral framework to enhance the contribution of competition policy to international trade and development and important decisions are expected to be taken at Cancún in this connection.

Intellectual property is not a static concept as it evolves and changes according to the needs of the changing world. The TRIPS Agreement recognizes this and envisages adaptation to such evolution. As the ongoing discussions in the TRIPS Council demonstrate, there are a number of subjects where some developing countries have taken a lead in the WTO in this connection with a view to enhancing the way the intellectual property system can respond to their needs. These include not only the issues of access to medicines and the protection of genetic resources and traditional knowledge discussed above but also the extension of the higher protection of geographical indications to products other than wines and spirits.

4. MANAGING OPENNESS WITHIN WTO RULES

The rules of the GATT/WTO seek to secure at least four objectives that are crucial to the viability, effectiveness and smooth running of the trading system. These objectives define the backbone upon which continuing stability in the system is built, ensuring that Members balance the exercise of their rights and respect for their obligations in a predictable and mutually beneficial manner.

First, market access commitments and the fundamental systemic principle of non-discrimination must not be undermined by the way in which other policies are designed or by administrative procedures. Provisions on the goods side covering such areas as customs valuation, technical barriers to trade, sanitary and phytosanitary measures, import licensing, the use of quantitative restrictions, subsidies, state trading, regional arrangements, and general and security exceptions are all designed with this in mind. Various rules in the services area, such as those pertaining to economic integration, domestic regulation, recognition, monopolies and business practices pursue the same objective, although they are obviously tailored to the characteristics of services transactions.

Second, the rules must accommodate public policy objectives, particularly where trade restrictions of one kind or another may be required in order to meet these objectives. The provisions on standards, for example, allow public authorities to protect life, health and safety. The general exceptions of Article XX of GATT 1994

[143] Maskus (2000) finds that the positive impact of intellectual property protection on growth depends critically on other economic variables, including economic openness.

and Article XIV of GATS seek to do the same, but range more widely in terms of public policy objectives. The link between the first and second objectives identified here is made clear in these provisions, as public policy objectives must be pursued in a non-discriminatory manner and must not constitute a disguised restriction on international trade.

Third, certain GATT/WTO rules define circumstances in which Members can reverse, temporarily or otherwise, their market access commitments. Two main justifications exist for such action. One is that sudden and sometimes unanticipated changes in trading conditions may make trade restrictions necessary from a national economic perspective. The other is to guard against unfair trade practices. Among the provisions designed for these purposes on the goods side are the right to use safeguard measures, anti-dumping duties, and countervailing duties. Although each of these are intended to respond to quite different circumstances, they are sometimes collectively referred to as "contingency" trade policy. In services, the possibility of safeguards and anti-subsidy measures is foreseen, but any possible provisions are yet to be negotiated.

Other GATT/WTO provisions also contemplate the introduction of trade restrictions. Restrictions may be adopted on balance-of-payments grounds under GATT 1994 and GATS to address a serious decline or shortage of foreign exchange reserves. Developing countries are permitted under Article XVIII:C of GATT 1994 to impose import restrictions to promote the establishment of a particular industry with a view to raising general living standards. Finally, Article XXVIII of GATT 1994 and Article XXI of GATS permit governments, respectively, to renegotiate maximum permitted tariff levels that have previously been bound and to modify services schedules of specific market access and national treatment commitments.

Fourth, the dispute settlement arrangements provide for the multilateral enforcement of WTO obligations. This is a vital part of the underpinning of the entire system. If Members could not exercise their WTO rights through recourse at the multilateral level, they would be tempted to do so unilaterally. They might also take a different view of their own obligations if they did not believe that others were abiding by theirs. So without multilateral dispute settlement, the trading system would be less stable and effective.

Many of the provisions mentioned above are under consideration in the context of discussions on implementation-related issues and concerns, or the work on special and differential treatment. These discussions focus on particular aspects of the rules as they affect developing countries. Broad questions relating to specific rules for developing countries were taken up in Section IIB.3 above. In this Section attention will focus on four rules-related issues included for negotiation in the Doha Declaration. These are dispute settlement, aspects of contingency trade policy, trade and environment, and regional arrangements. It will be seen that the relevant rules in each case are fashioned with one or more of the above objectives in mind. The essential considerations are how effectively these objectives are met and what is at stake from a development perspective in these negotiations.

(a) Dispute settlement

A widely held view is that the dispute settlement mechanism of the WTO has worked well (Lacarte-Muró et al., 2000), although many Members believe that it can be improved. This is why the Doha Declaration called for negotiations to improve and clarify the Dispute Settlement Understanding (DSU).

Formal dispute settlement at the WTO is a last-resort option. The preferred approach is that countries solve their differences among themselves, and, indeed, many potential disputes do not become an issue at the WTO. Moreover, of all complaints raised, about three quarters do not proceed beyond consultations to the panel stage, which indicates that a satisfactory solution is found at an early stage of the WTO procedures (WTO, 2003b). Members widely regard the WTO dispute settlement mechanism as crucial to security and predictability within the trading system and at least some developing countries see the arrangements as a means of diluting underlying power imbalances among trading partners.

A study by Horn et al. (1999b) examined the use to which the dispute settlement system has been put in order to determine whether it rewarded WTO Members differentially. The study found no systematic bias and concluded that the evidence was, at best, ambiguous. Nevertheless, persistent claims are made that the way the WTO dispute settlement mechanism is designed favours its use by larger, economically more powerful countries. A number of developing countries seek to increase their ability to make effective use of dispute settlement mechanism. They point to two basic shortcomings. First, use of the dispute settlement mechanism involves considerable costs in terms of human and financial resources, and some developing countries are unable to meet these costs.

Second, even where the system has been used successfully to bring a dispute, developing countries may find it difficult in certain circumstances to ensure compliance with outcomes on the part of larger trading partners. This problem may arise when a Member against whom a determination has been made in a dispute decides not to bring the offending policies into conformity. Retaliatory or compensatory rights can be difficult for small countries to exercise, raising the question of how effectively the system deters inconsistent behaviour when smaller parties are implicated. Concerns about both of these issues – costs of the system and asymmetries in the ability to exercise rights – are at the root of many proposals put forward by developing countries in the DSU negotiations.

(i) Resource implications

A precondition for defending WTO rights is the availability of information about trade barriers in export markets. The two main channels for a country to obtain such information are its own representatives abroad and the private sector. Many developing countries do not have a substantial government presence overseas nor are they well-equipped to compile and evaluate the concerns expressed by national firms regarding questionable trade policies and practices in foreign markets (Hoekman et al., 2000). But even if sufficient information is available to make an initial assessment in these matters, available national expertise may be insufficient to initiate and sustain a dispute settlement case. For the preparation of written submissions, in particular, expensive assistance from international law firms and consultants is often necessary (Michalopoulos, 1999).

In an attempt to address these resource implications, a proposal by a group of developing countries seeks to oblige developed countries losing a case against a developing country to pay part of the latter's litigation costs. Article 27.2 provides for legal technical assistance to be given to developing countries by the WTO Secretariat. However, there is a view that such assistance can only be given after a Member has decided to bring a dispute to the WTO. Assistance in evaluating whether a case should be brought may therefore not be available (Horn et al., 1999b). In addition, it is generally thought that WTO Secretariat resource persons can only give advice and explanations about WTO law and procedure, as the impartiality obligation contained in Article 27.2 of the DSU is said to prevent them from acting as counsel or assisting in the drafting of submissions (Van der Borght, 1999).

The recently created Advisory Centre on WTO Law modifies this situation. The Centre is an independent body created to provide legal assistance to developing and least-developed countries and countries in transition. User charges for a country are linked to the ability to pay and the frequency with which services are used. An endowment fund has been set up by the founding members of the Centre. In contrast to the general legal advice the WTO Secretariat is able to provide, the added value of the Centre stems from its ability to support legal proceedings and give non-neutral advice.

(ii) Increasing use of the dispute settlement mechanism by developing countries

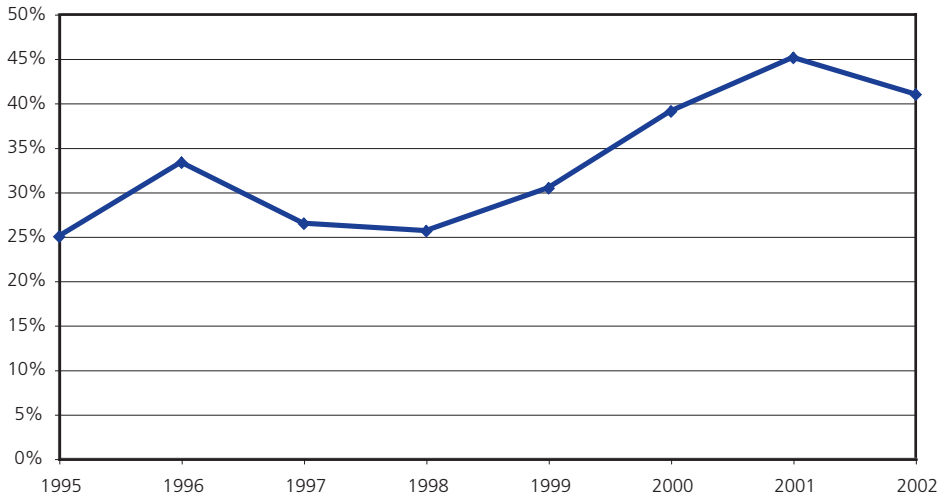
The average costs of WTO litigation for developing countries could also be reduced by trying to settle as many disputes as possible at the consultation stage and by speeding up the dispute process, which may take over two years to reach a final determination (Hoekman et al., 2000). A developing country proposal is currently under consideration in the DSU negotiations to make conciliation mandatory – a process whereby an impartial examination of a disputed matter and possible terms of a settlement are provided by an independent

authority. Up to now, resort to Article 5 of the DSU on good offices, conciliation and mediation has been sought only very rarely, and efforts in this regard have not been successful (WTO document, WT/DSB/25). The very limited success of the compulsory conciliation provisions contained in the 1979 Tokyo Round Agreement on Subsidies and Countervailing Measures has prompted many Members to look askance at the idea of making conciliation compulsory.

A 1966 Decision provided expedited dispute settlement procedures for developing countries (Article 3.12, DSU). However, proposals put forward by developing countries in the DSU negotiations go in the opposite direction, seeking to extend the overall time-frame for a dispute and provide longer time intervals for developing countries at each stage of the process. Other provisions in the DSU, such as Article 4.10, refer to the particular situation of developing countries which should be taken into account at the consultation stage. This is presumably designed to encourage reconsideration of an imminent complaint. While mandatory in nature, developing countries feel that the provision (and other obligations to afford special and differential treatment) has not been implemented effectively. They wish to see an obligation for developed country Members to justify how the special situation of developing countries has been taken into account and to what extent such consideration has lead them to pursue the case in a different manner.

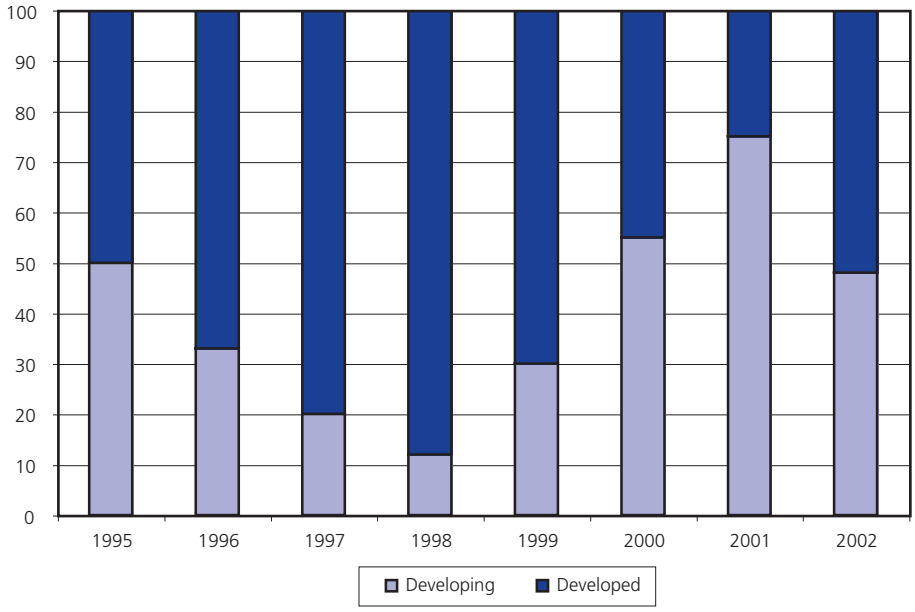
However, developing countries often simply fail to invoke special and differential treatment provisions. Part of the reason may be that they desire to be seen as equal partners in a litigation procedure, which may provide guidance for future rulings. Some 41 per cent of all complaints brought by developing countries since the entry into force of the WTO in 1995 have been directed against other developing countries, and this tendency has increased over the past years (Chart IIB.13). Since 1995, developing countries have on average brought about half of all complaints to the WTO (Chart IIB.14), with a larger share in the most recent years. Growing interest on the part of developing countries in the use of the WTO dispute settlement mechanism reflects a widening range of trade concerns and greater diversity of export products and trading partners.

Chart IIB.13
Developing country Member complaints against other developing country Members, 1995-2002
(Per cent of all developing country Member complaints [cumulative])



Source: WTO.

Chart IIB.14
Developed and developing country Members as complainants, 1995-2002
(Per cent)



Source: WTO.

(iii) Compliance considerations

In the WTO, the ultimate tool to induce compliance is the suspension of concessions pursuant to Article 22.6 of the DSU. The possibility of retaliating against non-complying WTO Members is intended as a credible threat that will induce greater compliance. Non-complying Members are likely to encounter pressure from affected exporter interests and perhaps others to bring offending measures into conformity when retaliatory measures are threatened or imposed. Judging by the number of cases that conclude with a suspension of concessions, it may be argued that the system works. Only a few cases have ended with a Member requesting authorization to suspend concessions.[144] Many other cases are resolved through mutually agreed solutions between the parties to a dispute. While the DSU requires that all mutually agreed solutions be consistent with the WTO Agreement (Article 3.5) and be notified to the Dispute Settlement Body (Article 3.6), there is concern that such agreed solutions might modify the disputed measure for the complaining party, but otherwise leave the measure unchanged. This concern underlies the view of a number of developing countries that Members should notify the terms of a settlement in sufficient detail for an evaluation to be made.

Developing countries may refrain from suspending concessions because of the adverse consequences for themselves of such action, while an economically powerful country with a large domestic market and multiple trade relationships may not be hurt by the suspension of concessions by a small country to which it supplies a minor share of its exports. A number of developing countries depend on unilateral preference schemes provided by other countries and may hesitate to displease the latter in filing a complaint (Pauwelyn, 2000; Mavroidis, 2000; Horn et al., 1999b).

In order to minimize costs that an increase in trade barriers invariably entails for a country's own economy and increase the effectiveness of retaliatory threats by small countries, the DSB has, on occasion, authorized suspension of obligations in areas other than goods. In the banana dispute, for instance, Ecuador was granted authorization to take countermeasures against the EC on TRIPS. This implied minimal costs for the domestic economy. At the same time, TRIPS was seen as an area where retaliatory action, even by a relatively small country, could have an effect in a large country by targeting well-organized lobby groups (Subramanian et al., 2000).

144 These four cases were: European Communities – Regime for the Importation, Sale and Distribution of Bananas; European Communities – Measures Affecting Meat and Meat Products (Hormones); United States – Tax Treatment for "Foreign Sales Corporations"; and Canada – Export Credits and Loan Guarantees for Regional Aircraft.

Systemic concerns have been expressed about the idea of authorizing a WTO-inconsistent measure to remedy a WTO violation by another Member. In approving suspensions of concessions, the goal of open trade is subverted and welfare costs are incurred. Moreover, as retaliating Members enjoy wide latitude in determining what imports to restrain, domestic industries may seize the opportunity to secure greater protection from imports. This can fuel more protectionist pressures. On the other hand, liberalizing forces in the country threatened by suspensions of concessions may be strengthened and affected exporting industries may gain greater prominence than protectionist lobbies. The idea of activating the fears of a maximum number of foreign exporters seems to be behind the concept of "carousel legislation", whereby the exporting industries hit by punitive duties periodically change, and more products are indicated as targets for retaliation than will actually be subject to restrictions (Charnovitz, 2001a).

Compensation is seen as preferable to retaliation by many developing countries.[145] Compensation in this context refers to the reduction of trade barriers in other areas. Instead of moving to a more protectionist situation when concessions are suspended, compensation would restore the overall situation to that which existed before a violation occurred, or perhaps even improve upon it. Compensation could take a financial form, and proposals along these lines have been made in the current negotiations.[146] The DSU expresses a preference for compensation over suspension of concessions, but notes that compensation is voluntary. So far, compensation has never been a remedy. Part of the reason may be that trade compensation would have to be given consistently with the most-favoured nation rule (Charnovitz, 2001a). However, by providing greater market access opportunities to all countries, the level of "nullification or impairment" suffered by the complaining party that needs to be compensated is likely to be exceeded, and consequently, an element of punishment would be introduced (Horn et al., 1999b).

Furthermore, if compensation were mandatory, it is unclear what consequential action could be taken if the defending country refused to provide the compensation. The single biggest advantage of suspending concessions is that the action can be implemented by the complaining party itself and creates an incentive for the defendant to redress the original violation. Bearing in mind the difficulties that would likely arise in enforcing compensation, the only alternative to a suspension of concessions would appear to be curtailment of the WTO rights of a defendant (Charnovitz, 2001a; Pauwelyn, 2000). Apart from these rather academic reflections, the proposal has been made in the DSU negotiations that countries unable to obtain compensation and disinclined to exercise their right to suspend concessions should be in a position to transfer this right to another interested Member. In exchange, a benefit, possibly a cash payment, would be negotiated not higher than the authorized level of suspension. While the third country who may have an interest in affording protection to its own industry would acquire the full award, it presumably would pay for it at a discount. Making retaliatory rights tradeable in such a manner may leave a developing country better off with an inflow of cash, which, albeit nominally lower, would nonetheless be superior to the reduced net benefit or even loss the country would incur by raising trade barriers and inflicting harm upon its own economy.

It has also been suggested that the point in time from which compensation is due should be when the WTO-inconsistent measure came into force (retroactive application). The lack of retroactivity in the current dispute settlement system affords the possibility that Members could go unpunished for acting inconsistently with their obligations, at least for the duration of a dispute. Given that it may take more than two years from the start of a dispute settlement process until the withdrawal of a WTO-inconsistent measure, considerable damage may have been inflicted upon the complaining country in the meantime.[147]

145 Currently, compensation is only allowed as an interim measure if panel recommendations are not implemented within a reasonable period of time (Art. 22.1 of the DSU). The idea is to rebalance trade between the litigating countries until recommendations are implemented.

146 The idea of monetary compensation was debated in the GATT in the 1960s. The remote likelihood that legislators would be willing to earmark budgetary outlays for this purpose was considered a serious obstacle to the pursuit of the idea. Recently, Bhagwati has proposed that the defending country provide cash compensation to the complaining party, which could then be donated to the exporting industry (quoted in Charnovitz, 2001a). That may, however, negatively affect industries in other countries.

147 The panel report on "Australia – Subsidies Provided to Producers and Exporters of Automotive Leather: Recourse to Article 21.5 of the DSU by the United States" (WTO document, DS/WT126/RW) illustrates that remedies under the DSU are not necessarily limited to purely prospective action. See in particular paragraphs 6.29-6.32.

Compensation may also be appropriate when a country prefers to endure the suspension of concessions because the political advantage of catering to a protectionist lobby is larger than the political cost incurred in having exporters subjected to retaliatory measures. Bhagwati (1999) proposes that a Member embark upon a re-negotiation of concessions whenever it finds it politically inopportune to implement panel recommendations. Compensation would be provided not only to affected parties but, on an MFN basis, to all WTO Members. Compensation through the renegotiation of concessions would not provide relief to the export industry affected by a violation, but from an overall economic perspective, it would be preferable to retaliation (Hoekman et al., 2000).

(iv) Likely developments in the negotiations

In exchange for the binding and automatic dispute settlement system negotiated in the Uruguay Round, Members agreed not to act unilaterally (Article 23 of the DSU). Restraint on unilateralism is likely to be further developed. For instance, the issue of whether multilateral determination of possible compliance with the rulings of the DSB should be undertaken before the suspension of concessions is authorized is about to be resolved ("sequencing").[148] Hitherto, it had not been entirely clear whether the non-conformity of measures taken to implement DSB recommendations could be established unilaterally, and retaliation sought by the complaining party immediately after the implementation period lapsed.

The system will, however, continue to rely on the good faith of Members, especially if economic insights are to feature more prominently (Barfield, 2002). As regards the DSU negotiations, it will be interesting to see whether the WTO dispute settlement mechanism will move even closer to a judicial system which would provide for increased protection of Members' rights, but would also result in potentially increased economic costs and rigidity. Alternatively, will creative ways be found to strengthen incentives for reaching political solutions and amicable settlements?

(b) Contingency trade policy in the field of goods

As noted above, contingency trade policies refer to rules that permit governments to apply anti-dumping duties, countervailing duties and safeguard measures. In the goods area, anti-dumping duties can be applied when a product is sold in an export market at less than normal value, thereby causing or threatening material injury to a domestic industry. Countervailing duties may be applied against exports that have benefited from a subsidy that is injurious to a domestic industry. Safeguard measures are permitted when increased imports cause or threaten serious injury to a domestic industry.

These measures all share one thing in common – they seek to restrict trade flows. Considering the declared objective of the WTO to liberalize trade[149], not to mention the strong body of economic theory and evidence demonstrating the welfare gains from trade, the question arises as to how these WTO provisions might be justified. A number of different arguments could be offered, building on the existence of market failure, imperfect markets, dynamic factors, high adjustment costs, and the behaviour of other governments. Such justifications generally rely on quite specific circumstances and may not always be easy to establish and defend. Moreover, a pervasive concern exists that because it is often hard to bring precision to bear in these cases, including on account of measurement difficulties, arguments can be manipulated and captured by special interests.

[148] For an in-depth analysis of the history of discussions and the legal background of the "sequencing" issue see Valles et al. (2000).

[149] The preamble to the Marrakesh Agreement Establishing the World Trade Organization speaks of "entering into reciprocal and mutually advantageous arrangements directed to the substantial reduction of tariffs and other barriers to trade".

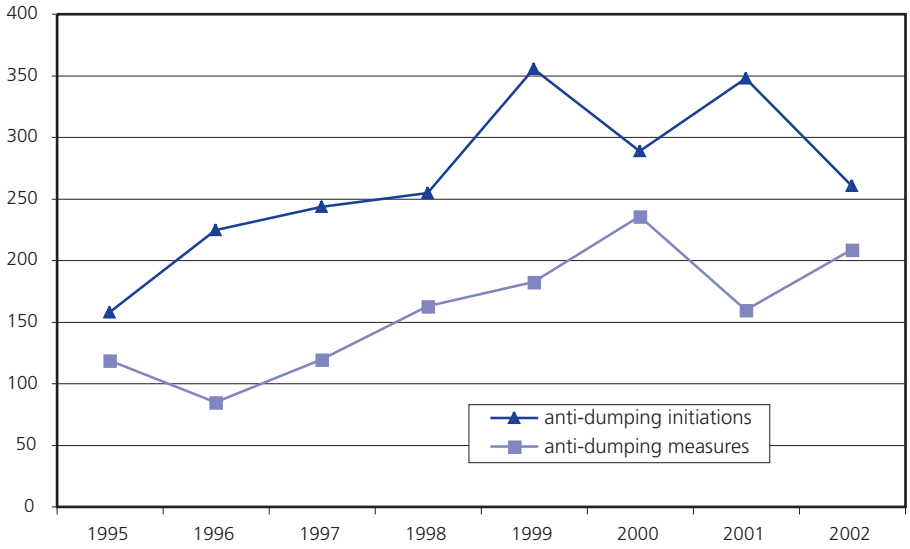
However, at a more basic level, it may be argued that contingent protection can lead to a higher quantum of market access at any given point in time than would be the case without these "escape" provisions. Governments may be willing to go further in opening markets if they know they are protected against unforeseen circumstances and can deal effectively with unfair trade practices. This is a basic economic justification for rules that envisage less open markets. But there are more and less efficient ways of exercising this option. Contingent measures might go further than necessary to address the situation at hand. They might be poorly designed and entail avoidable costs. At the limit, the increment of welfare won from additional market openness might be exceeded by the costs of contingent protection measures. Thus, much depends on the design of contingency trade policy measures.

A second consideration in favour of these instruments is that their very existence may discipline the policy behaviour of trading partners. If a government knows that its subsidies could be countervailed, for example, it might apply subsidies with greater restraint. Once again, however, the validity of the argument turns on specific circumstances. An economic justification requires that a bad subsidy (or other policy behaviour) is deterred and that the remedy is not worse than the infringement.

(i) Trends in contingency protection

Some years ago, contingency trade policy was almost the exclusive province of some developed countries. Developing countries hardly used safeguards, anti-dumping duties and countervailing duties. As developing countries have liberalized their trade regimes, however, a number of them have become frequent users of the instruments. Chart IIB.15 illustrates this development with respect to anti-dumping actions. The basic point to be made here is that the degree of reliance on contingency trade policy would seem to be at least in part a function of the degree of openness of an economy.

Chart IIB.15
Trends in the use of anti-dumping action by WTO Members, 1995-2002
(Number of cases)



Source: WTO.

This observation is consistent with the suggestion above about how the existence of the contingency trade policy option might induce additional trade liberalization, although the correlation does not prove a causal relationship. It does not necessarily follow that developing countries have opened their economies more because they have been able to use contingency protection measures. Some relatively liberal economies, both developed and developing, do not make much use of contingency trade policies. Moreover, to the extent that governments use these policies to a greater or lesser degree as a result of the policy behaviour of their trading partners, the geographical distribution of trade flows may also be a factor. As far as negotiations are concerned, positions taken tend to coincide with the degree of reliance on contingency protection.

Paragraph 28 of the Doha Declaration calls for "negotiations aimed at clarifying and improving disciplines under the Agreements on Implementation of Article VI of the GATT 1994 and on Subsidies and Countervailing Measures, while preserving the basic concepts, principles and effectiveness of these Agreements and their instruments and objectives, and taking into account the needs of developing and least-developed participants". Like some other areas of the Doha negotiations, differences are sharp on key elements of policy. The negotiating mandate makes clear the reservations of some Members when it comes to significant changes in existing provisions. Others would like more far-reaching changes aimed at rectifying what they see as excessive scope for imposing trade restrictions. The challenge of finding an appropriate balance in the negotiations will be considerable.

(ii) Anti-dumping

Anti-dumping is the most frequently used contingency trade policy and there is a large literature on this issue, reflecting long-standing contention. Economists have questioned the logic of anti-dumping in relation to the concept of predation. Predatory pricing behaviour involves a monopolistic strategy to price output below cost in the short-term in order to eliminate potential or actual competition. Once the monopolist has secured a market, monopolistic pricing is introduced, implying super profits for the producer and welfare losses for the economy. Critics of anti-dumping have argued that predation is a phenomenon very rarely encountered in international markets because of the difficulty of controlling entry into a market when many actual and potential competitors exist in many different countries and where the policy environment is less certain.

Others have argued that anti-dumping statutes are not about predatory pricing behaviour, but rather about the ill effects upon competition of trade-distorting government policies. Dumping is defined as sales below normal value, which is the difference between the export price of a good and its price in the ordinary course of trade in the domestic market. Although dumping, however defined, is a practice of firms, the argument is that this price differential is made possible because for one reason or another firms that dump are not subject to the full force of competition in their domestic markets. Government actions that could give rise to dumping opportunities include tariffs and other trade barriers, subsidies of one sort or another, regulations that stifle competition, and the absence of effective means to control collusive or monopolistic private sector practices. To the extent that such factors are responsible for prices below competitive levels, international negotiations to address them would be a better approach than restricting trade. Such negotiations would require a significant degree of co-operation among governments. In effect, some issues taken up in the Doha Round or suggested for negotiation do address these problems.

Critics of anti-dumping tend to focus on four main lines of argument. First, a definition of dumping that relies simply on the existence of a price wedge between domestic sales and exports will confuse opportunistic pricing behaviour made possible by distortions in the domestic market with normal commercial practice by firms facing different demand conditions in segmented markets. The argument is that markets can be segmented for reasons other than government-imposed policy distortions and so an undifferentiated definition of dumping catches both unfair trade practices and legitimate commercial activity.

Second, there exist a myriad of methodological issues relating to the measurement of dumping margins, the determination of injury and the causality relationship between dumping and injury. Much has been written on this topic. Anti-dumping administrations apply a variety of assumptions in the absence of precise information and use calculation methodologies that allegedly inflate the estimate of the amount of dumping. On the causality issues, it is argued that ills befalling firms detected in an injury investigation may be attributed too easily to low-priced imports, while other factors may be at work.

Third, it is argued that anti-dumping procedures do not take proper account of the balance between consumer and producer interests. This argument includes a point of principle and a procedural point. The principle turns on the assertion that anti-dumping statutes are framed only with producer interests in mind. This cannot be entirely true, since the injury test would not exist were it not for concern about consumer welfare. Nevertheless, to the extent that anti-dumping rules do not incorporate explicit consideration of the trade-off

between producer benefits and consumer costs, import restrictions will likely serve the former interest without clear knowledge of how much consumers pay and what the welfare calculus is for the economy as a whole. The procedural point is that consumers and user industries are unrepresented or under-represented in anti-dumping investigations.

Fourth, given some of the difficulties cited above that critics identify in relation to the anti-dumping statutes and the manner of their application, a political economy point is that by framing this rationale for import restrictions in terms of unacceptable behaviour on the part of foreign interests, it is easier to take a less critical view of the provisions. Anti-dumping is contrasted with safeguards in this context, since the latter measures are not predicated on any notion of unfair trade, but rather on an economic and political choice, where governments are required to take direct responsibility for imposing restrictions on trade.

Whatever view is taken of this debate, it is important to recall that this is not an issue that divides readily on North-South lines. Developing countries have revealed preferences on both sides of the argument. In formulating negotiating positions, certain considerations appear particularly relevant. One is that the possibility exists of taking an economy-wide view of anti-dumping, and establishing a clear picture of who wins and who loses from such actions. Such an approach would be very unlikely to lead to the elimination of all anti-dumping actions, but it would help to ensure that the benefits of liberalization are not unnecessarily dissipated. Another point to bear in mind is that countries not only take anti-dumping actions of their own if they so choose – they are also subject to such action taken by their trading partners. This argues for a balanced approach to the issue that does not overlook consumer and export interests while seeking to avoid unjustified and costly damage to producer interests. Some developing countries have been arguing for increases in the current thresholds below which exports will be exempted from anti-dumping actions. Such arrangements are clearly advantageous for developing countries with limited export potential. Finally, to the extent that anti-dumping actions are driven by policies of other governments that interfere with the conditions of competition and lead to unjustifiably low import prices, a question to ask is how much scope exists for addressing such policies directly.

(iii) Subsidies and countervailing duties

Many developing countries have manifested a close interest in subsidy issues, particularly the use of export subsidies and restrictions imposed on this by WTO agreements. Export subsidies on manufactures will eventually be phased out for all countries with a per capita national income level above one thousand US dollars (at constant 1990 prices). Apart from the desire manifested by some developing countries to continue using export subsidies to diversify their production base and establish a marketing presence in foreign markets, an additional issue is the rules on export credits, which are considered unfair to developing countries. In agriculture, export subsidies are not permitted unless they were being applied prior to the entry into force of the Uruguay Round Agreement on Agriculture.

Basic economic theory is not well disposed towards export subsidies. The immediate effects of an export subsidy are to raise the price of the subsidized product in the domestic market, lower it in the foreign market and reduce the government's disposable revenue. Each of these effects represents a net welfare loss and on its face is bad for the economy, so this raises the question why many developing countries nevertheless seek the flexibility to subsidize exports.

The WTO rules allow Members to offset the anti-export bias implicit in an import regime that raises prices of imported inputs into production for export. Duty drawbacks and remission schemes on directly incorporated inputs will not always completely neutralize the disadvantage to exporters arising from the import regime. Some developing countries have sought to provide additional support to exports in order to take account of this reality.

More generally, an effective challenge to the basic welfare analytics that suggests export subsidies carry net economic costs for the subsidizing country can be mounted from arguments relating to externalities and market failure. The most frequently encountered argument of this nature concerns the dynamic externalities associated with learning-by-doing in new industries and the failure of capital markets to finance such initial

costs efficiently. In these circumstances a subsidy will compensate for what otherwise would be an inadequate investment in the future. An additional argument which is related concerns the absorption and diffusion of new technologies. These are arguments essentially about increasing productivity and growth through diversification into new activities. Much of this literature is couched in terms of production subsidies and not export subsidies. Externalities associated with export markets alone are more likely to revolve around marketing considerations and issues of reputation. However, given revenue constraints and growing reliance on trade in many countries, the above considerations may be relevant whether it is exports or total output that is being subsidized.

There is no doubt that subsidies can be expensive and inefficient and may fail to deliver benefits. The literature in this area points to several ways of avoiding such risks. First, the case discussed above for subsidizing industries would be very difficult to defend other than as a temporary measure in a transitional process. Second, subsidies will be unlikely to yield results if they are not provided within a policy framework that rewards efficiency, encourages investment, promotes human capital development and offers adequate infrastructure. Third, clear eligibility criteria and full transparency in the design and implementation of subsidy policies are essential accompaniments of success. Fourth, many countries are likely to use subsidies and if the policies are not properly targeted and kept within defined bounds, government revenue may be wasted in a fruitless game of competitive subsidization. As developing countries seek to define their WTO rights and obligations in this field, these considerations would seem essential for development.

Finally, it is important to note that whatever the legal status of particular subsidies for particular countries, governments may still retain the right to use countervailing duties against the subsidy practices of their trading partners. Since a countervailed subsidy amounts to nothing more than a financial transfer from one government to another, subsidy practices need to be tempered by this consideration. Developing countries enjoy certain exemption thresholds in the area of subsidies and countervailing measures, just as they do in anti-dumping. An analysis of optimal thresholds from a development perspective would seem to be a worthwhile undertaking.

(c) Trade and environment

The relationship between trade and environment has been discussed in Section IIA.4. Members espouse quite different positions on certain aspects of this relationship, but at the same time recognize synergies and ways in which policies in both areas could be mutually reinforcing. Some Members stress first and foremost the importance of environmental protection, while others are concerned to avoid protectionist capture and the misuse of environmental arguments to impose unjustifiable trade barriers. Economic analysis is particularly helpful in teasing out the issues and identifying efficient and least-cost means of addressing the concerns of all parties.

The Doha Agenda on the relationship between trade and the environment reflects the variety of Member interests and priorities in this area. Members have committed to negotiations on the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs). They also intend to establish procedures to guide aspects of the relationship between MEA secretariats and the relevant WTO committees. The negotiating mandate calls for the reduction or elimination of tariffs and non-tariff barriers to environmental goods and services. The declared aim to clarify and improve WTO disciplines on fisheries subsidies is also relevant to this negotiating agenda.

In addition to the negotiating mandate, the Committee on Trade and Environment (CTE) is instructed to continue work on all aspects of its agenda, but to stress three particular issues. The first is the effect of environmental measures on market access, especially in relation to developing and least-developed countries, as well as situations where trade liberalization would benefit trade, the environment and development. Second, particular attention is to be given to the relevant provisions of the TRIPS Agreement. The third element of work singled out for special attention concerns labelling requirements for environmental purposes. The question whether negotiations are appropriate in any of these areas is to be taken up at the Fifth Ministerial Session. The paragraphs that follow will discuss certain aspects of the negotiating mandate and work programme from a development perspective.

Conceptually, most of the issues discussed by both the CTE Special (i.e. negotiating) Session and the regular CTE fall into either one of two categories: in a first group, the extent to which a reduction in trade barriers and distortions can lead to environmentally beneficial outcomes is examined. Examples are the issue of fisheries subsidies that lead to fleet overcapacity and fish stock depletion, or the removal of barriers to the trade in environmental goods and services. Second, potentially negative effects of environmental policies on trade, especially in relation to market access for exports from developing countries, are identified. Such environmental policies can be both direct trade measures, such as import bans, and measures with an indirect effect on trade, such as environmental taxes, labelling or recycling requirements. These policies may be pursued at the national level or be mandated in the context of multilateral environmental agreements (MEAs).

(i) Removal of trade restrictions and distortions leading to positive environmental effects

General issues related to market access

For developing countries, poverty is often the single biggest obstacle to environmental protection. As discussed in Section IIA, improvements in the conditions of access to markets will contribute to economic growth and a reduction in poverty in developing countries. Trade liberalization leads to a more efficient allocation of resources, which can have a direct and positive environmental effect. It can help developing countries to generate the necessary resources to protect the environment and provide an incentive to manage natural resources in a sustainable manner. Higher incomes also result in increased demand for environmental quality (WTO, 1999c).

Apart from these "general equilibrium" linkages between trade and environment, the removal of trade-restrictions in specific sectors may help bring about immediate environmental improvements. The CTE is examining a range of sectors in that regard. In many instances, the beneficial environmental effects will be a "side-effect" of the WTO's core business of liberalizing trade, for instance through the removal of trade barriers to environmental goods and services, or the reduction of production-related agricultural subsidies.[150]

The importance of fisheries to developing countries

Fisheries are important to developing countries. First, for many of them, the fisheries sector has significant export potential if prices are set competitively.[151] Subsidies granted by other countries to the domestic fishing industry that are either cost-reducing or revenue enhancing lower the price at which the domestic industry can still make a profit. Moreover, the depletion of fish stocks severely affects developing countries that depend on fishing for a large part of their income and employment, as well as for nutritional purposes. Subsidies provided by other countries contribute to excess fleet capacity and aggravate the problem of over-fishing (OECD, 2000a; OECD, 1998). Discussions in the CTE have also touched upon this wider link between subsidization and over-exploitation and the indirect negative impact of production distortions on export opportunities of poor countries.

In order to challenge a fisheries subsidy under the WTO Agreement on Subsidies and Countervailing Measures (SCM) as an actionable subsidy[152], certain definitional criteria would have to be met and the subsidy in question would have to result in one of three possible adverse effects – injury to the domestic industry from subsidized exports, "serious prejudice" to the domestic industry through displacement of its exports to the subsidized market or third markets, and nullification or impairment of benefits expected from market access commitments (particularly tariff bindings). It is often maintained that, in the case of fisheries, the data requirements and procedures associated with such claims may be particularly costly and cumbersome, making the SCM Agreement a somewhat attenuated option to secure a remedy, especially for resource-constrained developing countries. Article 6.1 of the SCM Agreement created a rebuttable presumption of serious prejudice under certain conditions, including when the total *ad valorem* subsidization of a product exceeded 5 per cent.

150 See for instance OECD (2003), OECD (2001c), Chaytor (2002), Bhagwati (1996), Edwards (1995).

151 The importance of fisheries exports for developing countries is illustrated in FAO (2002): For fish and fish products, the net exports by developing countries increased from $3.7 billion in 1980 to $18 billion in 2000. In 2000, they were several times larger than those of other agricultural commodities such as coffee, rice and tea.

152 Fisheries subsidies do not to any major extent seem to fall in the "prohibited" category of export or local content subsidies.

This provision had the advantage of placing the burden of proof that no serious prejudice resulted from a subsidy upon the subsidizing party, but this provision was allowed to lapse at the end of 1999.

In addition to the possibility of reviving the presumption of serious prejudice, suggestions for improvements include strengthened notification procedures in order to improve transparency. WTO Members remain, however, divided on the fundamental question of whether any such inadequacies of the SCM Agreement should be addressed on a horizontal basis only or, as the proponents hold, through sector-specific disciplines on fisheries.[153] While, as the latter argue, it may be true that the heterogeneity of fish products and the widespread practice of cross-subsidization render the task of establishing the information base for taking remedial action against fisheries subsidies difficult, it is not clear to what extent this differs from certain other sectors.

A special case for fisheries, and for developing further subsidy disciplines, may need to be built on the issue of sustainability and resource depletion. An intensive but somewhat inconclusive debate is continuing on the environmental effects of subsidies (both positive and negative), over-exploitation of fishery resources and the role of fisheries management in that regard.[154] A link to trade has been made by claiming that in contrast to other sectors, fishing subsidies in one country do more than affect the conditions of competition for other countries – they also limit access by poorer countries to a common property resource (Schorr, 1999). The issue is complicated by the fact that since exclusive economic zones (EEZs) were extended to 200 miles in 1994, a predominant part of the global fish catch takes place within national zones. In other words, property rights were conferred upon individual countries, and open access to a shared resource should therefore be relatively less significant (Gréboval et al., 1999).

Within EEZs, the preservation of fish stocks depends primarily on adequate national resource management and effective prevention of illegal, unreported and unregulated (IUU) fishing. Additional support may, however, be called for from other international and regional bodies to address migration of fish between zones and on the high seas. However, a fairly widespread practice is for governments to pay, in whole or in part, for fishing fleets to have access rights to EEZs, including those of developing countries. The fact that governments make payments reduces the costs that those fleets would otherwise incur for a given type and amount of fish catch and translates into distorted final prices of fish and fish products. It has also been noted that it is difficult to determine access payments in a way that would adequately reflect the value of the catch taken at undistorted prices and to verify that actual catch corresponds to the compensation made.[155]

(ii) Environmental policies and WTO rules

The pervasive scepticism of developing countries towards the trade and environment debate is anchored in the fear that developed countries press the issue at the WTO with a protectionist intent. Cherishing their right to challenge trade-restrictive measures under the WTO's dispute settlement mechanism, developing countries firmly resist what they see as an attempt to create a *prima facie* presumption of WTO-compatibility of specific measures, such as labelling programmes, or in general, trade measures taken under MEAs. Proposals have been made, for instance, to deem eco-labelling programmes, despite their effects on trade, as being in compliance with the Agreement on Technical Barriers to Trade, provided that these programmes were developed in accordance with multilaterally agreed guidelines. On MEAs, it was proposed to amend Article XX in order to preserve trade measures specifically mandated under MEAs from a WTO challenge if the MEA in question was found to correspond to a number of procedural and substantive criteria (Schoenbaum, 2002).

The question whether current WTO rules already provide adequate scope to address genuine environmental concerns remains open. WTO Members are free to adopt environmental protection policies provided that they do not discriminate between imported and domestically produced like products. A number of specific

153 For various arguments raised by WTO Members see their submissions on fisheries subsidies to the Rules Negotiation Group in WTO documents carrying the symbol TN/RL/W/*, in particular TN/RL/W/3, 9, 11, 12, 17, 21, 52, 58, 69 and 77.

154 For on overview of the state-of-play of discussions in the WTO and other international fora, see WTO (2000a) and WTO (2001d).

155 For more details see Milazzo (1998), Flaaten et al. (2000), OECD (2000b) and Porter (2002).

circumstances establish grounds for discrimination. Article XX(b) and (g) are designed to allow WTO Members to adopt otherwise GATT-inconsistent policy measures if this is either necessary to protect human, animal or plant life or health, or if the measure relates to the conservation of exhaustible natural resources. Thus, discrimination can be exceptionally allowed even between like products if the conditions of Article XX are fulfilled. These measures, should not, however, result in arbitrary or unjustifiable discrimination nor constitute a disguised restriction on international trade.[156]

Non product-related processes and production methods (NPR-PPMs)

Trade conflicts may arise from environmental policies that distinguish between identical products on the basis of how they were produced (non product-related processes and production methods, NPR-PPMs). It is clear that such products would be considered "like" for the purposes of Articles I and III, GATT 1994. But it is not evident whether a discrimination between such products for environmental reasons would qualify for an exception under Article XX, and, especially, how it could be ascertained whether or not such regulations were put in place for protectionist purposes (Charnovitz, 2001b). This question is key for developing countries, as they fear that their products may be excluded from developed country markets on the grounds that their production processes are considered comparatively more harmful to the environment than the ones used by producers operating in developed country markets. Given that the environmental impact of such production may be locally confined, developing countries argue that the relative abundance of environmental resources in their countries form part of their comparative advantage and that the attempt to exclude their products, besides being economically inefficient, amounts to an extra-jurisdictional imposition of developed country environmental standards. Where the production of an identical good in a developing country contributes relatively more to a trans-boundary or global environmental problem than production in a developed country, it has been argued that financial and technological support may be more appropriate than trade restrictions to address the problem. The environmental consequences of such assistance are likely to be more positive than punitive action, insofar as the support, contrary to trade sanctions, promotes development and increases resources for environmental protection (Shahin, 1999).

Labelling and consumer sovereignty

While no cases of outright import bans of products based on their NPR-PPMs have arisen to date, certain products may *de facto* be discriminated against through labelling schemes informing the consumer that a product, unlike competing goods, was produced in an environmentally more benign way (Snape et al., 1994).[157] A host of voluntary labelling initiatives are offered by the private sector as marketing tools to advertise positive environmental characteristics. It remains unclear to what extent governments could be held responsible under WTO rules for private sector initiatives that conform to the fundamental market principles of consumer sovereignty and the right to information, but which, if promoted by dominant players in the market, may have a significant impact on developing country trade (Okubo, 1999; Rege, 1994). On the other hand, labelling programmes can help establish niche markets for environmentally friendly products from developing countries, especially if combined with positive measures to assist developing countries in taking advantage of such initiatives.[158]

156 For an in-depth analysis of GATT/WTO dispute settlement practice relating to GATT Article XX, Paragraphs (b), (d) and (g), see WTO (2002i).

157 For a literature review on the market access effects of eco-labelling requirements and a tabulation of various eco-labelling schemes, including mandatory and voluntary schemes by governments, see WTO (2000b). It may be assumed that grievances about trade effects of governmental schemes could be raised in the appropriate WTO bodies. For some schemes, it is, however, not entirely clear whether they are run by the government or the private sector, given that, for instance, the certifying entity may be private, but accredited to certain standards by a supervisory governmental authority.

158 For example with regard to organic foods, the FAO has repeatedly stressed the potential as a niche market for developing countries. In a recent publication the FAO states that "some 100 developing countries produce organic commodities in commercial quantities, most of which are exported to industrial countries" and that "the tendency so far has been for the rate of demand growth to outstrip the rate of growth in available supplies" (FAO, 2003: 313). It is also highlighted that for a further expansion of supplies, developing countries are in need of assistance in complying with foreign standards and in establishing international equivalency.

Multilateral environmental agreements (MEAs)

While the NPR-PPMs issue may also be of relevance to MEA discussions, a more general complication arises with respect to the relationship of any trade measure mandated under an MEA and WTO rules.[159] Unlike national environmental policy measures, which a government may revoke if it so chooses, an MEA creates obligations of similar standing to WTO obligations (Marceau, 2001). At Doha, Members agreed to clarify the legal relationship between WTO rules and specific trade obligations in MEAs. The negotiations are, however, confined to the applicability of existing WTO rules among parties to an MEA. Although most MEAs contain provisions for dispute resolution, two parties, who are also WTO Members, may opt to pursue a trade-related matter of dispute under either the MEA or the WTO or both, as witnessed in the recent case on swordfish between Chile and the EU.[160] In addition, certain MEAs require parties to apply trade measures against non-parties. If both are WTO Members, the MEA non-party also retains the possibility of bringing a dispute to the WTO. While several trade measures in MEAs may be inconsistent with the non-discrimination principle, it may still be possible to gain permission for their application under Article XX. This could be the case, for instance, if discrimination against like products between parties and non-parties to an MEA were found to be justifiable on the grounds of differing conditions prevailing in the two sets of countries – related, say, to toxic waste handling facilities. Pursuant to the shrimp-turtle ruling by the Appellate Body, the will to resolve an environmental problem through the conclusion of an MEA, or good faith efforts to negotiate with the non-party concerned (WTO, 2002i) may also help tip the balance for the defending WTO Member.

(iii) Developing countries are not "demandeurs" on trade and environment

Although developing countries have not tended to be active proponents of the trade and environment agenda, they have a direct interest in the removal of trade restrictions and distortions that have a positive effect on the environment, development and trade ("win-win-win"), as well as in measures that may help them fulfil or even benefit from environmental requirements in developed country markets. Developing country concern about the possibility of a protectionist intent in this area makes them particularly vigilant in dealing with proposals for amendments or new interpretations of WTO rules on the altar of environmental considerations. They also seek to protect their dispute settlement rights by questioning any presumption of WTO-compatibility in respect of trade measures adopted for environmental purposes or environmental policies with trade effects. This debate is not going to disappear quickly, and developing countries do not need to be branded anti-environment in order to defend their legitimate trade interests.

5. MULTILATERAL TRADING SYSTEM AND DEEPENING GLOBAL INTEGRATION

The history of the GATT/WTO has been punctuated by the periodic adoption of new areas of focus and rule-making responsibility. Such initiatives are generally presented by their proponents as necessary to maintain the relevance of the multilateral trading system as the world economy becomes more integrated and trade relations more intense. Members react in different ways to proposals of this nature, and such reactions are inevitably tempered by perceptions of the national interest. At the same time, when governments feel unsure about the implications of new areas of activity, or the motives of proponents, they will tend to take a defensive posture. This is both prudent and natural, but it does create an obligation on the part of all concerned to demystify issues and subject them to careful analysis. Such efforts are underway in respect of the two new issues proposed for inclusion on the WTO Agenda which are briefly surveyed here – trade and investment and trade and competition.

159 For an overview of trade measures pursuant to MEAs and of relevant provisions in the WTO and MEAs concerning compliance and dispute settlement, see WTO (2003c) and WTO (2001e).

160 The MEA in question was the United Nations Convention on the Law of the Sea (UNCLOS), and dispute settlement proceedings were initiated under both the International Tribunal for Law of the Sea (ITLOS) and the WTO Dispute Settlement Understanding (DSU). Chile and the EC ultimately agreed to an arrangement that has effectively suspended both proceedings and is geared towards an amicable settlement of the disputes.

Although both issues are termed 'new' in the WTO context, in reality neither is new. Both were discussed in the Havana Charter[161], but did not find their way into the General Agreement on Tariffs and Trade. The issues resurfaced in the early 1980s during preparations for the Uruguay Round. Trade related investment issues were part of the negotiating mandate[162], while competition policy was not to appear on the formal agenda until nearly a decade later.

The treatment of investment issues in the Uruguay Round context was limited to only those that were deemed to be trade related. The final outcome was the Agreement on Trade Related Investment Measures, which adopted an illustrative list to clarify investment-related policies in the context of relevant GATT Articles.[163] Parallel negotiations in the area of services, however, led to the explicit inclusion of investment in the GATS Agreement and the establishment of a range of market access and national treatment commitments in favour of foreign investors. A more concerted effort at a broader approach to investment and competition policy was incorporated in the First Ministerial Declaration in Singapore in 1996, which created the Working Group on the Relationship between Trade and Investment and the Working Group on the Interaction between Trade and Competition Policy.

Work in these two groups and their future were discussed in preparations for subsequent Ministerial Meetings, but a concrete mandate for further work was not agreed until the Doha Ministerial Meeting Declaration. This mandate calls for negotiations on both investment and competition following a decision to be taken on modalities at the Fifth Ministerial Meeting on the basis of explicit consensus.

The next two Sections examine investment and competition policy issues and the nature of their possible contribution to the multilateral trading system. Before proceeding, however, a basic question to consider is whether the reasons for multilateral engagement spelled out at the start of Section IIB.1 apply to investment and competition. Four reasons for engagement were spelled out. The first related to the economic and political advantages of reciprocal action at the international level. The second concerned the advantage of international co-ordination as a means of reducing transaction costs associated with trade. The third dealt with the benefits of greater policy certainty arising from international agreements and pre-commitment to a set of principles and rules for the conduct of business. The fourth was to do with the benefits of tying in national policy at the international level as insulation against domestic political pressure for policy reversals.

These arguments were offered against the background of a prior determination that governments saw a clear national economic advantage from specialization through trade – international co-operation in the WTO was simply a way of consolidating and extending those gains. This reasoning may well apply to investment and competition, but only in the context of that prior question about the welfare gains from international engagement. Let us consider investment first. Are there advantages to the national economy from allowing foreign investment in the same way as there are for allowing trade? Trade and investment can potentially be substitutable means of accessing a foreign market (Markusen, 2002a, b; UNCTAD 1996; WTO, 1996). This line of reasoning takes one in the direction of concluding that co-operation through binding international agreements is desirable, and that the question is essentially one of content and architecture. A case against this conclusion would have to turn on other factors not so far mentioned, such as the pre-existence of bilateral co-operation arrangements that might be considered preferable, or the notion that this area of negotiation did not represent a priority because of scarce negotiating resources and the costs of negotiation. These are altogether more delicate questions, amenable only to careful and specific analysis of the trade-offs involved, not general conclusions.

161 The history of the World Trade Organization is founded in the twin initiatives of the negotiations that led to the General Agreement on Tariffs and Trade (1947) and the preparations for a trade institution to complement the Bretton Woods institutions that were established in 1944 on monetary and reconstruction issues. The charter for the proposed trade institution, the International Trade Organisation (ITO), was completed in Havana, Cuba in 1948. Due to ratification problems in national legislatures the ITO failed to materialize. Instead, the general treaty obligations under the GATT were accepted by the 23 Contracting Parties. The GATT articles were only a subset of the provisions in the ITO charter, which were broader and included aspects of both competition and investment policy. For more detail on the history of the GATT and the WTO, see Jackson (1996).

162 The mandate given to negotiators was "Following an examination of the operation of GATT Articles related to the trade restrictive and distorting effects of investment measures, negotiations should elaborate, as appropriate, further provisions that may be necessary to avoid such adverse effects on trade."

163 See WTO (1996).

The case of competition policy is somewhat different, in that the application of measures to deal with anti-competitive practices is in principle a matter of "systemic" interest – i.e., effective measures to deal with anti-competitive practices should, in principle, benefit all Members, and may be necessary to ensure that government barriers to trade and investment are not replaced by private ones. Moreover, the issue is not limited to questions of market access: practices such as international cartels undermine the benefits that should flow from trade liberalization not only with respect to access to markets but in terms of the lowering of prices and expansion of output. As with the reduction of tariff and non-tariff barriers, the role of international agreements in this area is to help countries do what in any case may be in their own self-interest, such as the adoption of well-crafted measures to deal with cartels and monopolies that are economically inefficient and undermine their development prospects, but which may be difficult to do for political-economic reasons.[164] As with investment, the case against negotiations may well turn on considerations relating to priorities and the costs of negotiation. Central to the debate are issues concerning the level of ambition of international engagement and the specific content and architecture of a possible agreement.

(a) Investment

Three principal drivers of the intensified interest in investment issues at the multilateral level can be identified: the dramatic growth in FDI flows over the past 15 years; the fundamental change in the perception towards a more liberal policy that the establishment and operation of foreign affiliates is conducive to development; and the increase in international investment rule making at the bilateral and regional level. Each of these drivers will be considered in turn followed by a brief overview of investment issues in the Doha Agenda.

The volume, composition and pattern of private foreign direct investment flows has changed rapidly over the past 15 years. This is the first driver and arguably the most important one. FDI flows are estimated to be $531 billion in 2002, down from the peak year of 2000 when they were $1,492 billion.[165] The average annual growth rate of FDI between 1991 and 2000 was estimated to be 20.8 per cent, whereas the rates for GDP and merchandise exports were, respectively, only 4.4 and 9.6 per cent (World Bank, 2002). This growth in importance of FDI has also been accompanied by a number of structural changes in its volume and composition. FDI in services is becoming increasingly more important (Mallampally and Zimny, 2000). Furthermore, South-South FDI flows have increased dramatically since 1995. In 1994 they were less than $10 billion. After peaking in 1998 at $60 billion they are estimated to be approximately $50 billion in 2001 (Aykut and Ratha, 2002).

Part of the explanation for the growth in FDI lies in the shift towards a more receptive regime for FDI, the second driver, in both developed and developing countries. This change is manifested in not only policy changes that lowered the barriers to FDI, but also the reduction in tariff barriers to merchandise trade. Between 1991 and 2001, 95 per cent of the regulatory changes affecting FDI were implemented to favour FDI flows (UNCTAD, 2002b). Another indicator of the importance that developing countries place on the role of FDI in development is their eagerness to attract FDI. The policy changes that favour FDI are an important element of a positive framework for investment. To complement these policies many national governments offer fiscal and financial incentives (Subrahmanyan, 2002).

Support for these policy changes has been drawn from an extensive literature on how private foreign direct investment flows (FDI) contribute to the development process, which emerged over the past two decades.[166] Its main elements run parallel to the literature on trade and development that has been surveyed in Section IIA.[167] Foreign investment in general, and FDI in particular, is a way of transferring to host countries needed

[164] As Birdsall and Lawrence (1999) observe, "When developing countries enter into modern trade agreements, they often make certain commitments to particular domestic policies – for example, to antitrust or other competition policy. Agreeing to such policies can be in the interests of developing countries (beyond the trade benefits directly obtained) because the commitment can reinforce the internal reform process. Indeed, participation in an international agreement can make feasible internal reforms that are beneficial for the country as a whole that might otherwise be successfully resisted by interest groups."

[165] Estimated by UNCTAD Press Release No. TAD/INF/PR/63, 24 October, 2002.

[166] Recent studies include Bora (2002b), Moran (1998), UNCTAD (1999) and World Bank (2002).

[167] FDI differs from portfolio capital movements in a number of ways. The principal difference is the long term nature of FDI, since it has, by definition, a degree of controlling interest in the enterprise.

capital as well as other assets, such as technology, managerial skills, and improved access to export markets for host countries. The enhanced mobility of FDI has the potential to contribute to the development process in ways similar to the effect of import competition and exports. It improves efficiency, has the potential to stimulate growth and provides a mechanism for the transfer and diffusion of technology. As with the case of openness to trade, as discussed in Section IIA, special cases and exceptions to the general conclusion can also be identified (Hanson, 2001; UNCTAD, 1999). Of particular concern is the impact on the stability and position of the balance-of-payments position, especially in developing countries. Other concerns include the impact of foreign investment on domestic investors, competition in host-country markets, domestic savings and consumption patterns, and the ownership of productive and financial assets (UNCTAD, 1999).[168]

The question of whether or not the contribution of FDI to the development process can be enhanced by government policy has also been extensively investigated (Moran, 2002; UNCTAD, 2001b, 2002c; UNCTAD and WTO, 2002). Some of the more common instruments that have been used by developed and developing countries include local content schemes, export performance requirements and trade balancing requirements. Many national governments have also been active in encouraging FDI flows through the use of various types of financial and fiscal incentives. Empirical evidence on the overall positive impact to the development process arising from the use of such instruments is weak (Hanson, 2001; Moran 1998, 2002).

The third driver is the level of international activity in the area of investment rule-making. Plurilateral efforts to develop rules on investment range from Bilateral Investment Treaties (BITs) to investment provisions in regional trading agreements and investment related provisions in the WTO Agreements. The breadth and discipline of the provisions varies across these agreements. Most BITs and some investment provisions in regional trading agreements include national treatment and most favoured nation treatment for investors. Many also include provisions related to performance requirements (UNCTAD and WTO, 2002). Some regional trading agreements, such as the North American Free Trade Agreement (NAFTA) include disciplines on investment policies, others such as the Australia New Zealand Closer Economic Relations Agreement do not. Taken together the current picture on international efforts at co-operation in investment policy is one of considerable interest and activity.

Investment issues were included in the Doha Ministerial Declaration in the context of these three drivers First and foremost, the mandate provided in the Declaration recognized the case for a multilateral framework to secure transparent, stable, and predictable conditions for long-term, cross-border investment, particularly foreign direct investment (FDI), that contributed to the expansion of trade. It identified a range of issues as being of importance to the link between trade related investment issues and development. These include market access issues in the form of pre-establishment commitments. The Doha Ministerial mandate also stressed that any prospective investment framework in the WTO must preserve the "right" and ability of Members to govern and regulate in the public interest.

The Doha Ministerial mandate placed particular emphasis on the importance of a multilateral framework reflecting the special development, trade and financial needs of developing and least-developed countries, and on allowing Members to undertake obligations and commitments commensurate with their individual needs and circumstances. It emphasized that creating a more open and stable climate for foreign investment is itself an important development objective. Not only do developing countries have an interest in encouraging inward investment and the important benefits that accompany it, developing countries also have a growing interest in creating a more secure international framework for outward investment, as they increasingly become exporters of FDI and home countries to transnational corporations.

[168] One interesting aspect to the impact of FDI is the extent to which it depends upon the motive for FDI. Classifying the various motives for FDI is not a simple task. Prior to the 1980s, FDI flows were either resource or market seeking. The former in order to exploit location specific advantages associated with natural resources and the latter typically to circumvent barriers to service a market via exporting such as tariffs or non-tariff measures. As a more liberal policy landscape for trade and foreign direct investment evolved towards the end of the last century, an increasing proportion of FDI flows were motivated by the opportunity to exploit comparative advantage factors such as low labour and transport costs; hence FDI became more export oriented.

The structure of the work programme provided by negotiators can best be described as pragmatic. If a genuine attempt at establishing an overarching and broad based multilateral framework for investment had existed, the mandate would have been much broader.[169] The pragmatism arises from the recognition that existing WTO rules already substantially cover a number of trade related investment issues. For example, market access in the context of services is covered under commercial presence under the GATS. Disciplines on government policies as they relate to merchandise trade could be challenged under the Agreement on Subsidies and Countervailing Measures and the Agreement on Trade Related Investment Measures.

Paragraph 22 of the Doha Ministerial Declaration mandated the Working Group on the Relationship Between Trade and Investment to focus on clarifying the following issues: scope and definition; transparency; non-discrimination modalities for pre-establishment commitments based on a GATS-type, positive list approach; development provisions exceptions and balance-of-payments; consultations and the settlement of disputes between Members. In addition, the Working Group also continued work on the relationship with other WTO Agreements and International Investment Agreements and also on the issue of FDI and the transfer of technology.

(b) Competition policy

The concern that private anti-competitive practices can erode the benefits of trade reform is one of long standing, as the proposed competition policy sections of the Havana Charter in the 1940s make clear. Competition policy is in many ways a natural complement to the reduction of tariff barriers and to some extent non-tariff barriers. Both encourage an environment where firms operate in such a way as to deliver consumers the benefit of a larger variety of goods at a lower price. Competition policy may also be seen as a governance mechanism that can help to ensure that the intended benefits of trade liberalization are not circumvented by cartels, monopolies and other anti-competitive conduct. A related consideration is that anti-competitive behaviour often has cross-border dimensions, whereas the mandate of national competition authorities, where they exist, is to apply remedies that have the objective of addressing the interests of those within their jurisdiction. For these reasons, it is important to assess the extent to which co-operation within a multilateral framework on competition policy could better ensure that the benefits of trade liberalization (i.e., lower prices and supply expansion) flow through to consumers, and could otherwise contribute to the development prospects of poor countries by promoting appropriate approaches to governance in a market economy.

The issue of trade and competition policy has been under study in the WTO since 1997, in a Working Group established at the Singapore Ministerial Conference. In the course of the debates in the Working Group, a number of more specific reasons have been put forward which, in the view of some Members, justify the development of a multilateral framework on competition policy. First, reference has been made to the growing body of empirical evidence that documents the harm caused by anti-competitive practices with an international dimension (particularly international cartels) to countries that lack the appropriate tools to deal with such practices.[170] The view has also been expressed that enhanced international co-operation is vital to addressing this impact, since the conduct involved often originates outside the borders of the jurisdictions affected. The argument has also been made that, although the adoption of a well-crafted national competition policy should normally be in the self-interest of all countries, developing countries may suffer, for political-economy reasons, from an under-investment in competition policy institutions relative to the harm caused to them by anti-competitive practices. This reflects the fact that, in many cases, anti-competitive practices that harm economic welfare are likely to be associated with concentrations of economic (and sometimes political) power, whereas the interests of the consumers who are the victims of such practices are likely to be more diffused.

[169] Three main channels through which international co-operation and co-ordination could exist have been proposed by the World Bank (2002): protecting investors' rights in order to increase incentives to invest; liberalizing investment flows to permit enhanced access and competition; and curbing policies that may distort investment flows and trade at the expense of neighbours.

[170] See the discussion of provisions on hardcore cartels below.

With reference to the role of WTO principles in this area, the view has been expressed that adherence to the principles of transparency, non-discrimination and procedural fairness in the field of competition law and policy is important to give confidence to international traders and investors, particularly given the recent proliferation of competition laws around the globe (currently, approximately 90-100 countries have on their books a competition law of one kind or another). Moreover, adherence to these principles is widely viewed as being central to the sound application of competition law and policy at the national level. On this basis, it has been argued that the objectives of both trade liberalization and the effective application of competition policy could be facilitated by explicit commitments in the WTO regarding adherence to the principles.

On the other side of the debate, two main sets of concerns or reservations have been voiced by developing countries in the WTO Working Group. The first relates to the implications of a WTO agreement on competition policy for national sovereignty and economic "policy space". Here, a particular concern has been that a multilateral framework on competition policy might intrude on developing countries' freedom to implement industrial or other policies that are considered necessary to promote dynamic (as opposed to static) efficiency goals. Another reservation has been a concern with the potential resource costs of implementing a multilateral framework. A further concern that has been raised in the Working Group relates to the implications of a possible multilateral framework on competition policy for countries that currently lack comprehensive domestic competition laws. In particular, the question has been posed as to whether such countries would be required, as a consequence of such a framework, to adopt a comprehensive law. In addition, a number of specific questions have been posed in the Working Group with respect to the practicality and benefits to be achieved by specific aspects of the current proposals.

As a further contextual point, it is worth recalling that competition policy considerations are already incorporated in several of the existing WTO agreements, albeit in an *ad hoc* fashion. For example, Article 40 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) recognizes the authority of Members to take measures against anti-competitive practices relating to the licensing of intellectual property rights. In addition, it enables Members to seek consultations with other Members in circumstances where the requesting Member believes that its laws are being infringed by the licensing practices of a foreign intellectual property right owner. The Reference Paper on regulatory principles, which was adopted by a number of the WTO's Members as an outcome of the Negotiations on Basic Telecommunications Services that were concluded in 1997, commits those Members to adopt measures to prevent anti-competitive practices by major suppliers in this sector. Article 11:3 of the Agreement on Safeguards prohibits Members from encouraging or supporting the adoption of non-governmental measures equivalent to voluntary export restraints, orderly marketing arrangements or other governmental arrangements prohibited under this Article. The existence of these and other provisions suggests that competition policy considerations cannot be excluded altogether from the multilateral trading system; the question is whether they will be integrated into the relevant agreements in a systematic or a piecemeal manner. A possible downside of a piecemeal approach is that sectoral initiatives might be implemented in isolation, perhaps limited to areas where only the more powerful Members or producer interests are effectively represented, and not benefit from the greater coherence, discipline and exposure to cross-sectoral experience which are often cited as potential advantages of more horizontal approaches to competition policy.[171]

Given the diversity of views on the international dimensions on competition policy, the mandate provided by Ministers in the Doha Declaration is modest and instructs the Working Group on the interaction between Trade and Competition to focus on the clarification of: core principles, including transparency, non-discrimination and procedural fairness; provisions on hard core cartels; modalities for voluntary co-operation and long-run support for the strengthening of competition agencies in developing countries through technical assistance and capacity building.

[171] For a related discussion, see "Special Study on Trade and Competition Policy", in *Annual Report of the World Trade Organization for 1997* (Geneva: 1997), Chapter IV, and Anderson and Holmes (2002).

(i) Core principles, including transparency, non-discrimination and procedural fairness

In the field of competition policy, a transparency commitment would apply to laws, regulations, and guidelines of general application. There would be an obligation upon WTO Members to ensure the publication of such laws, regulations and guidelines in a comprehensive and timely manner.[172] It could be argued that such a commitment is not inconsistent with the WTO system since the principle of transparency is well-established in WTO agreements such as the GATT (Article X regarding publication and administration of trade regulations), the GATS (Article III regarding transparency) and the TRIPS Agreement (Article 63 regarding transparency).

Transparency is perhaps of particular importance in regard to "behind-the-border" measures such as competition law and policy, since it is a means to ensure that such measures are not used as a trade-restrictive measure. Reliance on transparency mechanisms could help ensure that the reach and coverage of substantive disciplines in an agreement are not unnecessarily intrusive, thereby ensuring that an appropriate balance is struck.

Certain aspects of transparency, including the publication of laws, regulations and guidelines of general application, might entail administrative costs, and therefore would have implications for capacity-building. Transparency obligations should be defined in a way that was not overly burdensome. Nonetheless, developing transparent procedures, and having a transparent legislative framework is a key requirement for promoting compliance with the law and for the establishment of credible enforcement institutions. To this extent, the objectives of both the multilateral trading system and of credible and efficient competition law enforcement might be served by appropriately designed transparency obligations in a multilateral agreement on competition policy.

Non-discrimination as applied to competition policy involves two components: most-favoured-nation treatment and national treatment. In the context of applying national competition laws, MFN would not pose a great problem; it is unlikely that an authority would accept certain anti-competitive practices of firms originating in one country, while prohibiting those originating in other countries.[173]

On the other hand there are diverging views on the application of national treatment in the competition policy context. These views typically turn on the issue of whether or not national treatment of foreign firms would be pro-development. Even in the case where national treatment is applied in the context of *de jure* discrimination (discrimination embodied in laws, regulations and guidelines of general application) opponents of a multilateral framework on competition argue that it could still limit options for developing countries to pursue their objectives (Singh and Dhumale, 1999). Their argument typically revolves around the potential for second best effects arising from implementing policies that violate the national treatment principle.

A common feature of all effective competition policy regimes is that they include guarantees that the rights of parties facing adverse decisions and sanctions will be recognized and respected. Such guarantees typically vary both in content and in form, because they reflect the legal culture and traditions that have generated the competition regime. Arguably, the incorporation of basic requirements on procedural fairness in a multilateral framework on competition policy would both enhance the credibility of competition institutions worldwide and give reassurance to international traders and investors that they will not be dealt with arbitrarily. On the other hand, it would seem important that any such guarantees not entail disproportionate implementation costs.

A further issue in the debate on a possible multilateral framework on competition policy is whether the discussion should be limited to the proposed principles that are referred to specifically in the Ministerial Declaration (i.e., those of transparency, non-discrimination and procedural fairness). In the view of some Members, an additional principle, namely that of special and differential treatment (S&D) should be explicitly incorporated into any possible multilateral framework. Possible dimensions of this principle include increasing trade opportunities for developing countries, safeguarding their developmental interests, flexibility in any commitments for developing countries and LDCs, and transitional periods.

[172] This might be done either in print in an official gazette, journal or the like, or possibly on a publicly accessible website.

[173] On the other hand, issues could arise with regard to the status of bilateral and regional co-operation arrangements in relation to MFN treatment; these may need to be clarified.

(ii) Provisions on hardcore cartels

In recent years, a growing body of evidence has documented the extent of harm caused by private international cartels to the world economy, and particularly to developing countries that may lack the tools needed to address these arrangements. This, in turn, has raised the questions of whether binding international agreements are needed to complement national initiatives to tackle cartels and other anti-competitive practices.

During the 1990s, the United States and the European Commission prosecuted over forty international cartels made up of private firms located in 31 different economies. Several of these cartels – for example, in lysine, vitamins, and graphite electrodes – were worldwide in reach. Twenty four of these cartels lasted four or more years, suggesting that market forces alone cannot be guaranteed to undermine these international conspiracies (Evenett, Levenstein and Suslow, 2001). Although estimates vary, prices tend to fall between 20 to 40 per cent after international cartels are broken up (Levenstein and Suslow, 2001).

The overcharges caused by these cartels run into the billions of dollars annually. Some indication of this is given by the magnitude of the fines imposed in Europe and the United States, which are based in part on estimates of the amount that a cartel overcharges its customers. Since 1993 fines imposed by American authorities on members of international cartels have exceeded $1.9 billion. Last year, the European Commission fined international cartel members over a billion euros. Recently, the overcharges on vitamins trade during the ten year global conspiracy involving these products were conservatively estimated to be $2.7 billion, a substantial amount for a single international cartel. Moreover, there is evidence that this cartel deliberately raised prices by more in jurisdictions without active cartel enforcement regimes (Clarke and Evenett, 2003.) Finally, evidence from 12 private international cartels suggests that between 1995-2000, developing countries imported between $8-12 billion of goods that were subject to higher prices due to international cartels (Evenett and Ferrarini, 2002).

The damage done by private international cartels may reinforce the case for national enforcement measures, but does it provide a case for international collective action? Specifically, is there an argument for having some minimum standards for national cartel enforcement? Two arguments, borne out in the enforcement experience of the 1990s, suggest that this may well be case. First, public announcements in one nation about cartel enforcement actions tend to trigger investigations by trading partners. For example, the Republic of Korea began investigating the graphite electrodes cartel after reading about American enforcement actions against this cartel. Trading partners therefore benefit from active enforcement abroad – and these benefits are likely to be reinforced over time as formal and informal co-operation between competition authorities deepens.

The second argument is based on the fact that prosecuting an international cartel almost always requires securing testimony and documentation about the nature, extent, and organization of the conspiracy. To the extent that an international cartel hides such documentation in a jurisdiction that cannot or will not cooperate with foreign investigations into the cartel's activities, this jurisdiction's actions have adverse effects on their trading partners' interests. The key point is that when a nation does not rigorously enforce its cartel laws then the damage done is rarely confined to its own borders. An international accord on the enactment and enforcement of cartel laws can go some way to eliminating safe havens for domestic as well as international cartels.

Some are concerned about the cost of enforcing national anti-cartel laws. This concern might be more pressing were it not for the fact that countries at every stage of development have found it advantageous to prosecute cartels in recent years. Indeed, 12 developing economies reported in submissions to the OECD's Global Fora on Competition that they have prosecuted 28 cartels during the 1990s. Interestingly, six of these cartels involved bid-rigging; that is, deliberate attempts to defraud the state. Furthermore, the reduction in overcharges on a single international cartel in nations where the threat of cartel enforcement activity was higher accounted for a large proportion of many of these nations' state outlays on their entire competition enforcement regimes (Clarke and Evenett, 2003). This suggests that the total benefits of cartel enforcement are likely to exceed any implementation costs.

With regard to the possible contents of provisions of a multilateral framework on competition policy relating to hard core cartels, two main elements could be required: (i) a ban on such cartels; and (ii) measures to promote the exchange of information between WTO Members in relation to such cartels. More specifically, a WTO agreement could incorporate a clear statement that hard core cartels were prohibited. The exact contours of a definition of hard core cartels could only be determined through negotiations. In regard to penalties, while these were inherently a matter for domestic law and were closely linked to the domestic legal system, an eventual WTO competition policy committee (if such comes into being) could provide guidance to countries wanting to introduce penalties in terms of identifying what had proved effective in various jurisdictions.

(iii) Modalities for voluntary co-operation

The term "co-operation" has been used in a broad and a narrow sense in the debate on trade and competition policy in the WTO. In its broad sense, it has been used to refer to the full range of elements on which it has been proposed by some Members that Members might undertake to work together in the framework of the WTO – including technical co-operation and capacity building and possible commitments on hardcore cartels in addition to narrower forms of co-operation such as notifications, consultations and mutual assistance in particular cases. In the more specific sense that has been used in relevant contributions of Members to the WTO Working Group, co-operation has two main elements: (i) provisions to facilitate case-specific co-operation on anti-competitive practices having an impact on international trade; and (ii) provisions relating to general exchanges of information and experiences and joint analysis of global trade-related competition issues as might be conducted, for example, by a possible WTO committee on competition policy.

(iv) Long-run technical assistance and capacity building

The importance of a commitment to long-term support for the technical assistance and capacity building in the area of competition policy as a counterpart to any multilateral rules has been discussed extensively in the WTO Working Group. In the period leading up to the Cancún Ministerial Conference, the Secretariat's technical assistance activities in this field have focused on the immediate objective of informing Members regarding the nature of the current proposals and helping them to better evaluate the pros and cons of these proposals for their development prospects and interests. In the event that negotiations are launched at Cancún, technical assistance and capacity building in this area would likely have a different focus. In particular, the current proposals envision that, working in co-operation with other intergovernmental organizations active in this field, the WTO would contribute to the long-run process of strengthening competition institutions in developing and least-developed countries.

Appendix Table IIB.1
MFN bound tariffs for all products

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)				Other duties & charges		
							Total	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)	Simple average	Maximum	Non *ad valorem* (per cent)
Albania	100.0	7.0	0.9	20.0	2009	26.1	73.9	0.0	15.5	0.0	0.0	0.0	0.0
Angola	100.0	59.2	0.1	80.0	1995	0.0	100.0	0.0	99.3	0.0	0.1	0.1	0.0
Antigua and Barbuda	97.9	58.7	0.4	220.0	2004	0.0	97.9	0.0	97.9	0.2	0.0	0.0	0.0
Argentina	100.0	31.9	0.2	35.0	2004	0.0	100.0	0.0	97.8	0.0	3.0	3.0	0.0
Australia	97.0	9.9	1.1	55.0	2000	19.2	77.8	0.4	13.3	5.9	0.0	0.0	0.0
Bahrain	74.8	35.5	0.2	200.0	1995	0.0	74.8	0.0	74.8	0.2	0.0	2.0	0.0
Bangladesh	15.8	163.8	0.4	200.0	2004	0.0	15.8	0.0	15.2	0.0	2.2	2.5	0.0
Barbados	97.9	78.1	0.3	247.0	2004	0.0	97.9	0.0	97.9	0.4	98.3	246.0	0.0
Belize	98.0	58.2	0.3	110.0	1995	0.0	98.0	0.0	98.0	0.0	14.2	106.0	0.0
Benin	39.4	28.3	0.9	100.0	1995	0.5	38.9	0.0	17.6	0.9	6.8	19.0	0.0
Bolivia	100.0	40.0	0.0	40.0	2000	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Botswana	96.5	18.8	1.3	597.0	2007	14.5	82.0	0.0	40.0	2.6	0.0	0.0	0.6
Brazil	100.0	31.4	0.2	85.0	2004	0.6	99.4	0.0	97.0	0.0	0.0	0.0	0.0
Brunei Darussalam	95.3	24.3	0.3	50.0	1995	0.0	95.3	0.3	95.0	0.0	0.0	0.0	0.0
Bulgaria	100.0	24.5	0.6	98.0	2010	3.9	96.1	2.1	57.3	1.3	0.0	0.0	0.0
Burkina Faso	39.2	41.9	1.0	100.0	1995	0.5	38.7	0.0	17.5	0.0	17.8	50.0	0.0
Burundi	21.8	68.3	0.6	100.0	1995	0.6	21.2	0.0	18.6	0.0	18.8	30.0	0.0
Cameroon	13.3	79.9	0.0	80.0	1995	0.0	13.3	0.0	13.3	0.0	0.0	0.0	13.3
Canada	99.7	5.1	1.1	238.3	2004	31.0	68.7	3.8	6.0	6.0	0.0	0.0	0.0
Central African Rep.	62.5	36.2	0.2	70.0	1995	0.0	62.5	0.0	62.5	0.0	15.3	16.0	0.0
Chad	13.5	79.9	0.0	80.0	1995	0.0	13.5	0.0	13.5	0.0	0.0	0.0	0.0
Chile	100.0	25.1	0.1	98.0	2004	0.0	100.0	0.0	99.9	0.1	0.0	0.0	0.0
China	100.0	10.0	0.7	65.0	2010	5.8	94.2	0.0	16.3	1.3	0.0	0.0	0.0
Colombia	100.0	42.9	0.5	227.0	2004	0.0	100.0	0.0	100.0	2.2	0.0	0.0	0.0
Congo	16.0	27.5	0.3	30.0	1995	0.0	16.0	0.0	14.1	0.0	0.0	0.0	0.0
Congo, Dem. Rep.	100.0	96.2	0.2	100.0	1995	0.0	100.0	0.0	99.0	0.0	0.0	0.0	0.0
Costa Rica	100.0	42.8	0.3	233.1	2005	1.9	98.1	0.0	95.9	0.1	1.0	1.0	0.0
Côte d'Ivoire	33.1	11.1	0.6	64.0	2004	0.6	32.5	0.0	2.6	0.1	4.7	70.0	1.4
Croatia	100.0	6.0	0.9	55.0	2007	25.0	75.0	2.4	2.4	1.9	0.0	0.0	0.0
Cuba	30.9	21.3	0.8	62.0	2004	2.1	28.8	0.0	14.0	0.0	0.0	0.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)		International peaks (per cent)	National peaks (per cent)	Other duties & charges		
							Total	Non *ad valorem*			Simple average	Maximum	Non *ad valorem* (per cent)
Cyprus	85.9	40.4	0.3	245.0	2004	1.9	84.0	6.3	77.7	0.1	0.2	6.0	0.0
Czech Rep.	100.0	5.0	1.5	125.0	2004	18.7	81.3	0.0	3.5	3.5	0.0	0.0	0.0
Djibouti	100.0	40.9	0.4	450.0	1995	0.1	99.9	0.0	99.6	0.5	99.6	100.0	0.0
Dominica	94.8	58.7	0.4	150.0	2004	0.0	94.8	0.0	94.8	0.0	0.0	0.0	0.0
Dominican Rep.	100.0	34.9	0.3	99.0	2004	0.0	100.0	0.0	92.1	0.0	0.7	60.0	0.0
Ecuador	99.8	21.7	0.4	85.5	2001	0.0	99.8	0.0	72.1	0.2	0.0	0.0	0.0
Egypt	98.8	37.2	4.3	3'000.0	2004	0.0	98.8	0.2	72.2	0.4	0.0	0.0	0.0
El Salvador	100.0	36.6	0.3	164.4	2005	2.1	97.9	0.0	97.5	0.2	0.0	0.0	0.0
Estonia	100.0	8.6	0.9	59.0	2005	18.3	81.7	0.0	6.8	3.5	0.0	0.0	0.0
European Union	100.0	4.1	1.0	74.9	2004	24.3	75.7	6.0	1.8	3.1	0.0	0.0	0.0
Fiji	52.3	40.1	0.0	70.0	2004	0.0	52.3	0.3	52.1	0.0	0.0	0.0	0.0
Gabon	100.0	21.4	0.7	60.0	1995	0.0	100.0	0.0	14.3	0.0	18.2	48.0	0.0
Gambia	13.7	102.0	0.2	110.0	1995	0.0	13.7	0.0	13.7	0.0	10.0	10.0	0.0
Georgia	100.0	7.2	0.7	30.0	2006	21.6	78.4	0.3	1.7	0.5	0.0	0.0	0.0
Ghana	14.3	92.5	0.2	99.0	2004	0.0	14.3	0.0	14.3	0.0	0.2	15.0	0.0
Grenada	100.0	56.6	0.4	200.0	1995	0.3	99.7	0.0	99.7	0.6	0.0	0.0	0.0
Guatemala	100.0	42.3	0.4	257.0	2004	0.0	100.0	0.0	96.2	0.6	0.0	0.0	0.0
Guinea	38.9	20.1	0.8	75.0	1995	0.6	38.3	0.0	17.2	0.1	8.8	93.0	0.0
Guinea-Bissau	97.7	48.6	0.1	50.0	1995	0.0	97.7	0.0	97.7	0.0	46.8	80.0	0.0
Guyana	100.0	56.7	0.3	100.0	1999	0.0	100.0	0.0	100.0	0.0	31.4	85.0	0.0
Haiti	89.2	17.6	0.5	70.0	1999	4.9	84.3	9.7	47.8	0.0	12.6	21.0	0.0
Honduras	100.0	32.5	0.2	60.0	2001	0.0	100.0	0.0	91.8	0.0	0.0	0.0	0.0
Hong Kong, China	45.7	0.0	0.0	0.0	2000	45.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hungary	96.4	9.7	1.1	127.5	2002	9.1	87.3	0.0	9.9	6.5	0.0	0.0	0.0
Iceland	95.0	13.4	1.6	229.0	2000	37.3	57.7	3.3	29.9	4.4	0.0	0.0	0.0
India	73.8	49.8	0.8	300.0	2005	2.1	71.7	5.3	65.2	4.8	0.0	0.0	0.0
Indonesia	96.6	37.1	0.3	210.0	2005	1.9	94.7	0.0	91.0	0.5	0.1	25.0	0.0
Israel	76.4	20.8	1.9	560.0	2005	9.0	67.4	7.5	18.1	6.9	0.0	0.0	0.0
Jamaica	100.0	49.8	0.5	100.0	1995	0.6	99.4	0.0	84.1	0.0	14.1	200.0	0.0
Japan	99.6	2.9	1.6	61.9	2004	53.4	46.2	6.1	2.4	8.4	0.0	0.0	0.0
Jordan	100.0	16.3	0.9	200.0	2010	5.6	94.4	0.2	48.2	0.5	0.0	0.0	0.0
Kenya	14.6	95.7	0.1	100.0	1999	0.0	14.6	0.0	14.6	0.0	0.0	0.0	0.0
Korea, Rep.	94.4	16.1	2.7	887.4	2009	13.4	81.0	0.7	19.7	2.4	0.0	0.0	0.0
Kuwait	100.0	100.0	0.0	100.0	1995	0.0	100.0	0.0	100.0	0.0	15.0	15.0	0.0
Kyrgyz Rep.	99.9	7.4	0.6	30.0	2005	19.6	80.3	0.5	2.9	0.0	0.0	0.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.1
MFN bound tariffs for all products, continued

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)		International peaks (per cent)	National peaks (per cent)	Other duties & charges		
							Total	Non *ad valorem*			Simple average	Maximum	Non *ad valorem* (per cent)
Latvia	100.0	12.7	1.0	55.0	2008	14.3	85.7	0.1	16.1	8.6	0.0	0.0	0.0
Lesotho	100.0	78.6	0.6	200.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Lithuania	100.0	9.3	0.9	100.0	2009	22.5	77.5	0.4	10.1	2.2	0.0	0.0	0.0
Macao, China	26.8	0.0	0.0	0.0	1997	26.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Madagascar	29.7	27.4	0.2	30.0	1995	0.0	29.7	0.0	27.3	0.0	190.2	250.0	0.0
Malawi	31.2	76.1	0.5	125.0	2004	0.0	31.2	0.0	31.2	0.0	11.8	20.0	0.0
Malaysia	83.7	14.5	0.8	168.0	2005	5.2	78.5	3.7	35.3	0.5	0.0	0.0	0.0
Maldives	97.1	36.9	1.1	300.0	1995	0.0	97.1	0.0	97.1	2.5	0.0	1.0	0.0
Mali	40.6	28.8	0.9	75.0	1995	0.5	40.1	0.0	19.0	0.0	19.0	50.0	0.0
Malta	97.2	48.3	0.2	88.0	1995	0.3	96.9	8.6	88.0	0.0	0.4	100.0	10.2
Mauritania	39.3	19.6	0.9	75.0	1995	0.5	38.8	0.0	17.6	1.5	5.4	15.0	0.0
Mauritius	17.8	93.9	0.5	122.0	2005	3.2	14.6	0.0	14.6	0.0	13.7	17.0	0.0
Mexico	100.0	34.9	0.1	72.0	2004	0.2	99.8	1.0	98.3	0.0	0.0	0.0	0.0
Moldova	100.0	6.7	0.7	25.0	2005	22.6	77.4	1.1	1.7	0.0	0.0	0.0	0.0
Mongolia	100.0	17.6	0.4	75.0	2005	1.5	98.5	0.0	77.9	0.0	0.0	0.0	0.0
Morocco	100.0	41.3	0.5	289.0	2004	0.0	100.0	0.0	99.5	1.4	15.0	15.0	0.0
Mozambique	13.6	97.5	0.2	100.0	1995	0.0	13.6	0.0	13.3	0.0	100.0	100.0	0.0
Myanmar	17.3	83.6	1.1	550.0	1995	0.9	16.4	0.1	14.3	0.5	0.0	0.0	0.0
Namibia	96.5	19.1	1.3	597.0	2007	14.6	81.9	0.0	39.9	3.0	0.0	0.0	0.6
New Zealand	99.9	10.3	1.1	55.0	2000	42.5	57.4	4.1	30.9	5.4	0.0	0.0	0.0
Nicaragua	100.0	41.7	0.2	200.0	2004	0.0	100.0	0.0	99.9	0.1	0.0	0.0	0.0
Niger	96.8	44.3	0.7	200.0	1995	0.5	96.3	0.0	75.8	3.0	37.1	50.0	0.0
Nigeria	19.3	118.4	0.4	150.0	1999	0.0	19.3	0.0	19.3	0.0	80.0	80.0	0.0
Norway	100.0	3.0	1.3	25.5	2004	42.3	57.7	12.2	0.1	11.1	0.0	0.0	0.0
Oman	100.0	13.8	1.3	200.0	2009	3.6	96.4	0.0	3.5	1.5	0.0	0.0	0.0
Pakistan	44.3	52.4	0.6	200.0	2004	0.0	44.3	0.0	40.6	0.0	0.0	0.0	0.0
Panama	100.0	23.5	0.5	260.0	2010	2.0	98.0	0.0	72.3	0.3	0.0	0.0	0.0
Papua New Guinea	100.0	31.8	0.5	100.0	2008	0.0	100.0	0.9	71.2	0.4	0.0	0.0	0.0
Paraguay	100.0	33.5	0.2	35.0	1995	0.0	100.0	0.0	95.2	0.0	0.0	0.0	0.0
Peru	100.0	30.1	0.1	68.0	2004	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)		International peaks (per cent)	National peaks (per cent)	Other duties & charges		
							Total	Non *ad valorem*			Simple average	Maximum	Non *ad valorem* (per cent)
Philippines	66.8	25.6	0.5	60.0	2005	1.9	64.9	0.0	55.7	0.0	0.0	0.0	0.0
Poland	96.2	11.8	1.1	230.0	2002	4.0	92.2	4.8	15.2	2.6	0.0	0.0	0.0
Qatar	100.0	16.0	1.0	200.0	2009	0.9	99.1	0.0	18.7	0.8	3.0	3.0	0.0
Romania	100.0	40.4	0.9	333.0	2004	0.4	99.6	0.0	94.6	4.3	0.5	0.5	0.0
Rwanda	100.0	89.5	0.3	100.0	1999	0.8	99.2	0.0	97.3	0.0	0.0	0.0	0.0
Senegal	100.0	30.0	0.0	30.0	2005	0.0	100.0	0.0	99.8	0.0	7.2	85.0	0.0
Sierra Leone	100.0	47.4	0.1	80.0	2004	0.0	100.0	0.0	100.0	0.0	43.1	50.0	0.0
Singapore	69.2	6.9	0.6	10.0	2004	15.5	53.7	0.5	0.0	0.0	0.0	0.0	0.0
Slovak Rep.	100.0	5.0	1.5	125.0	2004	18.7	81.3	0.0	3.5	3.5	0.0	0.0	0.0
Slovenia	100.0	23.7	0.3	45.0	2003	2.2	97.8	1.8	84.0	0.0	0.0	0.0	0.0
Solomon Islands	100.0	78.8	0.2	150.0	1995	0.0	100.0	1.4	95.4	0.0	0.0	0.0	0.0
South Africa	96.5	19.1	1.3	597.0	2007	14.6	81.9	0.0	39.9	3.0	0.0	0.0	0.6
Sri Lanka	37.8	29.9	0.7	100.0	2001	0.2	37.6	0.6	24.4	0.0	0.9	10.0	0.0
St. Kitts and Nevis	97.9	75.9	0.2	250.0	2004	0.0	97.9	0.0	97.9	0.1	17.8	28.0	0.4
St. Lucia	99.6	61.9	0.4	250.0	2004	0.0	99.6	0.0	99.6	0.2	0.0	0.0	0.0
St. Vincent and the Grenadines	99.7	62.5	0.4	250.0	2004	0.0	99.7	0.0	99.7	0.2	0.0	0.0	0.0
Suriname	26.3	18.5	0.5	40.0	2004	0.8	25.5	0.0	21.0	0.0	27.0	50.0	0.0
Swaziland	96.5	19.1	1.3	597.0	2007	14.6	81.9	0.0	39.9	3.0	0.0	0.0	0.6
Switzerland	99.8	0.0	0.0	0.0	2004	15.1	84.7	84.7	0.0	0.0	0.0	0.0	0.0
Chinese Taipei	100.0	6.1	2.0	500.0	2011	28.4	71.6	2.2	5.8	4.9	0.0	0.0	0.0
Tanzania	13.3	120.0	0.0	120.0	1995	0.0	13.3	0.0	13.3	0.0	0.3	84.0	0.0
Thailand	74.7	25.7	0.5	226.0	2005	2.3	72.4	19.0	47.3	0.9	0.0	40.0	0.0
Togo	13.8	80.0	0.0	80.0	1995	0.0	13.8	0.0	13.8	0.0	0.0	0.0	13.8
Trinidad and Tobago	100.0	55.7	0.4	156.0	2004	1.4	98.6	0.0	95.4	0.0	14.2	15.0	0.0
Tunisia	57.4	57.8	0.7	200.0	2005	0.0	57.4	0.0	57.4	1.1	0.7	30.0	0.0
Turkey	47.3	29.4	1.3	225.0	2004	2.6	44.7	0.0	28.1	2.6	0.0	0.0	0.0
Uganda	15.8	73.3	0.2	80.0	1995	0.0	15.8	0.0	15.8	0.0	3.5	30.0	0.0
United Arab Emirates	100.0	14.7	1.1	200.0	2009	0.9	99.1	0.0	0.7	0.7	0.0	0.0	0.0
United States	100.0	3.6	2.9	350.0	2004	37.2	62.8	10.8	2.1	7.1	0.0	0.0	0.3
Uruguay	100.0	31.7	0.2	55.0	2004	0.0	100.0	0.0	98.2	0.0	3.0	3.0	0.0
Venezuela	100.0	33.8	0.2	123.0	2004	0.0	100.0	0.0	99.2	0.1	0.0	0.0	0.0
Zambia	16.8	106.4	0.3	125.0	1995	0.0	16.8	0.0	16.8	0.0	0.0	0.0	0.0
Zimbabwe	21.0	94.1	0.7	150.0	2004	1.6	19.4	0.5	14.6	0.0	9.4	15.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.2
MFN bound tariffs for agricultural products

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)				Other duties & charges		
							Total	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)	Simple average	Maximum	Non *ad valorem* (per cent)
Albania	100.0	9.4	0.6	20.0	2007	10.9	89.1	0.0	15.2	0.0	0.0	0.0	0.0
Angola	100.0	52.8	0.2	55.0	1995	0.0	100.0	0.0	94.7	0.0	0.1	0.1	0.0
Antigua and Barbuda	99.9	105.1	0.1	220.0	2004	0.0	99.9	0.0	99.9	0.0	0.0	0.0	0.0
Argentina	100.0	32.6	0.2	35.0	2004	0.1	99.9	0.0	95.9	0.0	3.0	3.0	0.0
Australia	100.0	3.2	1.4	29.0	2000	32.2	67.8	2.1	2.8	8.6	0.0	0.0	0.0
Bahrain	100.0	37.5	0.5	200.0	1995	0.0	100.0	0.0	100.0	1.3	0.1	2.0	0.0
Bangladesh	100.0	188.5	0.2	200.0	2004	0.0	100.0	0.0	98.1	0.0	2.4	2.5	0.0
Barbados	100.0	111.2	0.2	223.0	2004	0.0	100.0	0.0	100.0	0.0	93.0	244.0	0.0
Belize	100.0	101.4	0.0	110.0	1995	0.0	100.0	0.0	100.0	0.0	14.7	106.0	0.0
Benin	100.0	61.8	0.2	100.0	1995	0.0	100.0	0.0	98.2	0.0	18.5	19.0	0.0
Bolivia	100.0	40.0	0.0	40.0	2000	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Botswana	99.7	37.5	1.4	597.0	2000	21.8	77.9	0.0	70.8	2.4	0.0	0.0	4.2
Brazil	100.0	35.5	0.3	55.0	2004	2.2	97.8	0.0	96.2	0.0	0.0	0.0	0.0
Brunei Darussalam	97.6	23.2	0.4	50.0	1995	0.0	97.6	2.4	95.4	0.0	0.0	0.0	0.0
Bulgaria	100.0	35.6	0.8	98.0	2001	4.6	95.4	15.7	54.8	0.0	0.0	0.0	0.0
Burkina Faso	100.0	98.1	0.1	100.0	1995	0.0	100.0	0.0	98.4	0.0	48.7	50.0	0.0
Burundi	100.0	95.1	0.2	100.0	1995	2.5	97.5	0.0	96.8	0.0	28.2	30.0	0.0
Cameroon	100.0	80.0	0.0	80.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	100.0
Canada	100.0	3.5	2.1	238.3	2004	41.8	58.2	26.0	1.2	6.9	0.0	0.0	0.0
Central African Rep.	100.0	30.0	0.0	30.0	1995	0.0	100.0	0.0	100.0	0.0	16.0	16.0	0.0
Chad	100.0	80.0	0.0	80.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Chile	100.0	26.0	0.2	98.0	2004	0.0	100.0	0.0	100.0	0.6	0.0	0.0	0.0
China	100.0	15.8	0.7	65.0	2010	2.8	97.2	0.0	36.0	3.1	0.0	0.0	0.0
Colombia	100.0	91.9	0.4	227.0	2004	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Congo	100.0	30.0	0.0	30.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Congo, Dem. Rep.	100.0	98.2	0.1	100.0	1995	0.0	100.0	0.0	99.7	0.0	0.0	0.0	0.0
Costa Rica	100.0	42.5	0.6	233.1	2004	0.0	100.0	0.0	89.4	0.9	1.0	1.0	0.0
Côte d'Ivoire	100.0	14.9	0.3	64.0	2004	0.1	99.9	0.0	1.0	0.9	11.9	70.0	10.9
Croatia	100.0	9.4	1.0	55.0	2007	15.1	84.9	18.3	15.7	5.2	0.0	0.0	0.0
Cuba	100.0	37.0	0.3	40.0	2004	4.6	95.4	0.0	92.6	0.0	0.0	0.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)		International peaks (per cent)	National peaks (per cent)	Other duties & charges		
							Total	Non *ad valorem*			Simple average	Maximum	Non *ad valorem* (per cent)
Cyprus	99.6	58.8	0.5	245.0	2004	0.0	99.6	47.7	51.8	0.3	1.5	6.0	0.0
Czech Rep.	100.0	10.0	1.8	125.0	2000	38.7	61.3	0.0	20.4	8.4	0.0	0.0	0.0
Djibouti	100.0	47.3	0.9	450.0	1995	0.3	99.7	0.0	99.4	3.2	99.4	100.0	0.0
Dominica	100.0	112.2	0.2	150.0	2004	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Dominican Rep.	100.0	39.6	0.3	99.0	2004	0.0	100.0	0.0	98.8	0.0	1.0	30.0	0.0
Ecuador	100.0	25.5	0.4	85.5	2001	0.0	100.0	0.0	87.6	0.6	0.0	0.0	0.0
Egypt	99.7	95.3	4.5	3'000.0	2004	0.0	99.7	1.3	66.3	2.2	0.0	0.0	0.0
El Salvador	100.0	42.1	0.5	164.4	2004	0.0	100.0	0.0	100.0	1.2	0.0	0.0	0.0
Estonia	100.0	17.5	0.8	59.0	2004	17.0	83.0	0.0	44.2	0.4	0.0	0.0	0.0
European Union	100.0	5.8	1.3	74.9	2003	26.7	73.3	40.8	8.1	5.2	0.0	0.0	0.0
Fiji	100.0	40.4	0.1	70.0	2004	0.0	100.0	2.4	98.5	0.0	0.0	0.0	0.0
Gabon	100.0	60.0	0.0	60.0	1995	0.0	100.0	0.0	100.0	0.0	19.3	48.0	0.0
Gambia	100.0	103.5	0.2	110.0	1995	0.0	100.0	0.0	100.0	0.0	10.0	10.0	0.0
Georgia	100.0	11.7	0.5	30.0	2006	8.3	91.7	2.5	10.9	0.0	0.0	0.0	0.0
Ghana	100.0	97.1	0.1	99.0	2004	0.0	100.0	0.0	100.0	0.0	0.2	15.0	0.0
Grenada	100.0	99.6	0.3	200.0	1995	1.9	98.1	0.0	98.1	0.0	0.0	0.0	0.0
Guatemala	100.0	51.6	0.8	257.0	2004	0.0	100.0	0.0	98.1	4.0	0.0	0.0	0.0
Guinea	100.0	39.7	0.1	75.0	1995	0.0	100.0	0.0	98.4	0.0	24.5	93.0	0.0
Guinea-Bissau	100.0	40.0	0.0	40.0	1995	0.0	100.0	0.0	100.0	0.0	25.8	50.0	0.0
Guyana	100.0	100.0	0.0	100.0	1995	0.0	100.0	0.0	100.0	0.0	40.4	85.0	0.0
Haiti	100.0	21.7	0.7	70.0	1999	15.2	84.8	11.1	61.7	0.3	13.8	21.0	0.0
Honduras	100.0	32.3	0.2	60.0	2001	0.0	100.0	0.0	95.0	0.0	0.0	0.0	0.0
Hong Kong, China	100.0	0.0	0.0	0.0	2000	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hungary	100.0	27.0	0.8	127.5	2001	7.7	92.3	0.0	63.5	1.0	0.0	0.0	0.0
Iceland	100.0	43.4	1.0	229.0	2000	18.6	81.4	24.5	47.6	1.8	0.0	0.0	0.0
India	100.0	114.5	0.5	300.0	2004	0.0	100.0	0.3	98.2	0.0	0.0	0.0	0.0
Indonesia	100.0	47.0	0.5	210.0	2004	0.0	100.0	0.0	99.4	2.8	0.1	25.0	0.0
Israel	98.5	73.0	1.0	560.0	2004	2.8	95.7	0.3	75.5	2.8	0.0	0.0	0.0
Jamaica	100.0	97.4	0.2	100.0	1995	1.9	98.1	0.3	97.0	0.0	25.4	200.0	0.0
Japan	100.0	6.9	1.3	61.9	2004	28.7	71.3	22.7	14.3	8.4	0.0	0.0	0.0
Jordan	100.0	23.7	1.3	200.0	2010	0.9	99.1	1.0	57.3	3.5	0.0	0.0	0.0
Kenya	100.0	100.0	0.0	100.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Korea, Rep.	99.1	52.9	2.1	887.4	2004	2.2	96.9	4.7	70.6	6.6	0.0	0.0	0.0
Kuwait	100.0	100.0	0.0	100.0	1995	0.0	100.0	0.0	100.0	0.0	15.0	15.0	0.0
Kyrgyz Rep.	100.0	12.3	0.4	30.0	2003	1.2	98.8	2.4	22.0	0.0	0.0	0.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.2
MFN bound tariffs for agricultural products, continued

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)				Other duties & charges		
							Total	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)	Simple average	Maximum	Non *ad valorem* (per cent)
Latvia	100.0	34.6	0.5	55.0	2008	2.1	97.9	0.4	67.8	0.0	0.0	0.0	0.0
Lesotho	100.0	200.0	0.0	200.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Lithuania	100.0	15.2	0.9	100.0	2009	9.7	90.3	3.0	25.8	4.1	0.0	0.0	0.0
Macao, China	100.0	0.0	0.0	0.0	1995	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Madagascar	100.0	30.0	0.0	30.0	1995	0.0	100.0	0.0	100.0	0.0	240.8	250.0	0.0
Malawi	100.0	121.7	0.1	125.0	2004	0.0	100.0	0.0	100.0	0.0	0.8	20.0	0.0
Malaysia	99.9	12.2	1.6	168.0	2004	12.1	87.8	27.3	13.7	4.1	0.0	0.0	0.0
Maldives	100.0	48.0	1.4	300.0	1995	0.0	100.0	0.0	100.0	6.9	0.0	1.0	0.0
Mali	100.0	59.2	0.1	75.0	1995	0.0	100.0	0.0	98.4	0.0	48.7	50.0	0.0
Malta	100.0	34.3	0.6	88.0	1995	2.2	97.8	64.8	30.9	0.0	0.0	0.0	10.8
Mauritania	100.0	37.7	0.4	75.0	1995	0.0	100.0	0.0	98.2	0.0	14.6	15.0	0.0
Mauritius	100.0	119.6	0.1	122.0	1995	0.0	100.0	0.0	100.0	0.0	16.8	17.0	0.0
Mexico	100.0	35.1	0.3	72.0	2004	0.3	99.7	7.5	90.3	0.0	0.0	0.0	0.0
Moldova	99.9	12.2	0.4	25.0	2005	3.0	96.9	8.3	12.0	0.0	0.0	0.0	0.0
Mongolia	100.0	18.9	0.3	75.0	1999	0.7	99.3	0.0	74.4	0.3	0.0	0.0	0.0
Morocco	100.0	54.5	0.9	289.0	2004	0.0	100.0	0.0	100.0	6.6	15.0	15.0	0.0
Mozambique	100.0	100.0	0.0	100.0	1995	0.0	100.0	0.0	100.0	0.0	100.0	100.0	0.0
Myanmar	100.0	102.8	0.9	550.0	1995	0.6	99.4	0.6	85.8	3.4	0.0	0.0	0.0
Namibia	99.7	39.8	1.4	597.0	2000	22.4	77.3	0.0	70.2	1.5	0.0	0.0	4.2
New Zealand	100.0	5.7	1.2	35.2	2000	51.3	48.7	0.7	11.4	8.1	0.0	0.0	0.0
Nicaragua	100.0	43.5	0.3	200.0	2004	0.0	100.0	0.0	100.0	0.6	0.0	0.0	0.0
Niger	100.0	83.1	0.8	200.0	1995	0.0	100.0	0.0	98.4	0.0	48.7	50.0	0.0
Nigeria	100.0	150.0	0.0	150.0	1995	0.0	100.0	0.0	100.0	0.0	80.0	80.0	0.0
Norway	100.0	1.2	3.1	25.5	2000	21.4	78.6	75.2	0.6	5.0	0.0	0.0	0.0
Oman	100.0	28.0	1.6	200.0	2006	0.0	100.0	0.0	11.7	7.5	0.0	0.0	0.0
Pakistan	92.6	97.1	0.2	200.0	2002	0.0	92.6	0.0	89.1	0.0	0.0	0.0	0.0
Panama	100.0	27.7	0.5	260.0	2006	0.3	99.7	0.0	82.5	1.7	0.0	0.0	0.0
Papua New Guinea	100.0	43.2	0.5	100.0	2008	0.0	100.0	6.4	75.3	0.0	0.0	0.0	0.0
Paraguay	100.0	33.2	0.2	35.0	1995	0.0	100.0	0.0	93.8	0.0	0.0	0.0	0.0
Peru	100.0	30.8	0.2	68.0	2004	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)		International peaks (per cent)	National peaks (per cent)	Other duties & charges		
							Total	Non *ad valorem*			Simple average	Maximum	Non *ad valorem* (per cent)
Philippines	99.4	34.6	0.3	60.0	2003	0.0	99.4	0.0	91.6	0.0	0.0	0.0	0.0
Poland	99.9	32.9	1.1	230.0	2000	2.3	97.6	36.5	42.0	2.9	0.0	0.0	0.0
Qatar	100.0	25.7	1.6	200.0	1995	0.0	100.0	0.0	23.3	5.6	3.0	3.0	0.0
Romania	100.0	98.4	0.8	333.0	2004	0.1	99.9	0.0	97.3	3.4	0.5	0.5	0.0
Rwanda	100.0	74.3	0.3	80.0	1995	3.0	97.0	0.0	95.6	0.0	0.0	0.0	0.0
Senegal	100.0	29.8	0.1	30.0	2005	0.0	100.0	0.0	99.1	0.0	46.1	85.0	0.0
Sierra Leone	100.0	40.3	0.1	80.0	1995	0.0	100.0	0.0	100.0	0.0	19.6	20.0	0.0
Singapore	100.0	9.5	0.2	10.0	2004	3.1	96.9	3.8	0.0	0.0	0.0	0.0	0.0
Slovak Rep.	100.0	10.0	1.8	125.0	2000	38.7	61.3	0.0	20.4	8.4	0.0	0.0	0.0
Slovenia	100.0	23.3	0.6	45.0	2000	0.6	99.4	13.3	61.3	0.0	0.0	0.0	0.0
Solomon Islands	100.0	70.7	0.4	150.0	1995	0.0	100.0	3.4	82.6	0.0	0.0	0.0	0.0
South Africa	99.7	39.8	1.4	597.0	2000	22.4	77.3	0.0	70.2	1.5	0.0	0.0	4.2
Sri Lanka	100.0	49.7	0.1	60.0	2000	0.0	100.0	2.7	97.9	0.0	0.1	10.0	0.0
St. Kitts and Nevis	100.0	108.7	0.3	250.0	2004	0.0	100.0	0.0	99.7	0.0	17.8	18.0	2.8
St. Lucia	100.0	114.6	0.2	250.0	2004	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
St. Vincent and the Grenadines	100.0	114.6	0.2	250.0	2004	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Suriname	100.0	19.9	0.0	20.0	2004	0.0	100.0	0.0	99.4	0.0	50.0	50.0	0.0
Swaziland	99.7	39.8	1.4	597.0	2000	22.4	77.3	0.0	70.2	1.5	0.0	0.0	4.2
Switzerland	100.0	0.0	0.0	0.0	2004	17.4	82.6	82.6	0.0	0.0	0.0	0.0	0.0
Chinese Taipei	99.9	15.3	1.9	500.0	2011	24.5	75.4	10.9	32.9	3.8	0.0	0.0	0.0
Tanzania	100.0	120.0	0.0	120.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Thailand	100.0	35.5	0.8	226.0	2004	0.7	99.3	45.5	48.2	2.1	0.1	40.0	0.1
Togo	100.0	80.0	0.0	80.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	100.0
Trinidad and Tobago	100.0	90.2	0.3	156.0	2004	4.9	95.1	0.0	91.1	0.0	13.4	15.0	0.0
Tunisia	98.8	116.0	0.3	200.0	2005	0.0	98.8	0.0	98.8	0.0	0.0	0.0	0.0
Turkey	100.0	60.2	0.9	225.0	2004	0.0	100.0	0.0	86.7	4.6	0.0	0.0	0.0
Uganda	100.0	77.7	0.1	80.0	1995	0.0	100.0	0.0	100.0	0.0	1.0	30.0	0.0
United Arab Emirates	100.0	25.4	1.7	200.0	1995	0.0	100.0	0.0	5.6	5.6	0.0	0.0	0.0
United States	100.0	6.9	4.4	350.0	2003	28.7	71.3	49.6	4.0	1.9	0.0	0.0	0.3
Uruguay	100.0	33.9	0.2	55.0	2004	0.0	100.0	0.0	96.3	0.0	3.0	3.0	0.0
Venezuela	100.0	38.8	0.3	123.0	2004	0.0	100.0	0.0	99.3	0.3	0.0	0.0	0.0
Zambia	100.0	123.3	0.1	125.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Zimbabwe	100.0	143.4	0.2	150.0	2004	1.2	98.8	2.8	95.7	0.0	14.3	15.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.3
MFN bound tariffs for non-agricultural products

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)		International peaks (per cent)	National peaks (per cent)	Other duties & charges		
							Total	Non *ad valorem*			Simple average	Maximum	Non *ad valorem* (per cent)
Albania	100.0	6.6	1.0	20.0	2009	28.4	71.6	0.0	15.5	10.1	0.0	0.0	0.0
Angola	100.0	60.1	0.0	80.0	1995	0.0	100.0	0.0	100.0	0.0	0.1	0.1	0.0
Antigua and Barbuda	97.6	51.4	0.2	206.0	1999	0.0	97.6	0.0	97.6	0.1	0.0	0.0	0.0
Argentina	100.0	31.8	0.2	35.0	2003	0.0	100.0	0.0	98.1	0.0	3.0	3.0	0.0
Australia	96.5	11.0	1.0	55.0	2000	17.2	79.3	0.1	14.9	6.4	0.0	0.0	0.0
Bahrain	71.0	35.1	0.1	100.0	1995	0.0	71.0	0.0	71.0	0.0	0.0	0.0	0.0
Bangladesh	3.0	35.7	0.7	200.0	1997	0.0	3.0	0.0	2.5	0.1	0.8	2.5	0.0
Barbados	97.6	73.0	0.2	247.0	1995	0.0	97.6	0.0	97.6	0.4	99.2	246.0	0.0
Belize	97.7	51.5	0.1	110.0	1995	0.0	97.7	0.0	97.7	0.0	14.1	104.0	0.0
Benin	30.1	11.4	0.9	60.0	1995	0.6	29.5	0.0	5.3	1.4	0.9	19.0	0.0
Bolivia	100.0	40.0	0.0	40.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Botswana	96.0	15.8	0.7	60.0	2007	13.4	82.6	0.0	35.3	2.5	0.0	0.0	0.0
Brazil	100.0	30.8	0.2	85.0	2004	0.3	99.7	0.0	97.2	0.0	0.0	0.0	0.0
Brunei Darussalam	95.0	24.5	0.3	50.0	1995	0.0	95.0	0.0	95.0	0.0	0.0	0.0	0.0
Bulgaria	100.0	23.0	0.5	40.0	2010	3.8	96.2	0.0	57.7	0.0	0.0	0.0	0.0
Burkina Faso	29.9	13.2	1.4	100.0	1995	0.6	29.3	0.0	5.2	1.2	2.0	50.0	0.0
Burundi	9.9	26.8	1.1	100.0	1995	0.4	9.5	0.0	6.7	1.4	4.2	30.0	0.0
Cameroon	0.1	57.5	0.2	80.0	1995	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1
Canada	99.7	5.3	1.0	20.0	2004	29.4	70.3	0.4	6.8	6.4	0.0	0.0	0.0
Central African Rep.	56.8	37.9	0.2	70.0	1995	0.0	56.8	0.0	56.8	0.0	15.2	16.0	0.0
Chad	0.3	75.4	0.0	80.0	1995	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0
Chile	100.0	25.0	0.0	25.0	2004	0.0	100.0	0.0	99.9	0.0	0.0	0.0	0.0
China	100.0	9.1	0.7	50.0	2010	6.2	93.8	0.0	13.3	1.3	0.0	0.0	0.0
Colombia	100.0	35.4	0.1	104.0	2004	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Congo	3.2	15.2	0.7	30.0	1995	0.0	3.2	0.0	1.0	0.0	0.0	0.0	0.0
Congo, Dem. Rep.	100.0	95.9	0.2	100.0	1995	0.0	100.0	0.0	98.9	0.0	0.0	0.0	0.0
Costa Rica	100.0	42.9	0.2	100.0	2005	2.2	97.8	0.0	96.8	0.0	1.0	1.0	0.0
Côte d'Ivoire	22.9	8.6	0.7	25.0	1999	0.7	22.2	0.0	2.8	0.0	0.4	25.0	0.0
Croatia	100.0	5.5	0.8	25.0	2005	26.5	73.5	0.0	0.3	0.3	0.0	0.0	0.0
Cuba	20.4	9.5	0.8	62.0	2004	1.7	18.7	0.0	2.1	0.7	0.0	0.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)				Other duties & charges		
							Total	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)	Simple average	Maximum	Non *ad valorem* (per cent)
Cyprus	83.9	38.6	0.2	50.0	2004	2.1	81.8	0.0	81.6	0.0	0.0	6.0	0.0
Czech Rep.	100.0	4.2	0.8	29.0	2004	15.7	84.3	0.0	0.9	1.8	0.0	0.0	0.0
Djibouti	100.0	39.9	0.1	200.0	1995	0.0	100.0	0.0	99.6	0.0	99.6	100.0	0.0
Dominica	94.0	50.0	0.0	100.0	2004	0.0	94.0	0.0	94.0	0.0	0.0	0.0	0.0
Dominican Rep.	100.0	34.2	0.3	40.0	1995	0.0	100.0	0.0	91.1	0.0	0.6	60.0	0.0
Ecuador	99.8	21.1	0.3	40.0	2001	0.0	99.8	0.0	69.7	0.0	0.0	0.0	0.0
Egypt	98.7	28.3	0.6	160.0	2004	0.0	98.7	0.0	73.1	0.2	0.0	0.0	0.0
El Salvador	100.0	35.7	0.3	80.0	2005	2.4	97.6	0.0	97.1	0.0	0.0	0.0	0.0
Estonia	100.0	7.3	0.6	30.0	2005	18.5	81.5	0.0	1.1	0.8	0.0	0.0	0.0
European Union	100.0	3.9	0.9	26.0	2004	23.9	76.1	0.7	0.8	7.2	0.0	0.0	0.0
Fiji	45.0	40.0	0.0	40.0	1995	0.0	45.0	0.0	45.0	0.0	0.0	0.0	0.0
Gabon	100.0	15.5	0.3	60.0	1995	0.0	100.0	0.0	1.2	1.1	18.0	18.0	0.0
Gambia	0.5	58.3	0.4	110.0	1995	0.0	0.5	0.0	0.5	0.0	10.0	10.0	0.0
Georgia	100.0	6.5	0.7	20.0	2005	23.6	76.4	0.0	0.3	0.3	0.0	0.0	0.0
Ghana	1.2	35.9	0.3	99.0	2004	0.0	1.2	0.0	1.2	0.0	0.0	0.0	0.0
Grenada	100.0	50.0	0.0	100.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Guatemala	100.0	40.8	0.2	75.0	2004	0.0	100.0	0.0	95.9	0.0	0.0	0.0	0.0
Guinea	29.6	10.0	0.7	40.0	1995	0.7	28.9	0.0	4.8	0.2	0.7	93.0	0.0
Guinea-Bissau	97.4	50.0	0.0	50.0	1995	0.0	97.4	0.0	97.4	0.0	50.1	80.0	0.0
Guyana	100.0	50.0	0.0	100.0	1999	0.0	100.0	0.0	100.0	0.0	30.0	50.0	0.0
Haiti	87.6	16.9	0.4	40.0	1999	3.3	84.3	9.5	45.6	0.0	12.4	16.0	0.0
Honduras	100.0	32.6	0.2	55.0	2001	0.0	100.0	0.0	91.3	0.0	0.0	0.0	0.0
Hong Kong, China	37.4	0.0	0.0	0.0	2000	37.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hungary	95.8	6.9	0.6	68.0	2002	9.3	86.5	0.0	1.7	1.1	0.0	0.0	0.0
Iceland	94.2	9.6	1.3	175.0	2000	40.1	54.1	0.0	27.3	7.4	0.0	0.0	0.0
India	69.8	34.3	0.3	150.0	2005	2.5	67.3	6.1	60.1	0.1	0.0	0.0	0.0
Indonesia	96.1	35.6	0.2	150.0	2005	2.2	93.9	0.0	89.8	0.0	0.1	25.0	0.0
Israel	73.0	9.2	1.1	170.0	2005	10.0	63.0	8.6	9.3	3.5	0.0	0.0	0.0
Jamaica	100.0	42.5	0.4	100.0	1995	0.4	99.6	0.0	82.2	0.0	12.4	80.0	0.0
Japan	99.5	2.3	1.5	30.0	2004	57.1	42.4	3.6	0.6	10.3	0.0	0.0	0.0
Jordan	100.0	15.2	0.6	30.0	2010	6.3	93.7	0.0	46.8	0.0	0.0	0.0	0.0
Kenya	1.6	54.8	0.3	100.0	1999	0.0	1.6	0.0	1.6	0.0	0.0	0.0	0.0
Korea, Rep.	93.7	10.2	0.8	80.0	2009	15.1	78.6	0.1	11.9	3.6	0.0	0.0	0.0
Kuwait	100.0	100.0	0.0	100.0	1995	0.0	100.0	0.0	100.0	0.0	15.0	15.0	0.0
Kyrgyz Rep.	99.9	6.7	0.6	20.0	2005	22.5	77.4	0.2	0.0	0.0	0.0	0.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.3
MFN bound tariffs for non-agricultural products, continued

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)				Other duties & charges		
							Total	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)	Simple average	Maximum	Non *ad valorem* (per cent)
Latvia	100.0	9.4	0.8	55.0	2008	16.1	83.9	0.0	8.3	1.5	0.0	0.0	0.0
Lesotho	100.0	60.0	0.0	200.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0
Lithuania	100.0	8.4	0.7	30.0	2009	24.5	75.5	0.0	7.7	0.3	0.0	0.0	0.0
Macao, China	15.6	0.0	0.0	0.0	1997	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Madagascar	18.9	25.3	0.3	30.0	1995	0.0	18.9	0.0	16.3	0.0	149.4	250.0	0.0
Malawi	20.7	42.4	0.2	125.0	1999	0.0	20.7	0.0	20.7	0.0	20.0	20.0	0.0
Malaysia	81.2	14.9	0.7	40.0	2005	4.1	77.1	0.1	38.5	0.0	0.0	0.0	0.0
Maldives	96.7	35.1	1.0	300.0	1995	0.0	96.7	0.0	96.7	1.8	0.0	1.0	0.0
Mali	31.6	14.2	1.1	60.0	1995	0.6	31.0	0.0	6.9	2.9	4.6	50.0	0.0
Malta	96.8	49.1	0.2	88.0	1995	0.0	96.8	0.0	96.7	0.0	0.5	100.0	10.2
Mauritania	30.1	10.5	0.7	75.0	1995	0.6	29.5	0.0	5.3	0.0	0.7	15.0	0.0
Mauritius	5.3	18.9	1.6	122.0	2005	3.7	1.6	0.0	1.5	1.5	4.7	17.0	0.0
Mexico	100.0	34.9	0.1	50.0	2004	0.2	99.8	0.0	99.5	0.0	0.0	0.0	0.0
Moldova	100.0	6.0	0.7	20.0	2005	25.6	74.4	0.0	0.1	0.1	0.0	0.0	0.0
Mongolia	100.0	17.3	0.4	30.0	2005	1.6	98.4	0.0	78.4	0.0	0.0	0.0	0.0
Morocco	100.0	39.2	0.1	45.0	2004	0.0	100.0	0.0	99.5	0.0	15.0	15.0	0.0
Mozambique	0.5	11.3	1.8	100.0	1995	0.0	0.5	0.0	0.0	0.0	100.0	100.0	0.0
Myanmar	4.7	22.3	1.1	550.0	1995	1.0	3.7	0.0	3.4	0.1	0.0	0.0	0.0
Namibia	96.0	15.8	0.7	60.0	2007	13.4	82.6	0.0	35.2	2.5	0.0	0.0	0.0
New Zealand	99.9	11.0	1.1	55.0	2000	41.1	58.8	4.6	33.8	5.9	0.0	0.0	0.0
Nicaragua	100.0	41.5	0.1	100.0	2004	0.0	100.0	0.0	99.9	0.0	0.0	0.0	0.0
Niger	96.3	38.1	0.5	200.0	1995	0.6	95.7	0.0	72.3	0.0	35.3	50.0	0.0
Nigeria	6.9	48.8	0.2	150.0	1999	0.0	6.9	0.0	6.9	0.0	80.0	80.0	0.0
Norway	100.0	3.1	1.3	14.0	2004	45.5	54.5	2.5	0.0	12.1	0.0	0.0	0.0
Oman	100.0	11.6	0.4	20.0	2009	4.1	95.9	0.0	2.2	0.0	0.0	0.0	0.0
Pakistan	36.9	35.3	0.4	100.0	2004	0.0	36.9	0.0	33.2	0.0	0.0	0.0	0.0
Panama	100.0	22.9	0.5	81.0	2010	2.2	97.8	0.0	70.8	0.0	0.0	0.0	0.0
Papua New Guinea	100.0	30.1	0.5	100.0	2006	0.0	100.0	0.1	70.6	0.3	0.0	0.0	0.0
Paraguay	100.0	33.6	0.2	35.0	1995	0.0	100.0	0.0	95.4	0.0	0.0	0.0	0.0
Peru	100.0	30.0	0.0	30.0	1995	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Import markets	Binding coverage (per cent)	Simple average	Coefficient of variation	Maximum *ad valorem*	Last year of implementation	Duty-free (per cent)	Dutiable (per cent)		International peaks (per cent)	National peaks (per cent)	Other duties & charges		
							Total	Non *ad valorem*			Simple average	Maximum	Non *ad valorem* (per cent)
Philippines	61.8	23.4	0.5	50.0	2005	2.2	59.6	0.0	50.2	0.0	0.0	0.0	0.0
Poland	95.7	9.6	0.5	38.0	2002	4.3	91.4	0.0	11.1	0.0	0.0	0.0	0.0
Qatar	100.0	14.5	0.3	200.0	2009	1.1	98.9	0.0	17.9	0.0	3.0	3.0	0.0
Romania	100.0	31.6	0.2	220.0	2004	0.5	99.5	0.0	94.2	0.0	0.5	0.5	0.0
Rwanda	100.0	91.8	0.3	100.0	1999	0.5	99.5	0.0	97.6	0.0	0.0	0.0	0.0
Senegal	100.0	30.0	0.0	30.0	2005	0.0	100.0	0.0	100.0	0.0	1.4	85.0	0.0
Sierra Leone	100.0	48.5	0.1	80.0	2004	0.0	100.0	0.0	100.0	0.0	46.8	50.0	0.0
Singapore	64.5	6.3	0.7	10.0	2004	17.4	47.1	0.0	0.0	0.0	0.0	0.0	0.0
Slovak Rep.	100.0	4.2	0.8	29.0	2004	15.7	84.3	0.0	0.9	1.8	0.0	0.0	0.0
Slovenia	100.0	23.7	0.3	27.0	2003	2.4	97.6	0.1	87.5	0.0	0.0	0.0	0.0
Solomon Islands	100.0	80.0	0.1	120.0	1995	0.0	100.0	1.1	97.4	0.0	0.0	0.0	0.0
South Africa	96.0	15.8	0.7	60.0	2007	13.4	82.6	0.0	35.2	2.5	0.0	0.0	0.0
Sri Lanka	28.3	19.3	0.9	100.0	2001	0.2	28.1	0.3	13.2	0.5	1.3	10.0	0.0
St. Kitts and Nevis	97.6	70.8	0.1	170.0	2004	0.0	97.6	0.0	97.6	0.0	17.9	28.0	0.1
St. Lucia	99.5	53.9	0.3	206.0	2004	0.0	99.5	0.0	99.5	0.5	0.0	0.0	0.0
St. Vincent and the Grenadines	99.7	54.6	0.3	206.0	2004	0.0	99.7	0.0	99.7	0.5	0.0	0.0	0.0
Suriname	15.1	17.0	0.8	40.0	1999	0.9	14.2	0.0	9.1	0.0	3.6	50.0	0.0
Swaziland	96.0	15.8	0.7	60.0	2007	13.4	82.6	0.0	35.2	2.5	0.0	0.0	0.0
Switzerland	99.7	0.0	0.0	0.0	2004	14.7	85.0	85.0	0.0	0.0	0.0	0.0	0.0
Chinese Taipei	100.0	4.8	1.2	90.0	2011	29.0	71.0	0.9	1.7	2.4	0.0	0.0	0.0
Tanzania	0.1	120.0	0.0	120.0	1995	0.0	0.1	0.0	0.1	0.0	37.3	84.0	0.0
Thailand	70.9	24.2	0.4	80.0	2005	2.5	68.4	14.9	47.2	0.3	0.0	20.0	0.0
Togo	0.7	80.0	0.0	80.0	1995	0.0	0.7	0.0	0.7	0.0	0.0	0.0	0.7
Trinidad and Tobago	100.0	50.5	0.2	100.0	1995	0.9	99.1	0.0	96.1	0.0	14.3	15.0	0.0
Tunisia	51.1	40.6	0.4	180.0	2005	0.0	51.1	0.0	51.1	0.0	0.9	30.0	0.0
Turkey	39.3	17.5	0.7	102.0	2004	3.0	36.3	0.0	19.2	0.7	0.0	0.0	0.0
Uganda	3.0	50.8	0.2	80.0	1995	0.0	3.0	0.0	3.0	0.0	16.6	30.0	0.0
United Arab Emirates	100.0	13.1	0.3	15.0	2009	1.1	98.9	0.0	0.0	0.0	0.0	0.0	0.0
United States	100.0	3.2	1.3	48.0	2009	38.5	61.5	4.8	1.8	8.2	0.0	0.0	0.3
Uruguay	100.0	31.3	0.2	35.0	1995	0.0	100.0	0.0	98.5	0.0	3.0	3.0	0.0
Venezuela	100.0	33.1	0.1	40.0	2004	0.0	100.0	0.0	99.2	0.0	0.0	0.0	0.0
Zambia	4.1	42.7	0.2	125.0	1995	0.0	4.1	0.0	4.1	0.0	0.0	0.0	0.0
Zimbabwe	9.0	11.0	1.1	150.0	1995	1.6	7.4	0.2	2.3	0.5	1.2	15.0	0.0

Source: WTO Secretariat. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.4
MFN applied tariffs for all products

Import markets	Year	Total number of tariff lines	Simple average	Coefficient of variation	Maximum	Duty-free (per cent)	Dutiable (per cent)			
							Total dutiable	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)
Albania	2001	10579	7.5	0.7	15.0	1.0	99.0	0.0	0.0	0.0
Algeria*	2002	5996	19.2	0.5	30.0	1.8	98.2	0.0	41.9	0.0
Antigua and Barbuda*	2001	6290	9.6	1.0	70.0	11.1	86.1	2.8	26.7	4.0
Argentina	2001	9407	12.7	0.5	35.0	2.5	97.5	0.0	35.0	0.0
Armenia*	2001	5135	3.0	1.5	10.0	70.3	29.7	0.0	0.0	29.7
Australia	2001	5771	4.1	1.4	25.0	47.5	52.5	0.1	4.2	10.1
Azerbaijan	2002	10568	8.7	0.7	35.0	1.1	90.8	8.1	0.1	0.0
Bahamas*	2002	5812	30.7	0.4	260.0	7.5	92.3	0.2	86.8	0.3
Bahrain*	2001	6980	7.8	1.1	125.0	3.1	96.8	0.1	3.7	0.6
Bangladesh	1999	6520	22.0	0.6	37.5	6.4	93.6	0.1	55.2	0.0
Barbados	2001	6454	12.4	1.6	243.0	0.0	100.0	0.9	25.2	6.7
Belarus	2001	10850	10.0	0.5	25.0	0.7	99.3	11.9	9.3	0.0
Belize*	2001	6333	10.5	1.1	91.0	9.6	90.0	0.4	28.0	8.1
Benin*	2002	5491	12.0	0.6	21.0	1.3	98.7	0.0	40.9	0.0
Bermuda*	2001	5116	17.5	0.5	75.0	5.1	94.3	0.6	67.2	0.2
Bhutan*	2002	5243	16.6	0.7	100.0	7.0	93.0	0.0	47.6	0.5
Bolivia	2002	6787	9.4	0.2	10.0	3.9	96.1	0.0	0.0	0.0
Bosnia and Herzegovina*	2001	8382	6.0	0.8	15.0	27.3	72.7	0.0	0.0	0.0
Brazil	2001	9404	14.6	0.4	55.0	2.4	97.6	0.0	47.1	0.0
Brunei Darussalam	2001	6481	2.6	2.6	200.0	77.1	22.9	0.7	7.1	13.7
Bulgaria	2001	10500	11.0	0.9	74.0	16.6	83.4	1.3	21.7	2.4
Burkina Faso*	2002	5491	12.0	0.6	21.0	1.3	98.7	0.0	40.9	0.0
Cambodia*	2001	6809	16.4	0.8	120.0	4.2	95.7	0.0	28.1	0.2
Cameroon	2001	5577	18.0	0.5	30.0	0.6	99.4	0.0	48.0	0.0
Canada	2001	9588	4.1	1.4	238.0	38.7	61.3	2.9	8.2	9.8
Central African Rep.*	2002	5574	18.0	0.5	30.0	0.6	99.3	0.1	49.1	0.0
Chad*	2002	5574	18.0	0.5	30.0	0.6	99.3	0.1	49.1	0.0
Chile	2001	5855	8.0	0.1	8.0	0.6	99.4	0.0	0.0	0.0
China	2002	7323	12.4	0.7	71.0	3.2	96.8	0.5	30.3	1.6
Colombia	2001	6778	12.2	0.5	35.0	1.0	99.0	0.0	27.7	0.0
Congo*	2002	5574	18.0	0.5	30.0	0.6	99.3	0.1	49.1	0.0
Costa Rica	2001	7998	5.5	1.4	154.0	48.5	51.5	0.0	1.3	1.3
Côte d'Ivoire*	2002	5491	12.0	0.6	21.0	1.3	98.7	0.0	40.9	0.0
Croatia	2001	7669	6.4	1.1	77.0	31.4	68.6	2.4	8.6	1.9
Cuba	2002	5490	10.9	0.7	30.0	5.8	94.2	0.0	9.8	0.0
Cyprus	2001	11119	6.2	2.0	268.7	18.9	81.1	5.3	4.9	4.2
Czech Rep.	2001	10297	5.0	1.5	125.0	19.2	80.8	0.0	3.4	3.4
Djibouti	1999	5072	30.8	0.2	160.0	0.0	100.0	2.0	94.4	0.1
Dominica	2001	6335	9.9	1.4	165.0	22.9	77.1	0.0	23.8	6.0
Dominican Rep.	2000	6600	8.4	0.9	25.0	10.7	89.3	0.0	26.2	0.0
Ecuador	2000	6661	11.9	0.5	35.0	2.0	98.0	0.0	27.9	0.0
Egypt*	2002	6685	19.9	0.9	600.0	0.5	88.8	10.6	44.2	0.7
El Salvador	2000	5964	7.1	1.2	40.0	48.2	51.8	0.0	13.6	7.0
Equatorial Guinea*	2002	5574	18.0	0.5	30.0	0.6	99.3	0.1	49.1	0.0
Estonia	2002	10581	1.7	4.2	59.0	93.5	6.5	0.0	4.8	6.1

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Import markets	Year	Total number of tariff lines	Simple average	Coefficient of variation	Maximum	Dutiable (per cent)				
						Duty-free (per cent)	Total dutiable	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)
Ethiopia*	2001	5415	18.8	0.7	40.0	3.1	96.8	0.1	49.7	0.0
European Union	2002	10456	4.4	1.0	74.9	18.3	81.7	5.9	1.9	2.5
FYR Macedonia	2001	10490	12.6	1.0	60.0	0.6	99.4	1.5	29.7	2.8
Gabon	2000	5605	17.9	0.5	30.0	1.9	98.1	0.0	47.9	0.0
Georgia*	1999	5118	10.6	0.3	12.0	0.0	99.8	0.2	0.0	0.0
Ghana*	2000	5439	14.6	0.8	279.0	13.5	86.5	0.0	43.6	0.2
Grenada*	2001	6335	18.9	0.6	40.0	5.7	38.0	56.3	28.1	0.0
Guatemala	1999	5922	7.4	1.2	28.0	47.5	52.5	0.0	15.5	11.9
Guinea	1998	5349	6.5	0.2	7.0	0.6	99.4	0.0	0.0	0.0
Guinea-Bissau*	2002	5491	12.0	0.6	21.0	1.3	98.7	0.0	40.9	0.0
Guyana	2000	6398	11.0	1.1	100.0	4.0	96.0	0.0	25.2	6.4
Honduras	2000	5913	7.3	1.0	55.0	0.0	100.0	0.0	24.3	0.5
Hong Kong, China	2002	6552	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Hungary	2001	12659	9.5	1.1	127.5	10.1	89.9	0.0	10.1	6.4
Iceland	2000	7550	2.9	2.3	78.0	71.6	28.4	2.8	2.1	15.7
India	2001	5516	31.4	0.4	210.0	1.1	98.9	5.2	86.9	0.7
Indonesia	2002	7532	6.9	1.4	170.0	19.3	80.7	0.1	2.8	0.9
Iran*	2000	5112	7.3	0.9	30.0	24.6	75.4	0.0	9.6	1.3
Israel	1999	9847	5.6	2.1	250.0	40.8	59.2	18.2	3.7	3.5
Jamaica	1999	6760	7.2	1.6	75.0	63.3	36.7	0.0	24.3	7.0
Japan	2001	9036	3.3	1.5	50.0	45.2	54.8	6.5	2.7	8.8
Jordan	2001	6315	14.7	1.0	180.0	18.5	81.5	0.2	43.6	0.4
Kazakhstan*	1996	10151	9.5	1.1	100.0	31.3	68.7	0.0	21.5	3.8
Kenya	2001	5960	17.1	0.6	100.0	3.1	96.9	0.0	38.3	0.1
Korea, Rep.	2001	11280	12.4	3.3	917.0	4.9	95.1	0.5	7.8	2.6
Kuwait*	2002	5018	3.6	0.9	100.0	12.5	85.5	2.1	0.2	0.2
Kyrgyz Rep.	2001	10490	4.8	1.3	65.0	54.9	45.1	0.3	4.7	4.8
Lao PDR*	2001	5029	9.6	0.8	40.0	0.0	99.6	0.4	13.8	7.5
Latvia	1999	10839	4.1	1.9	93.9	19.1	80.9	0.1	2.5	19.0
Lebanon*	2002	5822	5.4	1.9	75.0	38.2	61.5	0.3	7.5	7.5
Libya*	2002	5743	17.0	1.7	400.0	30.6	67.2	2.1	36.4	5.5
Lithuania	2001	10895	3.4	2.3	87.0	75.0	25.0	0.4	4.3	13.7
Macao, China	2001	6370	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Madagascar	2000	6016	5.7	1.2	30.0	33.6	66.4	0.0	7.3	7.3
Malawi	2000	5469	13.4	0.7	30.0	3.8	96.2	0.0	37.4	0.0
Malaysia	2001	10379	7.3	1.4	300.0	53.3	46.7	0.8	20.6	10.3
Maldives*	2002	5318	20.2	0.6	200.0	0.1	99.8	0.1	59.9	1.4
Mali	1999	5483	11.1	0.9	25.0	29.4	70.6	0.0	31.7	0.0
Malta	2001	11131	5.6	0.8	80.0	16.7	83.3	0.1	1.8	1.6
Mauritania*	2001	5922	10.9	0.7	20.0	8.5	91.5	0.0	40.3	0.0
Mauritius	2001	5532	19.0	1.5	80.0	55.4	44.6	0.1	30.7	16.2
Mexico	2001	11319	17.9	0.8	260.0	0.8	99.2	0.8	54.2	0.7
Moldova*	2001	5989	4.9	1.1	25.0	46.1	53.2	0.7	0.1	15.2
Montserrat*	1999	6319	18.1	0.6	52.0	5.8	37.6	56.7	27.0	0.0
Morocco	1997	9114	33.7	0.8	376.5	0.0	100.0	0.2	80.4	1.3
Mozambique*	2002	5369	12.1	0.8	25.0	2.2	97.8	0.0	34.9	0.0
Myanmar	1996	5799	5.5	1.1	40.0	3.0	97.0	0.0	5.3	5.2
Nepal*	2002	5344	13.5	0.8	130.0	1.0	98.4	0.6	14.7	0.7
New Zealand	1999	7229	3.3	1.4	19.0	54.1	45.9	3.9	4.7	6.2
Nicaragua	2002	6319	4.7	1.3	170.0	49.1	50.9	0.0	0.3	18.4
Niger*	2002	5491	12.0	0.6	21.0	1.3	98.7	0.0	40.9	0.0
Nigeria*	2002	5129	30.0	0.8	150.0	0.0	99.5	0.5	54.8	5.2
Norway	2002	7133	2.2	6.7	555.0	75.2	24.8	9.4	2.4	11.1
Oman	2001	7216	5.7	1.6	100.0	5.0	95.0	0.0	1.1	1.1
Pakistan	2001	5477	20.1	0.7	250.0	0.0	100.0	0.7	57.8	0.6

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.4
MFN applied tariffs for all products, continued

Import markets	Year	Total number of tariff lines	Simple average	Coefficient of variation	Maximum	Duty-free (per cent)	Dutiable (per cent)			
							Total dutiable	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)
Panama	2001	8552	8.7	2.6	1'000.0	3.4	96.6	0.0	1.6	1.2
Papua New Guinea*	2002	5598	7.0	2.0	85.0	76.2	22.8	1.1	22.8	22.8
Paraguay	2001	9515	13.1	0.5	32.5	2.2	97.8	0.0	39.0	0.0
Peru	1998	6869	13.4	0.2	20.0	0.0	100.0	0.0	17.4	0.0
Philippines	2002	5640	5.7	1.1	65.0	2.1	97.9	0.0	1.7	1.6
Poland	2001	10573	13.9	1.4	676.7	4.8	95.2	3.6	20.0	4.2
Qatar*	2002	5018	4.2	0.7	70.0	0.0	100.0	0.0	0.5	0.5
Romania	1999	10586	28.9	1.6	332.5	2.6	97.4	0.0	52.1	6.9
Russian Federation	2001	11032	9.9	0.5	20.0	0.7	99.3	11.9	9.2	0.0
Rwanda*	2001	5684	9.9	0.8	25.0	7.5	92.3	0.2	15.2	0.0
Saudi Arabia*	2000	7055	12.0	0.2	20.0	2.7	91.6	5.7	4.7	0.0
Senegal*	2002	5491	12.0	0.6	21.0	1.3	98.7	0.0	40.9	0.0
Serbia and Montenegro*	2001	8538	14.4	0.8	40.0	0.8	99.2	0.0	39.2	0.0
Seychelles*	2001	5018	28.3	1.0	225.0	0.6	97.8	1.6	63.5	4.5
Singapore	2001	5977	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Slovak Rep.	2001	10312	5.0	1.5	125.0	19.2	80.8	0.0	3.4	3.9
Slovenia	2002	10445	9.6	0.7	45.0	10.0	90.0	1.5	13.8	0.9
Solomon Islands	1998	5251	22.2	0.8	70.0	0.0	100.0	1.4	54.2	7.2
South Africa	2001	7819	5.8	1.5	55.0	51.1	48.9	14.2	11.7	11.5
Sri Lanka	1998	6020	10.9	1.0	100.0	18.4	81.6	0.6	24.4	5.5
St. Kitts and Nevis*	2001	6339	9.3	1.2	70.0	23.5	76.1	0.4	25.4	3.2
St. Lucia	2001	6356	8.9	1.3	95.0	40.0	60.0	0.0	25.4	7.3
St. Vincent and the Grenadines*	2001	6330	9.8	1.0	40.0	8.5	91.3	0.2	27.1	6.2
Sudan*	1996	5018	5.4	2.5	200.0	65.9	34.1	0.0	11.2	11.2
Suriname*	2000	6333	17.5	0.9	50.0	5.3	19.9	74.8	9.0	0.0
Switzerland	2001	8326	0.0	0.0	0.0	15.8	84.2	84.2	0.0	0.0
Syria*	2002	8250	19.6	1.2	200.0	0.6	99.1	0.3	35.6	8.4
Chinese Taipei	2001	8399	7.8	1.1	50.0	14.2	85.8	1.6	9.8	6.7
Tajikistan*	2002	10493	8.3	0.7	30.0	0.9	96.7	2.4	10.3	0.8
Tanzania*	2000	5285	16.3	0.6	25.0	2.4	97.6	0.0	59.9	0.0
Thailand	1999	6867	16.8	0.9	80.0	1.4	98.6	22.7	31.3	5.4
Togo	2001	5466	12.0	0.6	20.0	1.2	98.8	0.0	40.1	0.0
Trinidad and Tobago*	2002	6629	7.9	1.6	70.0	44.2	55.8	0.1	29.1	9.7
Tunisia*	2002	16162	33.9	1.1	230.0	10.2	89.7	0.0	86.1	5.6
Turkey	2001	19229	10.2	2.4	232.5	16.3	83.7	1.7	11.0	7.0
Turkmenistan*	2002	10490	5.1	3.3	150.0	80.1	18.2	1.7	14.4	14.4
Uganda	2001	5163	9.0	0.6	15.0	16.1	83.9	0.0	0.0	0.0
Ukraine*	2002	10912	7.0	1.1	70.0	16.3	67.3	16.4	9.8	6.6
United States	2001	10187	3.9	1.4	350.0	30.7	69.3	0.2	4.5	7.9
Uruguay	2001	10573	13.8	0.4	35.0	2.2	97.8	0.0	44.5	0.0
Uzbekistan*	2001	5125	11.0	1.1	100.0	40.1	59.9	0.0	29.6	0.1
Vanuatu*	2002	5139	13.8	1.0	250.0	20.0	77.4	2.5	31.1	1.0
Venezuela	2001	6691	12.4	0.5	35.0	0.6	99.4	0.0	27.8	0.0
Viet Nam*	2001	6298	16.5	1.2	100.0	32.6	67.4	0.0	39.3	10.2
Yemen*	2000	6158	12.8	0.6	90.0	0.0	100.0	0.0	12.9	0.3
Zambia	2001	6041	14.0	0.7	25.0	14.2	85.8	1.4	32.0	0.0
Zimbabwe	2001	5972	18.3	0.9	100.0	4.1	95.9	3.2	40.4	4.0

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.5
MFN applied tariffs for agricultural products

Import markets	Year	Total number of tariff lines	Simple average	Coefficient of variation	Maximum	Duty-free (per cent)	Dutiable (per cent)			
							Total dutiable	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)
Albania	2001	2132	9.0	0.5	15.0	0.0	100.0	0.0	0.0	0.0
Algeria*	2002	815	12.8	0.4	30.0	0.2	99.8	0.0	67.5	0.0
Antigua and Barbuda*	2001	1036	14.7	1.0	45.0	21.0	78.3	0.7	47.1	16.4
Argentina	2001	946	12.3	0.4	22.5	3.0	97.0	0.0	27.2	0.0
Armenia*	2001	685	7.2	0.6	10.0	27.9	72.1	0.0	0.0	72.1
Australia	2001	752	1.1	1.8	5.0	76.5	23.5	0.7	0.0	21.1
Azerbaijan	2002	2291	12.7	0.3	35.0	0.1	78.2	21.7	0.1	0.0
Bahamas*	2002	945	24.6	0.7	260.0	16.6	83.0	0.4	70.5	0.3
Bahrain*	2001	1152	9.0	2.1	125.0	7.2	92.1	0.7	3.8	3.2
Bangladesh	1999	809	24.2	0.5	37.5	11.2	88.8	0.0	68.5	0.0
Barbados	2001	1058	30.1	1.5	243.0	0.0	100.0	5.8	43.7	7.8
Belarus	2001	2255	9.0	0.5	25.0	1.2	98.8	23.2	1.5	0.0
Belize*	2001	1037	17.8	1.0	91.0	12.2	86.3	1.4	47.4	28.1
Benin*	2002	803	14.2	0.5	20.0	0.0	100.0	0.0	57.0	0.0
Bermuda*	2001	685	7.9	1.1	33.5	18.0	79.0	3.1	16.5	0.0
Bhutan*	2002	719	20.1	1.0	100.0	14.7	85.3	0.0	51.5	3.9
Bolivia	2002	903	10.0	0.0	10.0	0.0	100.0	0.0	0.0	0.0
Bosnia and Herzegovina*	2001	1022	4.9	1.0	15.0	31.0	69.0	0.0	0.0	0.0
Brazil	2001	946	12.5	0.4	55.0	3.0	97.0	0.0	27.5	0.1
Brunei Darussalam	2001	930	0.0	0.0	30.0	94.7	5.3	4.7	0.0	0.6
Bulgaria	2001	2169	18.2	0.9	74.0	15.4	84.6	9.5	41.5	2.2
Burkina Faso*	2002	803	14.2	0.5	20.0	0.0	100.0	0.0	57.0	0.0
Cambodia*	2001	945	19.7	0.8	50.0	3.4	96.6	0.0	41.0	0.0
Cameroon	2001	837	22.0	0.4	30.0	0.0	100.0	0.0	67.4	0.0
Canada	2001	1425	3.0	2.1	238.0	49.8	50.2	19.9	1.2	7.8
Central African Rep.*	2002	842	22.3	0.4	30.0	0.0	99.5	0.5	70.8	0.0
Chad*	2002	842	22.3	0.4	30.0	0.0	99.5	0.5	70.8	0.0
Chile	2001	748	8.0	0.0	8.0	0.0	100.0	0.0	0.0	0.0
China	2002	1047	19.2	0.7	71.0	2.5	97.5	0.6	55.7	2.6
Colombia	2001	882	14.8	0.4	20.0	0.0	100.0	0.0	40.6	0.0
Congo*	2002	842	22.3	0.4	30.0	0.0	99.5	0.5	70.8	0.0
Costa Rica	2001	1144	12.0	1.2	154.0	23.2	76.8	0.0	9.9	7.8
Côte d'Ivoire*	2002	803	14.2	0.5	20.0	0.0	100.0	0.0	57.0	0.0
Croatia	2001	1169	11.6	1.1	77.0	16.2	83.8	18.0	21.6	7.5
Cuba	2002	745	10.6	0.8	30.0	10.0	90.0	0.0	16.2	0.0
Cyprus	2001	2831	21.4	1.5	268.7	26.9	73.1	34.9	29.4	8.0
Czech Rep.	2001	2096	10.0	1.8	125.0	38.8	61.2	0.0	20.4	8.4
Djibouti	1999	685	23.9	0.7	160.0	0.0	100.0	14.8	70.5	0.8
Dominica	2001	1025	19.6	1.2	148.0	25.3	74.7	0.0	41.9	7.8
Dominican Rep.	2000	956	12.1	0.7	25.0	7.2	92.8	0.0	47.0	0.0
Ecuador	2000	871	14.5	0.4	20.0	1.5	98.5	0.0	39.4	0.0
Egypt*	2002	852	22.8	1.1	600.0	0.0	99.2	0.8	57.0	2.2
El Salvador	2000	879	10.6	0.8	40.0	23.9	76.1	0.0	8.4	3.4
Equatorial Guinea*	2002	842	22.3	0.4	30.0	0.0	99.5	0.5	70.8	0.0
Estonia	2002	2176	12.2	1.3	59.0	52.8	47.2	0.0	34.6	8.7

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Import markets	Year	Total number of tariff lines	Simple average	Coefficient of variation	Maximum	Duty-free (per cent)	Dutiable (per cent)			
							Total dutiable	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)
Ethiopia*	2001	721	22.4	0.5	40.0	0.0	99.7	0.3	75.0	0.0
European Union	2002	2151	5.9	1.3	74.9	25.8	74.2	39.9	8.2	4.1
FYR Macedonia	2001	2142	19.1	1.0	60.0	1.2	98.8	10.5	36.6	9.6
Gabon	2000	843	21.8	0.4	30.0	0.0	100.0	0.0	66.2	0.0
Georgia*	1999	689	11.9	0.1	12.0	0.0	100.0	0.0	0.0	0.0
Ghana*	2000	769	20.1	0.5	40.0	3.3	96.7	0.0	78.3	0.0
Grenada*	2001	1036	23.0	0.6	40.0	11.7	59.8	28.5	48.6	0.0
Guatemala	1999	863	9.8	0.7	20.0	22.2	77.8	0.0	7.1	0.0
Guinea	1998	747	6.6	0.2	7.0	0.0	100.0	0.0	0.0	0.0
Guinea-Bissau*	2002	803	14.2	0.5	20.0	0.0	100.0	0.0	57.0	0.0
Guyana	2000	1029	20.1	1.0	100.0	8.9	91.1	0.0	45.2	3.4
Honduras	2000	870	10.9	0.7	55.0	0.0	100.0	0.0	37.5	1.6
Hong Kong, China	2002	907	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Hungary	2001	2291	25.8	0.8	127.5	8.6	91.4	0.0	61.0	0.9
Iceland	2000	1406	7.0	2.1	78.0	57.8	42.2	21.1	15.5	12.6
India	2001	745	37.0	0.7	210.0	2.6	97.4	0.3	87.0	1.3
Indonesia	2002	1082	8.2	2.8	170.0	10.4	89.6	0.7	3.9	2.9
Iran*	2000	685	8.4	0.9	30.0	20.9	79.1	0.0	8.8	7.9
Israel	1999	1334	15.9	1.7	250.0	30.3	69.7	30.0	23.2	6.9
Jamaica	1999	1194	15.8	1.1	75.0	41.2	58.8	0.0	43.4	0.7
Japan	2001	1793	7.1	1.2	50.0	29.2	70.8	23.2	16.1	8.6
Jordan	2001	825	20.7	1.2	180.0	9.5	90.5	1.0	54.8	2.7
Kazakhstan*	1996	2042	9.0	1.0	100.0	21.6	78.4	0.0	17.2	2.2
Kenya	2001	824	20.1	0.5	100.0	0.1	99.9	0.0	49.8	0.4
Korea, Rep.	2001	1513	45.5	2.4	917.0	1.9	98.1	3.1	48.6	7.1
Kuwait*	2002	676	1.7	5.2	100.0	78.6	16.7	4.7	1.3	1.3
Kyrgyz Rep.	2001	2240	5.9	1.0	20.0	43.3	56.7	2.1	4.4	4.4
Lao PDR*	2001	676	19.2	0.7	40.0	0.0	98.8	1.2	50.9	41.4
Latvia	1999	2231	11.9	1.2	93.9	3.2	96.8	0.6	18.8	8.7
Lebanon*	2002	783	14.7	1.5	70.0	17.2	82.6	0.1	25.5	25.5
Libya*	2002	903	23.0	1.2	300.0	33.8	60.1	6.1	47.5	4.4
Lithuania	2001	2407	9.8	1.5	87.0	43.7	56.3	3.2	22.7	14.3
Macao, China	2001	900	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Madagascar	2000	847	5.7	0.8	20.0	28.7	71.3	0.0	2.4	2.4
Malawi	2000	743	14.8	0.6	25.0	11.4	88.6	0.0	43.1	0.0
Malaysia	2001	1164	2.1	2.1	30.0	66.0	34.0	4.9	2.5	8.9
Maldives*	2002	716	18.2	0.4	50.0	0.6	99.2	0.3	29.2	0.0
Mali	1999	783	14.6	0.7	25.0	14.5	85.5	0.0	45.6	0.0
Malta	2001	2529	4.0	1.6	80.0	53.6	46.4	0.1	8.4	13.4
Mauritania*	2001	825	12.9	0.6	20.0	7.9	92.1	0.0	51.5	0.0
Mauritius	2001	729	19.7	1.2	80.0	43.0	57.0	0.1	35.2	12.1
Mexico	2001	1071	23.4	1.5	260.0	2.1	97.9	5.6	47.9	4.1
Moldova*	2001	780	10.3	0.5	25.0	11.2	86.3	2.6	1.0	46.5
Montserrat*	1999	1034	21.4	0.7	52.0	11.1	58.4	30.5	43.9	0.0
Morocco	1997	1239	57.6	1.0	376.5	0.0	100.0	0.0	97.8	4.6
Mozambique*	2002	753	16.8	0.6	25.0	0.8	99.2	0.0	58.0	0.0
Myanmar	1996	812	8.5	0.9	40.0	6.6	93.4	0.0	4.0	3.2
Nepal*	2002	717	13.4	0.7	130.0	1.7	95.8	2.5	14.9	0.1
New Zealand	1999	976	1.7	1.5	7.0	66.9	33.1	0.3	0.0	15.5
Nicaragua	2002	990	9.1	0.9	170.0	23.0	77.0	0.0	2.5	2.2
Niger*	2002	803	14.2	0.5	20.0	0.0	100.0	0.0	57.0	0.0
Nigeria*	2002	686	53.9	0.7	150.0	0.0	99.7	0.3	75.8	34.1
Norway	2002	1337	8.4	6.1	555.0	26.9	73.1	70.3	2.6	1.6
Oman	2001	1159	10.2	2.4	100.0	29.8	70.2	0.0	7.7	7.4
Pakistan	2001	700	22.0	0.8	200.0	0.0	100.0	5.0	62.5	2.4

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Import markets	Year	Total number of tariff lines	Simple average	Coefficient of variation	Maximum	Duty-free (per cent)	Dutiable (per cent)			
							Total dutiable	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)
Panama	2001	1340	15.1	2.2	1'000.0	3.7	96.3	0.0	8.9	3.8
Papua New Guinea*	2002	823	17.7	1.0	76.0	45.1	48.4	6.6	48.4	48.4
Paraguay	2001	957	12.1	0.4	32.5	3.0	97.0	0.0	23.8	0.0
Peru	1998	901	15.0	0.3	20.0	0.0	100.0	0.0	37.2	0.0
Philippines	2002	788	9.2	1.3	65.0	0.0	100.0	0.0	10.2	9.3
Poland	2001	2179	41.9	1.1	676.7	3.0	97.0	26.0	63.5	5.9
Qatar*	2002	676	4.9	1.5	70.0	0.0	100.0	0.0	1.3	1.3
Romania	1999	2134	112.0	0.8	332.5	0.1	99.9	0.0	98.4	0.0
Russian Federation	2001	2316	8.9	0.5	20.0	1.2	98.8	23.2	1.3	0.0
Rwanda*	2001	799	13.0	0.7	25.0	0.5	99.5	0.0	31.8	0.0
Saudi Arabia*	2000	1167	11.3	0.3	20.0	5.7	85.7	8.7	2.0	0.0
Senegal*	2002	803	14.2	0.5	20.0	0.0	100.0	0.0	57.0	0.0
Serbia and Montenegro*	2001	1070	22.3	0.6	40.0	3.7	96.3	0.0	72.3	0.0
Seychelles*	2001	676	40.0	1.0	205.0	4.3	93.0	2.7	82.8	9.3
Singapore	2001	844	0.0	0.0	0.0	99.7	0.3	0.3	0.0	0.0
Slovak Rep.	2001	2111	9.9	1.8	125.0	38.8	61.2	0.0	20.4	8.9
Slovenia	2002	2158	11.3	1.0	45.0	14.6	85.4	11.4	26.3	4.5
Solomon Islands	1998	736	34.0	0.6	70.0	0.0	100.0	3.5	84.7	0.0
South Africa	2001	848	8.7	1.3	55.0	42.4	57.6	13.3	21.1	5.8
Sri Lanka	1998	835	25.1	0.5	100.0	7.7	92.3	4.1	69.9	0.1
St. Kitts and Nevis*	2001	1037	12.6	1.1	45.0	24.8	73.4	1.8	35.6	14.4
St. Lucia	2001	1044	14.8	1.0	45.0	27.9	72.1	0.0	40.9	1.3
St. Vincent and the Grenadines*	2001	1037	15.6	1.0	40.0	11.5	87.3	1.3	43.7	25.6
Sudan*	1996	675	10.8	2.5	200.0	56.7	43.3	0.0	19.6	19.6
Suriname*	2000	1035	23.5	0.7	50.0	10.4	46.0	43.6	32.6	0.0
Switzerland	2001	2198	0.0	0.0	0.0	18.9	81.1	81.1	0.0	0.0
Syria*	2002	1102	21.3	1.2	150.0	0.0	99.8	0.2	32.2	10.3
Chinese Taipei	2001	1216	17.3	0.9	50.0	16.1	83.9	4.6	45.6	0.0
Tajikistan*	2002	2285	9.6	0.6	20.0	0.7	88.4	10.9	9.9	0.0
Tanzania*	2000	753	19.8	0.4	25.0	4.4	95.6	0.0	73.6	0.0
Thailand	1999	1001	30.8	0.7	65.0	2.8	97.2	53.3	31.5	0.0
Togo	2001	785	14.0	0.5	20.0	0.0	100.0	0.0	53.8	0.0
Trinidad and Tobago*	2002	1265	15.7	1.1	60.0	37.3	62.5	0.2	46.9	31.3
Tunisia*	2002	3363	77.8	0.8	230.0	1.3	98.7	0.0	96.0	26.8
Turkey	2001	3231	42.2	1.3	232.5	14.3	85.7	8.1	60.6	8.0
Turkmenistan*	2002	2285	13.5	1.9	150.0	52.8	40.3	6.9	36.0	36.0
Uganda	2001	678	12.4	0.3	15.0	1.2	98.8	0.0	0.0	0.0
Ukraine*	2002	2240	10.8	1.3	70.0	8.4	25.1	66.5	15.6	12.6
United States	2001	1740	4.7	2.0	350.0	28.5	71.5	1.8	7.2	8.1
Uruguay	2001	1374	12.3	0.4	35.0	3.0	97.0	0.0	26.7	0.0
Uzbekistan*	2001	685	10.2	1.3	30.0	58.1	41.9	0.0	32.6	0.0
Vanuatu*	2002	701	15.7	0.9	55.0	31.1	58.8	10.1	45.2	3.9
Venezuela	2001	874	14.8	0.4	25.0	0.0	100.0	0.0	40.5	0.0
Viet Nam*	2001	832	24.0	0.9	100.0	12.9	87.1	0.0	55.8	19.0
Yemen*	2000	914	15.2	0.5	25.0	0.0	100.0	0.0	27.0	0.0
Zambia	2001	791	18.4	0.4	25.0	1.3	98.7	5.8	51.4	0.0
Zimbabwe	2001	803	26.1	0.7	100.0	1.2	98.8	1.6	57.8	2.7

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.6
MFN applied tariffs for non-agricultural products

Import markets	Year	Total number of tariff lines	Simple average	Coefficient of variation	Maximum	Duty-free (per cent)	Dutiable (per cent)			
							Total dutiable	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)
Albania	2001	8447	7.2	0.8	15.0	1.1	98.9	0.0	0.0	0.0
Algeria*	2002	5181	18.5	0.5	30.0	2.0	98.0	0.0	37.9	0.0
Antigua and Barbuda*	2001	5254	8.8	1.0	70.0	9.2	87.6	3.2	22.7	1.6
Argentina	2001	8461	12.7	0.5	35.0	2.4	97.6	0.0	36.2	0.0
Armenia*	2001	4450	2.3	1.8	10.0	76.8	23.2	0.0	0.0	23.2
Australia	2001	5019	4.6	1.3	25.0	43.1	56.9	0.0	4.8	11.4
Azerbaijan	2002	8277	8.1	0.8	22.0	1.4	94.3	4.3	0.1	0.0
Bahamas*	2002	4867	31.6	0.4	100.0	5.7	94.1	0.2	89.9	0.3
Bahrain*	2001	5828	7.6	0.5	50.0	2.2	97.7	0.0	3.7	0.1
Bangladesh	1999	5711	21.7	0.6	37.5	5.7	94.3	0.1	53.2	0.0
Barbados	2001	5396	9.8	1.0	145.0	0.0	100.0	0.2	22.4	3.2
Belarus	2001	8595	10.1	0.5	25.0	0.6	99.4	10.1	10.5	0.0
Belize*	2001	5296	9.4	1.1	70.0	9.1	90.7	0.2	24.2	4.1
Benin*	2002	4688	11.6	0.6	21.0	1.5	98.5	0.0	38.1	0.0
Bermuda*	2001	4431	18.9	0.4	75.0	3.1	96.6	0.3	75.1	0.2
Bhutan*	2002	4524	16.1	0.5	30.0	5.8	94.2	0.0	47.0	0.0
Bolivia	2002	5884	9.3	0.2	10.0	4.5	95.5	0.0	0.0	0.0
Bosnia and Herzegovina*	2001	7360	6.2	0.8	15.0	26.8	73.2	0.0	0.0	0.0
Brazil	2001	8458	14.9	0.4	35.0	2.3	97.7	0.0	50.0	0.0
Brunei Darussalam	2001	5551	3.0	2.4	200.0	74.4	25.6	0.1	8.2	15.7
Bulgaria	2001	8331	10.0	0.8	30.0	16.8	83.2	0.0	18.7	0.0
Burkina Faso*	2002	4688	11.6	0.6	21.0	1.5	98.5	0.0	38.1	0.0
Cambodia*	2001	5864	15.9	0.8	120.0	4.4	95.6	0.1	26.1	0.2
Cameroon	2001	4740	17.5	0.5	30.0	0.7	99.3	0.0	45.1	0.0
Canada	2001	8163	4.3	1.3	25.0	37.1	62.9	0.3	9.3	10.6
Central African Rep.*	2002	4732	17.4	0.5	30.0	0.7	99.3	0.0	45.2	0.0
Chad*	2002	4732	17.4	0.5	30.0	0.7	99.3	0.0	45.2	0.0
Chile	2001	5107	7.9	0.1	8.0	0.7	99.3	0.0	0.0	0.0
China	2002	6276	11.3	0.6	51.0	3.3	96.7	0.5	26.4	1.0
Colombia	2001	5896	11.8	0.5	35.0	1.1	98.9	0.0	25.7	0.0
Congo*	2002	4732	17.4	0.5	30.0	0.7	99.3	0.0	45.2	0.0
Costa Rica	2001	6854	4.6	1.2	48.0	52.4	47.6	0.0	0.0	17.6
Côte d'Ivoire*	2002	4688	11.6	0.6	21.0	1.5	98.5	0.0	38.1	0.0
Croatia	2001	6500	5.7	1.0	35.4	33.7	66.3	0.0	6.6	5.3
Cuba	2002	4745	10.9	0.6	30.0	5.1	94.9	0.0	8.9	0.0
Cyprus	2001	8288	4.3	1.2	100.0	17.6	82.4	0.7	1.1	1.4
Czech Rep.	2001	8201	4.2	0.8	30.1	16.2	83.8	0.0	0.8	1.8
Djibouti	1999	4387	31.7	0.1	33.0	0.0	100.0	0.1	98.0	0.0
Dominica	2001	5310	8.4	1.2	165.0	22.5	77.5	0.0	21.1	2.9
Dominican Rep.	2000	5644	7.8	0.9	20.0	11.2	88.8	0.0	23.0	0.0
Ecuador	2000	5790	11.5	0.6	35.0	2.1	97.9	0.0	26.1	0.2
Egypt*	2002	5833	19.4	0.8	135.0	0.6	87.3	12.1	42.4	0.4
El Salvador	2000	5085	6.5	1.3	30.0	51.9	48.1	0.0	14.3	14.0
Equatorial Guinea*	2002	4732	17.4	0.5	30.0	0.7	99.3	0.0	45.2	0.0
Estonia	2002	8405	0.1	14.0	25.0	99.7	0.3	0.0	0.3	0.3

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Import markets	Year	Total number of tariff lines	Simple average	Coefficient of variation	Maximum	Duty-free (per cent)	Dutiable (per cent)			
							Total dutiable	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)
Ethiopia*	2001	4694	18.3	0.7	40.0	3.6	96.3	0.1	45.8	0.0
European Union	2002	8305	4.2	0.9	26.0	17.1	82.9	0.7	0.9	1.5
FYR Macedonia	2001	8348	11.7	0.9	35.0	0.6	99.4	0.1	28.6	0.0
Gabon	2000	4762	17.4	0.5	30.0	2.2	97.8	0.0	45.2	0.0
Georgia*	1999	4429	10.4	0.3	12.0	0.0	99.8	0.2	0.0	0.0
Ghana*	2000	4670	13.8	0.9	279.0	15.1	84.9	0.0	37.9	0.2
Grenada*	2001	5299	17.7	0.5	40.0	4.5	33.7	61.8	24.1	0.0
Guatemala	1999	5059	7.1	1.3	28.0	51.4	48.6	0.0	16.7	13.7
Guinea	1998	4602	6.4	0.3	7.0	0.7	99.3	0.0	0.0	0.0
Guinea-Bissau*	2002	4688	11.6	0.6	21.0	1.5	98.5	0.0	38.1	0.0
Guyana	2000	5369	9.6	1.0	70.0	3.3	96.7	0.0	22.1	3.3
Honduras	2000	5043	6.7	1.1	35.0	0.0	100.0	0.0	22.3	0.2
Hong Kong, China	2002	5645	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Hungary	2001	10368	7.0	0.6	78.0	10.3	89.7	0.0	2.3	1.6
Iceland	2000	6144	2.4	1.9	75.0	73.7	26.3	0.0	0.0	19.2
India	2001	4771	30.5	0.3	105.0	0.8	99.2	6.0	86.9	0.3
Indonesia	2002	6450	6.7	0.9	170.0	20.6	79.4	0.0	2.6	0.6
Iran*	2000	4427	7.2	0.9	25.0	25.2	74.8	0.0	9.8	0.3
Israel	1999	8513	4.0	1.4	100.0	42.4	57.6	16.4	0.7	2.0
Jamaica	1999	5522	5.9	1.6	40.0	66.5	33.5	0.0	21.3	20.9
Japan	2001	7243	2.7	1.4	33.8	47.7	52.3	3.9	0.7	9.9
Jordan	2001	5490	13.8	0.9	30.0	19.9	80.1	0.0	41.8	0.0
Kazakhstan*	1996	8109	9.5	1.2	100.0	33.8	66.2	0.0	22.5	4.1
Kenya	2001	5136	16.6	0.6	45.0	3.6	96.4	0.0	36.5	0.0
Korea, Rep.	2001	9767	7.5	0.4	30.0	5.4	94.6	0.1	1.6	0.0
Kuwait*	2002	4342	3.9	0.2	4.0	2.2	96.2	1.7	0.0	0.0
Kyrgyz Rep.	2001	8250	4.6	1.3	65.0	56.7	43.3	0.0	4.8	4.8
Lao PDR*	2001	4353	8.2	0.7	40.0	0.0	99.8	0.2	8.1	2.3
Latvia	1999	8608	2.9	1.8	30.0	21.5	78.5	0.0	0.0	16.4
Lebanon*	2002	5039	4.0	1.4	75.0	41.4	58.3	0.3	4.7	4.7
Libya*	2002	4840	16.2	1.8	400.0	30.1	68.6	1.4	34.3	5.7
Lithuania	2001	8488	2.5	2.2	33.8	79.8	20.2	0.0	1.4	15.8
Macao, China	2001	5470	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Madagascar	2000	5169	5.7	1.2	30.0	34.3	65.7	0.0	8.1	8.1
Malawi	2000	4726	13.2	0.7	30.0	2.6	97.4	0.0	36.5	0.0
Malaysia	2001	9215	8.1	1.3	300.0	51.4	48.6	0.2	23.3	10.8
Maldives*	2002	4602	20.5	0.6	200.0	0.0	99.9	0.1	64.6	1.6
Mali	1999	4700	10.6	1.0	25.0	31.6	68.4	0.0	29.6	0.0
Malta	2001	8602	5.8	0.7	25.0	11.1	88.9	0.1	0.8	0.5
Mauritania*	2001	5097	10.6	0.7	20.0	8.6	91.4	0.0	38.5	0.0
Mauritius	2001	4803	18.9	1.5	80.0	57.3	42.7	0.0	30.0	16.9
Mexico	2001	10248	17.1	0.5	35.0	0.7	99.3	0.0	55.1	0.0
Moldova*	2001	5209	4.1	1.2	15.0	51.3	48.2	0.5	0.0	10.5
Montserrat*	1999	5285	17.0	0.5	40.0	4.7	33.5	61.8	23.7	0.0
Morocco	1997	7875	30.1	0.6	50.0	0.0	100.0	0.2	77.8	0.0
Mozambique*	2002	4616	11.4	0.8	25.0	2.4	97.6	0.0	31.2	0.0
Myanmar	1996	4986	5.1	1.1	40.0	2.5	97.5	0.0	5.5	5.5
Nepal*	2002	4627	13.5	0.8	130.0	0.9	98.8	0.3	14.7	0.8
New Zealand	1999	6253	3.5	1.4	19.0	52.1	47.9	4.4	5.4	6.9
Nicaragua	2002	5329	4.1	1.3	15.0	53.1	46.9	0.0	0.0	15.3
Niger*	2002	4688	11.6	0.6	21.0	1.5	98.5	0.0	38.1	0.0
Nigeria*	2002	4443	26.3	0.8	100.0	0.0	99.4	0.6	51.6	0.7
Norway	2002	5796	1.7	2.4	16.0	82.5	17.5	0.1	2.3	12.9
Oman	2001	6057	5.0	0.4	100.0	1.2	98.8	0.0	0.0	0.0
Pakistan	2001	4777	19.9	0.6	250.0	0.0	100.0	0.1	57.1	0.6

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.6
MFN applied tariffs for non-agricultural products, continued

Import markets	Year	Total number of tariff lines	Simple average	Coefficient of variation	Maximum	Duty-free (per cent)	Dutiable (per cent)			
							Total dutiable	Non *ad valorem*	International peaks (per cent)	National peaks (per cent)
Panama	2001	7212	7.7	2.7	1000.0	3.4	96.6	0.0	0.5	0.3
Papua New Guinea*	2002	4775	5.5	2.3	85.0	81.5	18.4	0.1	18.4	18.4
Paraguay	2001	8558	13.2	0.5	28.0	2.1	97.9	0.0	41.3	0.0
Peru	1998	5968	13.1	0.2	20.0	0.0	100.0	0.0	14.4	0.0
Philippines	2002	4852	5.2	0.9	30.0	2.4	97.6	0.0	0.4	0.4
Poland	2001	8394	10.1	0.6	119.2	5.0	95.0	0.2	13.4	1.2
Qatar*	2002	4342	4.1	0.2	20.0	0.0	100.0	0.0	0.3	0.3
Romania	1999	8452	16.2	0.5	247.5	3.0	97.0	0.0	45.1	0.0
Russian Federation	2001	8716	10.1	0.5	20.0	0.6	99.4	10.1	10.4	0.0
Rwanda*	2001	4885	9.4	0.8	25.0	8.7	91.1	0.2	12.5	0.0
Saudi Arabia*	2000	5888	12.0	0.2	20.0	2.2	92.7	5.1	5.3	0.0
Senegal*	2002	4688	11.6	0.6	21.0	1.5	98.5	0.0	38.1	0.0
Serbia and Montenegro*	2001	7468	13.2	0.7	40.0	0.4	99.6	0.0	34.5	0.0
Seychelles*	2001	4342	26.5	1.0	225.0	0.0	98.5	1.4	60.5	3.8
Singapore	2001	5133	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
Slovak Rep.	2001	8201	4.2	0.8	30.1	16.2	83.8	0.0	0.8	1.8
Slovenia	2002	8287	9.3	0.6	27.0	9.3	90.7	0.0	11.9	0.0
Solomon Islands	1998	4515	20.5	0.8	70.0	0.0	100.0	1.1	49.5	5.5
South Africa	2001	6971	5.3	1.5	43.0	52.5	47.5	14.3	10.3	10.2
Sri Lanka	1998	5185	8.8	1.0	35.0	20.1	79.9	0.0	17.5	10.2
St. Kitts and Nevis*	2001	5302	8.8	1.2	70.0	23.3	76.7	0.1	23.3	1.1
St. Lucia	2001	5312	8.0	1.3	95.0	41.9	58.1	0.0	23.1	11.4
St. Vincent and the Grenadines*	2001	5293	8.9	0.9	40.0	7.9	92.1	0.0	23.9	2.4
Sudan*	1996	4343	4.5	2.1	70.0	67.3	32.7	0.0	9.9	9.9
Suriname*	2000	5298	14.5	0.8	40.0	4.3	14.8	80.9	4.4	0.0
Switzerland	2001	6128	0.0	0.0	0.0	15.3	84.7	84.7	0.0	0.0
Syria*	2002	7148	19.4	1.2	200.0	0.7	99.0	0.3	36.1	8.0
Chinese Taipei	2001	7183	6.3	0.9	50.0	13.9	86.1	1.1	4.3	2.9
Tajikistan*	2002	8208	8.1	0.7	30.0	1.0	99.0	0.0	10.4	1.1
Tanzania*	2000	4532	15.8	0.6	25.0	2.0	98.0	0.0	57.6	0.0
Thailand	1999	5866	15.5	0.9	80.0	1.2	98.8	18.0	31.2	4.0
Togo	2001	4681	11.7	0.6	20.0	1.4	98.6	0.0	38.0	0.0
Trinidad and Tobago*	2002	5364	6.7	1.5	70.0	45.8	54.2	0.0	24.9	4.6
Tunisia*	2002	12799	27.1	0.5	43.0	12.6	87.4	0.0	83.5	0.0
Turkey	2001	15998	5.5	1.5	84.6	16.6	83.4	0.7	3.4	3.3
Turkmenistan*	2002	8205	3.8	3.1	100.0	87.7	12.0	0.3	8.4	8.4
Uganda	2001	4485	8.5	0.6	15.0	18.4	81.6	0.0	0.0	0.0
Ukraine*	2002	8672	6.8	1.0	50.0	18.4	78.2	3.4	8.3	5.1
United States	2001	8447	3.8	1.2	109.7	31.1	68.9	0.0	4.1	7.9
Uruguay	2001	9199	14.0	0.5	22.5	2.1	97.9	0.0	47.2	0.0
Uzbekistan*	2001	4440	11.1	1.0	100.0	37.3	62.7	0.0	29.2	0.1
Vanuatu*	2002	4438	13.5	1.0	250.0	18.3	80.4	1.3	28.9	0.6
Venezuela	2001	5817	12.1	0.5	35.0	0.7	99.3	0.0	25.9	0.0
Viet Nam*	2001	5466	15.3	1.2	100.0	35.6	64.4	0.0	36.8	8.8
Yemen*	2000	5244	12.4	0.6	90.0	0.0	100.0	0.0	10.4	0.3
Zambia	2001	5250	13.4	0.7	25.0	16.2	83.8	0.8	29.0	0.0
Zimbabwe	2001	5169	17.1	0.9	80.0	4.6	95.4	3.4	37.7	4.3

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Appendix Table IIB.7
MFN applied tariffs for non-agricultural products
(Simple averages by sector)

Import markets	Year	Wood, pulp, paper and furniture	Textiles and clothing	Leather, rubber, footwear and travel goods	Metals	Chemicals and photographic supplies	Transport equipment	Non-electric machinery	Electric machinery	Mineral products, precious stones and metals	Manufactured articles not specified	Fish and fish products	Petroleum
Albania	2001	9	10	11	10	4	5	2	5	8	9	12	9
Algeria*	2002	20	26	20	17	16	11	9	18	17	22	29	19
Antigua and Barbuda*	2001	9	11	9	6	6	10	6	10	8	14	23	4
Argentina	2001	13	10	14	14	11	17	13	16	10	17	12	0.4
Armenia*	2001	0.9	5	3	0.3	0	5	0.2	1	3	4	9	0
Australia	2001	3	13	7	4	2	4	3	3	2	2	0	0
Azerbaijan*	2002	11	12	12	7	4	4	3	9	11	10	7	6
Bahamas*	2002	29	27	30	35	33	37	33	35	31	32	26	19
Bahrain*	2001	7	10	9	5	6	12	9	10	6	9	3	5
Bangladesh	1999	23	32	25	23	18	17	11	19	21	23	24	35
Barbados	2001	10	11	10	7	7	10	6	10	11	16	31	6
Belarus	2001	13	11	8	10	7	11	9	12	12	13	11	5
Belize*	2001	11	11	10	6	6	9	6	10	11	15	30	2
Benin*	2002	11	17	13	12	7	9	7	11	12	15	15	4
Bermuda*	2001	19	11	20	22	21	31	22	24	16	20	6	22
Bhutan*	2002	13	20	21	17	14	12	9	15	22	19	13	10
Bolivia	2002	10	10	10	10	10	8	5	9	10	10	10	10
Bosnia and Herzegovina*	2001	5	11	8	5	3	6	6	7	5	7	3	2
Brazil	2001	13	20	17	14	11	18	14	17	10	18	12	0.4
Brunei Darussalam	2001	4	0.6	3	0	0.4	14	6	14	0.5	5	0	0
Bulgaria	2001	10	19	12	8	8	6	7	8	9	7	12	10
Burkina Faso*	2002	11	17	13	12	7	9	7	11	12	15	15	4
Cambodia*	2001	17	20	24	12	10	19	15	25	16	17	19	15
Cameroon	2001	19	23	21	16	12	15	12	17	19	23	24	10
Canada	2001	2	12	6	2	3	6	1	2	2	3	1	1

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Import markets	Year	Wood, pulp, paper and furniture	Textiles and clothing	Leather, rubber, footwear and travel goods	Metals	Chemicals and photographic supplies	Transport equipment	Non-electric machinery	Electric machinery	Mineral products, precious stones and metals	Manufactured articles not specified	Fish and fish products	Petroleum
Central African Republic*	2002	19	23	21	16	12	15	12	17	19	23	24	10
Chad*	2002	19	23	21	16	12	15	12	17	19	23	24	10
Chile	2001	8	8	8	8	8	8	8	7	8	8	8	8
China	2002	9	18	15	7	8	16	10	11	10	14	15	5
Colombia	2001	13	18	14	10	8	14	9	10	10	11	19	10
Congo*	2002	22	23	21	16	12	15	12	17	18	23	24	10
Costa Rica	2001	6	10	8	2	2	5	1	2	5	6	9	4
Côte d'Ivoire*	2002	11	17	13	12	7	9	7	11	12	15	15	4
Croatia	2001	4	10	7	4	4	7	4	5	6	6	8	7
Cuba	2002	9	17	12	8	10	9	10	10	8	13	5	2
Cyprus	2001	2	9	4	3	5	4	2	3	3	3	14	1
Czech Rep.	2001	5	7	4	4	4	6	4	4	3	3	0.1	2
Djibouti	1999	30	33	33	32	32	33	33	32	27	33	20	33
Dominica	2001	9	10	11	6	7	9	3	9	8	13	27	3
Dominican Rep.	2000	9	9	12	7	5	8	4	8	9	13	18	4
Ecuador	2000	13	18	13	9	8	13	8	10	10	13	19	9
Egypt*	2002	22	36	24	17	14	32	11	18	21	20	19	11
El Salvador	2000	5	18	9	3	2	5	1	3	5	8	10	3
Equatorial Guinea*	2002	19	23	21	16	12	15	12	17	19	23	24	10
Estonia	2002	0	0	0	0	0	0	0	0	0	0	3	0
Ethiopia*	2001	13	32	24	12	11	14	9	18	18	26	31	1
European Union	2002	2	8	4	2	5	4	2	3	2	3	12	3
FYR Macedonia*	2001	14	21	16	10	8	10	11	14	13	16	13	13
Gabon	2000	19	23	21	16	12	15	12	17	19	23	24	10
Georgia*	1999	12	12	12	12	12	11	5	5	12	9	12	12
Ghana*	2000	19	23	15	11	13	5	2	10	13	16	16	45
Grenada*	2001	15	20	17	15	14	18	12	21	15	18	28	11
Guatemala	1999	6	20	11	3	2	6	1	3	6	8	10	5
Guinea	1998	7	7	6	7	7	6	5	7	7	7	7	7
Guinea-Bissau*	2002	11	17	13	12	7	9	7	11	12	15	15	4

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Import markets	Year	Wood, pulp, paper and furniture	Textiles and clothing	Leather, rubber, footwear and travel goods	Metals	Chemicals and photographic supplies	Transport equipment	Non-electric machinery	Electric machinery	Mineral products, precious stones and metals	Manufactured articles not specified	Fish and fish products	Petroleum
Guyana	2000	9	11	10	7	7	10	6	10	11	16	29	8
Honduras	2000	7	15	10	3	3	7	2	4	6	9	10	14
Hong Kong, China	2002	0	0	0	0	0	0	0	0	0	0	0	0
Hungary	2001	5	8	7	5	5	11	8	10	5	8	17	0.8
Iceland	2000	3	5	6	0.9	1	2	0.8	2	2	4	1	0.2
India	2001	29	30	32	32	34	38	25	26	29	29	35	18
Indonesia	2002	5	11	8	7	5	12	2	6	5	8	5	2
Iran*	2000	8	14	10	5	2	8	6	7	7	7	8	3
Israel	1999	6	5	6	4	2	3	4	4	4	6	4	2
Jamaica	1999	7	8	7	2	3	7	2	6	6	12	27	0
Japan	2001	1	8	7	1	3	0	0	0.2	0.8	1	6	3
Jordan	2001	17	16	19	13	8	12	8	18	17	21	22	10
Kazakhstan*	1996	13	16	11	10	4	7	0.5	0	17	16	11	5
Kenya	2001	23	28	18	15	12	12	9	14	15	16	15	2
Korea, Rep. of	2001	6	10	8	6	7	6	6	6	6	7	16	6
Kuwait*	2002	4	4	4	4	4	4	4	4	4	4	0	4
Kyrgyz Rep.	2001	0.4	10	4	3	0.4	5	5	4	7	6	10	0
Lao PDR*	2001	13	9	11	6	7	14	6	7	6	10	17	7
Latvia	1999	2	7	4	0.8	1	3	0	1	5	4	8	0
Lebanon*	2002	7	3	10	3	3	4	3	4	6	5	5	4
Libya*	2002	13	18	24	8	8	40	10	25	21	33	6	60
Lithuania	2001	3	9	3	0.1	0.4	0.1	0.2	0	2	1	5	3
Macao, China	2001	0	0	0	0	0	0	0	0	0	0	0	0
Madagascar	2000	3	14	6	3	1	6	5	6	4	6	3	0
Malawi	2000	14	20	19	11	7	14	9	13	12	19	12	4
Malaysia	2001	11	14	14	9	4	19	4	7	9	5	2	1
Maldives*	2002	17	21	26	22	15	44	21	22	22	19	16	21
Mali	1999	11	19	13	12	4	6	3	9	11	15	17	6
Malta	2001	5	9	5	5	6	6	4	6	3	5	4	2
Mauritania*	2001	11	16	12	10	6	12	7	10	11	14	20	9
Mauritius	2001	23	32	32	14	10	24	7	26	16	25	13	6
Mexico	2001	16	24	21	15	13	18	12	16	15	19	28	12
Moldova*	2001	4	8	7	0.7	3	2	0.1	4	5	6	6	0
Montserrat*	1999	15	20	16	15	14	11	12	19	14	17	28	3
Morocco	1997	41	45	42	29	28	22	13	20	29	23	49	23

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Import markets	Year	Wood, pulp, paper and furniture	Textiles and clothing	Leather, rubber, footwear and travel goods	Metals	Chemicals and photographic supplies	Transport equipment	Non-electric machinery	Electric machinery	Mineral products, precious stones and metals	Manufactured articles not specified	Fish and fish products	Petroleum
Mozambique*	2002	11	20	13	7	5	9	7	10	8	17	24	6
Myanmar	1996	7	11	5	3	2	4	2	4	4	6	8	2
Nepal*	2002	14	16	15	12	13	27	8	14	14	14	11	23
New Zealand	1999	4	7	5	3	1	5	4	4	2	2	0.6	0.7
Nicaragua	2002	5	8	7	2	1	4	0.9	2	4	6	10	4
Niger*	2002	11	17	13	12	7	9	7	11	12	15	15	4
Nigeria*	2002	22	51	32	23	17	18	13	20	30	23	25	23
Norway	2002	0.1	7	2	0.3	0.6	0.2	0.2	0	0	0.5	0	0
Oman	2001	5	5	6	5	5	5	5	5	5	5	5	5
Pakistan	2001	22	27	21	20	15	38	16	19	18	18	13	16
Panama	2001	9	7	9	8	5	13	5	8	7	15	13	3
Papua New Guinea*	2002	17	13	6	2	2	0.8	0.4	0	4	3	32	0
Paraguay	2001	13	20	15	13	11	11	9	12	10	16	13	0.3
Peru	1998	12	18	13	12	12	12	12	12	12	12	12	12
Philippines	2002	6	10	6	4	4	8	2	4	4	4	7	3
Poland	2001	8	13	12	10	9	17	8	8	7	11	20	10
Qatar*	2002	4	4	4	4	4	4	4	4	4	4	4	4
Romania	1999	13	24	17	14	16	24	13	11	11	15	22	2
Russian Federation	2001	13	11	8	10	7	11	9	12	12	13	11	5
Rwanda*	2001	11	14	10	8	7	7	5	12	7	13	12	8
Saudi Arabia*	2000	13	12	12	13	12	11	12	12	12	11	12	12
Senegal*	2002	11	17	13	12	7	9	7	11	12	15	15	4
Serbia and Montenegro*	2001	14	19	16	12	8	11	9	13	14	17	16	5
Seychelles*	2001	30	21	43	23	30	37	17	19	24	32	85	25
Singapore	2001	0	0	0	0	0	0	0	0	0	0	0	8
Slovak Rep.	2001	5	7	4	4	4	6	4	4	3	3	0.1	0
Slovenia	2002	10	13	11	8	8	12	9	10	6	11	7	2
Solomon Islands	1998	28	29	33	9	12	18	11	22	24	28	66	6
South Africa	2001	8	15	14	5	3	7	2	5	4	4	10	40
Sri Lanka	1998	14	6	20	10	7	9	6	9	12	10	10	3
St. Kitts and Nevis*	2001	10	12	10	6	6	10	5	12	8	15	12	4
St. Lucia	2001	8	12	10	3	6	12	2	7	7	13	28	23
St. Vincent and the Grenadines*	2001	9	11	10	6	6	9	6	10	8	13	28	6
Sudan*	1996	8	10	10	3	2	2	2	2	3	2	23	0.5
Suriname*	2000	11	14	11	12	11	12	3	12	15	15	31	7

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

Import markets	Year	Wood, pulp, paper and furniture	Textiles and clothing	Leather, rubber, footwear and travel goods	Metals	Chemicals and photographic supplies	Transport equipment	Non-electric machinery	Electric machinery	Mineral products, precious stones and metals	Manufactured articles not specified	Fish and fish products	Petroleum
Switzerland	2001	0	0	0	0	0	0	0	0	0	0	0	4
Syria*	2002	19	41	31	10	7	28	11	19	17	23	14	8
Chinese Taipei	2001	5	9	6	6	4	12	5	5	4	5	27	0
Tajikistan*	2002	6	15	5	7	5	7	5	5	11	8	11	5
Tanzania*	2000	18	21	16	18	9	11	11	19	15	20	24	6
Thailand	1999	14	25	26	13	10	24	9	13	10	15	58	0.5
Togo	2001	11	17	13	12	7	9	7	11	12	15	15	4
Trinidad and Tobago*	2002	7	8	8	4	3	7	2	9	7	12	28	7
Tunisia*	2002	35	35	33	26	24	23	13	28	29	29	41	8
Turkey	2001	2	9	4	4	5	4	2	3	2	3	50	1
Turkmenistan*	2002	0.6	16	4	0	0.7	4	0	2	4	0.2	3	0
Uganda	2001	10	13	10	8	8	7	1	7	11	9	15	11
Ukraine*	2002	8	6	10	5	6	7	5	8	8	10	10	0
United States	2001	0.8	10	5	2	4	3	1	2	2	3	1	1
Uruguay	2001	13	20	17	14	11	13	9	15	10	17	13	0.4
Uzbekistan*	2001	9	21	11	6	9	11	0.5	9	18	15	0	7
Vanuatu*	2002	15	11	8	13	11	15	8	20	13	23	28	0
Venezuela	2001	13	18	14	10	8	14	9	11	10	11	19	10
Viet Nam*	2001	17	36	19	8	5	23	5	13	13	16	31	14
Yemen*	2000	14	12	15	14	10	20	8	14	14	15	23	9
Zambia	2001	18	19	18	11	8	11	8	14	12	18	23	11
Zimbabwe	2001	21	28	26	16	9	18	9	19	17	21	14	15

* Indicates data sourced from UNCTAD.

Source: WTO Secretariat and UNCTAD. See Technical Notes for details on the calculation methodology.

CONCLUSION

This Report has ranged widely. The Executive Summary attached to the beginning of the Report outlines the main areas covered and observations made. A report of this nature is itself a summary of complex issues and has to rely heavily on the more detailed and analytical work of others. References have been made in the text to this work. Many of the issues addressed here are "moving targets", particularly where governments are constantly exercising policy options that exert an influence on outcomes and where WTO Members are actively engaged in a major trade negotiation.

Much of the Report has concentrated on development-related issues, recognising that one of the most pressing challenges facing the multilateral trading system is its capacity to respond effectively to the development needs of the majority of the WTO membership. But the efficacy of the system as a whole cannot turn only on the narrow, albeit crucial question of what developing countries need from it; the system must also be concerned with forging a set of arrangements that respond to the needs of the larger and richer countries. Neglect of the interests of any country or group of countries inevitably weakens the system and over time will undermine its global character.

The Report makes a strong case for intensified engagement in the multilateral trading system. The arguments apply to all the membership and are especially pertinent in the midst of a negotiation. Joint responsibility does not mean undifferentiated responsibility, however, and some countries are better placed than others to make a difference. This proposition is implicit in much of the analysis contained in the Report. The WTR also argues that if negotiating positions are not firmly rooted in a clear and coherent framework defined in terms of the national interest, opportunities to use the system to promote development will be missed. This means that negotiated outcomes should not give rise to the assumption by some countries of involuntary commitments. It also means countries should recognize that a reluctance or refusal to negotiate any commitments is a non-neutral policy stance that is bound to carry consequences in terms of lost opportunity.

TECHNICAL NOTES

(a) Composition of country groups

(i) Regions

North America: Canada, United States of America, and territories in North America n.e.s.

Latin America: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela and other countries and territories in Latin America and the Caribbean n.e.s.

Western Europe: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, Bosnia and Herzegovina, Croatia, Former Yugoslav Republic of Macedonia, Slovenia, Yugoslavia (the last five countries mentioned comprise the former Yugoslavia), and territories in Western Europe n.e.s.

Central and Eastern Europe, the Baltic States and the Commonwealth of Independent States (transition economies), of which *Central and Eastern Europe*: Albania, Bulgaria, Czech Republic, Hungary, Poland, Romania and the Slovak Republic; *the Baltic States*: Estonia, Latvia and Lithuania; and *the Commonwealth of Independent States (CIS)*: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. The grouping *former USSR* refers to the Baltic States and the CIS.

Africa, of which *North Africa*: Algeria, Egypt, Libyan Arab Jamahiriya, Morocco and Tunisia; and *Sub-Saharan Africa* comprising: *Western Africa*: Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Togo; *Central Africa*: Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Rwanda, and Sao Tome and Principe; *Eastern Africa*: Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Seychelles, Somalia, Sudan, United Republic of Tanzania and Uganda; and *Southern Africa:* Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia, Zimbabwe and territories in Africa n.e.s.

The Middle East: Bahrain, Cyprus, Iraq, Islamic Republic of Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen and other countries and territories in the Middle East n.e.s.

Asia, of which *West Asia*: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka; and *East Asia (including Oceania):* Australia; Brunei Darussalam; Cambodia; China; Fiji; Hong Kong Special Administrative Region of China (Hong Kong, China); Indonesia; Japan; Kiribati; Lao People's Democratic Republic; Macao, China; Malaysia; Mongolia; Myanmar; New Zealand; Papua New Guinea; Philippines; Republic of Korea; Samoa; Singapore; Solomon Islands; Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu (Chinese Taipei); Thailand; Tonga; Tuvalu; Vanuatu; Viet Nam and other countries and territories in Asia and the Pacific n.e.s.

(ii) Regional Integration Agreements

ANDEAN: Bolivia, Colombia, Ecuador, Peru and Venezuela.

APEC: Australia; Brunei Darussalam; Canada; Chile; China; Hong Kong, China; Indonesia; Japan; Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; Philippines; Russian Federation; Singapore; Chinese Taipei; Thailand; United States of America and Viet Nam.

ASEAN: Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam.

CACM: Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua.

CARICOM: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname and Trinidad and Tobago.

CEFTA: Czech Republic, Hungary, Poland, Romania, Slovenia and the Slovak Republic.

CEMAC (UDEAC): Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea and Gabon.

COMESA: Angola, Burundi, Comoros, Democratic Republic of the Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Namibia, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia and Zimbabwe.

ECCAS: Angola, Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Rwanda and Sao Tome and Principe.

ECOWAS: Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

European Union: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

GCC: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates.

LAIA: Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela.

MERCOSUR: Argentina, Brazil, Paraguay and Uruguay.

NAFTA: Canada, Mexico and the United States of America.

SAARC: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

SADC: Angola, Botswana, Democratic Republic of the Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe.

UEMOA: Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo.

(iii) Other country groups

Least-developed countries: Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen and Zambia.

The designations used in this report do not imply an expression of opinion by the Secretariat concerning either the status of any country, territory or area, or the delimitation of its frontiers.

(b) Tariff calculations

The tariff calculations in Section IIB were based on data available in the WTO's Consolidated Tariff Schedules database (CTS) and the Integrated Data Base (IDB), as well as the United Nations Conference on Trade and Development (UNCTAD) Trade Analysis and Information System (TRAINS).

Tariff profiles for MFN final bound duties were taken from the CTS, which include final bound duties and other information such as implementation periods and initial negotiating rights. It covers all WTO Members, contains all commitments on goods including pre and post Uruguay Round negotiations and is updated regularly.[1] The tariff profiles for bound duties are shown for 128 Members.[2]

Tariff profiles for MFN statutory applied duties are taken, in the first instance, from the IDB. The IDB, based on Members' notifications, contains MFN applied and current bound duties and import statistics. It also includes preferences and *ad valorem* equivalents (AVEs) for non *ad valorem* tariff lines if provided by Members on a voluntary basis. The database covers 107 Members and acceding countries for which processed information is available. In each case the latest available year has been selected.

UNCTAD's TRAINS database contains tariff, non-tariff measures and trade information. The tariff information is compiled by UNCTAD based on national, inter-governmental and other sources and is available at the tariff line level. The trade information is mostly sourced from the United Nations Statistical Division COMTRADE database (see below), and is available at the HS 6-digit level only.

To improve cross-country comparability, the tariff profiles in section IIB and the Appendix Tables have been compiled at the Harmonised System (HS) 6-digit level taking into account tariff lines in chapters 01 to 97. The HS 6-digit level product classification offers a common structure that is not biased by the different levels of disaggregation in Members' tariffs. For the calculation of HS 6-digit duty averages and maxima, only *ad valorem* duties, including AVEs if supplied by the Member, were used. However, the incidence of non *ad valorem* duties (specific, mixed, or compound duties) is indicated in all tables.

The first step in the calculations consisted of aggregating both bound and applied tariff line data up to the 6-digit level. With respect to bound duties, only bound tariff lines were taken into account in the calculations. No assumptions were made as to the duty of unbound tariff lines. Therefore, any 6-digit subheading was considered to be bound if at least one tariff line within that subheading was bound, and the duty averages were calculated only on bound tariff lines. Any 6-digit subheading, where no tariff line within that subheading was bound, was considered to be unbound. Unbound subheadings were not included in the calculations in Appendix Tables IIB.1-3. All subsequent calculations were based on these 'pre-aggregated' HS 6-digit duty averages.

In the case of tariff-rate quotas, in-quota duties have been included in the calculations for Canada, Japan, Philippines and the United States.

It should be noted that in the case of data sourced from UNCTAD in Appendix Tables IIB.4-7 only simple averages and coefficients of variation were calculated using HS 6-digit duty averages. The other indicators are calculated on a tariff line basis.

[1] Data for Armenia and the Former Yugoslav Republic of Macedonia, two recently acceded countries, have not yet been processed for inclusion in the CTS and are therefore not yet included in the tables.

[2] The Member states of the European Union are counted as one, and Switzerland and Liechtenstein are also counted as one.

(c) EU/EC

For Legal reasons, the European Union (EU) is known officially as the European Communities (EC) in WTO business. The use of either term in this Report depends on the specific context, but can be taken to refer to the same entity. The EC is a WTO Member in its own right as are each of its 15 member States – making 16 WTO Members altogether.

(d) Chart specific technical notes

Chart IIB.2 Per cent of duty free MFN lines and duty free MFN imports, selected economies

The percentage of MFN applied duty free lines was calculated at the HS 6-digit level as described above. The share of duty free imports was calculated using COMTRADE data at the HS 6-digit level.

Chart IIB.3 Average MFN rate by product category

The description of each of the categories is provided in Technical Note Table 1. Categories 01-11 and 97 are considered non-agricultural products. The average tariff rates were calculated using IDB data, hence the tariffs for agricultural products are the out-of-quota tariffs (except as specified above) and exclude non *ad valorem* lines.

Technical Note Table 1
Description of Multilateral Trade Negotiation Categories

CATEGORY		HARMONIZED SYSTEM NOMENCLATURE HS 1996
No.	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.
12	Fruit and vegetables	Ch. 07, Ch. 08, 1105-06, 2001-08.
13	Coffee, tea, maté,cocoa and preparations	0901-03, Ch. 18 (except 1802), 2101.
14	Sugars and sugar confectionery	Ch. 17.
15	Spices, cereal and other food preparations	0407-10, 0904-10, 1101-04, 1107-09, Ch. 19, 2102-06, 2209.
16	Grains	Ch. 10.
17	Animals and products thereof	Ch. 01, Ch. 02, 1601-02.
18	Oil seeds, fats and oils and their products	1201-08, Ch. 15 (except 1504), 2304-06, 3823.
19	Cut flowers, plants, vegetable materials; lacs, etc.	0601-03, 1211, Ch. 13, Ch. 14.
20	Beverages and spirits	2009, 2201-08.
21	Dairy products	0401-06.
22	Tobacco	Ch. 24.
23	Other agricultural products	Ch.05 (except 0509), 0604, 1209-10, 1212-14, 1802, 2301-10, 2302-03, 2307-09, 290543-45, 3301, 3501-05, 3809-10, 382460, 4101-03, 4301, 5001- 03, 5101-03, 5201-03, 5301-02.
97	Petroleum	2709-10.

Chart IIB.4 Tariff escalation in agricultural products and in selected agricultural categories

The methodology for calculating the average tariff is the same as Chart IIB.3. The product description for the three categories is provided in Technical Note Table 1. It should be noted that the calculations use out of quota rates and do not take into account non *ad valorem* duties. The categories for the three stages of production are described in WTO (2001b).

Chart IIB.5 Tariff profile of non-agricultural products

The data for bound and applied tariffs are sourced from the WTO CTS and IDB databases as presented in Appendix Tables IIB.3 and IIB.6. The per capita GDP data is for the year 2000 from the World Bank, World Development Indicators database.

Chart IIB.6 Tariff escalation in non-agricultural products and selected categories

The methodology for calculating the average tariff is the same as Chart IIB.3. The product description for the three categories is provided in Technical Note Table 1. It should be noted that the calculations do not take into account non *ad valorem* duties. The categories for the three stages of production are described in WTO (2001b).

Appendix Tables IIB.1-3

The description of the database was provided above. Technical Note Table 2 provides a description of each of the column headings in Appendix Tables IIB.1-3 on bound rates.

Technical Note Table 2
Description of table headings in Appendix Tables IIB.1-3

COLUMN HEADING		DESCRIPTION OR METHOD OF CALCULATION
Import market		WTO Member.
Binding coverage (per cent)		Number of HS subheadings containing at least one bound tariff line divided by the respective total number of HS subheadings of the corresponding version of the HS nomenclature (all products - HS92: 5020, HS96: 5113; non-agricultural products, as defined by the WTO Agreement on Agriculture – HS92: 4357, HS96: 4436).
Simple average		Simple average of the *ad valorem* final bound HS 6-digit duties.
Coefficient of variation		A measure of the relative dispersion of tariffs and is calculated by dividing the standard deviation by the mean of the final bound HS 6-digit duties.
Maximum		Maximum *ad valorem* final bound duty based on tariff line duties.
Last year of implementation		Latest final year of implementation.
Duty free (per cent)		Number of HS subheadings for which all tariff line duties are equal to zero, divided by the respective total number of HS subheadings.
Dutiable (per cent):	Total	Number of HS subheadings for which not all tariff line duties are equal to zero, divided by the respective total number of HS subheadings.
	Non *ad valorem*	Number of HS subheadings having at least one non *ad valorem* duty without *ad valorem* equivalent, divided by the respective total number of HS subheadings. Duties not provided were treated as non *ad valorem*.
International peaks (per cent)		Number of HS 6-digit duties higher than 15 per cent, divided by the respective total number of HS subheadings.
National peaks (per cent)		Number of HS 6-digit duties at least three times higher than the Member's overall simple average, divided by the respective total number of HS subheadings.
Other Duties and Charges (ODCs):	Simple average	Simple average of the ODCs with *ad valorem* HS 6-digit duties.
	Maximum	Maximum *ad valorem* ODC duty based on tariff line duties.
	Non *ad valorem* (per cent)	Number of HS subheadings having at least one non *ad valorem* ODC duty, divided by the respective total number of HS subheadings.

Appendix Tables IIB.4-6

Technical Note Table 3
Description of table headings in Appendix Tables IIB.4-6

COLUMN HEADING		DESCRIPTION OR METHOD OF CALCULATION
Import market		WTO Member or acceding country.
Year		Year of the tariff.
Total number of tariff lines		Total number of tariff lines in the Members' tariff schedule, including suffixes.
Simple average		Simple average of the *ad valorem* MFN applied HS 6-digit duties, taking into account AVEs if submitted for the IDB.
Coefficient of variation		A measure of the relative dispersion of tariffs and is calculated by dividing the standard deviation by the mean of the HS 6-digit applied duties.
Maximum		Maximum *ad valorem* MFN applied duty based on tariff line duties, taking into account AVEs if submitted for the IDB.
Duty free (per cent)		Number of HS subheadings for which all tariff line duties are equal to zero, divided by the respective total number of HS subheadings.
Dutiable (per cent):	Total	Number of HS subheadings for which not all tariff line duties are equal to zero, divided by the respective total number of HS subheadings.
	Non *ad valorem*	Number of HS subheadings having at least one non *ad valorem* duty without *ad valorem* equivalent, divided by the respective total number of HS subheadings. Duties not provided were treated as non *ad valorem*.
International peaks (per cent)		Number of HS 6-digit duties higher than 15 per cent, divided by the respective total number of HS subheadings.
National peaks (per cent)		Number of HS 6-digit duties at least three times higher than the Member's overall simple average, divided by the respective total number of HS subheadings.

Appendix Table IIB.7

Tariff data was sourced from both the WTO IDB database and the UNCTAD TRAINs database. The product categories are listed in Technical Note Table 1.

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