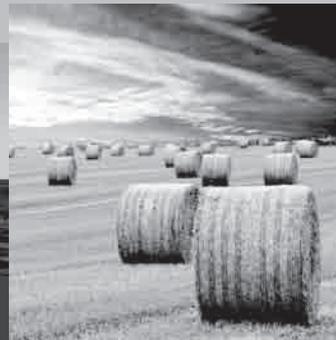




WORLD TRADE
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WORLD TRADE REPORT 2009

Trade Policy Commitments and Contingency Measures



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CONTENTS

ABBREVIATIONS AND SYMBOLS.....	vii
ACKNOWLEDGEMENTS	ix
DISCLAIMER	x
FOREWORD BY THE DIRECTOR-GENERAL	xi
EXECUTIVE SUMMARY.....	xiii
I THE TRADE SITUATION IN 2008-09	1
A INTRODUCTION.....	1
B OVERVIEW OF TRADE AND PRODUCTION DEVELOPMENTS IN 2008-09.....	3
C MERCHANDISE TRADE, VOLUME (REAL) TERMS, 2008.....	5
D MERCHANDISE AND SERVICES TRADE, VALUE (NOMINAL) TERMS, 2008.....	7
II TRADE POLICY COMMITMENTS AND CONTINGENCY MEASURES.....	19
A INTRODUCTION.....	19
B FLEXIBILITY IN TRADE AGREEMENTS.....	21
1. Economic theories of trade agreements and the role of flexibilities.....	21
2. Circumstances for suspension of commitments and flexibility measures built into the WTO agreements	30
3. Conclusions.....	39
C ECONOMICS, DISCIPLINES AND PRACTICES	47
1. Safeguards.....	47
2. Dumping and anti-dumping measures.....	65
3. Subsidies and countervailing duties.....	84
4. Other selected measures of contingency protection	102
5. Choosing among different measures.....	114
6. Conclusions.....	117
D EMPIRICAL EVIDENCE.....	127
1. Patterns and trends in the use of contingency measures.....	127
2. Contingency measures and the multilateral trading system	142
3. Factors explaining the use of trade contingency measures	147
4. The economic impact of contingency measures.....	152
5. Conclusions.....	156
E CONCLUSIONS.....	159
BIBLIOGRAPHY	161
TECHNICAL NOTES	169

LIST OF TABLES, CHARTS AND BOXES

I THE TRADE SITUATION IN 2008-09

Tables

Table 1	GDP and merchandise trade by region, 2006-08	6
Table 2	World exports of merchandise and commercial services, 2008	8
Table 3	World exports of commercial services by major category, 2008	9

Charts

Chart 1	Real GDP and trade growth of OECD countries, 2007-08	1
Chart 2	Prices of selected primary products, January 2002-January 2009	4
Chart 3	Growth in the volume of world merchandise trade and GDP, 1998-2008	5
Chart 4	Real merchandise trade growth by region, 2008	6
Chart 5	Export prices of selected primary products, 2006-08	7
Chart 6	Dollar exchange rates of selected major currencies, January 2000-January 2009	8

Appendix

App. Table 1	World merchandise trade by region and selected country, 2008	13
App. Table 2	World exports of commercial services by region and selected country, 2008	14
App. Table 3	Merchandise trade: leading exporters and importers, 2008	15
App. Table 4	Merchandise trade: leading exporters and importers, 2008 (Excluding intra-EU (27) trade)	16
App. Table 5	Leading exporters and importers in world trade in commercial services, 2008	17
App. Chart 1	Monthly merchandise exports and imports of selected economies, January 2006-February 2009	11

II TRADE POLICY COMMITMENTS AND CONTINGENCY MEASURES

B. FLEXIBILITY IN TRADE AGREEMENTS

Tables

Table 1	A categorization of circumstances and arguments for a temporary increase in protection	31
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Boxes

Box 1	Terms-of-trade and the international cost-shifting problem	22
Box 2	Time-inconsistency	23
Box 3	Commitment versus flexibility: the case of safeguards in the GATT and WTO	25

C. ECONOMICS, DISCIPLINES AND PRACTICES

Tables

Table 2	Suspension of concessions pursuant to SGA Article 8.2	64
---------	---	----

Charts

Chart 1	Binding coverage including and excluding subheadings with an overhang exceeding 20 resp. 15 percentage points, by region	107
Chart 2	Binding coverage including and excluding subheadings with a binding overhang exceeding 15 percentage points, by product category	108

Boxes

Box 4	“Automatic” safeguards in agriculture	50
Box 5	Is there a need for a services safeguard?	51
Box 6	Effects of tariff, quota and tariff-rate quota	60
	– Figure 1: The effect of a tariff	60
	– Figure 2: The effect of a quota	60
	– Figure 3: The difference between a tariff and a quota	61
	– Figure 4: The effect of a tariff-rate quota (TRQ)	61
Box 7	How anti-dumping can be used to facilitate collusion	71
	– Figure 1: Representation of the game in profit space	72
Box 8	Effects of an export subsidy	85
	– Figure 1: The effect of an export subsidy implemented by a large country	85
Box 9	Strategic trade policy	87
	– Figure 1: Output subsidy and reaction functions in Cournot model	87
Box 10	The effects of an export subsidy combined with a CVD	90
	– Figure 1: The effects of an export subsidy combined with a countervailing tariff: the case of large countries	90
Box 11	“Water” in banking sector commitments	109
	– Table: Degree of discrimination against foreign-owned banks relative to domestic banks: reported practices compared with WTO commitments	110

D. EMPIRICAL EVIDENCE**Tables**

Table 3	Number of tariff increases: selected members and selected years	136
Table 4	Number of AD initiations, by user and target, 1995-2007	140
Table 5	Number of CVD initiations, by user and target, 1975-2007	140
Table 6	Safeguard initiations, by user and target, 1995-2007	140
Table 7	Number of products subject to export taxes as reported in TPRs 1995-2008, selected countries	141

Charts

Chart 3	Annual initiations of AD, CVD and safeguard investigations	132
Chart 4	Annual number of new AD, CVD and safeguard measures	132
Chart 5	Trade contingent measures and the global business cycle	133
Chart 6	Number of Article XXVIII requests, by year	134
Chart 7	Number of Article XXVIII requests after round of negotiations	135
Chart 8	Number of initiations and world import share, by HS section	137
Chart 9	Number of renegotiations, by HS section	137
Chart 10	Number of members applying export taxes, by HS chapter	138
Chart 11	Number of cases of tariff increases of at least 15 percentage points, by product, 1996-2006	139
Chart 12	AD initiations, by level of development	139
Chart 13	Number of requests for renegotiations, by member	141
Chart 14	Number of cases of tariff increases of at least 15 percentage points, by country, 1996-2006	142

Boxes

Box 12	Anti-dumping duties	129
	– Table: Average AD duties for selected users (in per cent)	130
Box 13	Cautionary note on relying on the number of initiations/measures	130
Box 14	The use of contingency measures in Latin America: evidence based on country case studies	143
Box 15	Contingency measures in preferential trade agreements (PTAs)	144

ABBREVIATIONS AND SYMBOLS

AD	Anti-dumping
ANZCERTA	The Australia New Zealand Closer Economic Agreement
BIS	Bank for International Settlements
BOP	Balance of Payment
BSE	Bovine Spongiform Encephalopathy (Mad cow disease)
CAFTA	Central American Free Trade Agreement
CAMAD	Common Analytical Market Access Database
CARICOM	The Caribbean Community and Common Market
CEO	Chief Executive Officer
CEP	Centre for Economic Performance
CEPAL	Comision Economica para America Latina y el Caribe
CEPII	Centre d'Etudes prospectives et d'Informations Internationales
CEPR	Center for Economic Policy Research
CGE	Computable General Equilibrium
CIA	Central Intelligence Agency
CIS	Commonwealth of Independent States
CMEA	Council of Mutual Economic Assistance
COMPAS	Commercial Policy Analysis System
CRS	constant returns to scale
CVD	Countervailing Duty
EC	European Community
EEC	European Economic Community
EFTA	European Free Trade Area
EU	European Union
FAME	forecasting analysis and modeling environment
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariff and Trade
GDP	Gross Domestic Product
GNP	Gross National Product
GTAP	Global Trade Analysis Project
HS	Harmonized system
ICT	Information and Communication Technology
IF	Integrated Framework
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
INRs	initial negotiating rights
IPRs	Intellectual Property Rights
IRS	increasing returns to scale
ISIC	International Standard Industrial Classification
IT	Information Technology
ITC	International Trade Center
ITC	International Trade Commission
ITU	International Telecommunication Union
LDCs	Least-Developed Countries
MERCOSUR	Southern Common Market
NAFTA	North American Free Trade Agreement
NAMA	Non-agricultural market access
NIEs	Newly Industrialized Economies
NTBs	Non-tariff barriers
ODCs	other duties and charges

OECD	Organization for Economic Co-operation and Development
OEEC	Organization for European Economic Cooperation
OPEC	Organization of the Petroleum Exporting Countries
PPP	purchasing power parity
PSI	Principal Supplying Interest
PTAs	Preferential Trade Agreements
R&D	Research and Development
S&D	Special and differential treatment
SI	Substantial Interest
SITC	Standard International Trade Classification
SOC	Standard Occupational Classification
SPB	Sunset Policy Bulletin
SPS	Sanitary and Phytosanitary Measures
SSM	Special Safeguard Mechanism
SSRN	Social Science Research Network
STDF	Standards and Trade Development Facility
STP	Software Technology Parks
TAA	Trade Adjustment Assistance
TFP	Total Factor Productivity
TOT	Terms-of-trade
TPRs	Trade Policy Reviews
TRQs	Tariff-rate quotas
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
US	United States of America
USDOC	United States Department of Commerce
USITC	United States International Trade Commission
USSR	Union of Socialist Soviet Republics
VAT	Value-Added Tax
VERs	Voluntary Export Restraints
WCO	World Customs Organization
WWI	World War I

The following symbols are used in this publication:

...	not available
0	figure is zero or became zero due to rounding
-	not applicable
\$	United States dollars
€	euro
£	UK pound

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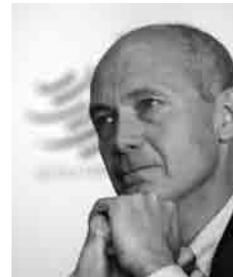
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DISCLAIMER

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FOREWORD BY THE DIRECTOR-GENERAL

In the last few months trade has contracted more than at any time since the 1930s, reflecting the dramatic global economic downturn provoked in the first instance by the collapse of major financial institutions. Trade growth will be strongly negative this year and we are unlikely to see sustained economic growth until 2010. This adversity is severely testing the policy ingenuity of governments across the globe, and in today's interdependent world, their willingness to make common cause in addressing shared challenges. Effective international cooperation and open markets are as vital today as they have ever been.

Experience tells us that while restrictive trade policies are not necessarily the root cause of episodes of economic downturn – they were not the trigger for the Great Depression – a protectionist response to the pain of contraction is a recipe for deepening and prolonging an economic crisis. A seemingly attractive short-term solution of keeping production and consumption at home soon becomes a millstone around a nation's neck, the more so when trading partners retaliate in kind. I believe this is better understood today than in the past, but it takes decisive and clear-thinking governments to hold the line under pressure. Many governments have affirmed their intention to keep markets open and the WTO's monitoring exercise suggests that by and large authorities are taking these declarations seriously. But significant risks remain, and call for vigilance.

The choice of topic for this year's *World Trade Report* is highly relevant to the challenge of ensuring that the channels of trade remain open in the face of economic adversity. Well-balanced contingency measures, designed primarily to deal with a variety of unanticipated market situations, are fundamental to the effectiveness and stability of trade agreements. The Report explores this proposition from a variety of angles. Through the prism of several policy options defined as "contingency" measures – safeguards, anti-dumping and countervailing measures, the re-negotiation of tariff commitments, the raising of tariffs up to their legal maximum levels (bindings), and the use of export taxes – the Report examines why countries resort to such measures, as well as the implications for the trading system in terms of how they are designed and deployed.

A variety of reasons explain the attractiveness of flexibilities that allow for the modification in one way or another of a pre-existing commitment. Contingency measures may be thought of as a safety valve mechanism, a form of insurance, or an instrument of economic adjustment. They may simply be there to strengthen the rule of law. They may entice governments to open their markets further than they would in the absence of these mechanisms, creating a greater quantum of openness than would otherwise be forthcoming. Or they may simply reflect the reality that we lack perfect foresight and therefore cannot write complete contracts for regulating future behaviour under any conceivable set of circumstances.

Sources of uncertainty about the future may be economic or non-economic in nature. In other words, economic conditions may simply shift in ways that provoke the use of contingency measures. Alternatively, some public policy concern may arise, such as a health or environmental emergency. Another possibility is that a trading partner undertakes a policy change that affects the conditions of competition and evokes a counter-action. Whatever the details of circumstance, it is plainly obvious that good agreements need to be responsive to change in ways that do not require continuing negotiation or automatically spark trade tensions.

The architectural challenge is to shape trade agreements that strike the right balance between flexibility and commitments. If contingency measures are too easy to use, the agreement will lack credibility. If they are too hard to use, the agreement may prove unstable as governments soften their resolve to abide by commitments. We have seen in the past how the GATT/WTO has striven to strike this balance. In the 1980s, for example, voluntary export restraints sprung up in many countries and sectors. These measures lacked legal cover and, in an effort to expunge them from the trade policy arsenal, safeguard provisions were redesigned in the Uruguay Round of negotiations. Similarly today, the delicate debate in the Doha Round of negotiations over the design of anti-dumping provisions or over the special safeguard measure on agriculture is an effort to align views on the question of balance.

The WTO offers a menu of contingency measures. The Report identifies certain sectoral and national patterns in the use of these measures. More research

is required to understand these choices better and analyze adequately the implications for economies and for international cooperation of the choices made. We do know, however, that while the circumstances at hand sometimes dictate the choice, other considerations may also play a part. Some measures are easier to use than others. Some call for compensatory policy adjustments and others do not. Governments may also be influenced by political economy considerations. Anti-dumping and countervailing measures, for example, are triggered by the charge of unfair trade practices on the part of foreign actors. Safeguards carry no such implication. Similarly, an anti-dumping action targets a firm's behaviour, while countervailing duties respond to government subsidies.

An important point to bear in mind is that while we can comfortably argue that contingency measures and the flexibility they bring are good for sustaining effective agreements, these measures also carry costs that may reduce economic welfare. Flexibility is not costless when it is used, and exercising restraint is beneficial. We would like to think that the existence of contingency policy options deepens international commitment, although this is hard to establish empirically. We would also like to think that the

exercise of flexibility options does not become a habit that erodes the credibility of agreements over time, undermining their value as guarantors of a greater degree of policy certainty.

Finally, we know from experience that resorting to contingency protection is influenced by external circumstances and "atmospherics". In these challenging times, governments have agreed to exercise restraint. I am convinced that such undertakings will be easier to maintain and to sell to public opinion in an environment where governments have demonstrated their ability and willingness to make common cause in trade policy matters. This is yet another reason why I remain convinced of the need to take the necessary decisions to complete the Doha Round sooner rather than later.



Pascal Lamy
Director-General

EXECUTIVE SUMMARY

TRADE POLICY COMMITMENTS AND CONTINGENCY MEASURES

The World Trade Report 2009 focuses primarily on certain contingency measures available to WTO members in the import and export of goods. The legal framework for such measures is much less developed in services trade, although this is also discussed.

The Report covers safeguard measures, anti-dumping, and countervailing duties. In order to appreciate better the trade-off among alternative policy instruments available to governments to address difficult economic situations, or situations in which a government decides to modify a policy stance, the Report also discusses a number of other mechanisms of flexibility available to WTO members. These include the renegotiation of tariff commitments, export taxes, and increases in tariffs up to the maximum ceiling that each WTO member has negotiated – known as tariff bindings.

Apart from the obvious relevance of contingency measures in relation to the integrity and durability of trade agreements, the topic of this Report merits attention as limited research has been undertaken in this area. Perhaps one reason for this is that contingency policy is an interdisciplinary field, requiring both legal and economic expertise. The Report seeks to fill a gap in the existing literature on the subject.

Trade agreements define rules for the conduct of trade policy. These rules must strike a balance between commitments and flexibility. Too much flexibility may undermine the value of commitments, but too little flexibility may render the rules unsustainable.

The tension between credible commitments and flexibility is often close to the surface during trade negotiations. For example, the question of a “special safeguard mechanism” (the extent to which developing countries would be allowed to protect farmers from import surges) was crucial in the discussions of the July 2008 mini-ministerial meeting, which sought to agree negotiating modalities – or a final blueprint – for agriculture and non-agricultural market access (NAMA).

Many of the kinds of flexibilities associated with trade agreements are generally referred to as escape

clauses, contingency measures, trade remedies or safety valves. The fundamental reason for incorporating such provisions into trade agreements is for governments to manage circumstances that cannot be anticipated prior to their occurrence. A trade agreement that offers such possibilities without unduly weakening existing contractual commitments has a better chance of remaining robust than an agreement that results in regular non-compliance.

FLEXIBILITY IN TRADE AGREEMENTS

Governments have good reasons for signing trade agreements, but effective agreements must strike an appropriate balance between flexibility and commitments.

Economic theory offers two main explanations why governments sign trade agreements. First, they allow parties to escape from mutually destructive beggar-thy-neighbour behaviour – or terms-of-trade conflicts – where trade restrictions may be used to change the prices of imports or exports in favour of the trade-restricting country. Second, trade agreements may also allow governments to confer greater credibility on their trade policies in the eyes of stakeholders.

If a trade agreement allows too much leeway to modify obligations, the underlying value of the agreement is reduced. But if flexibility provisions are too restrictive, an agreement will be less stable because signatories may be more inclined to renege on their commitments. Flexibilities are not costless in relation to the benefits of an agreement, since they undo part of what the agreement achieves in terms of trade cooperation. Moreover, relaxing trade commitments may harm a government’s credibility and result in a reduction of global welfare. The presence of these “costs from flexibility” opens the question of why contingent measures are introduced in the multilateral trading system.

Two largely complementary arguments are put forward to rationalize flexibilities in trade agreements: the “benefit” approach and the “incomplete contract” approach.

The “benefit” approach holds that the cost of flexibilities in trade agreements must be compared with the benefits of allowing some degree of discretion to participating governments in setting their trade policy. Within this framework, contingency measures may serve as a safety valve, an insurance mechanism, or an adjustment policy tool. They may also serve as a means to improve the rule of law in the trading system and to facilitate trade opening.

The “incomplete contract” approach stresses the fact that a trade agreement is a contract that does not specify rights and duties of all parties in all possible future states of the world. Trade agreements are incomplete by nature and flexibilities offer an avenue for dealing with difficulties arising from contractual incompleteness in an agreement. Contracts may also be incomplete by choice. Governments opt for flexibilities as a trade-off between the benefits of a more detailed agreement and the costs associated with writing such an agreement.

Abstracting from terms-of-trade considerations, the economic case for employing measures of contingent protection rests on the emergence of market failures, such as negative external effects (externalities) or imperfect competition. Alternatively, political economy arguments may explain a willingness to contemplate an agreement that allows for the suspension of commitments.

From an economic theory perspective, an import surge may provide a terms-of-trade argument for an increase in trade protection. Large countries might be tempted to suspend commitments in periods of high import volumes because they can extract a higher economic surplus from foreign exporters. If the costs of breaking the agreement are offset by the benefits, an increase in protection may be seen, in the absence of a credible retaliatory threat, as an optimal policy.

In general, economic theory provides a strong argument for non-intervention in a perfectly competitive environment. When markets are not functioning well, however, measures of protection can be justified in terms of a “second-best” argument. Suppose that an independent external event, such as the introduction of a successful technological innovation abroad, induces a sharp contraction of a sector. If the sector is large, its down-sizing may negatively affect other sectors and generate

lay-offs. A second-best argument for trade policy intervention can be made in these circumstances to slow down the restructuring of the sector.

In the absence of market failures or a terms-of-trade consideration, political economy arguments may explain the willingness of a government to suspend commitments. This could be the case, for example, when some external factor alters the distribution of income in such a way that influential groups or the median voter lose out. Political economy arguments can also explain the temptation to increase protection after a political event, such as a government change, or in response to a subsidy in a foreign country that would otherwise lower prices to consumers in the domestic market.

A categorization of the circumstances that might justify government intervention can be made on the basis of the type of external event (shock) and its sectoral/country coverage.

Three types of shocks may hit an economy: economic, non-economic and policy-related shocks. Economic shocks are changes in the economic environment in which economic agents operate. Examples of non-economic shocks include situations of environmental or health emergencies as well as political economy shocks. Examples of policy changes are the reduction of a tariff or the provision of a subsidy by a foreign country.

Economic shocks can be further divided into industry-specific, country-specific or global shocks. Four types of industry-specific shocks can be identified: changes in preferences, technological innovation, changes in factor endowments and changes in market structure. Country-specific shocks are changes in the state of nature that affect all sectors at the same time. They can originate in changes in aggregate demand or supply.

All these circumstances give rise to possible economic or non-economic motivations for government intervention.

Broadly defined, flexibilities can take many forms...

Flexibilities can include anything that redefines or reverses a commitment under an agreement. They can also include actions that take advantage of a gap between commitments and policies actually applied, or simply involve measures not covered by an agreement but which have implications in policy

areas relevant to the agreement. Some flexibilities may be of a nature that provokes retaliation from trading partners. Some even argue that the violation of a commitment or non-compliance with a dispute settlement finding may be regarded as a form of flexibility, although the robustness of agreements would determine the extent to which flexibility can be defined in these terms.

ECONOMICS, DISCIPLINES AND PRACTICES

SAFEGUARDS

Safeguards in the WTO enhance the willingness of governments to undertake commitments, but the temporary nature of such measures is crucial to the attainment of their objectives.

Safeguard provisions allow policy-makers to agree to higher levels of commitments than would be forthcoming in the absence of such flexibility. At the time a trade agreement is concluded, governments cannot foresee all future events that may lead to an intensification of competitive pressure from imports. Such pressure may make protection desirable for certain industries, whether to lessen income loss, facilitate adjustment or serve political objectives.

A distinguishing feature of WTO safeguards is their strictly temporary nature backed up by a credible threat of retaliation from trading partners. A number of studies have shown that this feature is crucial if safeguards are to achieve their objective, whether in terms of technological catch-up, a reduction in the speed of an industry's decline, or to avoid congestion in the labour market.

WTO rules seek to strike a balance between a party's need for flexibility and the interest of trading partners in minimizing the impact of safeguards.

A number of WTO members have used safeguards over the years, but none of those challenged in dispute settlement were able to justify the measure. Issues have arisen in regard to the establishment of a causal link between imports and injury, and distinguishing among the sources of injury. Economists have cautioned against excessive reliance on a correlation between imports and injury in the causality analysis and, at the same time, struggled with the conception of imports as an external

(exogenous) variable that could “cause” injury in the domestic economy to such variables as domestic production. Members are free in their choice of methodology to carry out this type of analysis, and the suggestion by economists that econometric models might help to separate the contribution of relevant factors has largely been ignored.

One of the reasons for this may be that legal issues in respect of which such quantification could matter – notably the determination of the tariff rate that corresponds to the share of injury attributed to imports – have never been tested in dispute settlement. This is because governments imposing safeguards have been unable to meet the causation standard for attributing injury to increased imports.

Safeguard measures can take different forms, such as tariffs, quotas or tariff-rate quotas (TRQs). While in many circumstances tariffs may be preferable to quotas for reasons of transparency and efficiency, some arguments in favour of quotas can be made on political grounds, or in the presence of changing factors not taken account of by prices in the market (dynamic externalities) and “menu costs” (costly changes in trade policy).

A range of disciplines governs the application of safeguard measures. Among other things, safeguards should generally be applied on an MFN basis and compensated through equivalent concessions in other sectors. They are time-limited, with “holiday” provisions preventing an immediate re-imposition. However, some of these provisions contain loopholes. Countries may circumvent the MFN requirement by “modulating” quotas – that is, attributing lower shares to countries with disproportionate increases in imports. Also, compensation (for which agreement may be difficult to reach in any event) does not become due for the first three years during which a safeguard is imposed if the measure responds to an absolute increase in imports. An evaluation of safeguard disciplines obviously involves a comparison with other forms of contingent protection.

DUMPING AND ANTI-DUMPING MEASURES

In economics only “predatory” dumping results unambiguously in welfare-reducing effects for the importing country.

Dumping can arise from price discrimination by firms with market power in international markets. It can also arise from cyclical shifts in demand coupled with an inability by firms to adjust production capacity over the course of the business cycle. Predation – the strategic firm objective of forcing competing producers to exit the market – cannot be ruled out as a motive for dumping. But the difficulty involved in successfully carrying out predation on international markets discounts this as an important explanation for practicing price discrimination in different markets.

There are costs and benefits associated with anti-dumping.

Economic theory suggests that in the first instance, with the possible exception of predatory dumping, all dumping either increases, or at worst, has an ambiguous effect on the economic welfare of the importing country. This is because dumped imports lower the cost of the good in the importing country. Further, if dumping increases the productivity of the foreign firm, the welfare benefits for the importing country may increase over time.

Many countries rely on antidumping law to counteract dumping. Antidumping law may be seen as a form of *ex ante* flexibility required in a trade agreement so that countries can make deeper market access commitments. Antidumping measures can act like a safety valve to let off protectionist steam which might otherwise threaten a government's programme of trade reform.

There are also *ex post* benefits from antidumping measures. Antidumping law can lead domestic firms to behave in a way that is beneficial for consumers. Domestic firms may expand production in the hope of sufficiently depressing prices in order to trigger an antidumping investigation. The growing number of countries adopting antidumping statutes may increase consumer welfare across the board if it succeeds in reducing or preventing international price discrimination.

But there are *ex post* costs from antidumping measures. An antidumping duty raises the price that both domestic and foreign firms will charge in the domestic market, penalizing domestic consumers. If the reason for dumping is the need of the foreign firm to maintain production capacity during periods of slack demand, antidumping can lead to a significant reduction in trade volumes. There

is a possibility that the provision of contingent protection to an upstream industry will incite demand for contingent protection in downstream industries. If firms compete not only on price but also on the basis of the quality of the product, antidumping may adversely affect the fortunes of the domestic firm in the long-run if this leads the foreign firm to upgrade the quality of its product. Penalizing foreign firms through antidumping can make it more difficult for firms from technologically backward countries to catch up and it can prevent firms from undertaking productivity enhancing activities. Finally, antidumping can facilitate collusive behaviour between domestic and foreign firms.

GATT/WTO rules appear to give members a significant degree of flexibility in the use of the measure, since some dumping can be welfare-improving.

GATT Article VI and the Agreement on Antidumping (formally the Agreement on Implementation of Article VI of GATT 1994) provide internationally agreed rules on the conduct of antidumping investigations and the application of antidumping measures. What triggers an anti-dumping investigation is the allegation that an exporter is causing injurious dumping to domestic industry. The definition of dumping in the Agreement does not distinguish the nature of the dumping, whether it is predatory or cyclical, the motivation, or the likely duration. A given proportion of domestic industry must support the request for initiation of the antidumping investigation. There must be evidence that the domestic industry has suffered material injury or the threat thereof as a result of dumped imports. Antidumping measures cannot exceed the dumping margin. The measures cannot be permanent and can be extended only if a subsequent review determines that the expiry of a measure would likely lead to continuation or recurrence of dumping and injury.

Economists have also raised some questions about provisions dealing with material injury...

The Antidumping Agreement allows the practice of cumulation, where imports of a product from more than one country are simultaneously subject to anti-dumping investigations and an injury determination may be the result of a finding of cumulated dumping from more than one national source. Cumulation increases the likelihood of a positive injury finding because it is much easier to

identify and establish material injury arising from a larger volume of imports than it is to establish a sufficient level of injury independently for smaller levels of imports from specific supplier countries. By cumulating exporters from different countries, there will be a lower incentive for each exporter to invest in its own defence, because it can free ride on the legal defence of other exporters. But by free riding, the consequence is a smaller than optimal cumulative effort in putting up a legal defence, thus increasing the possibility of a positive injury finding.

A second issue has to do with the list of factors that investigating authorities need to examine in considering material injury. It has been suggested that some of the injury factors listed in Article 3.4 of the Agreement may actually reflect a healthy evolution of the domestic industry. The reduction of employment, for instance, may be the result of improvements in technology. Technological change may also lead to wage reductions.

...and suggested the use of economic concepts and models in the causality and non-attribution analyses.

It has been argued that economic concepts and methods could be used in the causality and non-attribution analyses. Simulation or econometric models are able to determine the contribution of dumping to injury of a domestic industry and to distinguish that from the contribution of other factors. Another consideration has to do with the use to which the non-attribution test is put. Antidumping duties are imposed to counteract the dumping margin so long as there is evidence that the domestic industry's injury has been caused, either wholly or partly, by the dumped imports. Conceivably, the results of the non-attribution test could be used to quantify and deduct injury caused by factors other than dumped imports. Depending on the precision in which this analysis is undertaken, the results could also be used to adjust the magnitude of the antidumping duties, since the dumping margin may only be responsible for part of the material injury to domestic industry.

SUBSIDIES AND COUNTERVAILING DUTIES

Duties imposed to countervail subsidies will generally not raise aggregate welfare in the country that imposes them. Two exceptions are circumstances when a terms-

of-trade argument can be made and when markets fail. Political economy considerations help to explain why governments might use countervailing duties.

Under the assumption that markets function perfectly, countervailing duties typically have a negative effect on aggregate welfare in the country imposing them. There are two main caveats to this proposition. First, in theory, countervailing duties can improve the importing country's terms-of-trade. If the terms-of-trade gain from the duty is larger than the efficiency loss, there may be an aggregate welfare argument for the government to countervail. Second, countervailing duties may deter subsidization altogether and thereby confer benefits to producers in the importing country who must compete with subsidized goods in their export markets.

When the assumption of perfect markets is dropped, further aggregate welfare-based arguments may be made for using countervailing duties. With rigidities in the labour market, for example, a subsidy can harm the importing country. Similarly, under imperfect competition in product markets, countervailing duties can be used to appropriate some of the economic rents that accrue to factors of production.

The principal beneficiaries of countervailing duties are producers competing with subsidized imports. If, as suggested in the political economy literature, governments do not necessarily maximize national welfare but rather pursue policies that benefit certain constituencies, they may indeed use countervailing duties to help producers harmed by foreign subsidies.

Countervailing duties can serve two main purposes in trade agreements. First, they may be used by governments to neutralize negative external effects (externalities) arising from subsidies. Second, the prospect that countervailing duties might be used could deter the use of subsidies in the first place.

If the rationale of a trade agreement is to eliminate reciprocally policies that impose negative effects (externalities) on trading partners, countervailing duties may serve this objective. The government of an importing country can set countervailing duties so as to restore the price prevailing in the absence of the subsidy, thereby leaving domestic consumers and producers unaffected by the subsidy. In the process, the government collects tariff

revenue which makes it better off than before the subsidy. In this particular case, however, the negative externality imposed by the subsidy does not necessarily correspond to a loss of aggregate economic welfare for the importing country. This means that the rationale for countervailing duty law could be seen as protecting an entitlement of domestic producers to be shielded from the harmful effects of foreign subsidies rather than as an instrument to promote global efficiency.

The possibility of imposing countervailing duties may also be seen as part of a larger multilateral system aimed at discouraging trade distorting subsidies and facilitating trade policy commitments. A system of constraints upon subsidies can only be effective if it is properly enforced and countervailing duties may be part of the enforcement mechanism. While, in a narrow sense, countervailing duties might be deemed detrimental to national economic welfare, there might nevertheless be systemic gains from the existence of credible countervailing duty provisions in all countries. The threat of countervailing duties may allow governments to resist political pressures for wasteful subsidization at home and also deter subsidies that would otherwise injure each nation's exporters in their overseas markets.

Legal provisions in the Agreement on Subsidies and Countervailing Measures support the idea that governments need countervailing duties to help domestic producers. However, they do not lend much support to the idea that in the WTO system countervailing duties serve the purpose of discouraging subsidies.

If the possibility of applying countervailing duties were conceived as a means of neutralizing or deterring subsidies that inflict a welfare loss on trading partners, their application should be sanctioned only for cases in which a subsidy can be shown to have this sort of negative effect. The Subsidies and Countervailing Measures Agreement, however, confines the use of countervailing duties to situations where the importing country can provide evidence that an industry has been injured by subsidized imports. This lends support to the idea that the main rationale for countervailing duty law is to protect an entitlement of domestic producers to be insulated from the harmful effects of foreign subsidies rather than to promote global efficiency.

There are reasons to doubt that the threat of countervailing duties within the WTO system does much to discourage subsidies. First, countervailing

duties have been used infrequently and only by a small number of nations. Part of the reason for this is the injury test, which restricts the number of countries that can countervail to those with an import competing industry. Moreover, uncoordinated and unilateral countervailing actions may only divert subsidies towards non-countervailing markets. Second, countervailing duties will only be employed against subsidy programs if and when those become known to trading partners. If detection takes time, the beneficiaries of the subsidy may derive considerable benefit before the duty is applied.

The economic discussion of WTO disciplines on countervailing duties has focused on two features of the provisions – the rationale of a unilateral as opposed to multilateral track for addressing subsidies, and the nature of the injury test.

The WTO rules provide a multilateral and a unilateral track for addressing subsidies. Under the first of these, a member who considers that its interests are being harmed by subsidies provided by another member may challenge the measure under the dispute settlement system. The unilateral track entails the possibility of applying countervailing duties against injurious subsidies. Analysis of the rationale for having two tracks relies on both theoretical and practical considerations.

On the question of the injury test, a suggestion in the literature is that this test might be replaced by an aggregate economic welfare test in order to determine the desirability of applying countervailing duties. This suggestion follows from the proposition that the injury test is not consistent with the promotion of global economic efficiency.

RENEGOTIATION OF COMMITMENTS

Provisions in the WTO for renegotiating commitments determining the conditions of access to the market are not intended to permit temporary remedial measures, but rather to secure a more permanent adjustment of commitments.

Commitments under the WTO can be renegotiated under Article XXVIII GATT and Article XXI GATS. These provisions define conditions under which members are allowed to withdraw commitments (bound tariff reductions or specific commitments) in exchange for other commitments to compensate members whose trade interests are affected by the withdrawal.

Like other flexibility provisions, the possibility of renegotiating commitments may act as a safety valve that facilitates the achievement of deeper commitments in the presence of uncertainty about future developments. Renegotiation also allows “efficient breach” under a trade agreement – that is, deviations from commitments that may be mutually beneficial to signatories.

Institutional factors and administrative costs may explain why some countries appear to use the renegotiation of commitments as a form of contingent protection.

In general, it would not make sense to change commitments on a permanent basis in response to a temporary change in economic and political conditions. However, this temporal consideration may be blunted when the right of renegotiation is deployed as a form of contingent protection.

Some aspects of the legal text may induce countries to prefer the use of renegotiation relative to other trade remedies. One consideration relates to the “reputation” costs (i.e. a loss of credibility with respect to trading partners) of different measures. As renegotiation requires compensation, it has a small reputation cost and may be favoured relative to other trade remedies. In addition, countries may be induced by institutional factors (such as the lack of domestic institutional capacity to administer an antidumping statute) to revert to renegotiation as a form of contingent protection.

THE MARGIN BETWEEN COMMITMENTS AND APPLIED MEASURES

The legal consolidation (binding) of tariffs in goods markets and market access and national treatment commitments in services markets constitute the backbone of trade agreements. But some commitments reflect less than applied policies (the binding “overhang”).

In the trade policy debate it is often argued that the binding of trade policy commitments above the level of the corresponding applied measures increases policy stability and reduces the uncertainty confronting exporters in foreign markets. Economists have given surprisingly little attention to this question. A small number of recent theoretical contributions link the use of weak bindings (i.e. bindings that specify the

maximum level at which a government commits to set its applied tariff rather than a precise level) to contracting costs, privately observed political pressure, or continuing contributions from lobbies. Work is even more sparse on the quantification of benefits of tariff bindings or of the value to be given to the binding overhang.

Binding overhangs are a prominent feature of the WTO commitments of most members.

A close examination of tariff bindings in developing countries shows that in a large number of these countries 70 per cent to 90 per cent of tariffs could be raised by 15 percentage points without violating WTO commitments. A binding overhang exists in other areas, such as in the case of developed country tariffs in the agricultural sector (as well as domestic and export subsidy commitments), and in relation to the services schedules of most members. However, an exact quantification of these overhangs is more difficult due to the nature of commitments in these areas.

EXPORT TAXES

A lack of binding commitments on export taxes on the part of most members reflects the incompleteness of the WTO Agreement and provides members with a largely uncontrolled form of flexibility.

Potentially, members could heavily restrict trade through the imposition of export taxes without having to comply with specified procedural requirements, to demonstrate the existence of specified circumstances, or to submit to the limitation imposed by sunset reviews.

On the other hand, a limitation on the discretionary use of export taxes is imposed by the general applicability of the most-favoured-nation principle. In addition, for some WTO members the use of export taxes is limited by binding commitments assumed at the time of accession to the WTO. Other countries face limitations in the use of export taxes through commitments under regional trade agreements or as a result of national legislation.

Export taxes may be used for a variety of reasons, but generally they do not amount to first-best policy under perfect market assumptions.

An analysis of Trade Policy Reviews conducted from 1995 to 2008 shows that governments use export taxes primarily with the stated objectives of insulating a country from sudden price changes (shocks), easing government revenue constraints in a situation of sharp currency devaluation, nurturing infant industries, and protecting the environment.

Export restrictions, like tariffs, are in general not a first-best policy in market-based neoclassical analysis. But in some circumstances their use may be justified as a second-best policy and they may be preferred to import restrictions.

THE CHOICE AMONG INSTRUMENTS OF CONTINGENT PROTECTION

Differences in the applicable legal framework – both domestic and international – appear to be a major factor in the choice by governments of particular contingent trade policies.

The predominant use of antidumping by many countries is eye-catching. One of the reasons may be the absence of an obligation under WTO rules to provide compensation. If an antidumping measure is challenged in a dispute, the expected compensation (or the retaliation the country may face) may not be different from what the country would be required to give in any event under the Agreement on Safeguards or in renegotiations.

Another advantage of antidumping over safeguards is the possibility of multiple extensions subject to sunset reviews. In many cases, these do not seem to have constituted a major hurdle to prevent the prolongation of such measures.

The discriminatory application of antidumping duties as opposed to safeguards and tariff increases as well as the possibility to negotiate price undertakings are elements of flexibility that may be appreciated by governments. Voluntary understandings of the latter variety may also help to contain the risk of reputation damage associated with the extensive use of antidumping.

Domestically, the involvement of various actors in the decision-making process may differ for different contingent trade policies. Depending on whose agreement is needed and how much discretionary authority is provided to individual decision-makers,

the outcome for the domestic industry may be subject to more or less uncertainty.

Political economy factors may also play a part.

In political economy terms, the fact that anti-dumping measures imply that action is the result of an “unfair” trade practice on the part of foreign trade partners may make this contingent measure more attractive than one which turns exclusively on a consideration of conditions in the domestic economy. Of the flexibilities considered in detail in this report, anti-dumping and countervailing measures are the only ones that embody this feature. Countervailing duty measures are different from anti-dumping measures in that the implied unfair trade practice is attributable to a government as opposed to the private sector. Acting against another government may be less attractive in political economy terms than doing so against firms.

None of the above points in isolation can conclusively explain the popularity of antidumping over the other contingent trade policies discussed in this Report. However, taken together, it seems that the rules on antidumping, including domestic arrangements, provide considerable flexibility to be adapted to a wide range of circumstances calling for contingent trade policy.

EMPIRICAL EVIDENCE

Significant gaps exist in empirical evidence on contingent protection, making it difficult to generalize from the data.

The bulk of the empirical literature on contingency measures focuses on antidumping measures, and there is a predominance of empirical studies on the United States and the European Union. The literature on contingent measures in developing countries has developed only very recently. But it is hard to draw general conclusions from this evidence as most of the results of these studies differ by country or by sector.

At the same time, comparable data on the various measures of contingent protection make it impossible to undertake cross-country analysis and analysis of substitution among instruments. One of the ways that the gap could be filled is through better, more timely and more comprehensive notifications of measures by WTO members.

One interesting feature that emerges from observed patterns and trends in the use of contingent protection is that the preference for particular measures is sector-specific. Some countries also make relatively more use of certain forms of trade remedies than others.

Antidumping actions, countervailing duties and safeguards, and to a lesser extent renegotiations, are mainly related to the chemicals and steel industries. Export taxes apply mainly to fishery, forestry, gold and precious metals and cereals. The use of tariff increases is much less concentrated at the sectoral level than the use of these other measures of contingent protection.

At the country level, data allow us to distinguish between traditional and new users of antidumping and countervailing duties, and safeguards. Developed countries are the major users of countervailing measures. In recent years, developing countries have become the main users of antidumping duties, safeguards, export taxes, renegotiations and tariff increases within bindings. In particular, in our restricted sample, the six countries that use tariff increases most intensively are African, which offers a significant contrast from the list of users of antidumping. A reason for this may be that developing countries, particularly the poorer ones, prefer to use tariffs because they lack the necessary resources to comply with the procedural requirements for the use of antidumping, safeguards or countervailing duties.

Unfortunately, not much empirical literature has emerged to test the proposition that trade contingent measures are a quid pro quo to facilitate deeper market-opening commitments.

Case study evidence suggests that the relationship between contingent measures and market opening is one of complementarity. Trade contingent measures have often been used to accommodate and isolate protectionist pressures that would otherwise have grown into large-scale threats against the whole policy of openness.

In the specific case of antidumping measures, however, econometric evidence on the trade-off between flexibilities and commitments is ambiguous. One study that focuses on whether a country has an antidumping mechanism in place at the moment of joining the GATT/WTO supports the view that the potential to use flexibility measures helps to further the overall process of

market opening. But econometric studies based on disaggregated sectoral data cast doubts on these conclusions. For developing countries that use antidumping intensively, the studies tend to find an increase in the use of antidumping actions in the aftermath of trade opening, and that past use of antidumping actions is not associated with further tariff reductions.

Much more research is needed on whether contingent protection has enabled countries to commit to further market opening.

Studies that focus on regional trade agreements show that the great majority of such agreements maintain antidumping, countervailing duty and safeguard provisions. This is consistent with the argument that flexibility is required by countries when they commit to further trade opening. The few preferential trade agreements (PTAs) which have managed to abolish antidumping, countervailing duties or safeguard measures are characterized by deeper integration and a greater degree of coordination or harmonization of their “behind-the-border” policies. This does not mean that the demand for flexibility vanishes as preferential trade agreements achieve deeper integration. Rather, what appears to happen is that deeper integration calls for a different set of instruments to achieve flexibility and manage adjustment, much like the role played by structural funds in the European Union.

Evidence on antidumping, countervailing duties and safeguards is generally consistent with the view that these measures are tools of flexibility to confront difficult situations. The evidence is less clear for increases in applied tariffs, export taxes and the modification of tariff commitments.

Available empirical literature suggests that the use by governments of antidumping, countervailing duties and safeguards is explained in significant measure by movements in the business cycle, the real exchange rate and industry-specific determinants. The frequency of trade contingent actions, particularly antidumping, increases during periods when countries suffer decreases in aggregate economic activity. Changes in the real exchange rate also appear to influence the number of filings even though it has opposing effects on the likelihood of dumping and injury. Holding everything else constant, industries which have a high level of import penetration, employ a large number of workers, and are capital-intensive seem more likely

to file antidumping petitions. Recent studies have also highlighted the export orientation of domestic industry as a factor that determines the frequency of antidumping filings. Investigating authorities are more willing to grant trade-contingent protection to industries that confront a reduction in profits or increasing imports, but a “political” element reflecting the size or importance of the affected industry also appears to be relevant.

No systematic empirical evidence exists that investigates what factors determine the modification of concessions, applied tariff increases within bindings, and the use of export taxes. However, a preliminary analysis of the data suggests that, as may be expected from consideration of adjustment costs, modifications of concessions primarily occur in the aftermath of the conclusion of a round. In addition, data on export taxes suggest that although they may be used to deal with contingencies such as price or inflationary effects, much of the motivation appears to stem from long-term goals such as generating tax revenues, supporting downstream industries and environmental protection.

Important differences exist across countries as to the degree of flexibility that different measures of contingent protection provide.

While multilateral agreements have increased uniformity in trade remedy practices, there are nevertheless significant differences among countries on procedural and substantive issues that affect which measure is chosen, the perceived likelihood of positive findings, and the impact of the measures.

A high degree of discretion appears to be given to national authorities in deciding on a range of important trade remedy questions, such as the use of constructed normal values in the case of anti-dumping, the treatment of non-market economies, and the determination of injury and causation.

Existing empirical evidence on the economic impact of adopting measures of contingent protection shows that there are costs associated with the use of these measures, but the magnitude of these costs is uncertain.

Contingent protection can hurt domestic consumers because it may raise domestic prices, either directly or indirectly, through its effect on the domestic market power of producers. Evidence based on the overall welfare effect of antidumping and countervailing duties estimates significant costs

of contingent protection. The results of existing studies on the effects of contingent protection on the market power of the import-competing industry differ, however, by country.

As regards the effectiveness of contingent protection in mitigating import competition and helping an industry in its restructuring or in catching up technologically, there is no conclusive evidence. On the one hand, contingent protection has trade-diverting and tariff-jumping foreign direct investment effects. On the other hand, factors other than contingent protection appear to have greater effect in promoting industrial recovery or accelerating technological catch-up.

CONCLUSIONS

A trade-off exists between flexibility that allows the adoption of contingency measures in a trade agreement and the binding nature of commitments.

Standards relating to injury, causality and the duration of measures are designed to strike an appropriate balance. The same may be said of the rules on compensation.

Trade contingency measures adopted by members can involve both benefits and costs.

It is important to distinguish between the reasons for incorporating flexibilities in trade agreements and the effects of such measures. Flexibilities allow governments to commit to deeper opening in a trade agreement while reducing the economic and political opposition to the agreement. However, in the absence of market failures, trade restrictions will cause losses in economic welfare. While contingency measures address injury to the industry, little or no account is taken of how the economy as a whole is affected – a feature of the system regarded as a weakness by some.

Differences in legal frameworks and political economy factors help to explain how governments choose among contingency measures.

The choice of a particular contingency measure may depend on how easy it is to invoke the measure, the possibility of discriminating among sources of imports, whether the period of applicability of a measure may be extended, reputation costs, and the necessity or otherwise of providing compensation

upon adoption of a contingency measure. While multilateral agreements impose a certain uniformity among countries in the design of contingency measures, significant differences remain in terms of procedural and substantive issues.

Existing empirical evidence supports the argument that flexibilities are needed in trade agreements to address future unforeseen difficulties.

Contingency measures are more likely to be used in difficult economic circumstances. However, the evidence cannot preclude the possibility that such measures are sometimes used as a protectionist device. Although some case study evidence suggests that flexibilities allow countries to commit to deeper opening, recent attempts to show this on the basis of economic analysis offer ambiguous results. Data limitations have limited the scope and coverage of existing research on trade remedies. More timely notification by WTO members of contingency measures could help to address this problem.

The use of contingency protection measures in times of economic crisis can present particular problems.

Members have an uncontested right to use contingency measures that are consistent with WTO rules. In normal circumstances such measures would generally be seen as exceptional and their use would be infrequent. But at a time of global crisis, a proliferation of such measures among trading partners would have adverse economic effects with few of the positive offsetting advantages that might otherwise be invoked to justify such measures.

Restraint in the use of restrictive trade measures will contribute to a more rapid recovery in the world economy.

Experience from the Great Depression in the 1930s suggests that while trade policy may have little or nothing to do with the onset of an economic crisis, protectionism can certainly deepen and lengthen a severe downturn. Evidence to date suggests some increase in the use of measures that restrict trade, but so far against a background of general restraint. While it is a comparatively straightforward matter to detect the use of contingency measures of the kind analysed in this Report, it is more difficult to identify trade-restrictive measures and subsidies with adverse trade effects that may be embedded in financial rescue and fiscal stimulus packages.

Transparency and effective monitoring make a decisive contribution to managing trade policy, especially in adverse economic circumstances.

Free-flowing information on policies affecting trade is essential to cooperation among countries seeking to manage the crisis. Comprehensive and timely notification of trade contingency measures to the relevant WTO bodies is essential to ensure proper monitoring.

I THE TRADE SITUATION IN 2008-09

A INTRODUCTION

Signs of a sharp deterioration in the global economy were evident in the second half of 2008 and the first few months of 2009 as world trade flows sagged and production slumped, first in developed economies and then in developing countries. Although world trade grew by 2 per cent in volume terms over the course of 2008, it tapered off in the last six months of the year and was well down on the 6 per cent volume increase posted in 2007. World output measured by real gross domestic product (GDP) also slowed appreciably, falling to 1.7 per cent in 2008 from 3.5 per cent a year earlier.

Output and trade growth of developed economies were already slowing during the first three quarters of 2008, but the worsening of the global financial crisis in the fourth quarter of 2008 and the first quarter of 2009 appears to have accelerated this trend (see Chart 1).

A notable aspect of the current slowdown in world trade is the synchronized nature of the decline in exports and imports of major developed and developing economies since September 2008 (see

Appendix Chart 1). With the growing share of developing countries' trade in the global total, and increased geographical diversification of trade flows, it was assumed by some commentators that a "decoupling" effect would have made developing countries less vulnerable to economic turmoil in developed countries. This has not turned out to be the case.

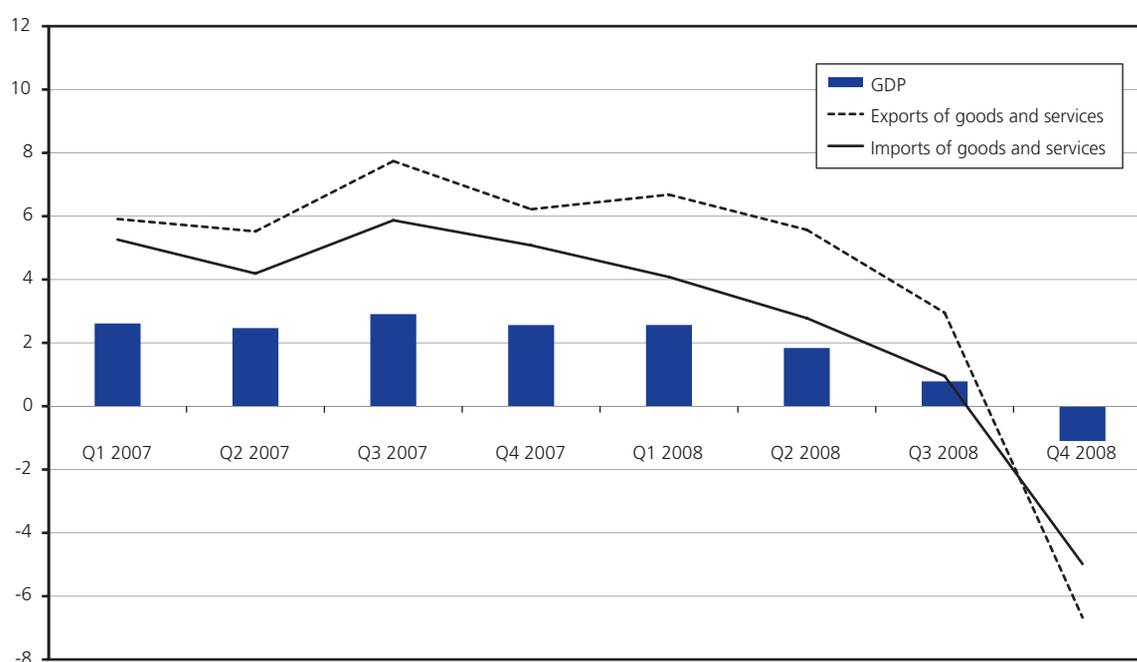
1. FINANCIAL CRISIS SPARKS DOWNTURN

The financial crisis that has so weakened the world economy began in mid-2007 with declines in the values of mortgage-backed securities. This had a severe impact on the balance sheets of major financial institutions. The crisis intensified dramatically following the collapse of the Wall Street investment bank Lehman Brothers in September 2008 and the government-led rescue of a number of financial institutions in the United States and elsewhere.

Turmoil in the financial sector and acute credit shortages spread inexorably to other parts of the

Chart 1
Real GDP and trade growth of OECD countries, 2007-08

(Percentage change on a year to year basis)



Source: OECD National Accounts.

economy. Declining asset prices, faltering demand and falling production translated into dramatically reduced and, in some cases, negative growth in production and trade in many countries. Trade has also been affected adversely by a sharp decline in credit to finance imports and exports.

Although the crisis began in the United States, it soon spread and financial institutions and economies throughout the developed and developing world have been severely affected. The deteriorating economic situation has taken a toll on both consumer and business confidence, with a loss of confidence in the financial sector having an impact on the rest of the economy.

The financial crisis has disrupted the normal functioning of the banking system and deprived firms and individuals of much-needed credit. Falling stock markets and housing prices have reduced wealth in the United States and elsewhere, making households unwilling to purchase long-lasting goods such as cars while they attempt to rebuild their savings. Falling prices for oil and gas, while a boon to consumers in importing countries, have deprived oil-producing countries of export revenues.

The closing months of 2008 and the start of 2009 saw precipitous drops in global production and trade, first in the developed economies and subsequently in developing countries. Governments have tried a variety of policy measures to address the economic crisis, including financial bail-outs for banks as well as monetary and fiscal policies aimed at limiting the impact of the crisis. Conventional monetary policy may be reaching the limits of its effectiveness, with central banks in the United States and elsewhere having already reduced interest rates close to zero per cent. The timing of the recovery may now depend on the effectiveness of proposed fiscal stimulus plans, which currently amount to more than 3 per cent of total world production.

2. REASONS FOR TRADE CONTRACTION

The declines in trade flows in the closing months of 2008 and at the start of 2009 were larger than in past slow-downs. A number of factors may explain this.

One reason is that the fall-off in demand is more widespread than in the past, as all regions of the world economy are slowing at once.

A second reason for the magnitude of recent declines relates to the increasing presence of global supply chains in total trade. Trade contraction or expansion is no longer simply a question of changes in trade flows between a producing country and a consuming country – goods cross many frontiers during the production process and components in the final product are counted every time they cross a frontier. The only way of avoiding this effect, whose magnitude can only be guessed at in the absence of systematic information, would be to measure trade transactions on the basis of the value added at each stage of the production process. Since value-added, or the return to factors of production, is the real measure of income in the economy, and trade is a gross flow rather than a measure of income, it follows that strong increases or decreases in trade flow numbers should not be interpreted as an accurate guide to what is actually happening to incomes and employment.

A third element that is likely to contribute to the contraction of trade is a shortage of trade finance. This has clearly been a problem and it is receiving particular attention from international institutions and governments. The WTO has played its part by bringing together the key players to work on ensuring the availability and affordability of trade finance.

A fourth factor that could contribute to trade contraction is an increase in protection measures. Any rises in these measures will threaten the prospects for recovery and prolong the downturn. The risk of growing protectionism is a source of concern.¹

B OVERVIEW OF TRADE AND PRODUCTION DEVELOPMENTS IN 2008-09

1. ECONOMIC GROWTH

World economic growth – measured by total production, or gross domestic product (GDP) – slowed abruptly in 2008 and the early part of 2009² against the backdrop of the worst financial crisis since the 1930s. Weaker demand in developed economies brought about by falling asset prices and increased economic uncertainty contributed to the decline in world output growth from 3.5 per cent in 2007 to 1.7 per cent in 2008. Growth in 2008 was the slowest since 2001 and well below the 10-year average rate of 2.9 per cent.

Developed economies managed a meagre 0.8 per cent growth in 2008, compared with 2.5 per cent in 2007, and an average rate of 2.2 per cent between 2000 and 2008. Developing economies, on the other hand, expanded their output in 2008 by 5.6 per cent, down from 7.5 per cent in 2007, but still equal to their average rate for the 2000–08 period.

Oil-exporting countries experienced rapid growth of 5.5 per cent on average in 2008, with exports from the Middle East growing at an even faster rate of 6.3 per cent. Least-developed countries (LDCs) grew faster than any other group of countries, at 6.6 per cent in 2008, and above their 2000–08 average rate of 6.3 per cent.

Europe and North America each grew only about 1 per cent in 2008, while the oil-exporting regions of South and Central America, the Commonwealth of Independent States, Africa and the Middle East all experienced GDP growth in excess of 5 per cent.

Asia's economic growth (GDP) in 2008 was only 2 per cent, owing in large measure to the negative growth (–0.7 per cent) recorded by Japan. By contrast, developing Asia (excluding Japan, Australia and New Zealand) grew 5.7 per cent, led by China, which registered the strongest growth of any major economy, at 9.0 per cent.

The overall picture was one of continuing growth in the first half of 2008, with oil-exporting countries in particular benefiting from record prices for oil and gas. This was followed by faltering growth and the beginnings of a severe downturn in the second half of the year and into 2009, starting in the United States and other developed countries, and spreading subsequently to developing countries.

2. EXCHANGE RATES AND COMMODITY PRICES

The value of the US dollar against a broad group of currencies, i.e. its real effective exchange rate, rose during 2008 and the first part of 2009 as the United States currency strengthened against those of its trading partners. The rise of the dollar followed a weakening against other currencies since 2002. The 2008 appreciation was most pronounced in the second half of the year as the financial crisis intensified. A strengthened dollar appears in large measure to be the result of a flight to cash (i.e. a sudden widespread selling of investments in other currencies) in exchange for a perceived “safe haven” currency. This may also explain the strengthened yen (see below).

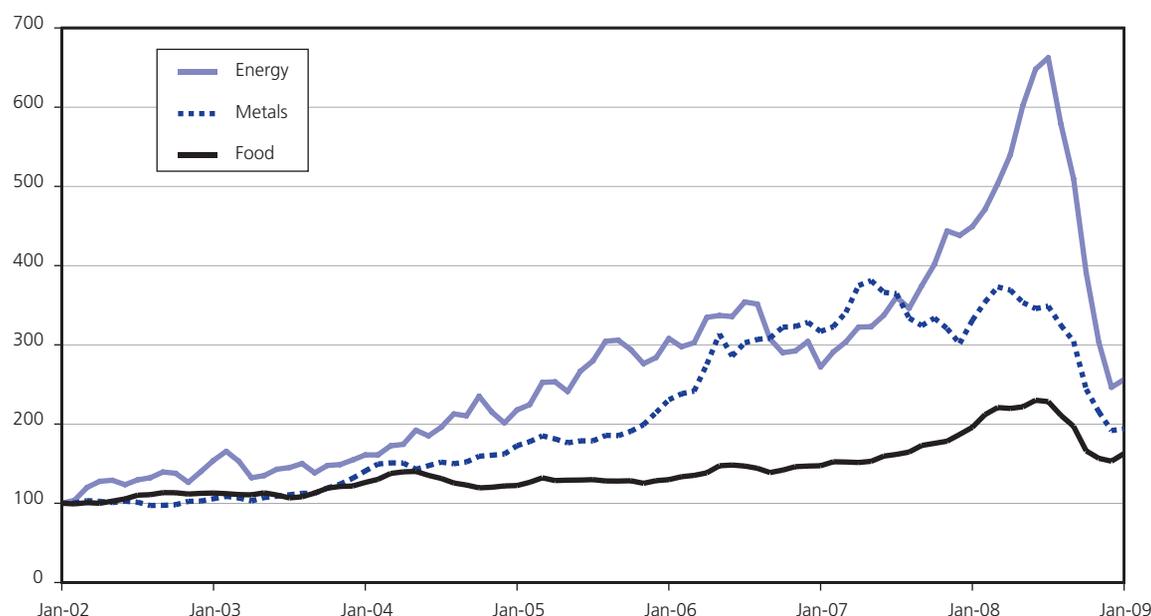
In the first half of 2008 the euro rose 7 per cent against the dollar and then fell 14 per cent from July to December. The euro had previously gained 30 per cent against the dollar between January 2006 and its peak in July 2008. The British pound, the Canadian dollar and the Korean won all displayed similar trends, falling sharply against the dollar in the second half of 2008, after a long period of appreciation.

The Japanese yen and Chinese yuan behaved differently in response to the financial crisis. Both had appreciated against the dollar in recent years. As the financial crisis took hold, the yen rose sharply against the dollar while the yuan has remained more or less constant.

Prices for primary commodities, such as oil and gas, were highly volatile in 2008. This is one of the main reasons why trade performance in the second half of the year was so different from the first half. After steadily rising throughout 2007, energy prices reached record highs at over US\$ 140 a barrel by mid-2008, only to crash subsequently to the lowest level since early 2005 amid weakening demand in oil-importing countries. Between January 2007 and July 2008 fuel prices rose 144 per cent, more than doubling. But from July until the end of 2008 they fell 63 per cent (see Chart 2).

Prices for other primary products, including metals and food, have also fallen from their peaks at the start of 2008. Rises in inflation have not occurred in most countries due to weaker demand for goods worldwide, and deflation may be a greater risk in some countries in the short term.

Chart 2
Prices of selected primary products, January 2002-January 2009
 (Index, January 2002=100)



Source: IMF International Financial Statistics.

3. TRADE

Growth in real terms (i.e. adjusted to discount changes in prices) in merchandise trade slowed significantly in 2008 to 2 per cent, compared with 6 per cent in 2007. However, trade still managed to grow more than global output, as is usually the case when production growth is positive. Conversely, when output growth is declining, trade growth tends to fall even more, as is evident in 2009.

In dollar terms (which includes price changes and exchange rate fluctuations), world merchandise exports increased by 15 per cent in 2008, to US\$ 15.8 trillion, while exports of commercial services rose 11 per cent to US\$ 3.7 trillion.

The share of developing economies in world merchandise trade set new records in 2008, with exports rising to 38 per cent of the world total and imports increasing to 34 per cent. Germany's merchandise exports in 2008, which totalled US\$ 1.47 trillion, were slightly larger than China's US\$ 1.43 trillion. This meant that Germany retained its position as the world's leading merchandise exporter.

Despite its strong overall trade performance, China's exports in some product categories faltered towards the end of 2008. Exports of office and

telecom equipment, which was worth US\$ 381.5 billion in 2008, fell 7 per cent in the fourth quarter compared with the same period of the previous year, after growing at an average rate of 17 per cent during the first three quarters. Exports of office and telecom equipment to the United States fell even more sharply, registering a 13 per cent decline in the fourth quarter after growth of 10 per cent in the third quarter. Overall, exports of Chinese manufactured goods to the United States increased just 1 per cent over the previous year, after growth of 14 per cent in the third quarter.

One of the sectors hardest hit by the global recession has been the car industry. Japan's exports of automotive products fell by 18 per cent in 2008, while exports to the United States dropped by 30 per cent in the fourth quarter of 2008. Automotive products represented 12 per cent of total merchandise exports of developed economies in 2007.

As with merchandise exports, exports of commercial services fell in the fourth quarter of 2008 compared with the previous year – albeit less so (7–8 per cent) than merchandise (12 per cent). For 2008 as a whole, exports of commercial services grew more slowly than exports of goods (on a balance of payments basis), rising by 11 per cent compared with 15 per cent for goods. Exports of transport services rose

15 per cent in 2008 while travel services and other commercial services both increased 10 per cent. The United States remained the largest exporter and importer of commercial services, with exports of US\$ 522 billion and imports of US\$ 364 billion.

One indicator of the severity of the global downturn in trade has been the fall-off in international shipping. According to the International Air Transport Association (IATA), air cargo traffic was down 23 per cent in December 2008 compared with a year earlier, led by a strong decline of 26 per cent in the Asia-Pacific region. In contrast, the decline recorded in September 2001, when most of the world's aircraft were temporarily grounded following the terrorist attacks on the United States, was only 14 per cent.

Another measure that has received a lot of attention recently is the Baltic Dry Index, a measure of

the cost of shipping bulk cargo by sea, published by the Baltic Exchange in London, the leading world marketplace for brokering shipping contracts. Movements in the index reflect global demand for manufactured goods. Between June and November 2008 the Baltic Dry Index fell by 94 per cent.

Annual trade figures in dollar terms were strongly influenced by changes in oil and gas prices and exchange rates in 2008. Despite the fact that fuel prices ended 2008 at a lower level than at any point in 2007, average prices for 2008 were about 40 per cent higher than 2007. This tended to raise total merchandise imports for most countries. For example, United States merchandise imports grew 7 per cent in 2008, but non-fuel imports only increased by 1 per cent. Prices for food and beverages have also receded from their peaks in 2008.

C MERCHANDISE TRADE, VOLUME (REAL) TERMS, 2008

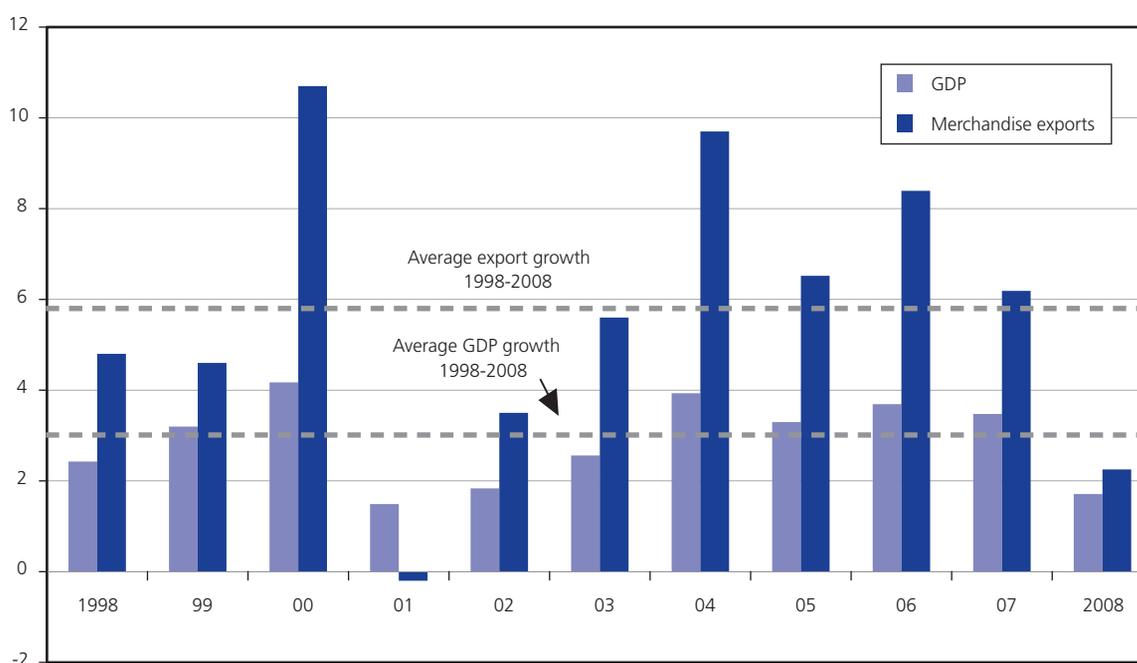
Merchandise trade in volume terms (excluding the price and exchange rate fluctuations) expanded by 2 per cent in 2008, down from 6 per cent in 2007. Growth for 2008 was below the average 5.7 per cent registered during the 1998-2008 period. Growth in merchandise trade was very close to GDP growth

in 2008, compared with earlier years when trade growth exceeded GDP. It is likely to be below GDP growth in 2009 (see Chart 3).

South and Central America saw exports expand by 1.5 per cent and imports grow by 15.5 per cent in

Chart 3
Growth in the volume of world merchandise trade and GDP, 1998-2008

(Annual percentage change)



Source: WTO Secretariat.

Table 1
GDP and merchandise trade by region, 2006-08
 (Annual percentage change at constant prices)

	GDP			Exports			Imports		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
World	3.7	3.5	1.7	8.5	6.0	2.0	8.0	6.0	2.0
North America	2.9	2.1	1.1	8.5	5.0	1.5	6.0	2.0	-2.5
United States	2.8	2.0	1.1	10.5	7.0	5.5	5.5	1.0	-4.0
South and Central America ^a	6.1	6.6	5.3	4.0	3.0	1.5	15.5	17.5	15.5
Europe	3.1	2.8	1.0	7.5	4.0	0.5	7.5	4.0	-1.0
European Union (27)	3.0	2.8	1.0	7.5	3.5	0.0	7.0	3.5	-1.0
Commonwealth of Independent States (CIS)	7.5	8.4	5.5	6.0	7.5	6.0	20.5	20.0	15.0
Africa	5.7	5.8	5.0	1.5	4.5	3.0	10.0	14.0	13.0
Middle East	5.2	5.5	5.7	3.0	4.0	3.0	5.5	14.0	10.0
Asia	4.6	4.9	2.0	13.5	11.5	4.5	8.5	8.0	4.0
China	11.6	11.9	9.0	22.0	19.5	8.5	16.5	13.5	4.0
Japan	2.0	2.4	-0.7	10.0	9.5	2.5	2.0	1.5	-1.0
India	9.8	9.3	7.9	11.0	13.0	7.0	8.0	16.0	12.5
Newly industrialized economies (4) ^b	5.6	5.6	1.7	13.0	9.0	3.5	8.0	6.0	3.5

a Includes the Caribbean.

b Hong Kong, China; Republic of Korea; Singapore and Chinese Taipei.

Source: WTO Secretariat.

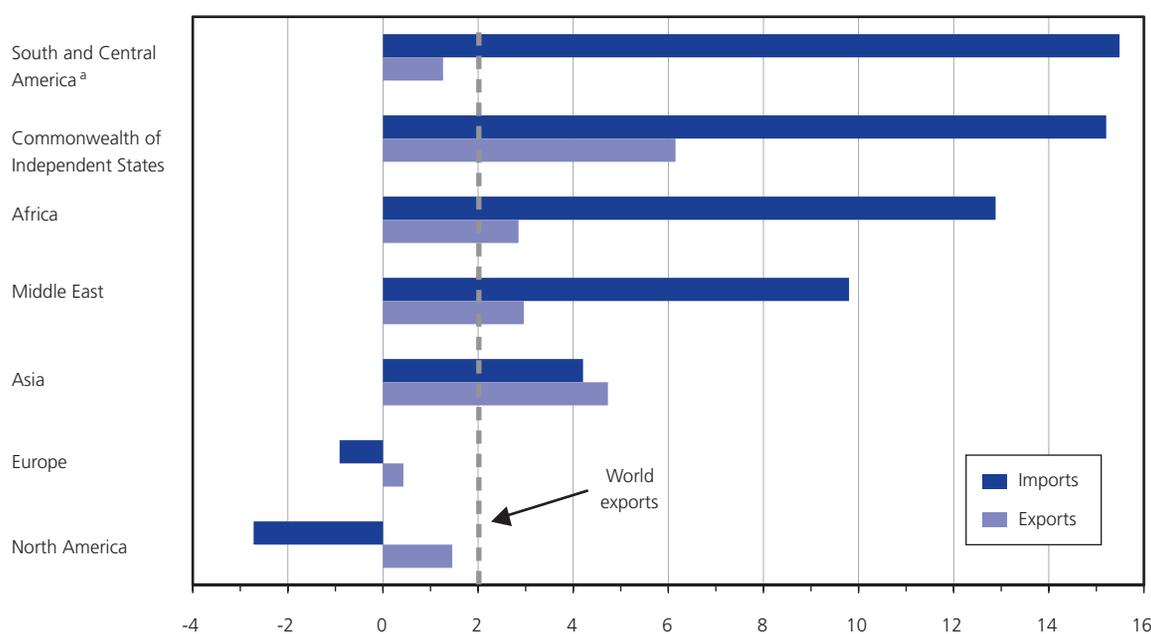
2008. Import growth was the strongest recorded by any region (see Table 1). Imports grew more than GDP while export volume lagged behind output.

The region with the fastest export volume growth in 2008 was the Commonwealth of Independent States, which recorded a 6 per cent increase compared with

2007. The CIS also had the second-highest import growth globally, with a 15 per cent expansion over the previous year.

Both export and import volumes for the Middle East were down sharply in 2008, falling to 3 per cent from 4 per cent in 2007 for exports, and to 10

Chart 4
Real merchandise trade growth by region, 2008
 (Annual percentage change)



^a Includes the Caribbean.

Source: WTO Secretariat.

per cent from 14 per cent for imports. The growth of Africa's exports and imports also slowed in 2008, falling from 4.5 per cent in 2007 to 3 per cent in 2008 on the export side, and from 14 per cent in 2007 to 13 per cent on the import side.

Asia's exports and imports dropped sharply in volume terms. Export growth was 4.5 per cent in 2008, down from 11.5 per cent in 2007, and 13.5 per cent in 2006. Import growth in 2008 was even weaker, at 4 per cent, down from 8 per cent in the previous year.

Europe registered the slowest export growth of any region last year, with an expansion of just 0.5 per cent, down from 4 per cent in 2007. Import growth turned negative in 2008, falling by 1 per cent. North America's exports grew by 1.5 per cent in 2008, while imports dropped 2.5 per cent. Both exports and imports were down sharply from 2007 (see Chart 4).

D MERCHANDISE AND SERVICES TRADE, VALUE (NOMINAL) TERMS, 2008

1. PRICES AND EXCHANGE RATES

Net oil-exporting regions benefited from record fuel prices in 2008, as the cost of a barrel of oil rose to over US\$ 140 by mid-year. Prices declined after July, however, and ended the year below US\$ 50 per barrel, as world demand for oil moderated and the global economy slowed.

Significantly higher energy prices in 2008 had a strong effect on nominal (i.e. where prices and exchange rate changes are included) merchandise trade values and

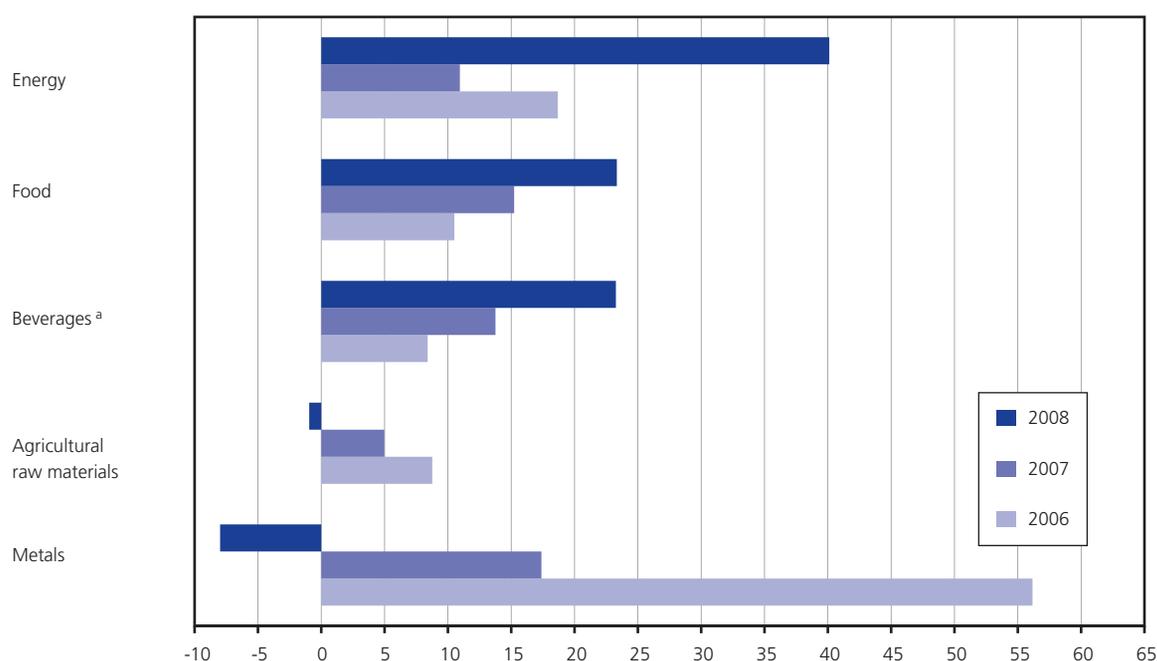
growth rates compared with 2007. Energy prices rose 40 per cent on average last year, while prices for food and beverages both increased 23 per cent. Agricultural raw material prices fell by less than 1 per cent, while metals dropped 8.0 per cent (see Chart 5).

The appreciation of the US dollar against other currencies in late 2008, especially against the euro, also influenced trade developments estimated in nominal terms. The growth of trade in eurozone countries is probably understated as a result of being expressed in US dollars.

Chart 5

Export prices of selected primary products, 2006-08

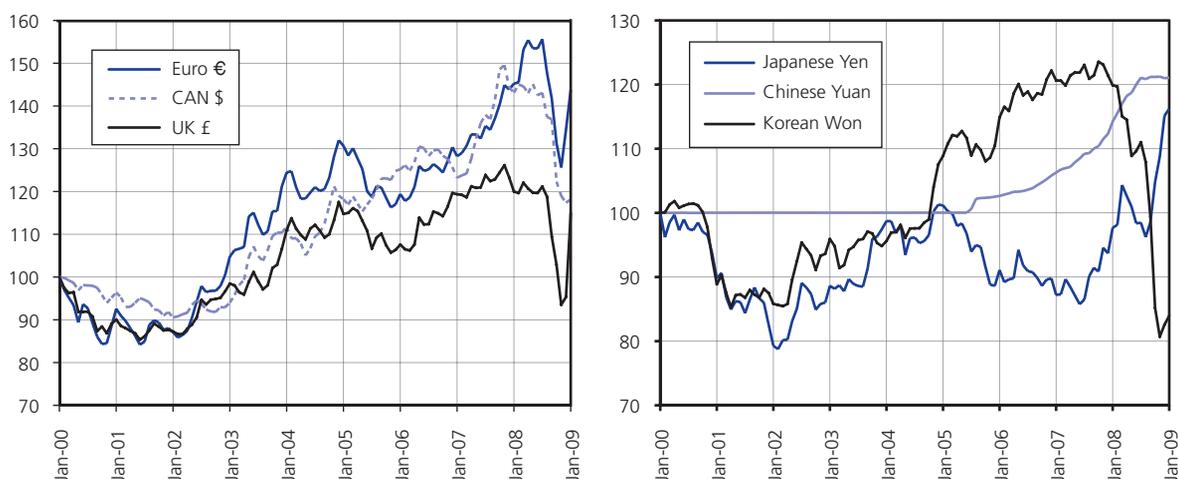
(Annual percentage change)



^a Comprising coffee, cocoa beans and tea.

Source: IMF, International Financial Statistics.

Chart 6
Dollar exchange rates of selected major currencies, January 2000-January 2009
 (Indices, January 2000=100)



Source: IMF, International Financial Statistics.

The Canadian dollar, British pound and Korean won have followed similar trajectories as that of the euro, first appreciating against the dollar in recent years but reversing this trend sharply as the financial crisis worsened. The Chinese yuan has risen gradually against the dollar since 2005, but remained fairly stable during the latter half of 2008 amid increasing turmoil in financial markets. The Japanese yen also appreciated sharply (see Chart 6).

World merchandise exports in nominal dollar terms rose 15 per cent in 2008, to US\$ 15.8 trillion, while exports of commercial services increased 11 per cent to US\$ 3.7 trillion. The stronger growth of merchandise trade may be explained by rising commodity prices during the first part of 2008, especially the 40 per cent increase in energy costs (see Table 2).

2. MERCHANDISE TRADE

North America exhibited the weakest growth of merchandise trade on both the export and import sides. Exports increased 10 per cent to US\$ 2.0 trillion in 2008, while imports rose 7 per cent, to US\$ 2.9 trillion. According to the National Bureau of Economic Research, which traditionally is the body that dates recessions in the United States, the US economy has been in recession since December 2007. This explains its relatively weak trade performance (see Appendix Table 1).

South and Central America saw more robust growth, of 21 per cent in exports (US\$ 602 billion) and 30 per cent in imports (US\$ 595 billion). Like North America, Europe recorded weaker growth in 2008 compared with 2007 but this was partly influenced by the depreciation of the euro over the course of the year. Exports increased by 12 per cent, to US\$ 6.5 trillion, while imports rose 12 per cent, to US\$ 6.8 trillion.

Table 2
World exports of merchandise and commercial services, 2008
 (Billion dollars and percentage)

	Value	Annual percentage change			
	2008	2000-08	2006	2007	2008
Merchandise	15775	12	16	16	15
Commercial services	3730	12	13	19	11

Source: WTO Secretariat.

The CIS saw robust growth of both exports and imports, resting on the strength of the region's extractive industries. Exports rose 35 per cent, to US\$ 703 billion, while imports increased by 31 per cent to US\$ 493 billion.

Africa, like other regions rich in natural resources, also saw a strong expansion in exports and imports in 2008. Exports increased 29 per cent to US\$ 561 billion, and imports rose to US\$ 466 billion, 27 per cent higher than in 2007. The Middle East enjoyed the strongest export growth of all regions in 2008, at 36 per cent (US\$ 1.0 trillion) while imports grew by 23 per cent (US\$ 575 billion). Finally, Asia's exports increased 15 per cent in nominal terms to US\$ 4.4 trillion, and imports rose by 20 per cent, to US\$ 4.2 trillion.

Germany remained the leading merchandise exporter in 2008, with shipments worth US\$ 1.47 trillion, despite the fact that its share in world exports fell to 9.1 per cent from 9.5 per cent in 2007 (see Appendix Table 3). China was the second-largest, with exports of US\$ 1.43 trillion and an 8.9 per cent share in world exports. The next largest exporters were the United States (US\$ 1.3 trillion or 8.1 per cent of world exports), Japan (US\$ 782 billion or 4.9 per cent) and the Netherlands (US\$ 634 billion or 3.9 per cent).

The United States continued to lead all merchandise importers with shipments from the rest of the world worth US\$ 2.17 trillion (13.2 per cent of world imports). Germany was the second-largest importer of merchandise, with a 7.3 per cent share valued at US\$ 1.21 trillion. The remaining top five importers were China (US\$ 1.13 trillion or 6.9 per cent of world imports), Japan (US\$ 762 billion or 4.6 per cent), and France (US\$ 708 billion or 4.3 per cent).

If the 27 members of the European Union are considered collectively (excluding internal EU trade), the five leading exporters were the European Union (15.9 per cent of world exports), China (11.8 per cent), the United States (10.7 per cent), Japan (6.4 per cent) and Russia (3.9 per cent). Exports from the EU were worth US\$ 1.93 trillion in 2008 (see Appendix Table 4).

3. COMMERCIAL SERVICES TRADE

World exports of commercial services rose 11 per cent in 2008, to US\$ 3.7 trillion. The fastest growing of the major services categories in the past year was transport (15 per cent growth), followed by travel (10 per cent) and other commercial services (10 per cent). Other commercial services, which includes financial services, was just over half of the total value of exports (51 per cent), while travel and transport each represented about a quarter (25 per cent and 23 per cent, respectively) (see Table 3).

In 2008, North America's exports of commercial services increased by 9 per cent, to US\$ 603 billion, while imports grew 6 per cent, to US\$ 473 billion (see Appendix Table 2).

The financial crisis shows up clearly in quarterly data on trade in commercial services for North America. The region's trade, which grew rapidly in the first nine months of 2008 (13 per cent for exports and 10 per cent for imports), slowed suddenly in the last quarter (-2 per cent for exports and -3 per cent for imports). The most affected sector was travel, which includes tourism (-2 per cent for exports and -6 per cent for imports).

In 2008, Europe's exports of commercial services increased by 11 per cent, to US\$ 1.9 trillion while imports grew 10 per cent, to US\$ 1.6 trillion.

Table 3
World exports of commercial services by major category, 2008
(Billion dollars and percentage change)

	Value	Annual percentage change			
	2008	2000-08	2006	2007	2008
Commercial services	3730	12	13	19	11
Transportation services	875	12	10	20	15
Travel	945	9	10	15	10
Other commercial services	1910	14	16	22	10

Source: WTO Secretariat.

The impact of the financial crisis is also evident in the case of Europe. The region's exports of commercial services grew by 19 per cent in the first nine months of 2008 but recorded an 11 per cent decline in the last quarter of the year. Exchange rate effects in the last quarter of 2008 are likely to have magnified the impact of the crisis but they do not, on their own, explain such a large drop.

Exports of commercial services from South and Central America increased 16 per cent (US\$ 109 billion) in 2008 while imports rose 20 per cent (US\$ 117 billion). The Commonwealth of Independent States advanced 26 per cent on the export side in 2008, to US\$ 83 billion while imports rose 25 per cent, to US\$ 114 billion.

Africa's commercial services exports grew 13 per cent in 2008, to US\$ 88 billion. Imports also grew 15 per cent, rising to US\$ 121 billion. Commercial services exports from the Middle East reached US\$ 94 billion in 2008, 17 per cent higher than the previous year. Imports were also up 13 per cent, to US\$ 158 billion. Asia's exports, valued at US\$ 837 billion, were 12 per cent above their 2007 level. Imports also increased by 12 per cent, to US\$ 858 billion.

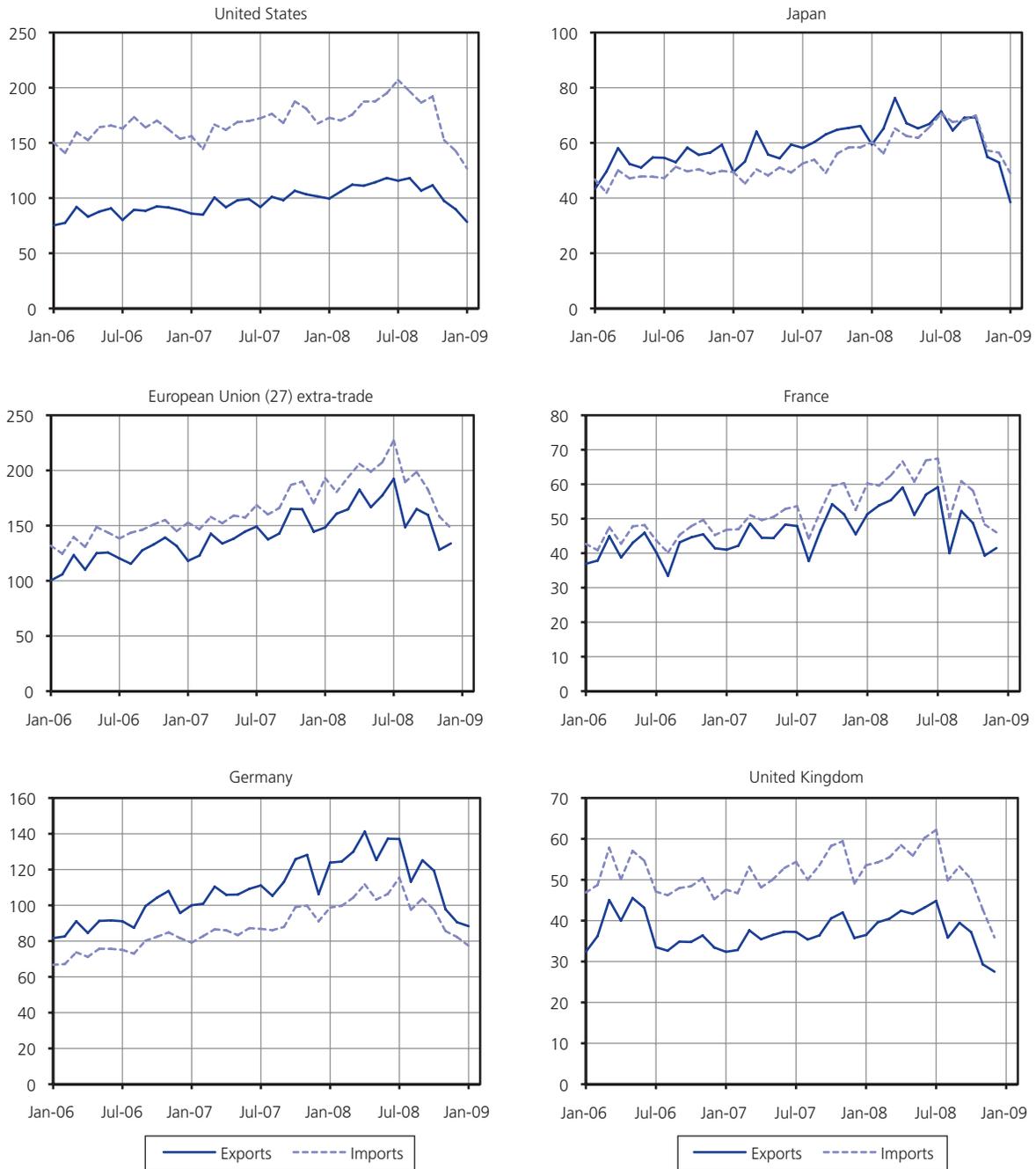
The United States saw its exports of commercial services rise 10 per cent in 2008, to US\$ 522 billion, making it the top exporter. The country's share in

world services exports was 14 per cent in 2008 (see Appendix Table 5). The United Kingdom remained the second-largest exporter with a 7.6 per cent world share worth US\$ 283 billion. The next largest exporters were Germany (6.3 per cent of the world total or US\$ 235 billion), France (4.1 per cent or US\$ 153 billion) and Japan (3.9 per cent or US\$ 144 billion), with Japan rising one place in the rankings and replacing Spain.

The WTO Secretariat estimates that China remained in seventh place with exports of US\$ 137 billion (3.7 per cent of the world total). India ranks ninth with a 2.8 per cent share in the world total, worth US\$ 106 billion, and the Netherlands replaced Ireland as the tenth-largest exporter.

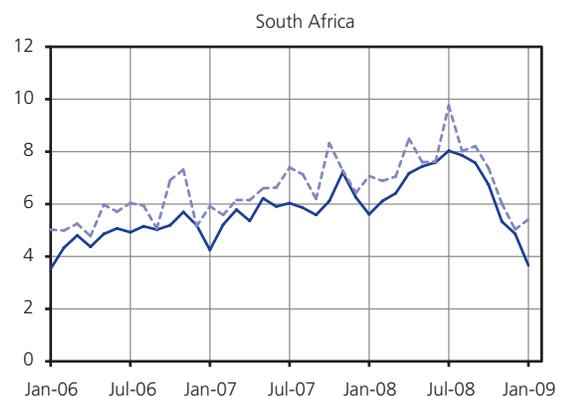
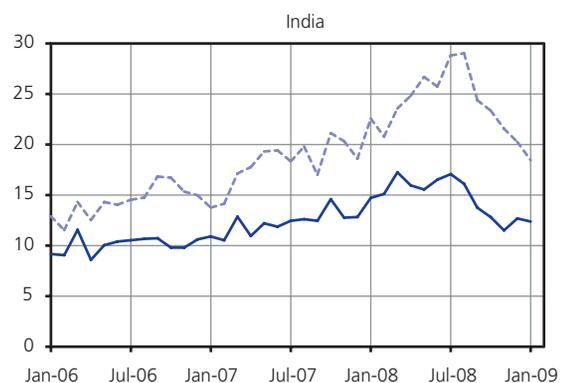
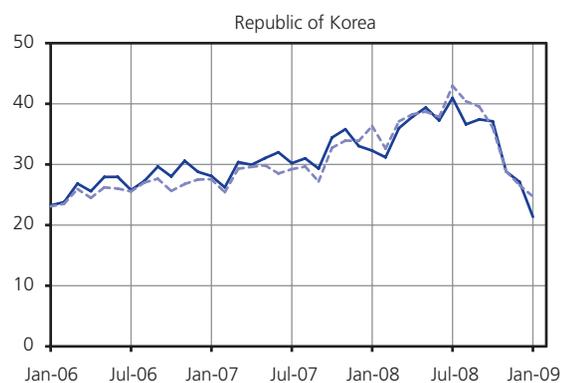
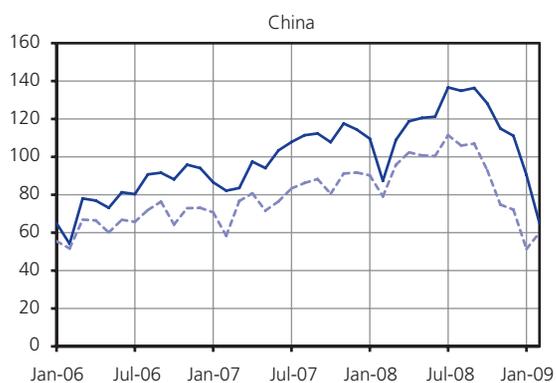
On the import side, the United States stayed in first place, with imports rising 7 per cent to US\$ 364 billion (10.5 per cent of world imports of commercial services). Germany was the second-largest importer at US\$ 285 billion (8.2 per cent of world imports). The next three largest services importers were the United Kingdom (US\$ 199 billion or 5.7 per cent of world trade), Japan (US\$ 166 billion or 4.8 per cent) and China (US\$ 152 billion or 4.4 per cent). The only change in the ranking of the top ten importers was the addition of the Republic of Korea in tenth place, displacing the Netherlands which dropped to eleventh place.

Appendix Chart 1
Monthly merchandise exports and imports of selected economies, January 2006-February 2009
 (Billion dollars)



Source: IMF International Financial Statistics, Global Trade Information Services GTA database, national statistics.

Appendix Chart 1 (continued)
Monthly merchandise exports and imports of selected economies, January 2006-February 2009
 (Billion dollars)



— Exports - - - Imports

— Exports - - - Imports

Source: IMF International Financial Statistics, Global Trade Information Services GTA database, national statistics.

Appendix Table 1
World merchandise trade by region and selected country, 2008
 (Billion dollars and percentage)

	Exports					Imports				
	Value	Annual percentage change				Value	Annual percentage change			
	2008	2000-08	2006	2007	2008	2008	2000-08	2006	2007	2008
World	15775	12	16	16	15	16120	12	15	15	15
North America	2049	7	13	11	10	2909	7	11	6	7
United States	1301	7	15	12	12	2166	7	11	5	7
Canada	456	6	8	8	8	418	7	11	9	7
Mexico	292	7	17	9	7	323	7	15	10	9
South and Central America ^a	602	15	21	14	21	595	14	22	25	30
Brazil	198	17	16	17	23	183	15	23	32	44
Other South and Central America ^a	404	14	23	13	20	413	14	21	23	24
Europe	6456	12	13	16	12	6833	12	15	16	12
European Union (27)	5913	12	13	16	11	6268	12	14	16	12
Germany	1465	13	14	19	11	1206	12	17	16	14
France	609	8	7	11	10	708	10	7	14	14
Netherlands	634	13	14	19	15	574	13	15	18	16
Italy	540	11	12	18	10	556	11	15	14	10
United Kingdom ^b	458	6	16	-2	4	632	8	17	4	1
Commonwealth of Independent States (CIS)	703	22	25	20	35	493	25	30	35	31
Russian Federation ^c	472	21	25	17	33	292	26	31	36	31
Africa	561	18	19	18	29	466	17	16	24	27
South Africa	81	13	13	20	16	99	16	26	12	12
Africa less South Africa	481	19	20	17	32	367	18	13	28	31
Oil exporters ^d	347	21	21	18	36	137	21	9	31	37
Non oil exporters	133	15	18	15	22	229	16	15	27	28
Middle East	1047	19	22	16	36	575	17	12	25	23
Asia	4355	13	17	16	15	4247	14	16	15	20
China	1428	24	27	26	17	1133	22	20	21	19
Japan	782	6	9	10	10	762	9	12	7	22
India	179	20	21	22	22	292	24	21	25	35
Newly industrialized economies (4) ^e	1033	10	15	11	10	1093	10	16	11	17
Memorandum items:										
Developing economies	6025	15	20	17	20	5494	15	17	18	21
MERCOSUR ^f	279	16	16	18	25	259	14	24	31	41
ASEAN ^g	990	11	17	12	15	936	12	14	13	21
EU (27) extra-trade	1928	12	11	17	13	2283	12	16	16	16
Least Developed Countries (LDCs)	176	22	25	24	36	157	17	15	24	27

a Includes the Caribbean. For composition of groups see the Technical Notes of WTO, International Trade Statistics, 2008.

b The 2007 annual change is affected by a reduction in trade associated with fraudulent VAT declaration. For further information, refer to the special notes of the monthly UK Trade First Release (www.statistics.gov.uk/StatBase/Product.asp?vlnk=1119).

c Imports are valued f.o.b.

d Algeria, Angola, Cameroon, Chad, Congo, Equatorial Guinea, Gabon, Libya, Nigeria and Sudan.

e Chinese Taipei; Hong Kong, China; Republic of Korea and Singapore.

f Common Market of the Southern Cone: Argentina, Brazil, Paraguay and Uruguay.

g Association of Southeast Asian Nations: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam.

Source: WTO Secretariat.

Appendix Table 2

World exports of commercial services by region and selected country, 2008

(Billion dollars and percentage)

	Exports					Imports				
	Value	Annual percentage change				Value	Annual percentage change			
	2008	2000-08	2006	2007	2008	2008	2000-08	2006	2007	2008
World	3730	12	13	19	11	3470	12	12	18	11
North America	603	8	12	14	9	473	7	12	9	6
United States	522	8	13	16	10	364	7	12	9	7
South and Central America ^a	109	11	14	18	16	117	10	14	21	20
Brazil	29	16	21	26	27	44	14	21	28	28
Europe	1919	13	12	21	11	1628	12	10	19	10
European Union (27)	1738	13	12	21	10	1516	12	10	19	10
Germany	235	15	16	16	11	285	10	8	15	11
United Kingdom	283	12	13	20	2	199	9	8	16	1
France	153	9	3	15	6	137	11	8	15	6
Italy	123	10	11	13	12	132	12	11	21	12
Spain	143	13	13	21	11	108	16	17	26	10
Commonwealth of Independent States (CIS)	83	22	23	27	26	114	22	17	30	25
Russian Federation	50	23	25	27	29	75	21	16	32	29
Africa	88	14	13	22	13	121	16	16	31	15
Egypt	25	12	10	24	26	16	11	8	27	25
South Africa ^b	13	13	7	13	...	17	15	18	16	...
Middle East	94	14	18	13	17	158	16	21	29	13
Israel	24	6	10	10	13	20	7	8	20	11
Asia	837	13	16	20	12	858	11	14	18	12
Japan	144	10	13	10	13	166	6	9	11	11
China ^b	137	...	24	33	...	152	...	21	29	...
India ^b	106	...	35	22	...	91	...	33	23	...
Four East Asian traders ^c	271	11	14	17	10	247	10	12	15	7

a Includes the Caribbean. For composition of groups see Chapter IV Metadata of WTO International Trade Statistics, 2008.

b Secretariat estimates.

c Chinese Taipei; Hong Kong, China; Republic of Korea and Singapore.

Note: While provisional full year data were available in early March for 50 countries accounting for more than two thirds of world commercial services trade, estimates for most other countries are based on data for the first three quarters (the first six months in the case of China).

Source: WTO Secretariat.

Appendix Table 3
Merchandise trade: leading exporters and importers, 2008
 (Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	Germany	1465	9.1	11	1	United States	2166	13.2	7
2	China	1428	8.9	17	2	Germany	1206	7.3	14
3	United States	1301	8.1	12	3	China	1133	6.9	19
4	Japan	782	4.9	10	4	Japan	762	4.6	22
5	Netherlands	634	3.9	15	5	France	708	4.3	14
6	France	609	3.8	10	6	United Kingdom	632	3.8	1
7	Italy	540	3.3	10	7	Netherlands	574	3.5	16
8	Belgium	477	3.0	10	8	Italy	556	3.4	10
9	Russian Federation	472	2.9	33	9	Belgium	470	2.9	14
10	United Kingdom	458	2.8	4	10	Korea, Republic of	435	2.7	22
11	Canada	456	2.8	8	11	Canada	418	2.5	7
12	Korea, Republic of	422	2.6	14	12	Spain	402	2.5	3
13	Hong Kong, China	370	2.3	6	13	Hong Kong, China	393	2.4	6
	- domestic exports	17	0.1	...		- retained imports	98	0.6	...
	- re-exports	353	2.2	...					
14	Singapore	338	2.1	13	14	Mexico	323	2.0	9
	- domestic exports	176	1.1	13					
	- re-exports	162	1.0	13					
15	Saudi Arabia ^a	329	2.0	40	15	Singapore	320	1.9	22
						- retained imports ^b	157	1.0	31
16	Mexico	292	1.8	7	16	Russian Federation ^c	292	1.8	31
17	Spain	268	1.7	6	17	India	292	1.8	35
18	Taipei, Chinese	256	1.6	4	18	Taipei, Chinese	240	1.5	10
19	United Arab Emirates ^a	232	1.4	28	19	Poland	204	1.2	23
20	Switzerland	200	1.2	16	20	Turkey	202	1.2	19
21	Malaysia	200	1.2	13	21	Australia	200	1.2	21
22	Brazil	198	1.2	23	22	Austria	184	1.1	13
23	Australia	187	1.2	33	23	Switzerland	183	1.1	14
24	Sweden	184	1.1	9	24	Brazil	183	1.1	44
25	Austria	182	1.1	11	25	Thailand	179	1.1	28
26	India	179	1.1	22	26	Sweden	167	1.0	10
27	Thailand	178	1.1	17	27	United Arab Emirates ^a	159	1.0	20
28	Poland	168	1.0	20	28	Malaysia	157	1.0	7
29	Norway	168	1.0	23	29	Czech Republic	142	0.9	20
30	Czech Republic	147	0.9	20	30	Indonesia	126	0.8	36
	Total of above ^d	13120	81.4	-		Total of above ^d	13409	81.7	-
	World ^d	16127	100.0	15		World ^d	16415	100.0	15

a Secretariat estimates.

b Singapore's retained imports are defined as imports less re-exports.

c Imports are valued f.o.b.

d Includes significant re-exports or imports for re-export.

Source: WTO Secretariat.

Appendix Table 4
Merchandise trade: leading exporters and importers, 2008
Excluding intra-EU (27) trade
 (Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	Extra-EU (27) exports	1928	15.9	13	1	Extra-EU (27) imports	2283	18.4	16
2	China	1428	11.8	17	2	United States	2166	17.4	7
3	United States	1301	10.7	12	3	China	1133	9.1	19
4	Japan	782	6.4	10	4	Japan	762	6.1	22
5	Russian Federation	472	3.9	33	5	Korea, Republic of	435	3.5	22
6	Canada	456	3.8	8	6	Canada	418	3.4	7
7	Korea, Republic of	422	3.5	14	7	Hong Kong, China	393	3.2	6
						- retained imports	98	0.8	...
8	Hong Kong, China	370	3.0	6	8	Mexico	323	2.6	9
	- domestic exports	17	0.1	...					
	- re-exports	353	2.9	...					
9	Singapore	338	2.8	13	9	Singapore	320	2.6	22
	- domestic exports	176	1.4	13		- retained imports ^a	157	1.3	31
	- re-exports	162	1.3	13					
10	Saudi Arabia ^b	329	2.7	40	10	Russian Federation ^c	292	2.3	31
11	Mexico	292	2.4	7	11	India	292	2.3	35
12	Taipei, Chinese	256	2.1	4	12	Taipei, Chinese	240	1.9	10
13	United Arab Emirates ^b	232	1.9	28	13	Turkey	202	1.6	19
14	Switzerland	200	1.7	16	14	Australia	200	1.6	21
15	Malaysia	200	1.6	13	15	Switzerland	183	1.5	14
16	Brazil	198	1.6	23	16	Brazil	183	1.5	44
17	Australia	187	1.5	33	17	Thailand	179	1.4	28
18	India	179	1.5	22	18	United Arab Emirates ^b	159	1.3	20
19	Thailand	178	1.5	17	19	Malaysia	157	1.3	7
20	Norway	168	1.4	23	20	Indonesia	126	1.0	36
21	Indonesia	139	1.1	18	21	Saudi Arabia ^b	112	0.9	24
22	Turkey	132	1.1	23	22	South Africa ^b	99	0.8	12
23	Iran, Islamic Rep. of ^b	116	1.0	31	23	Norway	89	0.7	11
24	Bolivarian Rep. of Venezuela	94	0.8	35	24	Ukraine	84	0.7	39
25	Kuwait ^b	93	0.8	49	25	Viet Nam	80	0.6	28
26	Nigeria ^b	82	0.7	24	26	Israel ^b	67	0.5	14
27	South Africa	81	0.7	16	27	Chile	62	0.5	31
28	Algeria	78	0.6	30	28	Philippines ^b	59	0.5	2
29	Kazakhstan	71	0.6	49	29	Argentina	57	0.5	28
30	Argentina	71	0.6	27	30	Iran, Islamic Rep. of ^b	57	0.5	27
	Total of above^d	10873	89.5	-		Total of above^d	11215	90.2	-
	World^d (excl. intra-EU (27))	12142	100.0	17		World^d (excl. intra-EU (27))	12430	100.0	17

a Singapore's retained imports are defined as imports less re-exports.

b Secretariat estimates.

c Imports are valued f.o.b.

d Includes significant re-exports or imports for re-export.

Source: WTO Secretariat.

Appendix Table 5
Leading exporters and importers in world trade in commercial services, 2008
 (Billion dollars and percentage)

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	United States	522	14.0	10	1	United States	364	10.5	7
2	United Kingdom	283	7.6	2	2	Germany	285	8.2	11
3	Germany	235	6.3	11	3	United Kingdom	199	5.7	1
4	France	153	4.1	6	4	Japan	166	4.8	11
5	Japan	144	3.9	13	5	China ^a	152	4.4	...
6	Spain	143	3.8	11	6	France	137	3.9	6
7	China ^a	137	3.7	...	7	Italy	132	3.8	12
8	Italy	123	3.3	12	8	Spain	108	3.1	10
9	India ^a	106	2.8	...	9	Ireland ^a	103	3.0	9
10	Netherlands ^a	102	2.7	8	10	Korea, Republic of	93	2.7	12
11	Ireland ^a	96	2.6	8	11	Netherlands ^a	92	2.6	10
12	Hong Kong, China	91	2.4	9	12	India ^a	91	2.6	...
13	Belgium ^a	89	2.4	16	13	Canada	84	2.4	5
14	Switzerland	74	2.0	15	14	Belgium ^a	84	2.4	16
15	Korea, Republic of	74	2.0	20	15	Singapore	76	2.2	6
16	Denmark	72	1.9	17	16	Russian Federation	75	2.2	29
17	Singapore	72	1.9	3	17	Denmark	62	1.8	16
18	Sweden	71	1.9	13	18	Sweden	54	1.6	13
19	Luxembourg ^a	68	1.8	5	19	Thailand	46	1.3	22
20	Canada	62	1.7	2	20	Australia	45	1.3	18
21	Austria	62	1.7	12	21	Brazil	44	1.3	28
22	Russian Federation	50	1.3	29	22	Hong Kong, China	44	1.3	7
23	Greece	50	1.3	16	23	Norway	44	1.3	12
24	Norway	46	1.2	13	24	Austria	42	1.2	8
25	Australia	46	1.2	15	25	Luxembourg ^a	40	1.2	8
26	Poland	35	0.9	20	26	Switzerland	37	1.1	10
27	Turkey	34	0.9	22	27	United Arab Emirates ^a	35	1.0	...
28	Taipei, Chinese	34	0.9	8	28	Saudi Arabia ^a	34	1.0	...
29	Thailand	33	0.9	11	29	Taipei, Chinese	34	1.0	-2
30	Malaysia	30	0.8	5	30	Poland	30	0.9	25
	Total of above	3135	84.1	-		Total of above	2835	81.7	-
	World	3730	100.0	11		World	3470	100.0	11

a Secretariat estimates.

Note: While provisional full year data were available in early March for 50 countries accounting for more than two thirds of world commercial services trade, estimates for most other countries are based on data for the first three quarters (the first six months in the case of China).

Source: WTO Secretariat.

Endnotes

- ¹ Two factors that might accentuate the extent of year-on-year declines in monthly data in value terms are the higher commodity prices that prevailed a year ago and increases in the value of the US dollar compared with most other currencies.
- ² The figures reported here are for 2008, since a complete data set for the first quarter of 2009 was not available at the time of going to press.

II TRADE POLICY COMMITMENTS AND CONTINGENCY MEASURES

A INTRODUCTION

Trade agreements define rules for the conduct of trade policy. These rules must strike a balance between commitments and flexibility. Too much flexibility may undermine the value of commitments, but too little flexibility may render the rules politically unsustainable. This tension between credible commitments and flexibility is often close to the surface during trade negotiations. For example, the question of a “special safeguard mechanism” (the extent to which developing countries would be allowed to protect farmers from import surges) was crucial in the discussion of the July 2008 mini-ministerial meeting, which sought to agree negotiating modalities – or a final blueprint – for agriculture and non-agricultural market access (NAMA).

Many of the kinds of flexibilities associated with trade agreements are generally referred to as escape clauses, contingency measures, trade remedies or safety valves. These terms will often be used interchangeably. The fundamental reason for incorporating escape clauses of various kinds into trade agreements is for governments to manage circumstances that cannot be anticipated prior to their occurrence. These may involve unexpected increases in imports from foreign suppliers or “unfair” trade practices, such as dumping and subsidies or the political desire to modify existing policy commitments. A trade agreement that offers such possibilities without unduly weakening existing contractual commitments has a better chance of remaining robust than an agreement that results in regular non-compliance by World Trade Organization (WTO) members in response to such circumstances. In addition, these measures allow governments to undertake deeper commitments, while reducing the political costs of signing the agreement.

The *World Trade Report 2009* focuses primarily on contingency measures available to WTO members in the import/export of goods. The legal framework for such measures is much less developed in services trade, although these will also be discussed. The Report will focus on safeguard measures, anti-dumping duties, and countervailing duties.¹ In order to appreciate better the trade-off among alternative policy instruments available to governments to address difficult economic situations, or situations in which a government decides to modify a policy

stance, the Report also discusses a number of other mechanisms of flexibility available to WTO members. These include the renegotiation of tariff commitments, export taxes, and increases in tariffs up to the maximum ceiling that each WTO member has negotiated – known as tariff bindings.

More indirect measures, such as restrictive safety, health and technical standards, or managed exchange rates may be used by governments in a way that makes them similar to contingency measures. For example, if a government introduces stricter rules to assess whether a certain product complies with domestic regulations, this may increase the time required for imports to cross the border and increase trade costs.² Since these measures may have similar effects to a temporary increase in tariffs, they may be used to protect a sector that is struggling to compete with imports and have the same impact as escape clauses built into the WTO agreements. These indirect measures are not covered in this Report.

The design of contingency measures is frequently a central element of negotiations. This indicates the importance that governments attach to these instruments. Moreover, it is often possible to trace periods of particular economic difficulty, either at the sectoral level or more generally, when contingency measures were applied with greater intensity. Data from 2008 show that in the face of recession in the global economy, the use of trade remedies increased significantly. The WTO Secretariat reported that in 2008, there was a 28 per cent increase in anti-dumping investigations compared with 2007.

Apart from the obvious relevance of contingency measures in relation to the integrity and durability of trade agreements, the topic merits attention as little research has been undertaken in this area. Perhaps one reason for this is that contingency policy is an interdisciplinary field, requiring both legal and economic expertise. The *World Trade Report 2009* seeks to fill an important gap in the existing literature on the subject. The Report looks into the different approaches to the design and content of contingency measures and provides insight into how governments make policy choices.

The next section examines flexibilities in trade agreements, in terms of their theoretical justification, and outlines the range of contingency measures available. Section C explores contingency measures in more detail, looking at both the economic and legal aspects of contingent trade policy. Section D

focuses on data and empirical evidence, regarding the frequency and usage of various contingency measures. It also summarises research seeking to explain the application of such measures. Section E briefly concludes the Report.

Endnotes

¹ Safeguard measures are invoked to counter increased imports deemed injurious to domestic industry, anti-dumping duties respond to alleged injury caused by dumped imports, and countervailing duties react to foreign subsidies considered injurious to domestic industry. Definitions of these terms and the way the relevant rules work form a major part of the analysis of this Report.

² Using gravity models, recent studies find that a 10 per cent increase in time to import decreases trade by between 5 and 25 per cent depending on the sector and destination. See Hausman et al. (2005), Djankov et al. (2006), and Nördas et al. (2006).

B FLEXIBILITY IN TRADE AGREEMENTS

The aim of this section is to: (a) clarify what justifies the inclusion of contingency measures in trade agreements; (b) provide an account of all circumstances when a suspension of commitments may make economic sense; and (c) identify the flexibility measures built into WTO agreements. The section provides a framework for the discussion of specific contingency measures in the subsequent sections of the Report.

1. ECONOMIC THEORIES OF TRADE AGREEMENTS AND THE ROLE OF FLEXIBILITIES

Trade agreements aim to strike a balance between flexibility and commitments. If there is too much flexibility, the value of the commitment is undermined. If there is too little flexibility, countries may refuse to make deep commitments or may easily renege on such commitments. This section explores how this trade-off works. It reviews the economic rationale for international trade cooperation and explains the reason for the inclusion of flexibilities in a trade agreement. It is important to highlight the distinction between the initial motivations for introducing flexibilities and the consequences of using such flexibilities. This section focuses on the reasons for including flexibilities while the effects of specific measures are examined in Sections C and D.

(a) The economic rationale for trade agreements

There has long been a solid argument in favour of free trade based on economic efficiency. Based on this premise, there is no need for trade agreements since governments intent on maximizing national welfare would consider any deviation from free trade as a self-defeating choice. Notwithstanding this well-known argument, unilateral trade policies that inefficiently restrict trade flows do occur and trade agreements that aim to limit such unilateral actions are in place.

Economists have identified several rationales for the existence of trade agreements, such as those embodied in the WTO, and its antecedent, the General Agreement on Tariffs and Trade (GATT). Two main approaches can be distinguished.¹ The first states that in the absence of a trade agreement, a country may be tempted to manipulate the terms-of-trade (i.e. the price of its exports relative to its imports) in order to increase its national income at the expense of its trading partners. The second approach stresses the economic and political difficulties that governments face in setting trade policy. As discussed below, trade agreements allow governments to escape terms-of-trade conflicts and/or to resist pressures from the private sector and special-interest groups urging the government to deviate from a liberal trade policy.

i) The traditional approach to trade agreements

The main logic of the terms-of-trade (or traditional) approach is that countries that have market power (i.e. that can influence their terms-of-trade) cannot resist the temptation to act in their own interests. Johnson (1954) analyzes a situation where each country sets trade policy in an attempt to improve its terms-of-trade and increase national income. The resulting “non-cooperative equilibrium” (known as Nash equilibrium) is inefficient as the unilateral actions of countries cancel out one another. More restrictive trade policies by all countries have little net effect on the terms-of-trade, but lead to a contraction of trade volumes which reduces overall welfare (see Box 1).

Box 1

Terms-of-trade and the international cost-shifting problem

This box examines why countries may be tempted to exploit terms-of-trade effects and why such unilateral behaviour leads to an inefficient outcome, i.e. a reduction in global welfare. Consider two large trading partners, Country A and Country B. Each government can choose free trade or impose a tariff on imported goods. What will be the welfare effect if Country A imposes a tariff on imports from Country B? How will the tariff affect the welfare of Country B?

When the government of a large country imposes a tariff on an imported good, it reduces the demand for that good in the international market as domestic residents will buy less of it at the higher domestic price. Because the consumers in Country A represent such a large proportion of the market, this fall in demand for the good produced in Country B depresses its price in the international market, which in turn implies that Country A obtains its imports at a lower international price than before. This positive effect of a tariff on the country's welfare is the terms-of-trade effect.² Country A will set this benefit against the costs of trade restrictions, which arise because of the expansion of inefficient domestic production and the reduction in consumer choice that the tariff introduces.

Importantly, however, terms-of-trade manipulation is a “beggar-thy-neighbour” type of policy. The benefit to Country A comes at the expense of welfare in Country B. This is because the tariff can be seen as a tax partly paid by foreign producers who cannot fully pass it on to domestic consumers and, therefore, end up bearing part of the burden. As the government in Country A does nothing to offset the negative effect that the tariff imposes on foreign producers, it has adopted a policy which is inefficient from the point of view of global welfare. This is the beggar-thy-neighbour that the terms-of-trade theory identifies.

The last step is to understand what would be the optimal trade policy in Country B given the strategy of the government in Country A. If the government in Country B chooses free trade, it is hurt by the tariff imposed by its trading partner. If, on the other hand, the government in Country B imposes its own tariff on goods produced in Country A, it will also benefit from an improvement in its terms-of-trade. This is why unilateral policy setting leads trading partners to retaliate against each other. Both governments impose trade restrictions, creating a situation often called “trade war”. In this situation, the benefits of the terms-of-trade are generally cancelled out (with neither country gaining from it) while the imposition of the tariffs reduces global welfare.

This situation, which is often referred to as a “Prisoners’ Dilemma” driven by terms-of-trade, can be avoided through a trade agreement between countries allowing them to cooperate rather than act unilaterally.³ By cooperating in binding agreements to reduce their trade restrictions, countries overcome this inefficiency (Mayer, 1981). Interestingly, the purpose of a trade agreement in this situation is not tied to the assumption that governments choose trade policy to maximize national income. Even when governments are concerned about the political consequences of their tariff choices, Bagwell and Staiger (1999; 2002) show that the two main features of the GATT/WTO system, the principles of reciprocity and non-discrimination, are simple rules that allow countries to escape the terms-of-trade driven Prisoners’ Dilemma.⁴

It is important to note that an agreement facilitates trade cooperation, but does not eliminate the signatories’ beggar-thy-neighbour temptations. In the absence of external punishment mechanisms, a trade agreement needs to be “self-enforcing”: signatories will abide as long as respecting the agreement is in their own interest. This implies that the short-term gains from deviating from the commitment must be balanced by the long-term loss from retaliation.

ii) The commitment approach to trade agreements

While the traditional approach to trade agreements emphasizes an international source of inefficiency in trade policy (i.e. the temptation of countries to act in a non-cooperative manner), commitment

theory focuses on a domestic source of inefficiency. When setting trade policy, a government may be unable to make credible economic and/or political commitments to the private sector or the parliament.

The lack of economic commitment leads to a so-called time-inconsistency problem. This is a situation where the decision of the government to implement a certain policy at some future time is not optimal when the future period arrives. Therefore, the statement that the policy will be implemented in the future is not credible (see Box 2). The notion of time inconsistency has been applied to trade policy in a large number of studies which highlight several different mechanisms

through which time-inconsistent trade policy may lead to inefficiencies (a partial list includes Staiger and Tabellini, 1987; Matsuyama, 1990 and Amin, 2003). In these models, the government wishes to use discretionary trade policy to increase social welfare (for example, in response to unexpected events, or to allow temporary protection to an infant industry, etc.). However, the use of trade policy changes the behaviour of participants in the economy. If agents anticipate the policy that the government will implement, they can react to it in a way that will reduce the impact that it has on them. This implies that the government will not be able to use discretionary trade policy as intended, and this results in a socially inefficient trade policy.

Box 2 Time-inconsistency

The following example illustrates the time-inconsistency problem. A teacher informs her class that there will be an algebra test next week. This is the “optimal” action – the threat of the test encourages the students to work hard which is good for both the teacher and the students. However, when next week arrives, the teacher has the opportunity to rethink whether or not to actually hold the test. Realizing that having done their preparation, there is no reason to put the students through the trauma of the exam, and that she can then also avoid all the grading, it is now optimal for the teacher not to hold the exam. Of course, the students may also realize that it will be in the teacher’s interest to renege on her pledge to hold the test. Anticipating this, the students have no reason to prepare for the test and the whole point of the test is undermined. The problem here is that holding the exam is an empty, or non-credible, threat – the students realize that the teacher will always be tempted to deviate from her original promise (Minford and Peel, 2002).

The Nobel Prize winning work of Kydland and Prescott (1977) shows that this simple argument can have very significant repercussions for economic policy-making. With regard to monetary policy, for instance, the government cannot credibly commit to a low inflationary policy (Barro and Gordon, 1983b; Barro and Gordon, 1983a; Kydland and Prescott, 1977).

In both situations, the problem becomes one of finding a means of credibly committing to carrying out the originally stated action – that is, to hold the exam or maintain low inflationary policies. For example, the teacher might promise to report the students’ results to a higher body, and the government might delegate responsibility for monetary policy to a Central Bank which is given the sole target of maintaining low inflation.

An especially pertinent point is made by Flood and Isard (1988). They demonstrate that if the economy is sufficiently volatile, it may be optimal for governments to employ an escape clause. Such a clause would involve the government finding a means of committing to a policy rule under “normal circumstances”, but maintaining the option of deviating from it under carefully defined “unusual circumstances”. The benefit is that this clause permits the government to find the correct balance between credibility, on the one hand, and the ability to act flexibly, on the other, if circumstances dictate (Persson and Tabellini, 1997). In a similar vein but in the context of trade agreements, Section B.1.b describes how governments, even when facing commitment problems, may actually seek to include escape clauses in their international obligations.

Similar credibility problems emerge when a government is exposed to political pressures by groups lobbying for protection. Consider a country that does not have a comparative advantage in a sector. Import restrictions would reward domestic producers and divert investments from other economic activities. The cost of these restrictions may be large in the long term, and hence the government would prefer to commit to free trade, but in the short term domestic lobbying may lead the policy-maker to set high restrictions (Maggi and Rodriguez-Clare, 1998).

These scenarios indicate that governments should undertake binding trade policy commitments concerning future activity. A trade agreement, in addition to bringing cooperation between countries, reduces (or eliminates) governments' discretionary power in setting tariffs and returning to unilateral trade protectionism. In this way, an agreement improves the bargaining power of each government in relation to domestic special interests and allows the policy-maker to resist pressures from particular sectors to deviate from a liberal trade policy.⁵

Finally, it should be noted that the traditional approach and the commitment approach are not mutually exclusive. Maggi and Rodriguez-Clare (2007) provide a theoretical model that blends standard terms-of-trade arguments with a desire of governments to commit themselves through trade agreements. As discussed in Irwin et al. (2008), the reasons for the existence of trade agreements are best understood as complementary explanations of the success of the GATT/WTO system over the past 60 years.

(b) The economic rationale for flexibility in trade agreements

The discussion about the economic rationales for trade agreements highlights the main potential costs of introducing flexibility into the multilateral trading system. First, since a trade agreement allows signatories to cooperate with each other through low trade barriers, flexibilities may undermine what the agreement achieves. In the words of Ethier (2002), contingency measures constitute unilateral behaviour in the multilateral trading system. The use of such unilateral measures is costly as it may reduce international trade flows and diminish the efficiency gains from more open trade.

Second, as rigid government commitments increase the credibility of trade policy and reduce the likelihood of inefficient policies, relaxing such rigid commitments may harm governments' credibility and reduce national and global welfare. For instance, if governments are not fully committed to free trade and can use contingency measures, there may not be an efficient allocation of resources between sectors as firms may anticipate that governments will use such measures in the future and may adjust their behaviour accordingly. This mis-allocation of resources represents a welfare loss, which is the cost in terms of credibility of introducing trade policy flexibility in a trade agreement.

If such risks exist, how can we justify the existence of flexibilities – such as contingency measures – in the multilateral trading system? In general, in the presence of uncertainty regarding future developments, flexibilities facilitate deeper government commitments, contribute to the overall stability of the system and help to reduce domestic opposition to signing a trade agreement. The evolution of safeguards provisions within the GATT/WTO system illustrates the interaction between commitments and flexibilities in trade agreements (see Box 3).

Two main approaches have emerged in the literature. The logic of the first is that that cost of flexibilities in trade agreements has to be assessed against the benefits of allowing governments some degree of discretion in setting their trade policy. The second approach stresses the limits of trade cooperation due to the contractual costs of trade agreements, difficulties in predicting future events, or political constraints to the regulation of domestic policies. As a result of these limitations, governments may prefer to sign a trade agreement that allows some policy discretion. While there are important overlaps between these two points, the differences between these two arguments justify separate discussions.

Box 3

Commitment versus flexibility: the case of safeguards in the GATT and WTO

Economic theory suggests a simple explanation for the presence of flexibilities in trade agreements. As future developments are uncertain at the moment of signing an agreement, flexibilities facilitate the achievement of deeper commitments to trade liberalization and contribute to the future stability of the trade regime. If the theory is correct, it should be expected that agreements that liberalize trade include some form of policy flexibility, particularly for sectors that are more heavily reformed. A brief overview of the evolution of safeguards provides an example of this point.⁶

Safeguards first emerged in the United States Reciprocal Trade Agreements programme of 1934, which set out the agenda for US trade liberalization (Jackson, 1997). In the years preceding the signing of the GATT, the Department of State – solicited by the US Congress – published a set of proposals concerning world trade which stated that “commitments with regard to tariffs should permit countries to take temporary actions to prevent sudden and widespread injury to the producers concerned... [and] should therefore contain an escape clause” (United States of America Department of State 1946:13). The conditions for the imposition of safeguards were laid down in the London Conference of October 1946 and a final agreement on the inclusion of an escape clause was reached during the New York conference in early 1947 (Sykes, 2006b). In the original construction of the GATT, “safety valves” in the form of safeguards were included in the Agreement under Article XIX.

In the 1970s and 1980s, against the backdrop of the rise of the discriminatory and GATT-inconsistent practice of applying voluntary export restraints (VERs) and other grey area measures, there was considerable impetus among countries to reassert the dominance of safeguards under Article XIX. One of the outcomes of the Uruguay Round, which commenced in 1986 and ended in April 1994, was the new Agreement on Safeguards. On the one hand, the Round sought to eliminate VERs that

escaped the control of Article XIX and to tighten safeguard disciplines (Sykes, 2006b). On the other hand, some features of the new Agreement on Safeguards (for instance, the provision preventing affected exporting members from retaliating for the first three years that the measure is in effect if the safeguard-applying member faces an absolute increase in imports) appear to allow for an expanded role for safeguards to accommodate the new wave of trade liberalization.

The significance of the Agreement on Safeguards in the context of the more general achievements of the Uruguay Round can be appreciated in respect of the choice faced by most developing countries. Prior to the Round, developing countries tended to have relatively few tariff bindings, and could therefore increase their tariffs without resorting to safeguards. However, binding coverage by developing countries substantially increased under the Uruguay Round and, with it, developing countries’ use of safeguards (Finger, 1998) and (Hoekman and Kostecki, 2001).

Safeguards also played a particular role in specific sectors which were heavily reformed in the Uruguay Round, namely textiles and agriculture. The Uruguay Round set out a gradual plan for the absorption of textiles into the general discipline of the GATT. During the transition, a special transitional safeguard measure was set up, providing that WTO members need not necessarily comply with the usual safeguard requirements under Article XIX with regard to textiles (Jackson, 1997). Similarly, the Uruguay Round Agreement on Agriculture included a special safeguard or “snap-back” mechanism for this sector (see Box 4). These safeguard measures could be triggered with greater ease than with the regular safeguard mechanism. In particular, if imports rise above a certain level, or if prices fall below a certain level, the special safeguard can be put in place (Hoekman and Kostecki, 2001). This offers further evidence regarding the role of flexibilities in agreements liberalizing specific sectors of the economy.

i) The benefits of trade policy flexibility

As noted above, there are clear efficiency costs associated with trade remedies. But economic theory also points to several benefits from accommodating policy flexibility in trade agreements. This section reviews the main arguments that emerge from this literature.⁷ First, flexibilities may serve as a safety valve, without which governments may feel pressure to renege on certain negotiated liberalization commitments. Second, contingency measures can be used as an insurance mechanism, which allows governments to preserve income stability. Third, trade remedies may represent an adjustment policy tool, which reduces variations in the costs for the domestic economy when it is affected by external events. Fourth, contingency measures can act as a form of compensation that allows signatories to accept a more rapid pace of trade liberalization. A final argument is that flexibilities may serve as a deterrent and a means to improve the rule of law in the trading system – that is, the very existence of contingency measures may discipline the policy behaviour of trading partners and, thus protect the integrity of the rest of the agreement.⁸

Safety valve

Flexibilities can be interpreted as a kind of “safety valve” which, while undermining the authority of the agreement in certain limited areas, can help secure deeper commitments by giving governments some discretion in unusual circumstances. Contingency policies may, therefore, be seen as an instrument to facilitate trade cooperation.

Flexibilities can act as a safety valve in both the economic and political spheres. A first economic argument is provided by Bagwell and Staiger (1990). They note that, in deciding whether or not to apply trade barriers, governments generally weigh the short-term benefits associated with imposing a trade policy against the long-term costs of abandoning cooperation with trading partners. Furthermore, they argue that the short-term gains associated with higher trade barriers are greatest when there are temporary fluctuations to trade flows, such as a surge in imports. When import volumes increase, the incentive for the importing country to exploit the terms-of-trade effect rises. In this case, the prospect of a future breakdown in cooperation may not be sufficient to deter unilateral actions. Flexibilities used by governments

to dampen fluctuations in trade volumes can help prevent large swings in the incentives to evoke protectionist policies. In doing so, flexibilities allow countries to maintain the self-enforcing nature of existing international cooperation and can preserve the integrity of the overall agreement.⁹

Flexibilities also have a powerful safety-valve function in the political arena as they allow governments to gain and maintain support for trade liberalization. Rosendorff and Milner (2001) and Bagwell and Staiger (2005) claim that flexibilities are efficient responses to domestic political uncertainty. Rosendorff and Milner argue that the extent of future support for (or against) trade liberalization is highly uncertain as it is the result of several factors ranging from future economic conditions (e.g. technology, prices) to political changes (e.g. institutional structure, preferences). In this environment, they demonstrate two basic propositions. First, the presence of contingency measures makes international trade agreements easier to reach. Second, the efficiency of such escape clauses increases with the uncertainty of future events. Bagwell and Staiger (2005) reach similar conclusions in a situation where governments have private information concerning the extent of pressures from domestic interest groups on their trade policy choices.

Economic and political motivations for the safety-valve argument for flexibilities can be seen as complementary explanations. Both motivations hinge on the fact that, as discussed earlier, countries negotiating trade agreements face a “Prisoners’ Dilemma”.¹⁰ All countries may be better off if they cooperate with each other, but they each would have a reason for engaging in unilateral protection. In this situation, a trade agreement needs to be self-enforcing. Only when governments value the gains associated with cooperating in the future highly enough can a position of free trade be achieved and sustained. Flexibilities, by allowing a government to reduce fluctuations in future economic and/or political costs, make the prospect of trade agreements more viable and lower the incentive for governments to deviate once the agreement has been reached.¹¹

Insurance

People involved in taking decisions in the economy are generally considered to be “risk-averse” – people prefer certain outcomes to uncertain ones.¹² That

people are risk-averse gives rise to the possibility of insurance – insurance allows them to hedge against the risks associated with large degrees of uncertainty. Authors such as Corden (1974) recognized that tariffs and other policies can provide a type of insurance against the risks associated with free trade. More specifically, temporary measures of protection can replace insurance by offering a means through which decision-makers in the economy can offset the effects of large and sudden fluctuations, such as import surges or price changes. Eaton and Grossman (1985) have formalized these ideas and show that, in the absence of an insurance market, a tariff can indeed enhance welfare in certain circumstances by operating as a type of insurance.

More recently, economists have become conscious that flexibilities in trade agreements can play a similar role. Fischer and Prusa (2003) consider a small economy that faces price fluctuations in many sectors and find that trade remedies, by making the possible outcomes more certain, effectively act as an insurance. The authors show that sector-specific tariffs will actually increase overall welfare when that sector is subject to an unexpected circumstance and that such a sector-specific tariff is generally more efficient than a uniform tariff.¹³ Freund and Ozden (2008) make a related point. They extend the standard lobbying model of Grossman and Helpman (1994) to consider the possibility that economic agents are averse to losses. In this framework, the presence of contingency measures in trade agreements can be rationalized as it reflects the desire of governments to shelter firms from global price fluctuations.

Adjustment

Many authors have suggested that flexibilities offer an “adjustment policy tool”. Deeper trade liberalization can cause harm to domestic producers as it raises the possibility of import surges both at the time of liberalization and also in the future. To paraphrase Jackson (1997), a temporary period of import relief will allow the domestic competing industry the opportunity to make the necessary adjustments to such surges. Several different facets have been proposed in this regard.

One dimension of the adjustment policy argument involves the labour market. Imperfections in the labour market, when combined with adjustment costs following unexpected events, may create a role for temporary protection and flexibilities.¹⁴

Davidson and Matusz (2004) explain this idea in more detail. They consider a two-sector economy where there is “congestion” in the labour market in that there is a possibility that a given worker may not be able to find a job in the exporting sector. They also underline that the more people who are unemployed, the lower the chance is of a particular person receiving a job. Under these conditions, a temporary tariff creates both costs and benefits. The costs are the usual losses associated with import taxes. On the other hand, a tariff draws workers out of unemployment into the import-competing sector, thereby increasing the chances of the remaining unemployed workers obtaining a job in the export-competing sector.

While governments may be more willing to accept deeper commitments knowing that they will have insurance and adjustment policy tools in the form of contingency measures, there is still a question as to whether using these measures is actually efficient. As noted, in Sykes (1989), Horn and Mavroidis (2003) and Fischer and Prusa (2003), contingency measures are a second-best solution to market failures when the optimal (first-best) policy is unavailable due to constraints faced by governments. Clearly, when available, first-best policy should be employed to address the sources of distortion. Moreover, political failures, such as governments’ inability to remove temporary protection in a timely fashion in the presence of political pressures, may provide further reasons to doubt the effectiveness of such policy actions.

Potential compensation for deeper commitments

A fourth rationale for flexibilities in trade agreements is proposed by Ethier (2002). An important question relates to the effect of contingency measures on the pace of trade liberalization. In other words, will flexibilities have adverse or positive dynamic effects? According to Ethier, the combination of multilateral trade rules and flexibilities that are observed today can only be understood when they are jointly examined. He argues that contingency measures may help to accelerate the rate of multilateral tariff reduction since they help to compensate countries that would otherwise be hurt by faster trade opening.

Consider three countries that have been involved in a multilateral negotiation process concerning trade policies. The technological leader and the technological follower export a good to a third

country which lags behind the other two. Would the laggard wish to apply a temporary protection policy? It would if it could be sure that such a policy would not lead to retaliation from the other countries. In order to avoid retaliation, the laggard would need to offer a form of compensation to the other countries. One means of doing so would be to permit greater multilateral tariff reduction. Clearly, the leader will benefit from less multilateral protection as it has a cost advantage in the laggard's market. However, the follower is much less likely to benefit and in fact, in Ethier's model, will not benefit at all from less multilateral protection. In this framework, the introduction of discriminatory contingency measures can help support faster multilateral trade liberalization by ensuring that all parties are persuaded that the agreement will be to their benefit. In particular, this would be the case if temporary unilateral protection enhances the ability of the follower to compete with the leader in the market of the laggard.

Deterrence and the rule of law

A final argument can be made in support of flexibilities in trade agreements: the very existence of contingency measures may discipline the behaviour of trading partners. More precisely, knowledge that WTO members are allowed to deviate from the agreed policy, for instance by imposing higher tariffs in response to export subsidies, may deter other countries from enacting in the first place policies that are inconsistent with WTO rules – for instance, subsidizing domestic exporters. Several authors make the point that governments may utilize the threat of contingency measures to achieve self-enforcing cooperation among countries. This is outlined further in the work of Riezman (1991) and Martin and Vergote (2008).¹⁵

In this sense, flexible arrangements may be seen as a means of helping to maintain the rule of law in international trade. Contingency measures regulate and limit WTO members' responses to trading partners' WTO-inconsistent policies and thereby limit the cases in which members are allowed to introduce temporary protection. In other words, flexibility provisions in a trade agreement channel what would otherwise be arbitrary and excessively costly protectionist actions into prescribed and predictable policy measures (Mansfield and Reihardt, 2008). These measures are themselves subject to WTO enforcement mechanisms to ensure

that they are not being applied inappropriately. In this way, flexibility increases the transparency of the multilateral trading system.

ii) Incomplete contracts and trade policy flexibility

Economic theory has recently developed a second approach to explain the existence of contingency measures in trade agreements. The starting point is that a trade agreement among countries is a contract that regulates their trade policy-making. However, a trade agreement (similar to contracts in other domains of economic, political or social interaction) is a highly incomplete contract.¹⁶ By this, we mean that trade agreements do not specify all parties' rights and duties in all possible future states of the world. In other words, a trade agreement is an incomplete contract in that it is a combination of rigid commitments and discretionary policy areas where future decisions by contracting parties are only partially or not at all constrained.¹⁷ The question of the rationale for contingency measures is therefore inherently related to the reason for contract incompleteness in trade agreements.

Two different (but not mutually exclusive) explanations have been proposed. First, trade agreements are incomplete contracts by nature. In the language of economists, this contract incompleteness is "exogenous" – i.e. an external factor – as it does not depend on some explicit decision taken by the signatories. Governments can influence international trade in a large number of ways, as several different policies (e.g. tariffs, subsidies) and regulations (e.g. product standards, public procurement rules) will affect trade flows. According to Copeland (1990), trade agreements cannot cover all possible areas of policy and future contingencies for several reasons. First, the agreement would have to excessively limit domestic policy-making and would be politically difficult to implement. Second, discretionary policy in some policy domains is unavoidable. Third, even if a complete trade agreement regulating all areas of policy-making affecting trade flows were conceivable, such an agreement would be too costly.

A second rationale for contract incompleteness emphasizes the active role of governments. In this view, a trade agreement is an incomplete contract by choice rather than by nature. There may be many reasons why governments may consciously opt to

write a trade agreement which is an incomplete contract. In Horn et al. (2008), governments choose the policy domain they intend to regulate in a trade agreement (and how they want to regulate it) as a result of a basic trade-off between the benefits of a more detailed agreement and the costs associated with writing it (transaction costs). As discussed in Appendix B.1, there may be other reasons that motivate contract incompleteness beyond transaction costs. For example, when negotiating a trade agreement, one country might withhold information that would result in a greater aggregate gain from trade because doing so means that it improves its own bargaining position. A deliberate policy of this nature would introduce contractual ambiguity to a trade agreement.

Finally, it is important to note that the two explanations are not mutually exclusive – trade agreements are highly incomplete contracts by nature and by choice. An example can clarify this point. Vague wording of the legal text provides policy flexibility to the parties to a trade agreement. Is this feature of an agreement the result of an explicit choice or not? If the vague wording of the text is the result of linguistic constraints, it should be concluded that the contract is incomplete by nature. However, signatories may consciously choose vague wording if they are unable to agree on a more specific text or because they value the flexibility and adaptability that a looser text provides.

Political and economic costs of signing a trade agreement

As previously discussed, one strand of literature (the exogenous incomplete contract approach), suggests that the presence of contingency measures in trade agreements is due to countries' attempts to circumvent the drawbacks caused by contractual incompleteness in the agreement. Since actual trade agreements cannot take into account all possible external events, there is a need for measures that allow subsequent adjustment of trade policy. In this sense, the “exogenous incomplete contracting” approach and the “benefits of flexibilities” approach to explaining the existence of flexibilities in trade agreements may indeed be seen as two sides of the same coin.

As an illustration of the complementary nature of these two explanations, Sykes (1991) discusses the rationale for safeguards in the GATT/WTO system.

This study is based on the premise that government policy is influenced by politically organized groups representing the interests of different economic sectors (e.g. declining industries, exporters) rather than being the result of a government's wish to maximise social welfare. Sykes suggests that if it is not possible to specify all potential outcomes, meaning that contracts are necessarily incomplete, allowing flexibilities such as safeguards will be beneficial to all signatories as these measures allow for an escape mechanism if the political costs of adhering to the agreement become intolerable.

As Sykes (2006b) puts it, these escape clauses “permit political officials to take back concessions that prove unduly burdensome from a political standpoint after uncertainty resolves”. More specifically, such an “efficient breach” of the trade agreement exists whenever the political costs of adhering to the agreement for one party exceeds the benefits for its trading partner.¹⁸ Under these circumstances, aggregate welfare is larger if the escape mechanism exists. This is why signatories of a trade agreement explicitly grant to each other the right to use contingency measures.

A second and novel strand of literature highlights what determines the contractual incompleteness of trade agreements. As discussed, Horn et al. (2008) suggest that the trade agreement may be an (endogenously) incomplete contract because the signatories prefer it that way. In particular, the authors attempt to explain the features of the agreement in terms of the contract writing costs incurred by: (i) describing the possible states of the world, and (ii) describing governments' policy responses to particular situations. This approach has two broad findings. First, the authors show that the optimal contract becomes more incomplete (loosely speaking, less detailed or more open to discretionary use of policies) if either of these writing costs increases. Second, this approach finds that increased uncertainty about future developments can lead to more or less rigidity in the optimal trade agreement depending on the sources of uncertainty. This suggests that the role of uncertainty in shaping trade agreements may be more subtle than first thought.

Finally, this line of research provides a novel explanation for two forms of contingency measures in the GATT/WTO system: safeguards and tariff ceilings. Horn et al. (2008) find that the optimal contract allows for using tariffs in response to sudden increases in import demand. While this

argument is, on the surface, similar to the safety valve argument discussed earlier, the logic is different. The rationale for escape clauses in this case is to reduce the incentive for governments to distort domestic policies (which may be too costly to regulate in a trade agreement) for terms-of-trade purposes in periods of high imports. The second feature of GATT/WTO that this approach can explain is the presence of so-called “weak bindings”, where the trade agreement only specifies a ceiling for the tariff rather than a rigid figure. In the words of the authors, this is a way to economize on contracting costs. Governments need some discretion to address unforeseen difficult circumstances. It is more costly to write a trade agreement that includes a precise level for the tariff rather than an agreement with a ceiling which allows governments room for manoeuvre within defined boundaries.

2. CIRCUMSTANCES FOR SUSPENSION OF COMMITMENTS AND FLEXIBILITY MEASURES BUILT INTO THE WTO AGREEMENTS

As discussed above, the design of a trade agreement needs to strike a balance between commitments and flexibility. On the one hand, commitments need to be designed in a way that impedes governments’ opportunistic behaviour. On the other hand, governments need some policy flexibility to address unforeseen difficulties.

The aim of this section is, firstly, to provide a categorization of the circumstances in which governments may want to increase barriers to trade. Secondly, the section will discuss contingency measures in the WTO in the context of all possible measures of flexibility to deal with changes in trade conditions.

(a) Circumstances for a temporary increase of trade barriers

From a strict economic point of view, assuming that each government has committed to optimal levels of protection (be it free trade or a positive degree of protection), it has a legitimate efficiency reason to move its trade policy away from the tariff bindings negotiated in an earlier negotiations round when it experiences unforeseen circumstances that make previous commitments inefficient.

In general, the case for government intervention rests on the emergence of market failures.¹⁹ When markets do not function well, an increase in trade barriers can be justified on the grounds of a second-best argument.²⁰ Where governments’ trade policy responds to the demands of individuals and firms who provide votes and funds for their election campaigns, there is an incentive for governments to increase the level of trade protection when an unexpected external event (shock) affects the country’s welfare.

There are a number of ways to classify circumstances that may explain an increase in the level of protection, including in the form of a temporary suspension of commitments. Table 1 provides a categorization of these circumstances. For simplicity, the following discussion focuses on tariff protection, but it may be to a large extent applied to other forms of trade protection. First, Table 1 distinguishes between different types of unexpected external events that can hit the economy: economic events, non-economic events (determined by natural disasters, for example) and political events (determined by the policy implemented by governments). Economic events are further broken down into industry-specific and global/country-specific events. Examples of demand or supply fluctuations, sudden changes in the real economy or the financial sector, temporary or permanent changes in circumstances are provided to discuss the economic and political arguments for suspending commitments in trade agreements in these different circumstances.

Table 1
A categorization of circumstances and arguments for a temporary increase in protection

Circumstances	Selected examples	Arguments for protection*
Economic		
<i>Product-specific</i>		
Demand	Change in consumer preferences	
	- that causes injury to import-competing producers	Structural adjustment
	- that does not cause injury to import-competing producers	Terms-of-trade argument
Supply	Innovation abroad	Restoring competitiveness, structural adjustment
	Infant industry	Development of infant industry
	Declining sector	Structural adjustment
Behaviour of firm	Dumping by foreign firms	Predatory dumping
<i>Global/country-specific</i>		
Aggregate demand/supply	Recession	Smoothing the cycle
	World price increase	Inflation control
	Balance of payments crisis	Restore equilibrium
Policy related		
	Subsidies by a foreign government	Political economy
	Unforeseen adjustment problems	Structural adjustment
Non-economic		
	National security, environmental reasons, health emergency	Dependent on the non-economic issue
	Unforeseen political event	Political economy

Note: *From an economic theory perspective, the terms-of-trade argument for a large country applies whenever there is an import surge.

i) Product-specific circumstances

Economists generally identify four types of shocks that can hit a particular sector: change in consumer preferences, technological innovation, changes in endowment and change in market structure.²¹ These changes affect the demand, the supply or the type of product market competition.

Change in consumer preferences

Imports in a given sector can increase because of changes in demand and supply. Economists generally identify fluctuations in demand with changes in consumer preferences. Changes in preferences may alter the composition of imported and domestically produced varieties of the same good in the consumers' shopping basket or they may shift consumption from one product to another product.

Suppose that following a change in fashion, consumer preferences shift in favour of a variety produced abroad.²² This will increase the demand for the foreign product. Imports are likely to increase and the import-competing sector will

suffer from the intensified competition. While the competing sector may suffer a loss in revenue, this is not, from an economic efficiency point of view, in itself a justification for the government to increase protection.

Economic theory in general provides a strong argument for non-intervention by the government: when markets function well and are competitive,²³ the market will allocate resources in the most efficient way because market prices will provide the right signals to consumers and producers. An efficiency argument could in these circumstances be made on the basis of terms-of-trade (for a large country)²⁴ or as a second-best argument in the presence of market failures.

For example, if rigidities in the labour market prevent firms from lowering wages, thus generating excessive lay-offs that create bottlenecks in the job-search or in the retraining process, a temporary increase in protection may help the sector to contract in an orderly way by keeping workers in employment for longer and avoiding congestion in the job-search process.²⁵ In contrast, a simple political economy argument for a temporary increase in protection can

be made: the intensification of competitive pressure from foreign imports may generate problems of income stability and redistribution of wealth in the importing country. This, in turn, may trigger lobbying by domestic firms that see their income falling below a certain threshold level. Under this pressure, the government may be prompted to raise trade barriers to protect the import-competing sector (Freund and Özden, 2008).

When a change in preferences shifts consumption between two different goods, imports may surge without hurting the domestic import-competing firm. Suppose, for example, that consumers' preferences shift from wheat to rice. Imports of rice may increase without this damaging the domestic rice industry. It can be the case that consumption of both domestically produced and imported rice increases. From a standard economic theory point of view, there is only a terms-of-trade argument for an increase in the level of protection in the rice industry in this case. As far as the wheat industry is concerned, the industry is likely to be hurt by the change in preferences. But this can occur in conjunction with a decrease in imports of wheat.

Technological innovation

In general, economic literature identifies fluctuations in supply with technological advances and changes in the availability of resources, such as labour supply.²⁶ Imports can increase because of a decline in supply in the domestic country²⁷ or an increase in supply in the foreign economy. Suppose, for example, that a firm located in a foreign country successfully innovates. By enhancing the competitiveness of foreign firms, the introduction of a new technology abroad will hurt the domestic import-competing sector. Under these circumstances, a temporary protection policy may help offset this effect by maintaining high domestic prices.

To the extent that the import-competing firm is a major employer and that the shrinkage of the industry may reduce the workforce and consequently support for the government, there is a political economy argument for the government to increase trade barriers. As in the case of change in consumer preferences, there is in general no economic argument for government intervention in the case of a temporary loss of international competitiveness due to the introduction of a new technology in a foreign country if markets are functioning well and are competitive. There may be, however, a

second-best argument for a government to increase temporary protection: a temporary increase in tariffs may help alleviate the costs faced by firms adversely affected by the technological innovation.

Another argument is made in a recent paper by Crowley (2006), where she suggests that temporary protection could help the firm with outdated technology to close the technological gap more quickly. The argument relies on the assumption that firms (domestic and foreign) compete on when they will adopt an existing technology whose cost of adoption is decreasing with time and that the incentive to adopt a new technology increases with market size.

An important point to make is that when changes in demand and supply are only temporary, it may be optimal for domestic competitors to continue producing as usual. They will experience temporary losses but they can avoid the costs associated with a temporary resizing of the firm. The issue is whether they have sufficient liquidity to remain in business.

Infant industry

The traditional argument for the use of temporary protection for a newly established domestic industry²⁸ has been the existence of a potential comparative advantage in a sector characterized by dynamic economies of scale.²⁹ The infant industry argument is that new domestic industries may not be able to compete with well-established foreign firms simply because they do not have enough experience. Over time, they can learn by doing, reduce their costs and be competitive in the international markets. However, due to the initial absence of expertise, if the government does not intervene (this can take the form of a trade barrier or a subsidy), the industry will never take off.

Although it may appear intuitively acceptable, dynamic economies of scale are not, on their own, a sufficient argument to justify government intervention from an efficiency point of view. If financial markets are well-functioning, it will be possible for the firm to borrow money from a bank in the initial phase of development and pay back the loan afterwards when it achieves higher profits (Baldwin, 1969). However, in situations where the financial sector may be reluctant to finance risky investments, a second-best argument exists for temporary protection. If an intervention in the financial market is not possible, a temporary

increase in trade barriers may allow the firm to sustain profits and self-finance investments in innovation in the initial phase.

An important point to make with regard to infant industry policy is that although infant industry protection has traditionally taken the form of tariff or other border barriers, in general the economic arguments for protection suggest that a production subsidy is a preferred policy instrument. For example, another argument for an active infant industry policy rests on the allegation that the process of entry into a new industrial activity or into a new foreign market, or the expansion of certain activities generates significant externalities.³⁰ One form of externality (called learning-by-doing) is that new firms will provide costly on-the-job training, but that some of the knowledge employees acquire while working will spill over to other firms. For instance, this may arise if employees of the firm in question change jobs and pass on their knowledge to their new employer. Another form of externality (called a discovery externality) relates to the fact that while the costs of assessing whether a domestic good is sold easily abroad is borne by the pioneer exporter, the corresponding discovery of the foreign market becomes freely available to other producers. A production and an export subsidy³¹, respectively, may constitute desirable policies in these cases.

A further concern with infant industry policies relates to their implementation. When implementation issues are taken into account, the advantages of government intervention are weighed against the possibilities of government failure. These may include lack of government competence, the large amount of information required to adequately define a certain policy measure and lobbying pressures.³²

Declining industry

A technological innovation that renders a previous technology completely outdated and a permanent change in consumer preferences may lead to the permanent decline of a sector. In this case, trade restrictions may be used to slow down the decline and give time to workers who have lost their jobs to find a different occupation. For example, suppose that the declining industry is represented by one particular company that employs a large share of the population in a particular town or region.³³ A drastic downsizing of the sector is likely to have a negative impact on other activities in the region. The lay-off of a large number of people all

at the same time may create a bottleneck in the labour market and keep people unemployed for a long period, generating substantial losses of skills. Government subsidies or intervention in the labour market to facilitate re-employment and retraining may be first-best policies in these circumstances but they may not be feasible.

From a political economy point of view, it is in the government's interest to slow down the decline of a large sector that influences support for the government (Hillman, 1982). However, the intervention will only slow down the decline and will not trigger a recovery.

Dumping

Beyond changes in consumer preferences and technology, competitive pressure from foreign imports can also increase following changes in the behaviour of foreign firms. When the competitive behaviour of a foreign firm operating in the international markets alters the degree of competition in the market, economic theory suggests that there may be reasons for a government to protect its domestic industry.

If a foreign firm deliberately sets prices very low in order to eliminate competition and establishes a monopoly (a practice known as predatory dumping), it may be optimal for a government to restrict trade. But a sharp fall in the price at which a foreign firm sells in the export market can be due to numerous other circumstances related to competition. For example, a firm may lower prices in periods of slack demand and excess capacity simply to try to maintain its market share. Equally, for a high-technology good, it may be important to capture initially an important share of the market in order to set the standard. Second-best considerations apart, in these circumstances government intervention cannot be justified on economic efficiency grounds.³⁴

ii) Global or country-specific economic fluctuations

Country-specific fluctuations are changes that affect all sectors at the same time. They can be due to changes in overall demand or supply. Any changes in private or public expenditure, investment or in the current account may have an impact on demand and supply.

Economic recession

An economic recession can be triggered by a sharp fall in demand or supply – for example, as a result of a financial crisis. The latter can trigger a recession in the real economy as the credit contracts and the asset prices plunge. When a recession is global, both the domestic and the foreign demand (or supply) fall. In this case, an increase in competitive pressure from foreign imports may also arise even without a surge in imports. In fact, imports may decline in conjunction with domestic production while their market share increases.³⁵

As discussed earlier, when income, investments and jobs are under threat, governments will face the pressure of firms and workers asking for the effects of the crisis to be mitigated through the introduction of new trade barriers. These would be raised with the view to securing domestic markets for domestic firms. Countries may respond to a recession by increasing protection. This can take the forms of increased tariffs or subsidies, managed currency exchange rates and other, more subtle, means of protection, such as restrictive safety, health and technical standards.

In a situation of global recession, there is a risk that beggar-thy-neighbour trade policies are implemented at the same time by all governments. Increased protection in one country may lead to retaliation by other countries. The overall result will be the reduction of global welfare and a worsening of the economic situation. The onset of the great depression of the 1930s was marked by policies of this type. Protectionism deepened and lengthened the crisis.³⁶ More recently, Baldwin and Evenett (2008) linked the 39 per cent increase in the number of anti-dumping initiations by WTO members in the first half of 2008 to the onset of the economic crisis triggered by the financial crisis. In general, this evidence highlights a problem of collective action that emerges in cases of global recession.

Changes in world prices

Raising world prices relative to domestic prices will encourage exports and discourage imports. Increasing export prices will make exporting firms more profitable and new firms will start exporting. Domestic supply will fall as more and more firms will turn to the foreign market. On the import

side, raising import prices will increase the costs of imported goods. Overall an increase in world prices will create inflationary pressures through the direct increase in the price of imported goods and the reduction in domestic supply.

Governments may try to insulate their country from higher world prices by restricting exports. The introduction of export restrictions will increase supply to the domestic market and this, in turn, will create downward pressure on domestic prices. This effect can be obtained both through quantitative restrictions as well as export taxes.³⁷ However, there is a problem of policy coordination when export restrictions are introduced at the same time by several exporting countries or by a major exporter. As the international supply of a particular commodity subject to a trade restriction falls, its world price may further increase. According to recent studies by the World Bank (2008a; 2008b), restrictions imposed on maize, wheat and rice in 2006-08 contributed to a self-reinforcing spiral of rising prices for these crops during that period.

It is interesting to note that economic theory does not provide a justification for the use of import restrictions in the case of an increase in prices. Raising barriers to imports would worsen the situation by further increasing domestic prices. The introduction of import restrictions in these situations can, however, be justified from a political economy point of view. The argument is that a higher world price that increases sales of the domestic industry also increases the marginal value of protection and leads to higher tariffs.

An unsustainable balance of payments situation

The balance of payments (BOP) indicates a country's status in international trade. It comprises the current account (determined by exports and imports of goods and services) and the capital and financial account (that reflects net capital and financial transfers from abroad).

In a regime of a freely floating exchange rate,³⁸ the value of the exchange rate of the national currency will be determined by the daily supply and demand for the currency. Any excess of supply for the domestic currency will be reflected in a fall in the value of the currency in such a way to restore BOP equilibrium. A lower currency value will have two effects: one on the current account and the other on the capital account. First, it will reduce the prices

of all domestic goods in terms of foreign currencies, thus increasing foreign demand for exported goods. At the same time, it will raise the price of foreign goods in terms of the domestic currency, thus reducing demand for imports. Both these effects work towards the restoration of the BOP equilibrium through an improvement in the current account. Second, in the capital market, if investors anticipate the depreciation of the domestic currency, the rate of return on foreign assets may fall, thus reducing the demand for the foreign currency.

A situation of unsustainable BOP disequilibrium is therefore associated with a system of fixed exchange rates.³⁹ In order to maintain a regime of fixed exchange rates, a country will need to buy and sell the reserve currency whenever there is excess demand or supply. BOP deficits may be financed only by running down reserves or by borrowing foreign currency. A balance of payments crisis occurs when the country is about to run out of foreign exchange reserves. This may happen because the government has been financing a persistent situation of excess demand for foreign currency (such as in the case of a long-term decline in terms-of-trade) and reserves fell close to zero or because of temporary fluctuations. Both permanent and temporary fluctuations may be due to internal or external factors. External factors include changes in terms-of-trade, the introduction of new barriers to access a foreign market and changes in the interest rate on a foreign currency. Examples of internal factors include a change in the government's monetary or fiscal policy (implying a change in the domestic interest rate or in government spending) and changes to demand or supply.

Under fixed exchange rates, if wages are relatively inflexible, a country may want to restrict imports to deal with difficulties arising from BOP disequilibrium. There are, however, strong limitations to the effectiveness of this policy in restoring BOP equilibrium. One is that import restrictions only act on the import side while a devaluation would both reduce imports and foster exports. Another limitation is that import restrictions will encourage the production of imported products rather than the production of commodities that are competitive in world markets. Finally, import restrictions will not only reduce imports but will also increase the price of inputs used in the production of exported products – exactly the opposite effect that would be needed to improve the balance of payments (Corden, 1971; 1994).

iii) Changes in policy

Any type of change in government policy can have repercussions for the economy. Below are two examples that are relevant in the context of trade policy and that have been highlighted in economic literature as circumstances for a temporary increase in the level of protection, including through the suspension of commitments.

Trade opening

Traditional economic theory predicts that when tariffs fall, there is a reallocation of resources according to comparative advantages.⁴⁰ Import-competing firms in the sectors where a country does not have a comparative advantage will face the competition of more efficient foreign producers able to sell at lower prices. This competition will push firms' sales and profits down and may increase pressures for lower wages and employment. Some workers may lose their jobs and some firms may close down. Overall, there will be welfare gains for the economy, but this adjustment will cause short-term costs.

In order to allow governments to deal with these adjustment costs, trade liberalization commitments generally foresee a transition period for implementation. A gradual implementation of commitments can in fact provide firms with the necessary time to self-finance the costs of adjustments.⁴¹ However, the implementation of commitments may also generate unforeseen costs of adjustment.

In general, governments may choose two different policy options to tackle adjustment problems: they can facilitate the process of reallocation of resources or they can support the restructuring of the industries hurt by foreign competition. Policies to assist the reallocation of resources may include the removal of obstacles to the expansion of the export sector. This may include facilitating access to credit in countries where there are inefficiencies in the financial markets or helping to reduce a mismatch between potential employees and employers in the labour market.

Support for the restructuring of industries hurt by foreign competition may imply a backsliding of previous government commitments. As highlighted in Bacchetta and Jansen (2003), in the case of

severe and unexpected circumstances affecting the competitiveness of an industry, governments can intervene to slow down the adjustment process. In general, economic theory would predict that with well-functioning markets, workers will choose the best rate at which to adjust to the new circumstances. However, governments may choose to intervene for political economy reasons or in response to certain market distortions. As discussed above, this may be the case if the shrinking industry is a major regional or national employer. Hence, the shrinking of the sector can generate negative effects (externalities) that could result in excessive lay-offs if not addressed.

Foreign countries' subsidies

Competitive pressure from imports can also increase because of a change in a foreign country's policy. Suppose that a foreign government provides an export subsidy to the producers of a particular good or service. From an economic point of view, a policy of this type can be justified, for example, on the grounds that there are potential benefits (also referred to as discovery externalities) associated with exporting. Exploring foreign markets to assess whether a good can be easily sold abroad may be costly but this discovery may become freely available to subsequent exporters. Irrespective of the motivation for the subsidy and even when subsidies are provided merely for efficiency reasons, its trade effects may cause difficulties in the import-competing sector abroad.⁴²

From a political economy point of view, the imposition of import duties in response to a subsidy given by the foreign government can be justified as a way of putting pressure on the foreign country to change its policy (Deardoff and Stern, 1987). But this argument relies on the importing country being a large country, since only large countries can impose a terms-of-trade loss on the foreign country by applying a tariff.

As discussed in Section C, from a standard (static) welfare perspective, in conditions of perfect competition, a subsidy is a transfer from the foreign country to consumers in the importing country. The application of an import duty will work as a tax on consumers and in favour of the domestic industry, but the country overall will lose. In these conditions, countervailing duties to offset subsidies can be justified only from a political economy point of view as a form of redistribution policy. However,

markets may fail because of externalities (that go unpriced in the market) or imperfect competition. In these circumstances, a temporary increase in protection in response to a subsidy of the foreign government may be a desirable policy.

iv) Non-economic circumstances

There are a number of circumstances when governments may want to adopt a trade restrictive policy to achieve a non-economic objective. These include national security, environmental and health emergencies as well as for political economy reasons.

National security, environmental and health emergency

A natural disaster or the spread of a new virus are examples of events that may require a temporary increase in trade barriers above the level of the government's commitments. Imagine that a new food-borne illness, initially localized in one country, risks spreading across the globe through trade in food. Governments may intervene by restricting or even banning trade of the risky product, with the aim of protecting the country's population and livestock. For example, various governments adopted this type of policy to avoid the spread of mad cow disease (BSE) in the 1990s.

In general, there is an incentive for a government to intervene with higher trade barriers if a foreign government fails to control negative effects on trading partners. For example, some environmental problems are cross-border issues. Air pollution and acid rains are two such examples. It may be the case that the government of one country does not wish to reduce these cross-border emissions. Trade barriers against the originating country can be raised by the affected country to try to encourage the polluting country or firm to adopt measures to reduce emissions. These measures, however, are likely to be effective only if the affected country buys a significant share of the production of the firm in question.⁴³

Political changes

Governments may be willing to change (permanently) trade commitments following a political change (Bown, 2002a). This may include a country having elections and facing a new government in power that prefers less trade than its predecessor. Other

examples include: reforms in campaign financing that alter the political pressure that firms may have on policy-makers, changes in political alignments that may alter the influential power of a certain sector in determining the government's trade policy as well as changes in the structure of trade unions or the degree of collusion of firms in the production market that may change the degree of political pressure that firms can apply.

In all of the examples above, no economic argument can be made for governments' intervention in the economy. There is, however, a political economy argument. The weight of various lobbying groups regarding a government's trade policy may be different to the situation when a trade agreement was first signed. Governments will be pressured, therefore, to change commitments.

(b) Contingency measures in WTO agreements

The arguments presented in the previous subsections have revealed that contingency measures are essential in a trade agreement because they allow the parties to make long-term commitments while preserving their ability to adapt to a changing environment. These measures work as escape clauses that a government can use to address unforeseen economic difficulties.⁴⁴ They preserve the credibility of the agreement and reduce the economic and political costs of signing the agreement.

In a broader context, contingency measures include all measures that a country can adopt to redefine or undo a commitment, including actions that may, in return, provoke a response. In this sense, contingency measures may take various forms. They may range from measures that allow a suspension of government commitments under certain specified conditions, to weak binding commitments,⁴⁵ or to no discipline at all, where the use of a policy instrument is completely discretionary.

Hauser and Roitinger (2002) argue that violation of trade agreements and non-compliance with a dispute settlement ruling from the WTO may also be regarded as forms of trade flexibility, as they may facilitate the renegotiation of the agreements in trade rounds. For example, consider the case of violation. The (potential) defendant is adjusting the level of concessions that it is ready to offer in response to the current level of concessions

provided by its trading partners. The latter can then decide whether to accept the new balance of concessions (and therefore refrain from reacting), or to seek a determination from the WTO's dispute settlement mechanism that authorizes them to suspend their trade concessions. This mechanism reflects a bargaining situation. The deterrent against the abuse of this system is represented by its costs. According to Hauser and Roitinger, these costs are reputation loss and potential loss of trade concessions if the ruling of the dispute settlement body is disregarded.

In WTO agreements it is possible to identify all forms of flexibilities named above. First, the WTO agreements contain provisions that allow for the suspension of government commitments. For example, WTO members have bound some of their tariffs under the WTO agreements but there are escape mechanisms that allow them to increase temporary protection or to renegotiate tariff bindings.

Second, the WTO agreements may provide governments with a margin of flexibility in their commitments by defining them in the form of a weak tariff binding – i.e. with a ceiling higher than the applied rate. For example, in the WTO schedules of commitments, members' commitments to market access for goods are expressed in terms of bound rather than applied duties. The gap between the bound and applied tariff rate – referred to as the binding overhang – provides governments with a margin of flexibility to change trade policy.⁴⁶ Tariffs can freely be raised so long as they do not rise above the bound rate. No restrictions exist in terms of the length of time that a restrictive trade policy may be adopted as the only requirement is for the applied tariff rate to remain within the agreed binding.⁴⁷ The only limitations to the use of these instruments arise in national legislation or from commitments in regional trade agreements.⁴⁸

Third, there are trade policy instruments that are not disciplined. For example, to a large extent the WTO agreements leave domestic policy instruments to the discretion of national governments. While subsidies and product standards are regulated, process standards, for example, are not. Yet, they may have effects on trade which are similar to regulated trade barriers.

Regarding the conditions under which a government can suspend the concessions it previously negotiated

without violating the WTO agreement, it is possible to make a further distinction between measures designed to deal with specified circumstances and generic measures which are applied according to certain procedures specified in the WTO agreement. Within each of these categories, there are measures that, in principle, are temporary and measures with no time limit.

i) Suspension of commitments under specified circumstances

Provisions that allow for temporary suspension of obligations under specified conditions include:

(i) Provisions to deal with problems arising from adjustment to new market conditions, such as the emergency protection provisions that allow for temporary protection in cases where surges in imports “cause or threaten serious injury to domestic producers ... of like or directly competitive products” (Article XIX: 1.(a) of the GATT). Article XIX of the GATT and the subsequent Agreement on Safeguards define the legal requirements for the application of safeguards.⁴⁹ As explained in Section C.1, among the principal requirements are the need to show that the surge in imports is the result of unforeseen developments and that a causal link between the import surge and injury to the domestic industry exists.

(ii) Measures to offset dumping – in legal terms, this is defined as pricing “at less than the normal value of the products ... if it causes or threatens material injury to an established industry in the territory of a contracting party or materially retards the establishment of a domestic industry” (Article VI:1 of the GATT). Article VI of the GATT and the Agreement on Anti-Dumping establish the rules for governments to impose, in compliance with WTO law, anti-dumping duties on goods that are deemed to be dumped by exporters. As discussed in Section C.2, a unique feature of these rules, in the context of the WTO system, is that anti-dumping actions can be taken in relation to the action of private firms, rather than in relation to the actions of the government.

(iii) Measures to offset the negative effect that subsidies provided by a foreign government have on domestic firms. The conditions for a government to introduce countervailing duties are defined in the Agreement on Subsidies and Countervailing

Measures (ASCM). Although subsidies can be challenged at the multilateral level through the WTO’s dispute settlement system, the ASCM also allows a country to undertake action against subsidized imports by adopting countervailing duties. For this, the importing member must conduct an investigation to demonstrate the existence and, if possible, the amount of subsidies, and show that subsidies provided by the foreign country cause or threaten material injury to the existing domestic industry or delay the establishment of this industry.⁵⁰

(iv) Measures that allow the restriction of imports to avoid a balance of payments crisis. These include provisions in Article XII and XVIII, Section B, of the GATT and their counterpart in the General Agreement on Trade in Services (GATS) Article XII. As has been discussed above, the general movement towards a system of flexible exchange rates has made these types of provisions less meaningful from an economic point of view. This, together with a revision of the legal provisions in the direction of more stringent requirements for their application,⁵¹ explains the decrease over time in the use of these measures. In particular, although in principle available to all WTO members, these provisions have mainly been an instrument used by developing countries. Developed countries primarily used balance of payments measures in the 1950s (Hoekman and Kostecki, 2001).

(v) Provisions that allow governments to temporarily protect an infant industry for the purpose of development. These measures, available only to developing countries, are introduced in Article XVIII, Section A, and Article XVIII, Section C, of the GATT. They allow the removal of tariff concessions and the introduction of quotas and other forms of non-tariff restrictions, respectively, for supporting the development of infant industry. In practice, balance of payment measures have often been preferred by developing countries to achieve infant industry objectives because of their less stringent requirements in terms of surveillance and approval procedures (Hoekman and Kostecki, 2001). Both types of measures, however, only allow import restrictions. As discussed earlier, the economic arguments for infant industry protection suggest that the first-best policy is a production subsidy targeted at the industry while trade protection is a second-best argument.

The category of provisions that allow for exceptions from obligations in specified circumstances are

those that allow for the suspension of commitments for public policy objectives. These include provisions that allow a reversal of commitments whenever a government considers it “necessary for the protection of its essential security interests” (Article XXI of the GATT, Article XIV *bis* of the GATS and Article 73 of the Trade-related Aspects of Intellectual Property Rights). In addition, general exceptions for non-economic objectives are allowed both in Article XX of the GATT and Article XIV of the GATS to protect public morals, to protect human, animal or plant life or health, “to secure compliance with laws and regulations” that are not inconsistent with WTO law. Article XX of the GATT also allows general exceptions to preserve natural resources, protect national treasures and to prevent exports of goods in short supply. Measures related to goods produced by prison labour are also allowed under the same article.

ii) Suspension of commitments under specified procedures

Some provisions allow for the suspension of commitments under specified procedures – rather than circumstances – for their application. Provisions in this category include waivers and renegotiations. WTO agreements do not provide any specific rule for the interpretation of waivers. But the requirements defined for granting and renewing waivers underline their exceptional nature. In particular, footnote 4 of Article IX of the Marrakesh Agreement Establishing the WTO defines very stringent procedures for the decision to grant a waiver in respect of any obligation subject to a transition period. In this case, the decision by the Ministerial Conference to grant a waiver shall be taken only by consensus, while the general rule is that “the decision shall be taken by three-fourths of the Members” (Article IX: 3, of the Marrakesh Agreement).

Unlike waivers, renegotiations are not time-limited in their application.⁵² Therefore, they are more appropriate to seek a rebalancing of concessions rather than as a measure to deal with temporary circumstances. Another important difference between these two measures relates to coverage in terms of the instruments of trade policy to which they can be applied. While waivers can be requested for any obligation imposed by the multilateral trade agreements, renegotiations only relate to changes in tariffs in the GATT (Article XXVIII) or specific commitments in the GATS (Article XXI).

3. CONCLUSIONS

From an economic perspective, trade agreements serve two main purposes. First, they allow countries to cooperate whereas acting unilaterally governments would be trapped in a trade war – leading to high levels of protection and low trade flows. Second, countries may benefit from signing a trade agreement as this permits them to commit to specific policies and to resist pressures from domestic special interests. If this is the case, how can flexibilities such as the use of contingency measures in the GATT/WTO system be explained? After all, at first glance, contingency measures are policy actions that reduce the benefits of a trade agreement, as they lower the value of cooperation and weaken governments’ commitment to an open trading regime.

This section has investigated the economic and political economy arguments that justify the presence of flexibilities in the GATT/WTO. The theory suggests that the reason for introducing contingency measures in a trade agreement is essentially to allow governments to address future developments that are unpredictable at the time that the agreement is signed. These measures provide an escape clause that maintains the overall stability of the world trading system, allows governments to undertake deeper trade commitments and reduces the economic and political costs of signing the agreement.

With this general framework in mind, this section has explained through various examples the circumstances in which economic theory would justify a temporary increase in trade barriers – even above the level of commitments in a trade agreement. These circumstances include when an import surge provides an argument for an increase in trade barriers as well as when a change in demand or supply or in policy leads to a sharp contraction for a particular sector and this, in turn, has a negative externality (like in the case of the one-company town). Another argument for trade policy intervention is when something alters the degree of competition in the market – for example, if a company indulges in predatory dumping. Other circumstances include developing countries providing support to infant industry, action to address balance of payment crises, and responding to a sharp increase in the world price of a product. In all these cases, the adoption of restrictive trade policy can be justified as a second-best option.

Political economy reasons for a government to suspend trade policy commitments include those circumstances when external factors alter income distribution in such a way that influential groups or the average voter lose out. In addition, there is the temptation to change policy commitments after a change in government or in response to a subsidy applied by a foreign country.

The variety of contingency measures built into the WTO agreements allow for the suspension of commitments under specified conditions in all of the above situations. Some provisions can be used only under a set of predefined circumstances. Other provisions are not linked to a specific circumstance but define the procedural conditions under which countries are allowed to waive or renegotiate commitments. For both types of provisions, the drafters of the WTO agreements have specified measures that provide for a temporary suspension of commitments or for a change without time limits.

Two questions are still open. First, how should contingency measures be designed? The traditional and the commitment theory of trade agreements have quite different implications. According to the terms-of-trade approach, the key challenge in designing escape clauses is to ensure that they do not become a back-door route to re-imposing the cost of a country's trade policy choices on its trading partners. This suggests that ensuring escape clauses do not upset the balance of trade concessions (i.e. ensuring that reciprocity between trading partners is maintained) is crucial. According to the commitment theory, the key challenge in designing

contingency measures is to ensure that they do not undermine the value of the trade agreement by helping governments make additional commitments to their own private sectors. This suggests that simply maintaining reciprocity may not be a good rule of thumb, and that the design of appropriate escape clauses is a much more difficult exercise.

Second, how much flexibility should a trade agreement allow for? In general terms, there appears to be a trade-off between the benefits of some flexibility and the costs of excessive flexibility. If governments are allowed too much policy discretion, then the trade agreement is badly weakened. Both policy cooperation and credibility would be compromised in these circumstances. However, if the trade agreement is too rigid, governments may be denied the necessary policy flexibility to address unforeseen future circumstances. In this case, the political support for trade cooperation can break down or trade rules may be disregarded. A trade agreement needs to strike a balance between these two elements. What the right balance is depends on the specific policy area under analysis.

One of the objectives of this Report is to analyze whether WTO provisions provide a balance between supplying governments with contingency measures compatible with WTO rules and adequately defining them in a way that limits their use for protectionist purposes. The rest of the Report will address this question by focusing on six contingency measures. These are safeguards, anti-dumping duties, countervailing duties, renegotiations, export taxes and tariff increases within their bound rate.

APPENDIX B 1: INCOMPLETE CONTRACTS

Since the seminal work of Grossman and Hart (1986), a large body of literature has emerged focusing on incomplete contracts. Contracts are considered incomplete when they do not specify all parties' rights and duties in all possible future states of the world (Battigalli and Maggi, 2001). While much of this research, notably Hart and Moore (1988; 1990), Chung (1991), Nosal (1992), Hackett (1993) and Mukerji (1998), has emphasized the consequences of incomplete contracts, various attempts have been made to explain the causes of contractual incompleteness. This appendix offers a review of the economic literature seeking to explain incomplete contracts and attempts to isolate the various hypotheses put forward over the last two decades or so.

Bounded rationality

Much of traditional economics assumes that agents are “rational” in that they can foresee all possible outcomes and analyze these potential outcomes to make an optimal decision. However, authors including Williamson et al. (1975), and Bolton and Faure-Grimaud (Bolton and Faure-Grimaud, 2009) suggest that in the context of contracting, economic agents are more appropriately regarded as “boundedly rational”. As Simon (1979) puts it, such bounded rationality is characterized by “failures of knowing all the alternatives, uncertainty about relevant exogenous events, and the inability to calculate consequences”.

To understand the potential significance of bounded rationality in the context of contracting in international trade, consider a world with five countries trading 100 goods. Suppose also that there are ten external factors – for example, weather, world income etc., that can have an impact on trade and each of these factors can take five different values. With these assumptions, the total number of possible combinations, that is the total number of contingencies, would be $5^{10} = 9,765,625$. Multiplying by 100 to account for the number of goods yields 976,562,500. Thus, if each country must form an agreement with the other four, $4 \times 976,562,500 = 3,906,250,000$ clauses would have to be considered by each country. In other words, under these assumptions, a “rational” country would have to be able to recognize almost four

billion possible obligations and their consequences. In the real world of course, with far more countries, goods, variables and possible outcomes, the number would likely be much greater. In reality, and in the context of world trade in particular, an assumption of bounded rationality may indeed be most appropriate.

If agents are boundedly rational, there are a number of reasons to expect contractual incompleteness. First and most simply, some contingencies may not be foreseen (or even foreseeable) by agents, or agents may not be able to distinguish between different states (Bernheim and Whinston, 1998). It is obviously impossible to incorporate such information as would be demanded by a complete contract. Second, agents may not possess the mental capacity to think through all possibilities (Foss, 2001). Third, linguistic constraints might mean that agents are unable to “articulate their knowledge or feelings by the use of words, numbers, or graphics in ways which permit them to be understood by others” (Williamson et al., 1975; see also Anderlini et al., 2006).

Transactions costs

Along with bounded rationality, the most widely described factor explaining incomplete contracts builds on the work of Coase (1937) and Williamson et al. (1975) and emphasizes the importance of transactions costs (see Grossman and Hart, 1986 and Anderlini and Felli, 1999). The point is that agents must weigh up the costs of composing more exhaustive contracts against the benefits of having a contract specifying the outcome in a larger number of circumstances. This trade-off may result in an incomplete contract, which can of course be fully consistent with rational optimizing behaviour.⁵³

Various transaction costs associated with contracting have been identified. First, there are costs associated with defining all possible contingencies during the process of forming the contract (Grossman and Hart, 1986; Hart and Moore, 1999). Second, there may be considerable costs involved in writing a formal and complete contract – for example, in terms of describing all states and responses in language (Horn et al., 2005). The cost of hiring lawyers to write contracts could also be considerable (Battigalli and Maggi, 2001). Third, Busch and Hortsmann (1999) suggest that there are costs associated with the time spent in negotiating the contract – what might be called “waiting costs”. More specifically,

following the influential work of Rubinstein (1982), the authors view the process of forming a contract as analogous to a situation of alternating offer bargaining. The longer the amount of time the contract takes to be agreed, the greater are the costs, or the less are the overall benefits associated with the eventual outcome. Fourth, Rasmusen (2001) emphasizes that even if writing a contract is not prohibitively expensive, reading one carefully to ensure that it contains no traps inserted to benefit one party can be a very intricate and costly exercise. Fifth, it may be costly to deduce which outcome finally emerged (Anderlini and Felli, 1999).

Many theoretical models, including those of Dye (1985), Busch and Hortsmann (1999), Anderlini and Felli (1999; 2000), Battigalli and Maggi (2001) and Rasmusen (2001), do indeed demonstrate that higher transactions costs tend to lead to greater contractual incompleteness. Crocker and Reynolds (1993) provide empirical support for this idea using data from aircraft engine procurement.

Non-verifiability

A third factor that has been proposed for explaining incomplete contracts is the inability of the judicial authority to distinguish effectively between different contingencies. This perspective is emphasized by Malcomson (1985), Hart and Moore (1988) and Nosal (1992). For instance, in a team effort towards production, it may not be possible to attribute a given level of output to a particular individual (Malcomson, 1985). In the context of world trade, it may be difficult to ascertain whether or not a country has truly ceased using purely domestic policies, for example, to promote exports or dampen imports, as there are so many complicated and indirect means of doing so.

In general, if it is not subsequently possible to distinguish between different contingencies, a contract may not be enforceable by a court of law or other body. It follows that including contingencies in contracts that cannot be verified may be futile and hence contracts may be incomplete. Clearly, this is especially true when there are costs associated with the inclusion of additional clauses – rational agents will surely not include clauses which entail prior costs but no actual additional benefits.

Strategic ambiguity

Another argument is so called “strategic ambiguity”, whereby one party withholds information from the contract in order to influence the opponent’s behaviour in a beneficial manner. A variety of mechanisms through which strategic ambiguity leads to incomplete contracts have been proposed in several different economic situations.

One reason for strategically withholding information is suggested by Ayres and Gertner (1989). In a contract, one contracting party might strategically withhold information that would increase the total gains from contracting in order to increase their private share of the gains. It has also been suggested that parties may strategically leave contracts incomplete as a means of disciplining others’ behaviour (Rasmusen, 2001). In particular, with a complete contract, if one party reneges on its commitments, the other’s only recourse would be to take legal action which could be costly and time consuming. Conversely, if a contract is incomplete, it may be possible to retaliate quickly and at a relatively small cost against the offending party. This threat of retaliation from the other party can help sustain a better outcome for both parties in the long run. Finally, some authors such as Rasmusen (2001) and Bernheim and Whinston (1998) have suggested that contracts may be left deliberately vague or incomplete to avoid unduly concentrating incentives on only what is included.

Strategically seeking an incomplete contract may be especially powerful in situations where one of the contracting parties possesses more information than the other. Spier (1992) notes that the better informed party may choose to refrain from including certain clauses in a contract because doing so will signal his or her private information to the other party which could either reduce the likelihood of a contract being signed or be used against him or her (see also Hermalin and Katz, 1991 and Ayres and Gertner, 1989). For example, suppose two countries were to sign a trade agreement. One country might want to include a clause that permitted it to renege on its commitments in certain circumstances. However, it may choose not to propose such a clause through fear of signalling to the other country that it may be an unstable or unreliable trading partner, which may in turn reduce the likelihood that an agreement is reached at all.

Final observation

It is worth making a final general point about this literature. For purposes of clarity and convenience, the preceding discussion has presented the various reasons for contractual incompleteness as a series of separate factors. It should be emphasized, however,

that in reality they are largely interdependent and often complementary. For instance, bounded rationality can underlie transactions costs and greater differences in access to information and the non-verifiability argument become all the more potent when transaction costs are present.

Endnotes

- ¹ We limit our analysis to the main economic theories of trade agreements. The *World Trade Report 2007* (WTO, 2007) provides an extensive discussion of the economic, political and legal literature on trade policy cooperation among nations.
- ² More precisely, the terms-of-trade of Country A improves as the price of imports decreases while the price of exports is unaltered. This implies that Country A can buy with the same amount of exports a larger amount of import goods from Country B.
- ³ As it is well understood in the theoretical literature and in the practice of trade policy, cooperation among countries cannot be achieved in the absence of a trade agreement. The reason is that if a country unilaterally reduces its tariff, the trading partners would still have an incentive to maintain their level of protection. A “trade war”, therefore, is a Nash equilibrium, since once high protection is in place, no country has an incentive to reduce its tariff unilaterally (see Box 1).
- ⁴ Recent studies find support in the data in favour of the traditional approach to trade agreements. Bagwell and Staiger (2006) investigate empirically market access commitments negotiated within the WTO and show that WTO accession leads to greater tariff reductions in sectors with higher initial import volumes (i.e. where the terms-of-trade effect is stronger). Broda et al. (2008) find that countries that are not members of the WTO set higher tariffs in sectors where they have market power. This evidence is consistent with the idea that, without a trade agreement, countries have an incentive to set policy to manipulate their terms-of-trade.
- ⁵ Staiger and Tabellini (1999) provide evidence of the credibility effect of trade agreements and show that GATT/WTO rules have helped the US government to make trade policy commitments to its private sector. More recently, Tang and Wei (2008) have found that accession to the GATT/WTO increases credibility of policy commitments – particularly for countries with poor domestic governance – and tends to raise income.
- ⁶ See Section C.1 of this Report for a detailed discussion on safeguards.
- ⁷ While some of these arguments on the benefits of flexibility may not be sufficient to motivate the presence of contingency measures in the GATT/WTO system, it is worth providing an encompassing overview, since these arguments often appear in the academic and policy debate.
- ⁸ For recent surveys of the literature, see Crowley (2007) and Bown (2006).
- ⁹ Bagwell and Staiger (2003) extend this analysis to examine governments’ incentives to exploit flexibilities over the business cycle. In particular, their study allows for booms (fast-growth phases in trade) and recessions (slow-growth phases), and shows that temporary surges in import volumes are more often associated with the use of contingency measures during recessions. This may offer one perspective on the empirical evidence discussed in Section D, which suggests that anti-dumping duties are more often used when the macroeconomic environment is weak.
- ¹⁰ See Box 1.
- ¹¹ The validity of the safety valve argument is tested empirically in recent work by Kucik and Reinhardt (2008). They find that the availability of contingency measures such as anti-dumping duties affect the levels of commitments for members of the WTO. A further discussion of this work is provided in Section D.
- ¹² For example, agents are said to be risk averse if they prefer an outcome with certainty (say one dollar) to the same outcome on average with uncertainty (say zero dollars with 50 per cent probability and two dollars with 50 per cent probability, the average outcome also being one dollar).
- ¹³ While there has been no empirical research examining explicitly the role of flexibilities as insurance, a few studies seem quite relevant. Evidence by Knetter and Prusa (2003) and Vandenbussche and Zanardi (2008) seem to support the idea that domestic import-competing firms use anti-dumping duties to maintain their market shares and profits in the face of adverse economic shocks.
- ¹⁴ Related to this is the argument that contingency measures may be employed to address equity and redistributive issues. Jackson (1997), for instance, argues that safeguard measures can be used to ease the adjustment problems faced by the losers from trade liberalization. See, however, Sykes (2006b) for a critical discussion of this point. Miyagiwa and Ohno (1995; 1999) and Crowley (2006) examine certain channels through which temporary protection can promote the competitiveness of domestic firms in the presence of market failures (see also the discussion in Section B.2).
- ¹⁵ Some authors, such as Sykes (2006b), argue that while significant from a theoretical perspective, the deterrence argument is likely not to be too relevant, particularly in discouraging WTO-inconsistent subsidies. This Report will discuss these issues further in Section C.3.
- ¹⁶ Appendix B.1 explains why contracts may be incomplete and provides examples of why this “contractual” approach is relevant to understand actual trade agreements.
- ¹⁷ A growing literature studies salient features of the GATT/WTO system using the incomplete contract approach, the idea being that the GATT/WTO’s incompleteness underlines many of its prominent characteristics. In addition to the contributions discussed in the main text, a minimal list includes Ethier (2000), Battigalli and Maggi (2003), Bagwell and Staiger (2005) and Maggi and Staiger (2008).
- ¹⁸ While being widely used in the literature, the term “efficient breach” may be misleading. It refers to the case where a trade agreement is completely rigid, so that any deviation would correspond to a breach (albeit efficient) of the agreement. If, however, signatories agree *ex ante* to introduce escape clauses in the trade agreement, then no breach actually occurs as the bargain expressly provides for it.
- ¹⁹ Another argument is that of terms-of-trade, (large) countries are tempted to adopt trade-restrictive policy during periods of high import volumes, since importers can extract economic surplus from foreign exporters (Bagwell and Staiger, 1990).
- ²⁰ Economists speak of a first-best policy when the instrument that imposes the smallest distortion to achieve a certain objective is adopted, and the instrument adopted permits a distortion to be offset to the greatest degree. When the first-best policy is not available, the next best policy is a second-best policy.
- ²¹ Economic literature often models shocks in the form of price shocks. This is implicitly a partial equilibrium approach. Preferences, technology or endowment shocks as well as changes in trade policy are the ultimate causes of price shocks.
- ²² A change in preferences can also be the consequence of a successful information campaign that improves domestic consumers’ confidence in the quality of the foreign product.

- 23 This means that there are no barriers to entry, that individual firms are so small relative to the size of the market that they cannot affect the market price and that there are no externalities.
- 24 On the terms-of-trade argument for protection in the large country see Section B.1.
- 25 As highlighted in Bacchetta and Jansen (2003), a more efficient policy could be to establish temporary training centres or job-search centres.
- 26 Examples are the reduction of labour supply as a consequence of a strike (temporary shock) or the reduction of women's participation in the labour force following a change in legislation that limits maternity leaves (permanent shock).
- 27 One example is the introduction of a regulation that may induce lower productivity with the technology in place.
- 28 This can be thought of as a positive domestic technological shock.
- 29 In essence, dynamic economies of scale are reductions in costs that arise over time from the production activity, whereas static economies of scale refer to a contemporaneous decrease in average costs associated with an increase in output.
- 30 An externality, which may be positive or negative, refers to an effect or an outcome that is not reflected in market prices/costs, and is therefore neglected in the decisions of private actors in the market.
- 31 In the presence of information externalities of the type described above, government loans and guarantees have also been discussed as possible policy options. See Hausmann and Rodrik (2003).
- 32 For a general discussion on the arguments for industrial promotion and implementation issue, see the *World Trade Report 2006* (WTO, 2006).
- 33 This case is known in the literature as the “one-town company” case. Rama (1999) discusses this circumstance in the context of a downsizing of the public sector.
- 34 See Section C.2 of this Report for a more extensive analysis of the circumstances for dumping and for the introduction of anti-dumping duties.
- 35 At the sectoral level, this may also happen in the case of a declining sector for example.
- 36 Section D of this Report presents the evidence on the relationship between the incidence of contingency protection and the economic cycle.
- 37 See Section C.4 for a more in depth discussion of export taxes.
- 38 Technically, this is the case when the Central Bank does not intervene to stabilize the currency of a country. The opposite is a regime of fixed exchange rates. When the Central Bank intervenes to keep the currency within a band, economists in general speak of a regime of managed floating exchange rate.
- 39 A balance-of-payments crisis or currency crisis occurs when the value of a currency changes quickly. All currency crises are characterized by speculative attacks against the currency, but at the time of the attack the currency is under fixed exchange regime.
- 40 Recent economic literature has shifted attention away from countries and industries to firms. New theories of firm-level adjustment to trade liberalization and empirical evidence based on firm-level data show that trade liberalization often leads to within-firm productivity gains and to a reallocation of resources from less productive to more productive firms. For a survey of this literature, see Tybout (2003) and the *World Trade Report 2008* (WTO, 2008).
- 41 The argument in favour of a gradual process of trade liberalization to face adjustment costs relies on the assumption that the process takes place across the board. An asymmetric process of trade liberalization where the pace of liberalization varies across sectors would generate different dynamics.
- 42 See the *World Trade Report 2006* (WTO, 2006) for a comprehensive overview of the links between subsidies and trade.
- 43 A more efficient solution may be that the affected country pays for the abatement costs of the originating countries. This policy may prove optimal if abating emissions abroad is more efficient than abating emissions at home. Yet, it may encounter the opposition of public opinion or it may be limited by budgetary constraints (Nordstrom and Vaughan, 1999).
- 44 A categorization of these circumstances is provided above.
- 45 As discussed in Section B.1, in the economic literature bindings are called “weak” when they are defined as ceilings. See Horn et al. (2008).
- 46 See Section C.4 for a discussion on binding overhangs.
- 47 Applied tariffs are subject to the general principles of the WTO. Most importantly, for example, Article I of the GATT establishes the general principle known as most-favoured-nation treatment (MFN), according to which countries cannot normally discriminate across trading partners.
- 48 Section D will discuss contingency measures in regional trade agreements.
- 49 The Agreement on Agriculture contains special safeguards provisions.
- 50 Countervailing duties will be discussed in Section C.3 of this Report.
- 51 The Uruguay Round has changed the legal framework for BOP measures. It has reinforced their temporary nature, has made more difficult the use of quantitative restrictions in favour of price-based measures of import restrictions, has required that surcharges and similar measures be applied across the board with the exception of “essential products” and has reinforced the surveillance of BOP actions (see Understanding of the Balance of Payment Provisions of the GATT, 1994).
- 52 Renegotiations will be further analyzed in Section C.4.
- 53 In a methodological paper Maskin and Tirole (1999) argue that transaction costs need not be relevant and suggest that more attention need to be devoted to the conceptual underpinning of the incomplete contract theory.

C ECONOMICS, DISCIPLINES AND PRACTICES

While Section B discussed the rationale for the existence of contingent trade policies in a trade agreement, this section analyzes in more detail some of the key features of different types of measures. This includes both an economic and a legal analysis. For safeguards, anti-dumping measures and countervailing (“anti-subsidy”) duties as well as the various other actions that can be used as contingent measures, each sub-section will highlight the specific economic aspects that are relevant for a full appreciation of the possible economic consequences of the use of any particular measure. Some of the principal WTO disciplines applying to each type of measure are discussed along with their interpretation through dispute settlement.

The sub-sections discussing legal elements of safeguards, anti-dumping and countervailing duties are organized in a similar manner in order to facilitate a comparison among these measures. The structure consists of a discussion of: (i) the respective “trigger” for contingent measures (increased imports, dumping, subsidization);¹ (ii) the definition/involvement of the “domestic industry”; (iii) the existence of (serious or material) injury to the domestic industry;² (iv) the cause of the injury; and (v) various conditions that need to be respected in the application of the respective measures, such as timeframes. Where applicable, selective reference is made to national practices as well as to comments, notably by economists, regarding the implementation of these disciplines and their compatibility with the economic rationale underlying contingent measures. The section concludes with a number of observations regarding regulatory factors, both domestic and international, that may influence a government’s preference for one contingent trade policy over another in a given situation.

1. SAFEGUARDS

In previous sections of this Report, the term “safeguards” has often been used in a generic sense to denote the existence of flexibility in trade agreements to temporarily employ trade measures in response to an increase in import competition. By briefly reviewing this discussion, sub-section (a) will highlight the fact that disciplining and limiting

credibly the use of safeguards in the context of a trade agreement is a key condition for governments to prevent moral hazard³ and to be able to achieve the intended objectives. This premise provides a natural lead into sub-section (b), which presents the main provisions contained in the Agreement on Safeguards (SGA) and their interpretation through WTO case law. It will also describe to what extent the underlying economic logic of how and when to apply safeguards is reflected in these disciplines, and how economists have sometimes struggled with the implementation of certain legal requirements.

(a) Economic arguments for disciplining the use of safeguards

In Section B.1, it was demonstrated that countries need the flexibility to temporarily defect from their obligations under an international trade agreement in order to be ready to commit to a higher level of liberalization commitments. At the time that a trade agreement is concluded, countries are unable to foresee all future events that may lead to an intensification of competitive pressure from foreign imports. This may make contingent measures desirable for certain industries, be it as insurance against income loss, to facilitate industry adjustment to competition or for political reasons.

Section B.2 elaborated on the different types of circumstances in which governments may wish to use such flexibilities. It was recalled that, from an economic point of view, government intervention may help to improve national welfare in the presence of market failures. For example, if imports increase and domestic production in a particular sector decreases while, at the same time, labour markets do not adapt, workers might become unemployed. Ideally, the problem is addressed at its source, i.e. in this case, via labour market policies, since trade is not the origin of the problem. However, according to the theory of “second-best”, a governmental measure in one market, that would be considered an unwanted distortion of incentives in a perfectly functioning market environment, may in fact counterbalance the effect of a market failure elsewhere. If, for example, in the case of rigidities in the labour market, the preferred policy, such as reducing job search costs, is for some reason not possible, a tariff may act as a “second-best” instrument reducing the costs of

adjustment associated with the transfer of workers from a declining industry into an expanding export sector and thereby improving the situation to at least some extent (Krugman and Obstfeld, 2006).

In Section B.2, it was demonstrated that rather than maximizing national welfare, governments may give in to demands for trade protection by well-organized pressure groups to gain political support or to use trade measures to redistribute or stabilize income in the pursuit of broader social objectives.⁴ Taking into account these political economy considerations, the greatest challenge in using temporary trade protection becomes the avoidance of moral hazard. Once trade measures are in place, incentives to adjust to new circumstances decline for the protected industry. Brainard and Verdier (1997) describe the vicious cycle of more lobbying leading to a greater level of protection and less industry adjustment, with the latter increasing in turn the industry's pay-off from lobbying for an extension of protection. In addition, as explained in Section B.1, firms anticipate that it is not in the government's interest to remove trade protection if industry adjustment has been inadequate. Since government lacks the credibility to remove protection at the pre-specified date, firms under-invest in the adjustment process (Staiger and Tabellini, 1987; Matsuyama, 1990).

The distinguishing feature of safeguards, taken in the context of a trade agreement as opposed to any protectionist measure pursued following the second-best argument, becomes the credible threat of their being removed after a defined period of time. A number of recent papers have specifically examined the question as to what extent the temporary nature of safeguard measures (for fear of retaliation)⁵ allows governments to reach the objectives pursued. It is assumed that competition from abroad rises unexpectedly and that temporary safeguards are used in order to either provide the opportunity to the domestic import-competing industry to catch up technologically or to allow for an orderly exit from the market if a quick contraction of the industry may be associated with long-term welfare losses.

Crowley (2006) and Miyagiwa and Ohno (1999) look at a foreign productivity "shock", i.e. a situation in which the domestic industry (unexpectedly) lags behind its foreign competitor in terms of technology. In such a situation, the government can put in place trade measures, such as tariffs, to stimulate

a (socially optimal) higher level of investment.⁶ The tariff has the effect of increasing the effective costs to foreign industry and allows domestic firms to reap higher profits from innovation in the meantime.⁷ The authors emphasize that in order to fulfil their purpose, safeguards must be strictly time-limited, since the benefits of protection vanish once the innovation has taken place.

It is crucial that governments can credibly commit to a specific period, after which protection will be removed. If the industry thinks there is a possibility of a renewal of safeguard measures if it has not successfully innovated, it has an incentive to delay innovation. As discussed in Section B.1, the threat of retaliation under a trade agreement can provide a credible "commitment device" that safeguard measures will not be extended beyond the authorized date. By the same token, industry also needs the assurance that early successes in research and development (R&D) do not lead to a premature withdrawal of protection. Otherwise, the expectation of lower profits might prompt the domestic industry to invest less. This seems to imply that a clear delineation of governments' rights in a trade agreement to use temporary protection is equally important, since countries should not come under pressure from trading partners to remove protection earlier than initially planned.

As mentioned above, several papers have noted that protectionist measures might be employed in order to slow down an industry's decline until it ceases to exist (Hillman, 1982; Brainard and Verdier, 1997; Magee, 2002). These papers seek to explain the political economy processes that lead governments to provide import protection to declining industries.⁸ However, some recent literature has gone further, emphasizing that if the costs of quickly scaling back production are high, slowing down an industry's decline via temporary safeguards may improve a country's overall welfare. Protracting an industry's demise, of course, also entails welfare costs, as it slows down the reallocation of resources to more productive sectors.

Davidson and Matusz (2004) assume the existence of "congestion" in the labour market, i.e. it becomes harder to find a job when the market is "crowded". A temporary safeguard tariff can be beneficial by reducing the number of unemployed at a given moment in time and keeping them at work in the import-competing sector. This reduces congestion and improves the chances of those looking for

a job to find a new occupation in expanding sectors. Since older workers have less time to find re-employment, this approach can specifically explain why governments concerned with the welfare of this segment of the population might have an extra incentive to provide temporary trade protection.

Importantly, Davidson and Matusz also show that temporary protection can lead to permanent gains compared with a situation in which the government decides not to intervene. The reason for this is a self-fulfilling prophecy: observing increased competition from imports, workers anticipate an increase in the number of those looking for a job and at the same time expect the job acquisition rate in the expanding (export) sectors to fall owing to congestion. With more than the “normal” rate of workers rushing to find a new job in other sectors, this is indeed likely to happen.

By providing temporary relief from imports, the government might be able to manipulate expectations in order to steer the economy away from a reduction in welfare. The short-term losses associated with a temporary trade distortion are consequently more than offset by the long-term gains from maintaining higher job acquisition rates and output. Since the purpose of protection is to improve the efficiency of the adjustment process by controlling the rate at which workers switch sectors, and not to halt or undermine the necessary structural change, the “temporariness” of trade measures for the duration of the transition is again essential in order to reach this goal.

Besides the existence of an increase in imports and the commitment to phase out safeguard measures after a specified period of time, WTO rules impose a range of additional conditions. Notably, the domestic industry in question must be shown to be in distress (“serious injury”) and the contribution of imports to that injury must be disentangled from other factors. WTO members are also not entirely free as to how they can apply such measures; for instance, safeguard measures normally must be applied against imports from all sources.

The extent of conditions imposed by WTO rules must be understood in the context of a multilateral agreement, where a balance needs to be struck between a member’s flexibility and the interest of trading partners to minimize adverse consequences. While in Section B.2 a wide range of situations was

described in which governments may wish to resort to trade remedies, including safeguards, as second-best instruments, a multilateral trade agreement is likely to contain provisions that seek to ensure that the interests of other countries are taken into account in this decision. Governments should not be able to discard alternative policies and count on pursuing safeguard action at the expense of foreign exporters in response to any unanticipated economic shock that might occur in a liberalized economy. Key WTO provisions governing the use of safeguards will be discussed in the sub-section that follows.

(b) WTO disciplines and practices on safeguards

The issue of safeguards has a long history in the GATT/WTO, beginning with the inclusion of Article XIX in the GATT 1947 and culminating in the drafting of the WTO Agreement on Safeguards (SGA) as part of the Uruguay Round. In between, the issue has been subject to plurilateral accords and several re-negotiations.⁹ The focus in this section will be on the SGA applying to trade in goods which is best suited to examine questions relating to the use of safeguards in trade agreements more generally. Box 4 discusses existing special safeguards (SSGs) available in agriculture as well as a special safeguard mechanism for developing countries that is currently under negotiation. These safeguard measures are characterized by the existence of price and volume triggers that automatically allow for the application of safeguard measures when certain thresholds are crossed. Box 5 summarizes the discussion on whether the creation of a safeguard mechanism in the area of services is warranted. It should also be noted that the Accession Protocol of China contains specific safeguard provisions, some of which have recently expired.¹⁰

Box 4

"Automatic" safeguards in agriculture*Special safeguard (SSG)*

The Agreement on Agriculture contains the right of certain WTO members to take special emergency actions ("special safeguards") in order to create a temporary buffer for their farmers from the economic impact of falling prices or surges in imports. However, the members who are eligible to use the agricultural special safeguard (SSG) and the products on which the SSG can be invoked are limited. The right to use the SSG was provided to WTO members who at the end of the Uruguay Round converted non-tariff restrictions to tariffs, a process referred to as tariffication. The products eligible for the SSG include those products that had tariffs established through the tariffication process; however, imports within tariff quotas are not eligible for SSG. Thirty-eight members retained the right to use the SSG in their schedules of commitments, but in practice the SSG has been used in relatively few cases.

The SSG described in the Agreement on Agriculture can either be triggered by a fall in prices or by an increase in imports. When import prices or import volumes of particular products cross certain thresholds, the government may apply a remedial duty. The calculations for the triggers for these two types of SSG mechanisms differ, as do the calculation and application of the remedies. Members do not have the right to implement these two types of safeguards concurrently on the same product.

The price-based SSG includes a trigger that is calculated from a fixed base period. Action can be taken when the import price of a shipment falls below this specified reference price. The size of additional duty that can be applied is determined according to the size of the difference between the trigger price and the cost insurance and freight (c.i.f.) import price of the shipment. Larger differences in prices entitle members to apply larger remedial duties. These remedies are applied on a shipment-by-shipment basis.

In contrast to the price-based SSG that is imposed on a clearly defined number of shipments, the volume-based SSG can be maintained over a

period of time and can thus be invoked on multiple shipments. Once the threshold trigger volume has been passed, the SSG remedies may be applied on the relevant product until the end of that year. These remedies are not to exceed one-third of the current tariff applied to the product in question.

As in other areas of the WTO, transparency plays an important role. Members have the responsibility to notify specific actions taken related to the SSG, including a notification of the reference prices used to calculate the price triggers. Finally, members are obliged to notify once a year a summary of the safeguard actions taken.

Special safeguard mechanism (SSM)

In the current Doha round of trade negotiations on agriculture, WTO members are negotiating another type of safeguard that would be available to developing countries called the special safeguard mechanism (SSM). Proponents of the SSM have stressed the need for low-income farmers to have a safety net to provide them with a buffer from the economic effects associated with rapid changes in agricultural imports. At the same time, others argue for limits on the SSM in order to guard against the protectionist use of this type of mechanism. The tension between those who are seeking a mechanism which will be easily triggered and those members who are seeking to craft a more constrained mechanism contributed to a breakdown in WTO negotiations in 2008.

In the draft modalities document TN/AG/W/4/Rev.4, the SSM can, like the former SSG, also be triggered either by an import surge or by a price decline. The volume-based SSM includes as a base for triggers a rolling average of imports in the preceding three-year period. A three-tiered trigger mechanism is defined based on this rolling average. The associated remedies for each tier are additional duties that increase as the trigger increases.

The price-based SSM includes a trigger defined as 85 per cent of the average monthly most-favoured-nation (MFN)-sourced price for the most recent

three-year period for which data are available. Like the SSG, the price-based SSM would be triggered on a shipment-by-shipment basis. When the c.i.f. import price of the shipment falls below this trigger, an additional trade remedy would be applied on that shipment.

Proponents of a more limited SSM have argued that a cross-check mechanism is needed in order to identify situations in which an increase in the volume of imports did not occur simultaneously with a price decline for relevant products. Since it is the price impact that determines the resulting economic effect on rural households, an import surge without a corresponding price decrease

does not necessarily imply that imports are threatening rural livelihoods. Removing those situations where prices are not falling from eligibility for the volume-based SSM provides a discipline on potential protectionist motives.

A cross-check provision is envisioned in more recent proposals on the volume-based SSM, which would prevent the application of trade remedies when domestic prices are not declining. The current formulation of the price-based SSM includes a similar type of cross-check, such that developing countries should not normally invoke the price-based SSM if the volume of imports of the products concerned are “manifestly declining”.

Box 5 Is there a need for a services safeguard?

Work on the need for, and possible scope of, emergency safeguards under the General Agreement on Trade in Services (GATS) has not made a lot of headway after more than ten years of negotiations. At first glance, the theoretical case for a safeguard mechanism appears similar to the one for goods. It could be argued that, although limitations on national treatment (i.e. treatment no less favourable of foreign supplies and suppliers in the domestic market) and market access can be inscribed in GATS schedules of commitments and access can be conditioned on the economic situation in a sector (“economic needs test”), WTO members might find it difficult to anticipate all possible “emergency” situations that may arise in the future and to qualify their commitments accordingly. Hence, the existence of a safeguard mechanism may be expected to encourage higher levels of commitments in the first place. However, the trade-off between expected gains in liberalization and (safeguards-related) losses in predictability appears more precarious than in the area of goods, given basic structural differences between the GATS and the General Agreement on Tariffs and Trade (GATT).

These differences include the extension of the coverage from “conventional” trade in products, cross-border, to the treatment of both products (services) and suppliers under four modes of supply (mode 1: cross-border trade, i.e. services

provided from one country to another; mode 2: consumption abroad, i.e. consumers or firms making use of a service in another country; mode 3: commercial presence, i.e. a foreign company establishing itself in another country; and mode 4: presence of natural persons, i.e. individuals travelling from their own country to supply services in another).

Questions abound. How could the notion of safeguards be extended to the movement of consumers, under mode 2, and to investment and labour flows under modes 3 and 4? For example, in the case of mode 3, who would be protected from whom? All domestically established service suppliers, regardless of nationality, would be protected from all new entrants? Or only domestically owned suppliers would be protected from new foreign entrants? In the latter case, how would established foreign companies be treated? Discussions among WTO members have focused on a scenario under which safeguards could be invoked to protect domestically owned suppliers from new foreign entrants, while established foreigners would be prevented from further expansion during the relevant period.

However, this scenario is not without problems. First, it is difficult to see why the foreigners that had caused the injury should be entitled to continue their current operations and be protected from follow-up (foreign) competitors. Second,

even a freeze on the current operations of foreign-invested companies might prove irreconcilable with the national-treatment obligations typically assumed under bilateral investments treaties (BITs). There are currently more than 1,900 BITs in force, involving virtually all WTO members. The large majority of these treaties guarantees national treatment, about 40 treaties even apply to new greenfield investments and/or acquisitions (Adlung and Molinuevo, 2008). Since only a few WTO members have sought most-favoured nation (MFN) exemptions under the GATS for their BITs, these guarantees need to be extended in most cases to the whole membership.

The case for safeguards under modes 1 (cross-border trade) and 2 (consumption abroad) is not easier to make, for different reasons. Producer subsidies that strengthen the competitive position of a domestic industry, at the expense of cross-border imports or consumption abroad, are not disciplined under the GATS. The guidelines governing the scheduling of commitments

(WTO document S/L/92) explicitly exempt WTO members from the obligation to extend their producer subsidies to suppliers established in other jurisdictions. Thus, contrary to the Agreement on Subsidies and Countervailing Measures, “import-substituting subsidies” are not actionable in services trade. Hence, what would be the rationale for a safeguard action if it is possible, within existing flexibilities, to achieve similar objectives (Adlung, 2007)?

Finally, given the restrictiveness of virtually all commitments relating to mode 4 (presence of natural persons), the application of safeguards to this mode has never been considered in detail. It may remain a moot point. Current Doha Round offers do not foreshadow any dramatic changes that would increase the likelihood of a safeguards-type scenario under this mode. It thus seems that a clearer picture still needs to emerge on the possible role of an additional “safety valve” in the area of services and the gaps it is intended to fill.

The following section explains the principal requirements contained in the SGA regarding increased imports as a result of unforeseen developments, serious injury to the domestic industry and the causal link that must be established between the former and the latter. Some of the conditions attached to the actual application of safeguards are also discussed. Where appropriate, observations by outside commentators on the appropriateness and shortcomings of WTO safeguard disciplines are reviewed. For illustration purposes, selective reference is also made to domestic practices of WTO members and WTO case law.

i) Imports

Unforeseen developments

As stated in Section B.1, one of the main rationales for the existence of safeguards in a trade agreement from an economic point of view is the existence of uncertainty over future events that may require a government to temporarily “escape” from its obligations.¹¹ The requirement contained in GATT Article XIX.1.a, that safeguards may only be taken in response to import surges that are “a result of unforeseen developments”, appears to be in this spirit.

Although the notion of “unforeseen developments” has not been taken up in the text of the SGA, the Appellate Body has emphasized its continuing relevance (Appellate Body Report on *Argentina – Footwear*, para. 91; Appellate Body Report on *Korea – Dairy*, para. 84). Since, in *Korea – Dairy*, the Appellate Body clarified that “unforeseen” means “unexpected” rather than “unforeseeable” (Appellate Body Report on *Korea – Dairy*, para. 84), it seems that safeguard action remains possible if the government is able to demonstrate that the probability of a development leading to a surge in imports could reasonably have been assumed to be low.

As far as timing is concerned, although Article XIX of the GATT does not explicitly address the question as of when the developments must have been “unforeseen”, the GATT panel in the *US – Fur Felt Hats* case made clear that unforeseen developments did not include those developments that negotiators could and should have foreseen at the time when the concession was negotiated (para. 9), and the Appellate Body has taken the same approach (Appellate Body Report on *Korea – Dairy*, para. 86). The panel in *US – Steel Safeguards* accepted, for instance, that the Russian and the

South-east Asian financial crises could be considered unforeseen developments that could not have been predicted at the end of the Uruguay Round.¹²

Horn and Mavroidis (2003) have commented that the concept of “unforeseen circumstances” should be applicable beyond the time when the concession was negotiated in order to preclude the use of safeguards in situations in which imports rise as a result of government policy, mismanagement or oversight. The authors submit that governments should be expected to have a good enough understanding of the economy to know that certain measures (that may decrease domestic supply or increase demand) can provoke a rise in imports. According to the authors, in such cases, governments should have foreseen the consequences and should not be able to justify the use of safeguards.

Increased imports

SGA Article 2.1 provides that safeguard measures may be applied only if a product is imported in such increased quantities (i.e. volumes, not values), either in absolute terms or relative to domestic production, as to cause or threaten to cause serious injury to domestic industry.¹³ Here, the increase of imports is measured in relation to domestic production, unlike in anti-dumping and countervailing scenarios, where the relevant comparator may be either domestic production or consumption.

The possibility of “relative increases” appears to imply that imports may even fall, as long as by less than domestic production, and still fulfil this requirement. There is no specific numerical threshold in terms of import growth that must be exceeded before action can be taken. However, the Appellate Body also clarified that not all increased quantities of imports (absolute or relative) might allow for safeguard action. It interpreted the requirements in SGA Article 2.1 (along with GATT Article XIX.1.a)¹⁴ to mean that “the increase in imports must have been recent enough, sudden enough, sharp enough, and significant enough, both quantitatively and qualitatively, to cause or threaten to cause “serious injury” (Appellate Body Report on *Argentina – Footwear*, para. 131). The Appellate Body in that case emphasized that the authorities should examine recent imports, and not simply trends over the period of investigation.¹⁵ Even more explicitly, the Appellate Body stated that it was not sufficient to examine “simply trends in imports during the past five years – or, for that matter,

during any other period of several years” (Appellate Body Report on *Argentina – Footwear*, para. 130). This statement precluded the simple comparison of import levels at the end points of the investigation period, as Argentina had done in this case.

However, in another case, the Appellate Body still highlighted the importance of import trends over the entire period of investigation along with an explanation of how these developments supported the investigation authority’s determination that increases in imports were such as to cause/threaten to cause serious injury to domestic industry (Appellate Body Report on *US – Steel Safeguards*, paras. 354-355 and 374).¹⁶ In *US – Line Pipe*, the panel pointed out that a finding of increased import quantities was still possible even if imports declined for part of the period of investigation (including towards the end of the investigation period), as long as there clearly was an increasing trend in imports over the relevant time period as a whole (Panel Report on *US – Line Pipe*, para. 7.207).

ii) Domestic industry

Unlike for anti-dumping and countervailing measures, WTO rules on safeguards do not contain provisions regarding the initiation of an investigation.¹⁷ While in practice, many countries have put in place petitioning procedures for the affected industry, WTO rules do not prevent the investigating authority from opening an investigation on its own initiative. In comparison with WTO rules on anti-dumping and countervailing measures, the definition of the domestic industry under the SGA is broader to include producers of both “like” and directly competitive products. These producers, as for anti-dumping and countervailing measures, must comprise domestic production as a whole or at least a major proportion of the relevant goods (SGA Article 4.1.c). It seems that both of these criteria leave some room for interpretation as to the exact delimitation of the domestic industry.

In *US – Lamb*, the United States’ authorities included both growers and feeders of live lamb as parts of the domestic industry of lamb meat, apart from lamb breakers and packers. The United States argued that those four groups of producers were “producers as a whole” of the like product, because they constituted a continuous line of production and as such had a substantial coincidence of economic interests (Appellate Body Report on *US – Lamb*, para. 89).

More precisely, the United States held that growers and feeders contributed 88 per cent to the value of lamb meat and, therefore, were also affected by the injury caused by imports of the processed end product (Panel Report on *US – Lamb*, para. 7.58). However, both the panel and the Appellate Body took issue with this broad definition. Most importantly, it was noted that the like products examined by the authorities were domestic and imported lamb meat, and not live lamb, and that “producers as a whole” just provided a quantitative benchmark for the proportion of producers within a properly defined domestic industry and was not meant to include the whole manufacturing process or transformation of raw materials and inputs into a final product (Appellate Body Report on *US – Lamb*, paras. 94-96). In other words, the Appellate Body emphasized that the determination of domestic industry should focus on an identification of the imports concerned and of the domestic products that are “like” or directly competitive with such imports and not on the manufacturing process or the whole value chain relating to the domestic products.

It is important to note that once the domestic industry is identified, data that are sufficiently representative of the industry must be used. In *Korea – Dairy*, the domestic industry included both raw milk and milk powder. However, parts of the injury analysis were conducted for milk powder only, without explanation as to why an analysis of injury indicators of raw milk was omitted (Panel Report on *Korea – Dairy*, paras. 7.79-7.82). In addition, within the analyzed industry segment, data on profits and losses, debt-to-equity ratios, capital depletion and production costs of only some producers were examined. In this case, the data used were not found to be sufficient to demonstrate serious injury to the domestic industry (Panel Report on *Korea – Dairy*, paras. 7.75, 7.83-7.84).

iii) Serious injury

In line with GATT Article XIX and SGA Articles 2.1 and 4, before a safeguard is implemented it is necessary to demonstrate that the increase in imports causes or threatens to cause “serious” injury to the domestic industry. The “higher standard” (Appellate Body Report on *US – Lamb*, para. 124) of injury for the imposition of a safeguard measure in comparison with that required in relation to anti-dumping or countervailing measures (“material

injury”) seems to be related to the fact that safeguards are not used in response to “unfair” trade practices.

The SGA defines serious injury as a significant “overall impairment” in the position of a domestic industry (Article 4.1.a). SGA Article 4.2.a provides a (non-exhaustive) list of quantifiable factors, all of which must be examined in order to determine injury, namely the rate and the amount of the increase in imports of the product concerned in absolute and relative terms, the share of the domestic market taken by increased imports, changes in the level of sales, production, productivity, capacity utilization, profits and losses and employment (Panel Report on *Argentina – Preserved Peaches*, para. 7.96). In order to assess the overall position of the domestic industry, investigating authorities must also evaluate other factors having a bearing on the situation of the industry concerned, actively look for pertinent information and not disregard those factors for which the evidence received is considered insufficient (Appellate Body Report on *Argentina – Footwear*, paras. 136, 139; Appellate Body Report on *US – Wheat Gluten*, paras. 45-55).

Hence, every time safeguard action is contemplated, all of the listed (and other relevant) factors must be evaluated.¹⁸ For each factor, an explanation must be given as to what extent the data presented support or detract from the determination of injury or as to why a given factor might be disregarded. For instance, in a number of cases, the examination of changes in sales, capacity utilization and/or productivity of the domestic industry was found to be insufficient, even where relevant data were provided, since there was no explanation as to how these data affected the situation of the domestic industry. In *Korea – Dairy*, inventory data showed an accumulation of stock for the period under investigation, as would be expected for an industry experiencing a downturn. However, Korean (Rep. of) authorities failed to explain why these levels were indicative of serious injury or, more broadly, why they were negative for the domestic dairy industry (Panel Report on *Korea – Dairy*, para. 7.78).

In *Argentina – Footwear*, the complainant (European Communities (EC)) provided data showing an increase in capacity utilization and productivity from alternative Argentinean sources that were in conflict with the declining numbers in both variables used by investigating authorities. Despite

some counter-arguments by Argentina that some firms closed down, thus lowering overall capacity, and that quality upgrading of products should not be misinterpreted as productivity increases, the panel found that these factors had not been fully considered in the injury investigation, including the question as to how the information provided for individual firms was related to the situation of the whole industry.¹⁹ Beyond listing the factors to be examined, the Agreement does not provide further guidance – for instance, in regard to the weight to be assigned to individual elements.²⁰

The question has been raised in the literature on this subject whether a more precise definition of injury would be desirable. Bown and Crowley (2005) argue that, on the one hand, industries that believe they are injured but do not satisfy the better-defined criteria may be less likely to petition.²¹ On the other hand, industries that abstain from requesting safeguards given the current lack of clarity might be confident that more precise criteria could be fulfilled. This might put them in a better position to press their case with the government and undermine the government's ability to resist such pressure by referring to the uncertainty as to whether the current injury requirements are fulfilled.

iv) Link between imports and injury (causation/non-attribution)

Once the existence of an increase in imports (as a result of unforeseen developments) and injury to the domestic industry have been established, evidence on the causal link between the former and the latter must be provided (SGA Article 4.2.b). In particular, if factors other than increased imports have been found to cause serious injury to the domestic industry, such injury must not be attributed to increased imports of the product concerned.²² For analytical purposes, the causal link requirement as such (as opposed to “non-attribution”) will be discussed first, followed by a discussion of the need to separate and distinguish the injurious effects of different causal factors from one another in order not to falsely attribute parts of the injury to increased imports.

Causal link

The relationship between the movements in imports (volume and market share) and the injury constitutes a central element in the required analysis of causation

(Panel Report on *Argentina – Footwear (EC)*, para. 8.237). In other words, it is examined whether the upward trend in imports (in absolute or relative terms) is shown to coincide with the expected movement of the various injury factors, and if not, whether an explanation is provided as to why the data could nevertheless imply causation. While correlation, of course, does not necessarily imply causation, panels and the Appellate Body expressed the view that a coincidence between increased imports and injury should normally exist if causation was indeed present.²³ Put another way, the absence of a correlation would require a compelling explanation as to why imports could still cause injury.

In *Argentina – Footwear*, the panel rejected Argentina's assertion that despite a fall in imports from all sources, imports in 1995 remained high relative to their 1991 levels, and therefore could still be responsible for the industry's hardship (as measured by declining sales, production, employment and profits). The panel disagreed, observing that both the absolute volume of footwear imports and the ratio of those imports to domestic production increased only in 1993 and declined continuously thereafter. It also noted that a one-year change in the base year revealed a negative trend for the whole time series,²⁴ and, hence, not the expected relationship with injury.

However, it appears that a general coincidence between imports and injury does not presuppose a co-movement of trends in imports and each and every injury factor at all times.²⁵ In *US – Wheat Gluten*, the complainant (EC) noted that, for instance, the industry's capacity utilization and sales worsened at the beginning of the investigation period and increased thereafter (1996-1997) in parallel to a surge in imports. The United States countered that despite the slight improvements in these factors at the end of the period, there was an overall negative trend during the entire investigation period (1993-1997), with the 1997 figures remaining far below their pre-import surge levels. It also pointed out that the industry continued to operate at a loss, i.e. that some injury factors had also worsened in 1996-1997.²⁶

The panel found it was appropriate for the United States to look at the situation of the industry over the entire period of investigation and agreed with the finding of a general coincidence between imports and injury. An additional observation in regard to the import-injury coincidence was made

in the *US – Steel Safeguards* case, where the panel acknowledged that a time lag might exist between the increase in imports and the injury suffered by the domestic industry, which could vary across industries and injury factors.²⁷

In addition to the coincidence between increases in import volumes and market shares and injury to domestic industry, the conditions of competition between imported and domestic products have been analyzed more specifically. This type of examination appears to go beyond the mere demonstration of statistical correlation (which could be spurious) to include instances of how imports have taken the place of domestic products in question. To recall, in line with SGA Article 2.1, a safeguard measure may be applied only if the product is imported “under such conditions” as to cause or threaten to cause serious injury to the domestic industry. In *Argentina – Footwear*, the panel deduced from this phrase the need to examine the conditions of competition between the imported product and the domestic “like” – or directly competitive – product.²⁸ While the panel held, in the absence of further guidance from the Agreement itself, that any factor affecting the conditions of competition between the imported and domestic products might be relevant for such an assessment, it highlighted the particular importance of an analysis of relative prices.²⁹

In that regard, it found fault with the lack of evidence provided by the Argentinean investigating authority concerning its claim that output by the domestic industry had been replaced by imports and that these were indeed cheaper than domestic footwear. The panel further explained that where a broad definition of like or directly competitive products was used, the analysis of the conditions of competition had to go beyond mere statistical comparisons of imports and of the industry as a whole. Concretely, this implied that the summary of questionnaire responses from domestic producers established by the investigating authority lacked detailed product information in order to characterize the relevant competitive relationship.³⁰

Following a similar approach, the panel on *US – Steel Safeguards* concluded that, for some product lines, the analysis of the conditions of competition supported the existence of a causal link between increased imports and injury to domestic industry while for others it did not. For instance, the panel found that combining a variety of products within one product group cast doubts on the validity of

the price analysis. It also criticized the omission of data on several sub-products within the product group.³¹ For other product lines, where the evidence showed that imported goods undersold domestic goods and import and domestic price trends were closely linked, the competitive situation appeared to confirm the existence of a causal link.³²

Non-attribution

In line with SGA Article 4.2(b), besides the existence of a causal link between increased imports of the product concerned and serious injury (or threat thereof) to domestic industry, investigation authorities must demonstrate that when other factors are causing injury at the same time, such injury is not attributed to increased imports. The Appellate Body has explained that in order to do this, the effects of increased imports must be separated and distinguished from the effects of other factors.³³

Investigating authorities must then attribute to increased imports, on the one hand, and, by implication, to other relevant factors, on the other hand, “injury” caused by all of these different factors.³⁴ In this way, investigating authorities are supposed to determine whether “the causal link” exists between increased imports and serious injury, and whether this causal link involves a genuine and substantial relationship of cause and effect between these two elements. The Appellate Body left it to the discretion of national investigating authorities to develop a proper methodology for non-attribution analysis.³⁵ The proper conduct of the non-attribution test also has consequences for the size of the safeguard measure to be imposed (SGA Article 5.1, which is further discussed below), which must be limited to the extent of the serious injury caused by increased imports.³⁶

As mentioned above, in *US – Wheat Gluten*, during the investigation period (1993-1997), imports increased and injury was evident in the form of a decline in capacity utilization and profitability. However, the domestic industry’s productive capacity also increased. The EC challenged the imposition of a safeguard, alleging that the United States failed to ensure that the injury caused by the capacity increase was not wrongly being attributed to increased imports.

In examining these issues, the Appellate Body agreed that increased capacity might have had an

important impact on the overall situation of the domestic industry. Assuming no capacity increase, capacity utilization would only have fallen modestly and would probably have allowed the domestic industry to operate profitably, despite the increase in imports. By the same token, the Appellate Body considered that even if the increase in imports had been lower than it actually was, the rate of capacity utilization would have fallen significantly owing to the expanded capacity and would only have been about 10 per cent higher than the levels actually attained in 1997. This sort of analysis was not contained in the report of the United States investigating authority, the International Trade Commission (ITC). The ITC had claimed that, but for the increase in imports, the industry would have operated at 61 per cent of capacity in 1997, i.e. closer to the level at which the industry operated early in the investigation period when it still made profits.³⁷

In addition, the Appellate Body noted that neither the reasoning by the ITC (showing that none of the factors examined constituted a more important cause³⁸ of serious injury than increased imports) nor the finding by the panel (that increased imports in and of themselves had to be sufficient to cause serious injury) were supported by the Agreement.³⁹ This issue also arose in *US – Lamb*, where again, the Appellate Body observed that the ITC had not offered an explanation of the effects of other factors nor separated these effects from the threat of serious injury caused by increased imports.⁴⁰ Similar shortcomings were found in other safeguards cases.⁴¹ In summary, the Appellate Body clarified that the SGA did not require “but for causation”, i.e. that other factors could be equally or even more important contributors to injury as long as these effects were properly identified to avoid misattribution of injury to imports. In that regard, it emphasized the need to provide a solid explanation of the relevant relationships. This also implies that allegations of causation may prove unfounded if an alternative explanation of the facts can be brought to bear that renders the defendant’s explanation inadequate.

Causation analysis: some economic observations

Causation analysis has been found to be defective in practically all safeguard disputes. Some have voiced the opinion that the approach established by the Appellate Body constituted a task that was

“significantly difficult and complicated, if not completely impossible” (Lee, 2005: 81). At the same time, many critics cautioned against too much reliance on simple correlations even if supplemented by qualitative statements in all parts of the analysis (Sykes, 2003b; Grossman and Mavroidis, 2003b). This raises the following questions: (i) how can the relationship between imports and domestic factors be conceptualized economically; and (ii) how can the relative contributions of different factors be measured?

Modelling the relationship between imports and domestic factors

From an economic perspective, it is highly unusual to regard imports as an “exogenous” variable, i.e. a variable that is not determined within economic theory and that could “cause” the decline of domestic production, employment or any other injury to domestic industry. Commonly, domestic variables of that sort and imports are seen as being determined simultaneously and as being the result of the interaction between demand and supply in the importing country and the rest of the world.⁴² Changes in the quantity of imports and the state of the domestic industry can both be the result of the same cause.⁴³ Under such circumstances, it would be impossible to ascribe a causal relationship between the two variables (Grossman and Sykes, 2007; Grossman and Mavroidis, 2007c).

By the same token, in economic modelling, at least some of the injury variables listed in the Agreement on Safeguards, such as a decline in productivity, that may be affected by imports may be considered as possible “exogenous shocks” — i.e. an external event that is not explained within the model. It is interesting to note that, unlike in the SGA, the Anti-dumping Agreement (ADA) provides separate lists of factors having a bearing on the state of the industry (ADA Article 3.4) and indicators other than “dumped” imports that may cause injury to the domestic industry (ADA Article 3.5). While productivity features in both these listings, the list of other causal factors in the ADA includes variables, such as changes in the pattern of consumption, that economists normally perceive as possible alternative causes for reductions in domestic output.

In summary, even when a correlation between rising imports and indicators of the domestic industry’s decline is found, these may be caused by other

factors.⁴⁴ The *World Trade Report 2005* (WTO, 2005: 204) provides a simple graphical illustration of both supply and demand fluctuations that may cause imports to rise and the domestic industry to decline. Domestically, such developments may, for example, be triggered by a hike in the price of a key domestic production input or a decline in productivity. As far as factors originating from abroad (external shocks) are concerned, imports may increase following a change in import supply – for instance, because foreign income and demand for that product have dropped or foreign productivity has increased, thus resulting in a larger volume for export.

Horn and Mavroidis (2003) argue that only the latter type of developments, i.e. those originating abroad, should qualify as a legitimate ground for safeguards.⁴⁵ While the SGA does not make a distinction as to the origin of the economic factors causing disruption, the combined requirements of increased imports and ensuring that injury due to other factors is not attributed to imports can at least be seen as an indirect attempt at isolating the degree of “foreign responsibility”. Of course, in reality, the ultimate causes of higher imports and domestic injury are usually a lot less clear-cut than in the examples mentioned in the previous paragraph. In such a simple framework, the observed movement of prices (along with the specific changes in consumption, production and imports) would be quite telling in terms of the origin of the economic shock.

In the case of a decline in domestic supply, prices faced by consumers would be expected to stay unchanged (with imports filling the excess demand gap), but would tend to fall if imports were to increase following a decline in demand or an increase in supply abroad (WTO, 2005: 205; Irwin, 2003). In practice, several developments at home and abroad may take place at the same time and, as is evident from the case law to date, distinguishing and separating the effects of different factors on injury to domestic industry can prove to be a challenging task. For example, lower prices of domestic products in the presence of increased imports could also be the result of perceived differences in product quality, and any correlation between domestic and import prices would only be a demonstration that one product could be substituted for the other to a certain degree (Grossman and Sykes, 2007).

Measuring the contributions of different factors

The *World Trade Report 2005* (WTO, 2005: 200-201) summarizes a number of econometric methods

that have been proposed in trade literature in order to estimate the contribution of relevant factors to a particular injury indicator, as well as simpler injury approaches that seek to determine the causes of injury on the basis of data routinely provided in safeguard investigations.⁴⁶ The latter method take import supply and domestic demand elasticities as given. It is then determined to what extent outside factors having an impact on supply and demand must have changed in order to obtain the observed level of injury, as measured by domestic production, for example. By comparing the estimated and observed levels, some inference can be made as to how likely it is that injury to domestic industry has been caused by increased imports (Irwin, 2003; Kelly, 1988).

In using econometric methods, the aim is to estimate the average contribution of individual supply and demand factors to a particular indicator of injury to domestic industry. For instance, Grossman (1986a) estimates the relationship between employment in the steel sector (as one indicator of injury) and imports as well as domestic factors, such as industry output. He uses the estimated parameters to simulate a path that employment would have taken if imports had stayed at their initial level, assuming no changes to other variables. Comparing the simulated and actual employment levels allows him to isolate the contribution of imports. He proceeds in a similar manner to determine the impact of other factors.

Pindyck and Rotemberg (1987) pursue a similar approach, in which they ascribe any remaining injury that is not explained by shifts in domestic supply and demand to increased imports, no matter what the sources of these changes are (i.e. they also include the response of imports to these domestic developments and not only import surges in response to factors originating abroad). Either one of these approaches involve rather stark assumptions, such as infinite (elasticity of) import supply in the former case or the attribution of injury to imports even if these change purely as a result of domestic developments.

Prusa and Sharp (2001) advocate the use of simultaneous equation models which take account of the nature and intensity of the economic relationships between imports and domestic products as well as other relevant demand and supply factors. In summary, a range of economists seem to support the view that econometric techniques can help to address the question of causation by

providing concrete information about how different factors contribute to injury to domestic industry. Quantifying in this way the injury caused by various factors may also help to assess the magnitude of safeguard measures permitted under SGA Article 5.1, an issue that is further discussed below.

v) Application of safeguard measures

Tariffs, quotas or tariff-rate quotas?

Safeguard measures can take different forms, such as tariff surcharges, quotas or tariff-rate quotas (TRQs), since the type of measure to be applied is not prescribed by the relevant WTO rules, other than the obligation to choose the most suitable measure (SGA Article 5.1). Of the 89 safeguard measures notified to the WTO between 1 January 1995 and 19 February 2009, nine took the form of quotas or quantitative restrictions, 21 took the form of tariff rate quotas, and the remaining measures took the form of tariffs, either specific (27), *ad valorem* (27), variable (4), or a combination thereof (1).

From an economic point of view, it must be asked what instrument is preferable under what circumstances. Box 6 provides an overview of the economic effects of tariffs, quotas and tariff-rate quotas for a small country under perfect competition. Tariffs are more transparent, easy to administer and the revenue created is collected by the government (as opposed to quotas where scarcity premia (quota rents) might be “captured” by exporters or importers depending on the method for allocating quota shares, unless these are auctioned off). However, once political considerations enter the picture, quotas may be the preferred instrument of protection for the very same reasons. For example, as shown in Box 6, fixed quota limits ensure that any demand increases beyond the quota volume are met by the domestic industry and not by imports. Disregarding the added inefficiencies that this creates, governments might see a political advantage in being able to “guarantee” to the affected industry a fixed upper limit on imports (Baldwin, 1989).

In general, the existence of quota rents creates specific interests that politicians might wish to accommodate (Findlay and Wellisz, 1986). Since, under the SGA, quota shares are distributed on the basis of historical market shares (and not auctioned off), these may even be transferred to

foreign producers, which may help governments appease trading partners and prevent possible retaliatory action (Godek, 1991). Magee (1989) emphasizes that policy-makers may on purpose choose quotas as a less transparent instrument in order to conceal political favouritism and reduce the risk of displeasing a large number of voters.⁴⁷

Furthermore, under the assumption that the required adjustment by the domestic industry involves marginal costs that decrease with cumulative production learning, and the first-best policy of production subsidies is unavailable on budgetary or political grounds, Melitz (2005) demonstrates that, under certain assumptions, quotas are preferable to tariffs in order to increase domestic production at the expense of imports. He assumes that trade policy changes are costly and that it makes sense for policy-makers to set a fixed tariff or quota level only once (or a limited number of times). However, the optimal tariff needs to decrease as the adjustment progresses until it reaches zero at the end of the learning period.

A fixed tariff may not offer enough protection early in the adjustment period and be too restrictive towards the end. Conversely, if a quota is set at the long-term consumption level of foreign goods (i.e. the amount of imports once the domestic industry has adjusted), the domestic industry naturally decreases costs until the adjustment is completed. This also implies that quotas require less information about adjustment in the learning period, notably no information on the adjustment process.⁴⁸ However, as discussed in Section C.1.a above, Miyagiwa and Ohno (1999) show that domestic firms are encouraged to adjust more quickly the higher the effective costs of imports via tariff protection in order to enjoy higher profits as long as possible until the protection phase-out date. By contrast, quotas set at the long-term level of imports (i.e. when marginal costs of the domestic industry have stabilized after the adjustment process) would reduce the incentive to innovate since they do not increase a foreign firm’s effective costs as much as tariff protection would do.

Box 6
Effects of tariff, quota and tariff-rate quota

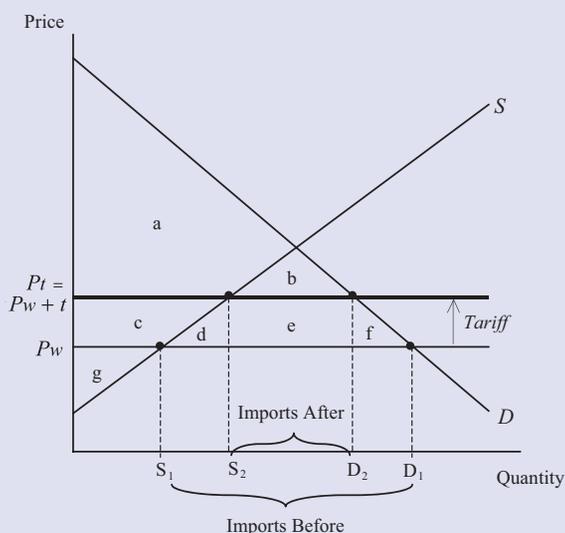


Figure 1: The effect of a tariff

A common way of analyzing the effects of a tariff and a quota is with the help of a simple demand and supply framework, as shown in Figures 1 and 2. The analysis here assumes the existence of perfect competition and a small economy (i.e. one that is “price-taking” and therefore cannot affect prices by quantitatively varying supply or demand). National economic welfare consists of consumer surplus (the difference between the willingness to pay and the actual price the consumer pays), producer surplus (the sum of profits earned by suppliers) and government tariff revenue. Consumer demand is represented by demand curve D and producers are in a competitive market with supply curve S . Under free trade, consumers purchase at world price P_W and demand a quantity equal to D_1 , domestic suppliers produce S_1 , and imports fill the excess demand gap. In Figure 1, consumer surplus is given by the sum of a , b , c , d , e and f whereas producer surplus is given by g .

Suppose a country imposes a tariff per unit on foreign imports. The domestic price becomes $(P_W + t)$, demand decreases to D_2 , and supply increases to S_2 . As a consequence, imports fall. Producer surplus increases to $(g + c)$, consumer surplus shrinks to $(a + b)$, but government revenue from the tariff on imports is collected, amounting to e . The sum of national economic welfare in the presence of a tariff is strictly lower than welfare under free trade, with the so-called deadweight

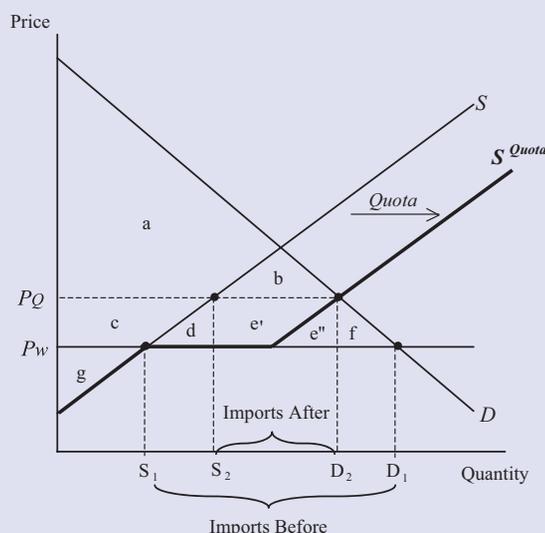


Figure 2: The effect of a quota

loss being equal to $(d + f)$. Owing to the price increase, some consumers are driven out of the market and this loss is captured by triangle f . Moreover, the increase of domestic production entails costs that exceed the costs of the imports they replace. Hence, triangle d captures the loss of surplus associated with domestic production.

Now suppose a government imposes an import quota. This prevents the domestic economy from importing as much as before. Instead, in order to satisfy demand, domestic suppliers have to produce any quantity demanded in excess of the quota. However, since the cost of producing these extra units is strictly higher than the costs of imports, the domestic price rises to P_Q . In Figure 2, the domestic supply curve is now represented in bold. That is, a quota has the effect of shifting the supply curve to the right by the amount of the quota whenever the price is above the world price. The supply curve below the world price does not move, since at these levels of demand it is not profitable for the licence holders to import. A quota, like a tariff, raises the domestic price and causes deadweight losses equal to $(d + f)$.

While a tariff produces government revenue, an import quota creates a surplus for the licence holders (area $e' + e''$). Theoretically, if the government auctions import rights, the two instruments are equivalent. However, in practice, governments might distribute the quota shares

based on historical market shares to importers, who collect the quota rents. Hence, the existence of a quota can provide incentives for importers to engage in inefficient activities aimed at maximising their quota shares. In addition, a quota grants discretion as to how a government allocates import licences. As a result, quotas are considered less transparent and might entail additional inefficiencies, which is why tariffs are commonly seen as a better means of protection.

Further differences exist between tariffs and quotas. A quota interferes directly with the link between prices and quantities, which is essential to the operation of a market-based system. A tariff simply creates a wedge, but allows the price system to function. For instance, if there is an unexpected increase in demand after a tariff or a quota has been imposed, a quota is more protectionist than a tariff. In Figure 3, the demand, represented by D , refers to when the tariff or quota was set. However, the demand unexpectedly expands to D' . With a tariff, the excess demand is satisfied by an increase in imports at price P'_t . In the presence of a quota, however, excess demand has to be satisfied by an increase in domestic production, which leads to an increase in the domestic price to P'_Q . Therefore, a quota leads to a further deadweight loss equal to $(d' + f')$ compared with a (previously equivalent) tariff when demand increases. For further considerations on the effects of tariffs and quotas in competitive markets and the differences between these instruments of protection under

conditions of imperfect competition see, for instance, Vousden (1990).

Safeguard measures, under certain conditions, may also be applied in the form of tariff-rate quotas (TRQs). As its name suggests, a TRQ consists of a quota for a certain volume of imports that may enter the country at a favourable tariff rate known as the in-quota tariff. Any imports exceeding this volume are subject to a higher out-of-quota tariff. Figure 4 illustrates the basic mechanism of a TRQ for three different cases of quota fill and demand. In Case 1, the quota is only partially filled. The applicable tariff on imports is the in-quota tariff, and, hence, the domestic price is equal to $P = P_W + t^{in}$ and imports are equal to the amount of the segment that links point a to point b . Case 2 illustrates a situation in which the quota is filled and additional imports face the out-of-quota tariff. In this case, the out-of-quota tariff rate is high enough to deter imports and foster domestic production at price P' . That is, a TRQ has the effect of shifting the supply curve to the right by the amount of the quota. Finally, Case 3 shows a demand curve that is high enough to make even imports subject to the out-of-quota tariff profitable. The price for these additional units of imports is equal to $P'' = P_W + t^{out}$ and the volume of additional imports is equal to the amount de . Total imports in Case 3 are equal to imports under the in- and out-of-quota tariff, i.e. to the amount ce .

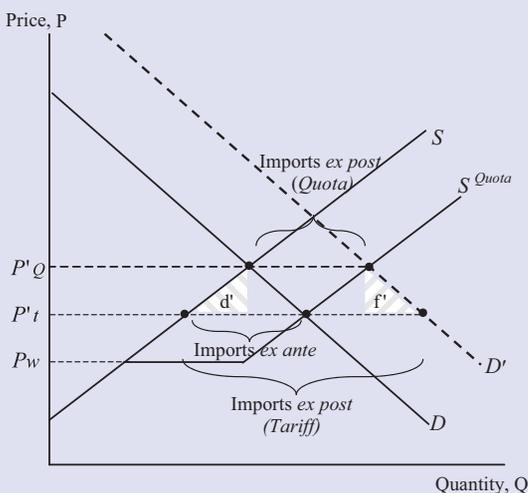


Figure 3: The difference between a tariff and a quota

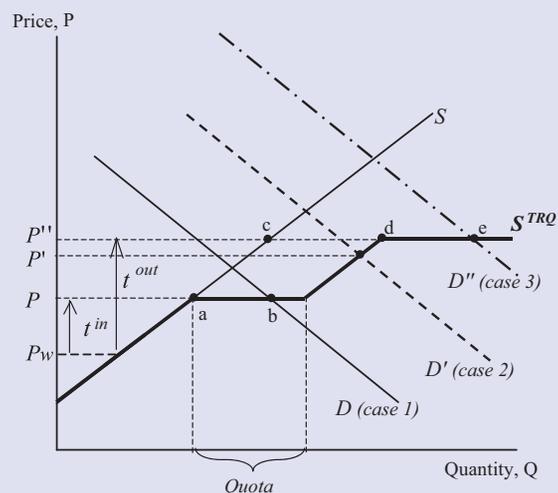


Figure 4: The effect of a tariff-rate quota (TRQ)

Size of safeguard measures

Concerning the size of safeguard measures, SGA Article 5.1 stipulates that measures are to be applied only to the extent necessary to prevent or remedy serious injury to domestic industry and to facilitate adjustment. No natural upper limit exists in contrast to anti-dumping, for example, where the duty cannot exceed the anti-dumping margin (i.e. the difference between the export price and the normal price in the exporter's domestic market). As mentioned previously, disentangling the relative contribution of different factors to serious injury might be important to determine the "permissible extent" of the safeguard measure. In light of the "non-attribution" requirement contained in SGA Article 4.2.b and described earlier, the Appellate Body recalled that this provision did not allow for safeguard measures that would completely remove serious injury to domestic industry if part of this injury was due to factors other than imports.

Thus, safeguards may be applied only to the extent that they address serious injury due to increased imports (Appellate Body Report on *US – Line Pipe*, paras. 250 and 260). By way of comparison with anti-dumping and countervailing measures, the Appellate Body finds broader support for this constraint, noting that if "the pain inflicted on exporters by a safeguard measure were permitted to have effects beyond the share of injury caused by increased imports, this would imply that an exceptional remedy, which is not meant to protect the industry of the importing country from unfair or illegal trade practices, could be applied in a more trade-restrictive manner than countervailing and anti-dumping duties" (Appellate Body Report on *US – Line Pipe*, para. 257).

From this interpretation, it follows that a permitted safeguard measure, such as a tariff, would be lower than the tariff that would be needed to completely remove the serious injury to domestic industry without requiring any adjustment to other injury factors.⁴⁹ With other elements in the safeguard determination being defective, notably the non-attribution analysis under SGA Article 4.2.b, panels for reasons of judicial economy rarely needed to examine claims regarding the appropriate level of measures under Article 5.1.⁵⁰ In the *US – Steel Safeguards* case, a model was used by the ITC which allowed the effects of trade remedies on supply and demand and ultimately prices in the affected industry to be modelled. This was done to

show that the safeguard measures were not applied beyond the extent necessary, but, for reasons of judicial economy, this approach was not further reviewed.⁵¹

Only for measures in the form of "quantitative restrictions" does the Agreement on Safeguards provide at least some indication on how the level of the safeguard measure is to be determined. Quotas must not be set at a level below the average for the last three representative years for which statistics are available, unless a clear justification is given that a lower level is necessary to prevent or remedy serious injury to domestic industry (SGA Article 5.1; Appellate Body Report on *Korea – Dairy*, para. 98). In their national legislation, some WTO members have also placed limits on tariffs. For example, the US Section 203(e)(3) of the Trade Act of 1974 restricts safeguard tariffs to a maximum increase of 50 per cent *ad valorem*. Moreover, members have an incentive to exert a degree of self-restraint, since the greater the extent of the measure, the larger the compensation that becomes due. It may also be more difficult to reach an agreement with affected countries on the sectoral coverage and extent of compensatory measures, which in turn heightens the risk of retaliation (Lee, 2005).

Scope of safeguard measures and MFN application

In principle, safeguard measures are to be implemented on an MFN basis, i.e. they are to be applied to all imports irrespective of their source (SGA Article 2.2). In the case of tariffs, this means the same level is applied to imports from all sources. However, in the case of quotas, the question arises as to how to allocate quota shares among supplying countries. The WTO member applying the restriction is first to seek agreement with supplying countries. In the absence of an agreement, the member is entitled to determine the quota shares based on historical levels of the total quantity or value of imports of the product over a representative time period, taking account of special factors that may have affected trade in the product (SGA Article 5.2.a).⁵² The member may even depart from these requirements and target imports from certain members (so-called "quota modulation") if imports from these sources have increased disproportionately in relation to the total increase of the product concerned, subject to a range of further conditions (SGA Article 5.2.b).⁵³

Another deviation from the MFN principle in the application of safeguard measures concerns special and differential (S&D) treatment given to developing countries.⁵⁴ Safeguard measures are not to be applied against a product originating in a developing country if its share in total imports is less than 3 per cent, provided that all those developing countries with a lower than 3 per cent import share do not account for more than 9 per cent collectively (SGA Article 9.1).⁵⁵

Another issue that has arisen in the context of the general MFN requirement is whether preferential trade agreement (PTA) partners may be excluded from the application of safeguard measures. A panel ruled that this was permitted, but this decision was declared moot by the Appellate Body and to be of no legal effect (Appellate Body Report on *US – Line Pipe*, para. 199)

Although the question remains unresolved (and has spawned a large literature on the relationship between SGA Article 2.2 and GATT 1994 Article XXIV),⁵⁶ the Appellate Body in cases involving PTA partners emphasized the requirement of “parallelism” between the sources of imports included in the injury investigation and those imports against which safeguard measures were actually applied.⁵⁷ For example, in *US – Steel Safeguards*, the US excluded some of its Free Trade Agreement (FTA) partners, such as Canada, Israel, Jordan and Mexico, from the application of the measures while including imports from these sources in the injury investigation. The US failed to explain how imports from sources other than the excluded countries solely satisfied the conditions of injury and causation laid down in SGA Article 2.1. It would also have been necessary to show that the effects of excluded imports were not falsely attributed to imports included in the measure (Appellate Body Report on *US – Steel Safeguards*, paras. 444 and 450-452).

Applying safeguard measures on an MFN basis prevents trade diversion, i.e. it ensures that “efficient imports” are not replaced by imports from less efficient producers in third countries that are not subject to the measures. In particular, it avoids the predominant use of safeguards against smaller countries, which might otherwise be a preferred target since they are not in the same position to retaliate as large countries. On the other hand, exclusion of some trading partners from the application of safeguards reduces the need

for compensation and the potential for additional inefficiencies through “more than necessary” retaliation.

For example, in relation to a recent safeguard measure on travel goods taken by Turkey, the EC noted that its exports were priced higher than the relevant Turkish products and that any measure should not be applied across-the-board (WTO document G/SG/M/33: para. 71). As noted above, in principle, quota modulation allows for a targeted use of safeguards. If fewer countries are subject to safeguard measures, the potential for trade being redirected from the safeguard-imposing country to third-country markets is also reduced and, along with it, the threat of other countries resorting to protection in response to such trade deflection.

Compensation

SGA Article 8.1 obliges a WTO member proposing to apply a safeguard to provide trade compensation in order to maintain a substantially equivalent level of concessions with exporting members affected by such a measure. If compensation is not forthcoming or considered unsatisfactory, aggrieved countries may choose to retaliate (SGA Article 8.2), i.e. by restricting imports from the safeguard-applying country, subject to certain procedural requirements. However, an important exception exists: if the safeguard-applying country faces an absolute (as opposed to relative) increase in imports, affected exporting members may not exercise their right to suspend the application of substantially equivalent concessions or other GATT obligations, i.e. “retaliate”, for the first three years that a safeguard measure is in effect (SGA Article 8.3).

The compensation requirement is a key distinction of safeguards in comparison with anti-dumping and countervailing measures (where compensation is not required owing to the unfair character of the imports in question). However, in practice, compensation has rarely been implemented. In fact, since the establishment of the WTO in 1995, no notifications have been received on proposed compensation.⁵⁸ This is perhaps not too surprising. Countries affected by the safeguard measure may target different sectors for which compensation is demanded. Since tariff reductions in those sectors would need to be provided on an MFN basis, the safeguard-applying country runs the risk of over-compensation. At the same time, it is unrealistic to expect all affected WTO members to agree on a

single set of compensatory measures. Bown (2002b) proposes that the safeguard-applying country refund the tariff revenue collected to those foreign governments whose exporting firms are negatively affected.

With the average duration of safeguards under the WTO being slightly over two years (Yano, 2006), the “three year” grace period for exercising the right to retaliate under SGA Article 8.3 provides another explanation for the relatively small number of compensation/retaliation instances raised under Article 8. A number of notifications on proposed countermeasures have been received, in line with SGA Article 8.2, but these have not always been implemented (see Table 2).

From a systemic point of view, compensation seems appropriate in order to preserve the “global” pre-safeguard level of liberalization. More particularly, the need to compensate entices large countries, i.e. countries that can impose part of the cost of protection on exporters, to absorb more of the price (terms-of-trade) effect they create. Faced with costs that are closer to the true costs of protection, countries may implement trade measures less frequently. As mentioned in Box 2 of Section B, voluntary export restraints (VERs), that were explicitly prohibited under the Safeguard Agreement, provided an implicit compensation to foreign firms through the quota rents they created in exporting countries.⁵⁹ At the same time, if a country uses temporary protection to solve an adjustment problem in one industry, but has

(politically) optimal tariffs in place elsewhere, unravelling a “balanced” situation through tariff reductions in unrelated sectors might be considered counterproductive.

*Time-limited application
(temporary relief to facilitate adjustment)*

SGA Article 7 provides precise prescriptions for the duration and review of safeguard measures. As a general rule, safeguard measures are to remain in place only for the time necessary to prevent or remedy serious injury to domestic industry and to facilitate adjustment. They cannot exceed four years. However, safeguards may be extended for another four years if the WTO member imposing the safeguard is able to provide evidence that this continuation is necessary to address the ongoing effects and that the industry being protected is still adjusting.⁶⁰

The notion of adjustment is also embodied in the requirement that after the first year of application, safeguard measures must be progressively liberalized at regular intervals. The risk of these time limits being circumvented by a re-imposition of safeguards after the end of the original application period is curtailed by the fact that a safeguard may not be applied to the same product for a period equal to the duration of the previous measure, at least for two years.⁶¹ For shorter safeguard measures (less than 180 days), a one-year “holiday” applies subject to the condition that a measure has not been applied on the same product

Table 2
Suspension of concessions pursuant to SGA Article 8.2

Member proposing suspension	Against whom?	Original safeguard measure imposed on	Notified in *	Year	Was the suspension actually implemented?
Norway	EC	farmed salmon	G/L/738 and Corr.1	2005	No
Turkey	Jordan	pasta	G/L/626	2003	No
Turkey	Jordan	sanitary ware products	G/L/625	2003	No
Turkey	EC	certain steel products	G/SG/N/12/TUR/1, also as G/L/624	2002	No
EC	US	certain steel products	G/C/10 and Suppl.1	2002	Yes (See G/C/10/Suppl.1)
Japan	US	certain steel products	G/C/15 and Suppl.1	2002	Yes (See G/C/15/Suppl.1)
Switzerland	US	certain steel products	G/C/18	2002	No
China	US	certain steel products	G/C/17	2002	No
Norway	US	certain steel products	G/C/16	2002	No
Poland	Slovakia	sugar	G/L/453 and Suppl.1-3	2001	Yes (See G/C/M/53 and G/L/453/Suppl.3)
EC	US	wheat gluten	G/L/251	1998	No

*Only one symbol is indicated, even for multi-referenced documents.

Source: WTO Secretariat.

more than twice in the five-year period preceding the imposition of the measure.

As discussed in sub-section C.1.a, specific and credible time limits are crucial for safeguards to fulfil their purpose. The SGA incorporates this concept by defining fixed periods and only limited options for extension/re-imposition of measures. However, the time-limits set under the SGA may provide too much protection in some cases and too little in others. While the first case has obvious efficiency costs, the latter case is problematic as well. A duration of safeguard measures that allows insufficient time for the domestic industry to adjust would impose costs on consumers without ultimately yielding the expected benefits to the economy (Crowley, 2007).

(c) Conclusions

Safeguard provisions are an important element in international trade agreements. They allow policy-makers to make far-ranging commitments taking into account the uncertainty over future events that may require a change in policy. This section has highlighted that the distinguishing feature of safeguards in trade agreements is their strictly temporary character backed up by the credible threat that other countries will legitimately punish any abuse of the mechanism. This constraint sets the right incentives to make industrial adjustment happen.

Furthermore, in a trade agreement, this and other requirements seek to strike a balance between any WTO member's unknown need for flexibility (at the time that the agreement is signed) and the concern of trading partners to minimize the impact of safeguard measures on their interests. The requirement to demonstrate that an increase in imports is the cause of injury to domestic industry and to ensure that injury caused by other factors is not falsely attributed to imports is key in this respect.

In practice, the implementation of this causation/non-attribution requirement has not been straightforward, as proven by the negative track record in dispute settlement in this regard. In addition, many observers have criticized the reliance on correlations between imports and injury to demonstrate the impact of imports on domestic industry. Economists have noted the fundamental problem of conceptualizing imports as an exogenous

variable and not as one that is determined simultaneously with other injury variables, such as domestic production. Both injury and imports may in fact be the consequence of other events. This view has triggered an academic debate on whether the origin of the shock – foreign or domestic – and a possible identification of responsibilities play a role in pinpointing imports as the cause of injury to domestic industry.

Such discussions might eventually also be of practical concern – for instance, in calculating the permissible extent of a safeguard tariff that would not exceed the share of injury due to imports. In presenting the rules on the application of safeguard measures, the section has also highlighted further issues that have triggered some debate in trade literature, such as the possibility of quota modulation (whereby imports from specific WTO members are targeted) or the compensation that is required from the country applying the measure. However, in order to evaluate the stringency of safeguard disciplines, these issues must also be seen in relation to the rules governing other forms of contingent protection. These are discussed in the following sub-sections.

2. DUMPING AND ANTI-DUMPING MEASURES

This section discusses how economic literature has explained the phenomenon of dumping – i.e. the practice of exporting goods at less than their normal price in the exporter's domestic market. It reviews firms' motivations for dumping and the consequences of dumping on the economic welfare of the importing country. It evaluates the likely benefits and costs of anti-dumping policy when governments employ it as a tool to combat dumping. Finally, it describes multilateral rules on anti-dumping and how such rules are implemented in practice.

(a) Why do firms dump goods?

Dumping is generally seen either as an exercise by foreign firms of monopoly power in international trade or as a response to changing demand coupled with an inability to adjust production capacity over the course of the business cycle.

There is extensive literature that sees dumping as a reflection of monopoly power. The classic treatment

of the problem of dumping in international trade can be found in Viner (1923) who defines dumping as essentially “price discrimination”, in which a firm with monopoly or market power charges different prices to consumers in the home and export markets. Charging a lower price to consumers in the export market will be profitable to the monopolist if consumers in the export market are more responsive than consumers at home to price changes, meaning that they will be more inclined to decrease their demand if the price of the product goes up demand is elastic. This difference in demand elasticity between the home and export market can arise if the dumping firm faces competition in the export market but retains a monopoly in its home market.

The assumption that the dumping firm has a monopoly in its home market and that the domestic market is oligopolistic is the hallmark of much of the contemporary economic literature on dumping. The presence of competition means any increase in the price charged by the dumping firm will lead consumers to switch to the goods offered by other firms in the domestic market. To sustain price discrimination for the same product, the firm with monopoly power must be able to segment or separate its home and export markets, otherwise arbitrage – the goods selling in the cheaper market will be resold in the high price market – will simply erase the price differential. This segmentation can occur because of trade barriers in the exporting country or high transport costs.

Viner (1923) provides a classification of dumping according to the motives of the firm and the duration of the dumping. The motives include disposing of a surplus, creating goodwill in a new market, predatory dumping (i.e. seeking to establish a monopoly by driving domestic producers out of business), retaliation against dumping by a foreign firm and retaining reduced unit cost through the expansion of output and sales in the export market.⁶² The duration of dumping can be sporadic, intermittent or continuous. As shall be seen in this and later sections of the Report, many of the subsequent economic explanations for dumping tend to take one of these motivations as their point of departure.

Brander and Krugman (1983) develop a model of international oligopoly, with the foreign and domestic firms having market power and competing in both markets, leading to reciprocal dumping.

The foreign firm dumps goods in the domestic market and the domestic firm dumps goods in the foreign market. This departs from the usual model of dumping, where the domestic firm only serves the domestic market while the foreign firm has a monopoly of its own market. As shall be seen in the next section, reciprocal dumping creates interesting interactions between the domestic and foreign governments, including tit-for-tat or retaliatory anti-dumping actions.

Reciprocal dumping occurs because of two features outlined by Brander and Krugman: domestic and foreign firms act as Cournot⁶³ competitors and both firms incur transport costs when they export. Cournot competition and the existence of transport cost give the domestic firm a larger share of the domestic market but still leave the foreign firm with a foothold in the domestic market. Furthermore, since a Cournot competitor perceives a demand elasticity – that is, the degree of responsiveness to a price change – equal to the industry elasticity divided by its own market share, each firm faces a more elastic – or more price-responsive – demand in its export market. This difference between the demand elasticities faced by the imperfectly competitive firms in the domestic and foreign markets creates the condition for dumping (the f.o.b. – free on board – price for exports is below the price charged in the home market).⁶⁴ Since both firms face this difference in demand elasticities in the domestic and foreign markets, there is reciprocal dumping.⁶⁵

If a firm has market power, will it not attempt “predatory” dumping, selling at a sufficiently low price so that domestic producers are eventually driven out of business and the foreign firm is then able to establish a monopoly? Some of the earliest laws on anti-dumping, such as the 1916 US Anti-dumping Act, were aimed at predatory behaviour by foreign firms (Brown and Hogendorn, 2000).⁶⁶ Although the predation motive for dumping was discussed by early economists, such as Viner (1923) and Haberler (1937), they tended to discount it as an important explanation.

In engaging in predatory dumping, the foreign firm will have to incur losses upfront as it tries to undercut its competitor’s price (this presupposes that the foreign and domestic firms have similar cost structures). Assuming that it is successful in eventually driving out its competitor, it will have to subsequently raise its price so as to recoup the initial losses and earn a positive rate of return. But raising

its price will invite entrants to the market, which might be new domestic producers or other foreign exporters, thus defeating the purpose of predatory dumping. If it does not raise its price sufficiently, it may not be able to recoup its initial losses. Thus, the set of conditions under which predatory dumping can be successful appears to be quite difficult to realize in practice. In one of the few empirical studies that actually looks at this question, Shin (1998) concludes that such instances appear to be rare.⁶⁷

More recent theories of predatory dumping attempt to get around some of these difficulties by noting that this behaviour could arise if the domestic firm has incomplete information or if credit markets are imperfect. In Hartigan (1996b), the domestic firm is unable to secure loans from financial markets which would allow it to survive the initial period of dumping by the foreign firm.⁶⁸ The reason for this is that financial markets do not have complete information and project the domestic firm's prospects based on its current profits. Thus, in the face of foreign dumping and losses by the domestic firm, financial markets deny it credit even though in reality the domestic firm may be able to recover if it receives financing to tide it over.

Hartigan (1994) develops a model of predatory dumping whereby the domestic firm does not know for sure whether its foreign rival is a low-cost producer. If the foreign firm is a low-cost producer, the domestic firm will be unable to compete successfully. By dumping, the foreign firm can, irrespective of its actual costs, act like a low-cost competitor and force the domestic firm to close down. Thus, dumping can be a rational strategy even for a high-cost foreign firm so long as its true costs are not known by the domestic firm.

While most explanations of dumping assume that firms who engage in this behaviour must have market power, Ethier (1982) shows that dumping, in the sense of selling in the export market at a price below the average cost of production, can also be the response of firms in perfectly competitive markets during economic downturns.⁶⁹ The reason why the price of their goods is that they are unable to reduce their costs as quickly as their price during economic downturns.

In the face of a sudden drop in demand, output price can fall quickly while the firm's lack of flexibility in laying off workers or reducing its capital stock means that it would not be able to adjust its production

capacity to the same extent and consequently its costs. Thus, dumping is a natural consequence of a world where perfectly competitive firms face uncertainty in terms of demand for their output and are unable to adjust their production processes quickly. This explanation also suggests that dumping may be more frequent in cyclical industries that experience regular fluctuations in demand and in industries where it is difficult to adjust capacity.

Finally, dumping can also be a way for firms to gain valuable experience or increase their technological knowledge, thereby increasing economic efficiency. In Clarida (1993), countries have different levels of technological knowledge. He assumes that firms in the technologically backward country can only acquire technical know-how from engaging in production. If world demand is high enough, entry into the market by these firms can push down the world price below the opportunity cost⁷⁰ of production, with the result that firms in the backward country take part in dumping.

A similar type of explanation is provided by Gruenspecht (1988). In his study, a firm gains experience from producing goods; the acquired experience enables the firm to produce at lower costs in the future. This provides an incentive for domestic and foreign profit-maximizing firms to continue producing and exporting even if prices are below current costs. This is economically rational for a firm since producing and exporting even when prices are below current costs is a form of investment which pays off in future profitability.

i) Welfare effects of dumping

What are the effects of dumping on the economic welfare of the importing country? Economic theory suggests that, with the possible exception of predatory dumping, all other instances of dumping either increase, or at worst, have an ambiguous effect on, the economic welfare of the importing country. Of course, for the most part, economic literature has treated dumping as an example of the exercise of market power. But within this context of imperfectly competitive markets, dumping may increase efficiency in resource allocation. In most circumstances, the welfare of the importing country increases as a result of dumping, as consumers and users of the product benefit from lower import prices, even though the reason for the reduction in price (the dumping) may vary.

In Viner, the dumping arises from the sensitivity to price of domestic consumers, who would switch to other products if the price is raised. In the explanations provided by Clarida and Gruenspecht, the foreign firm is willing to produce and sell at a price below average cost as a form of investment to increase productivity in the future. So not only are current prices charged by the foreign firm lower but its future price will be lower as well because of the acquisition of technological know-how or of production experience. In Ethier, business cycle movements and sluggish adjustment in the industry lead the foreign firm to sell at a price advantageous to domestic consumers.

The exception to this general conclusion that dumping is beneficial to the importing country is the case of successful predatory dumping. Domestic consumers and other users of the dumped product may benefit from low prices during the initial stage of dumping but they will face higher prices in the future when the foreign producer acquires monopoly power in the domestic market. If predatory dumping is successful, i.e. the foreign firm's discounted profits from dumping exceed its profits in the no-dumping scenario, consumers will be worse off as initially low prices do not compensate for the higher prices later on.

In the reciprocal dumping example of Brander and Krugman (1983), the welfare effects of dumping are ambiguous because of two opposing forces. Reciprocal dumping by domestic and foreign firms increases competition and reduces the market power of the incumbent firm in its domestic market. However, economic resources are wasted through the cost of transporting goods between the two countries. Whether welfare rises or not depends on the magnitudes of these two opposing effects.

In all these cases, dumping will be detrimental to domestic industry. The presence of dumped imports increases the competition faced by domestic industry and often leads to a reduction in domestic output. In the predatory dumping case, the domestic industry will cease to exist.

(b) What are the benefits and risks associated with the use of anti-dumping actions?

To counteract dumping and its economic effects, many countries have turned to anti-dumping law,

which allows national authorities to apply anti-dumping measures on imports as long as dumping has taken place and injury has been caused to domestic industry. Section B of this Report has argued that certain forms of flexibilities may be required in a trade agreement so that countries are prepared to make greater commitments to market access. Anti-dumping policy can act like a safety valve to let off protectionist steam which might otherwise threaten a government's programme of trade reform. This is an important benefit that should be kept in mind, the more so because much of the discussion in this section will be on the benefits and the costs incurred by the application of anti-dumping measures. In other words, how would the greater use of contingent protection affect the behaviour of foreign and domestic firms, trade volumes and the economic welfare of the importing country?

The effects of anti-dumping measures can be compared with the effects of a tariff on imports. Similar to a tariff, anti-dumping duties will improve the circumstances of domestic producers, raise revenues for government but increase the cost of imports for domestic users or consumers. Thus, the standard economic analysis of tariff protection can be applied to analyze the likely effects of anti-dumping measures. However, there are important features of anti-dumping policy that this standard analysis will fail to take into account and which need to be considered as well.

i) Trade diversion

Anti-dumping duties are not applied to all sources of imports, which raises the possibility of import diversion – i.e. imports from one country are reduced while there is an increase in imports from another country. The application of anti-dumping duties may not significantly reduce the total level of imports, since imports from those sources not subject to anti-dumping action may just take the place of those subject to the duties. Section D reviews the empirical evidence on the extent of the trade diversion that may be due to anti-dumping measures.

ii) Tariff-jumping foreign direct investment (FDI)

Another complication is that foreign firms who are the subject of anti-dumping action may decide to “jump” the anti-dumping tariff by establishing a presence, through direct investment, in the importing country. There are some who argue

that tariff-jumping FDI may be even more of a threat to domestic producers than dumped imports (Ellingsen and Warneryd, 1999). They argue that a high level of protection in the form of anti-dumping duties may be damaging to an import-competing industry as this would encourage inward FDI, which could be even less desirable to the domestic industry than import competition. A government that is unduly influenced by the domestic import-competing industry will consequently set the level of protection low enough to limit direct foreign entry. Section D reviews the empirical evidence of the significance of tariff-jumping FDI.

iii) Strategic behaviour

The presence of anti-dumping legislation may itself affect the strategic behaviour of domestic and foreign firms and in ways that make it difficult to predict the impact on the welfare of the importing country. Strategic behaviour refers to actions taken by firms that are intended to influence the market environment in which they compete, including the behaviour of their competitors. It can include actions to influence rivals to act cooperatively (e.g. form a cartel) or non-cooperatively. The actions have the objective of raising the firm's profits at the expense of rivals. Such behaviour is characteristic of firms which operate in imperfectly competitive markets. Economic literature on anti-dumping has produced a large number of models of strategic interaction among firms. This section discusses only a selected number of them. There has been little serious empirical evaluation of many of these models.

Non-cooperative outcomes

In the case of non-cooperative behaviour – i.e. the domestic and foreign firms do not end up colluding with one another in the form of a cartel, for example – the possibility of anti-dumping investigations can lead to a change in the pricing and output behaviour of foreign and domestic firms. Depending on whether firms compete on quantity or on price, the strategic and welfare effects will be different.

Reitzes (1993) looks into how the behaviour of both the foreign and domestic firm is altered by anti-dumping policy. Anti-dumping policy creates a credible threat of imposing future duties based on the current margin between the foreign firm's export price and the price it charges in its home

market. The domestic firm has an incentive to increase this margin so that there can be a basis for an anti-dumping investigation, while the foreign firm will want to reduce this differential. If firms compete on the basis of quantity, the domestic firm can increase this margin by expanding current production. This drives down price, while the foreign firm will want to lower exports to mitigate the downward pressure on price. So long as the domestic firm has a larger share of the domestic market, it will succeed in decreasing price. Since a reduction in price benefits domestic consumers and users, the presence of anti-dumping policy will tend to increase the domestic country's welfare.⁷¹

If firms compete on price however, anti-dumping policy will tend to worsen domestic welfare. Competition will force the domestic and foreign firms to charge the same price in the domestic market. This will trigger an anti-dumping duty on the foreign firm because it charges a higher price in its home market, where it has a monopoly and charges the monopoly price. The anti-dumping duty on imports raises the price in the domestic market, penalizing consumers and users.

An earlier study by Fischer (1992) had examined a similar question, although he considers a wider range of policies than anti-dumping.⁷² Insofar as his analysis of dumping is concerned, he goes beyond Reitzes in considering both definitions of dumping: (i) export price below the home market price; and (ii) price below average cost of production. No matter what definition of dumping is used, if firms compete on the basis of quantity, the domestic firm will increase production in the first period so as to lower price and to create the conditions for an anti-dumping action to be taken against the foreign firm. This will tend to increase welfare in the domestic economy.

One of the reasons for dumping that Viner identified is the firm's desire to maintain production capacity in the face of a reduction in demand. The model by Ethier discussed above also showed how dumping can result from the combination of a fall in demand and sluggish industry adjustment. For the foreign firm, the ability to "dump" in the domestic market during periods of slack demand reduces the cost of maintaining spare capacity. Under these circumstances, Staiger and Wolak (1992) show that one of the effects of having anti-dumping law in the domestic market may be the reduction of production capacity by the foreign firm. With anti-

dumping law, domestic firms can file anti-dumping petitions during downturns, reducing the volume of imports directly during such periods. This anti-dumping activity raises the cost to the foreign firm of holding excess capacity and leads to a scaling back of its spare capacity. Thus, the volume of imports is reduced indirectly as the foreign firm reduces the scale of its operations. While this helps domestic producers, the overall impact on the domestic economy will be a reduction in economic welfare.

Another perspective on strategic interaction prompted by anti-dumping actions is provided by Hoekman and Leidy (1992). They examine how the provision of anti-dumping protection to an “upstream” industry is likely to also prompt “downstream” industries⁷³ to seek similar protection.⁷⁴ If the increasing input prices associated with upstream anti-dumping protection harm the competitiveness of import-competing downstream firms, then anti-dumping protection provides little benefit to both sectors. They both lose since downstream industries face higher input prices while the upstream industry loses its customers (the downstream sector). However, since protection in the upstream market inflicts injury on downstream industries, this provides them with a basis on which to also seek anti-dumping protection. The paper’s principal conclusion is that there is a tendency for anti-dumping protection to cascade down the production stream, with the protection initially provided to the upstream industry ultimately being extended to the downstream sector as well. Furthermore, the knowledge that the downstream sector will be able to secure similar protection makes it easier for the upstream industry to petition for anti-dumping relief in the first place.

Vandenbussche and Waughy (2001) study the effects of anti-dumping policy in markets where firms compete on the basis of both the price and the quality of their product. One reason why imports may be priced lower than the domestic product is because they have lower quality. If the lower-quality foreign firm is compelled by anti-dumping measures to match the price of the domestic product, it will need to compete more aggressively on the basis of quality. Maintaining a low quality will no longer suffice to compete successfully against domestic firms. This can lead to a quality reversal, in which the foreign firm becomes the quality-producing leader. As the authors point out, quality upgrading of foreign imports as a response to the imposition

of trade restrictions, such as a quota, is well-known. Thus, the key insight of this paper is that, while anti-dumping policy can erase the price differential between imports and domestic output, it can hurt the long-term prospects of the domestic industry by giving the foreign firm the incentive and the opportunity to upgrade the quality of its product.

Finally, an interesting perspective on anti-dumping law is provided by Anderson et al. (1995) who view it as the outcome of strategic interaction not between firms but between governments instead. They take as their starting point the reciprocal dumping explanation of Brander and Krugman (1983) which was based on the domestic and foreign firms competing in both markets (home and domestic). Both firms also engage in dumping because their free on board (f.o.b.) export prices are less than what they charge at home. Anderson et al. (1995) argue that the reciprocal dumping outcome resembles a prisoner’s dilemma problem, where both parties are worse off as a result of a lack of co-operation. There is economic inefficiency associated with both firms engaging in price discrimination since consumer surplus is lower.

The adoption by the domestic country of anti-dumping law lowers its economic welfare since the price of imports increases but it improves welfare in the other country. This is because the anti-dumping duty effectively ties the prices charged by the foreign firm in its export and home markets, since the dumping margin reflects the difference between the two prices. Thus, it will be optimal for the foreign firm to reduce the price it charges in its home market to reduce the anti-dumping duty it faces, increasing welfare in the foreign country. A similar outcome arises when it is only the foreign country which adopts anti-dumping law: its economic welfare decreases while the domestic country’s welfare improves. Only if both countries adopt anti-dumping laws will both their welfare simultaneously increase because the laws eliminate price discrimination globally. The authors conjecture that the spread of anti-dumping laws worldwide could be seen as a cooperative agreement on the part of governments to avoid the prisoner’s dilemma problem.

The strategic interaction between governments is also covered in recent literature on retaliation as a motive for anti-dumping actions. The paper by Prusa and Skeath (2002) has argued that there is a retaliatory motivation behind countries’ use of anti-dumping

measures because they appear to take such actions against those that have previously subjected them to anti-dumping investigations. Those who retaliate may believe that previous users of anti-dumping measures are not following a prior commitment to trade openness. Thus, using anti-dumping actions in this strategic fashion is consistent with a strategy of punishing those countries that deviate from this course and deterring such deviation in the future. The paper by Martin and Vergote (2008) discussed earlier also draws on retaliation to explain the much more frequent recourse to anti-dumping measures which could be targeted at specific countries, than to safeguards.

Collusion

Anti-dumping policy can provide a means for domestic and foreign firms to collude, fixing prices or outputs. This happens because domestic firms can use anti-dumping investigations as a credible threat to persuade the foreign firm to collude. Without the threat of anti-dumping duties, it

would not have been possible to cajole cooperation from the foreign firm. The collusion between the domestic and foreign firm enables them, as a group, to earn greater profits than if anti-dumping duties had been applied. The additional profits come from maintaining higher prices by increasing the artificial scarcity of their output in the importing country. Consumers and other users in the importing country suffer from these higher prices while the domestic government foregoes revenues from anti-dumping duties.

Prusa (1992) shows that anti-dumping law can lead to tacit collusion between domestic and foreign firms. He develops a bargaining model between a domestic and foreign firm competing in prices and shows that domestic firms prefer to withdraw petitions rather than proceed with the anti-dumping investigation. The threat of a credible anti-dumping duty can prompt the foreign firm to bargain and cooperate on a price arrangement with the domestic firm that benefits both sides. Box 7 contains a detailed description of the paper.

Box 7

How anti-dumping measures can be used to facilitate collusion

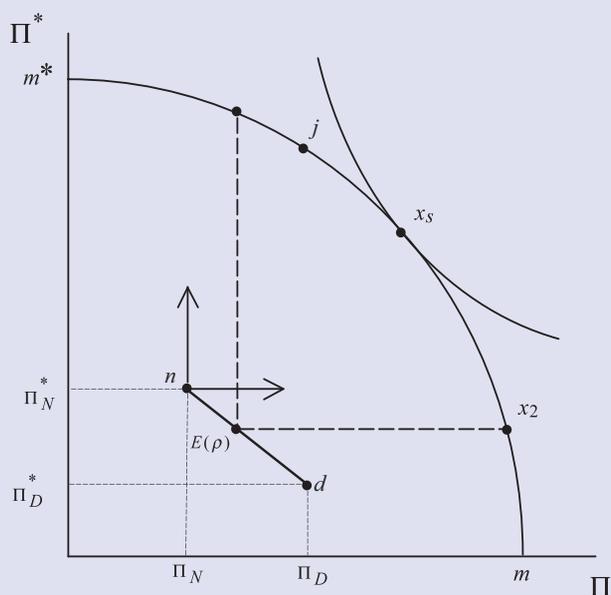
The model developed by Prusa analyzes withdrawn anti-dumping cases as the result of collusion between domestic and foreign industries. Prusa argues that the prospect of anti-dumping duties is used by the domestic industry to threaten the foreign industry to agree to collude. If the foreign industry does not agree to collude with domestic industry, the anti-dumping investigation is allowed to proceed with the resulting threat of duties to be imposed on foreign firms. If firms agree to collude, the anti-dumping petition is withdrawn and both domestic and foreign firms will charge higher prices in the domestic market.

Consider a market with two firms, one foreign and one domestic, each selling a slightly different product on the domestic market. For convenience, the foreign variables are denoted by an asterisk in the chart below. The timing of events and available strategies are as follows.^a In the first stage, the domestic industry decides whether to file a petition against the foreign industry. If a petition is not filed, firms compete with each other, which leads them to the Bertrand-Nash equilibrium denoted by point n .^b If the

domestic industry initiates an anti-dumping investigation, the anti-dumping authority will start its investigation. In the second stage, the domestic industry can either withdraw the petition or leave the authorities to proceed to the final determination. This will occur with probability ρ , in which case the foreign firm will increase the price for its product and pay duties as determined by the anti-dumping authority. In the event of a terminated outcome, which occurs with probability $1-\rho$, the industries will earn profits as if the petition was never initiated, i.e. profits are equal to that of the Bertrand-Nash equilibrium.

Figure 1 is a graphical representation of the model at the industry level and it represents all the profit possibilities attainable by the two firms. The curve m^*jm is the profit possibilities frontier (PPF), which shows the maximum profit attainable by the two firms. The PPF is downward sloping because the profits of one firm can be increased only by decreasing the profits of the other firm. Any point on or below this frontier is attainable by a suitable pair of prices (one price charged by the domestic firm and the other price charged by

Figure 1
Representation of the game in profit space



the foreign firm). The point m^* (m) depicts the monopoly level of profit for the foreign (domestic) firm, while j depicts the joint profit (or colluding) maximizing level of profits.

The Bertrand-Nash profit level (point n) is an interior point to the PPF. Both firms could be strictly better off than in the Bertrand-Nash equilibrium if they commit to higher prices which would generate greater profits for both (points to the north-east of n as shown by the direction of the arrows).

The equilibrium outcome of an affirmative decision is point d , where profits for the domestic and foreign firms are given by Π_D and Π_D^* respectively. Note that if anti-dumping duties are applied, the profit of the domestic firm is higher than at the Bertrand-Nash equilibrium ($\Pi_D > \Pi_N$) while the profit of the foreign firm is correspondingly lower ($\Pi_D^* < \Pi_N^*$). The line segment that links point n to d represents all the possible expected profits for any probability ρ . Let the point $E(\rho) \equiv (E\Pi(\rho), E^*\Pi(\rho))$ depict the expected profit of the domestic and foreign firm when the probability of getting an affirmative decision is equal to ρ .^c If it is likely that the authorities will find dumping (e.g. ρ close to one), then $E(\rho)$ lies closer to point d . Conversely, if it is unlikely to establish dumping, (e.g. ρ close to zero) then $E(\rho)$ lies closer to point n .

Both the domestic and the foreign industries have an incentive to negotiate an agreement because it can increase their profits with respect to the expected values $E\Pi(\rho)$ and $E^*\Pi(\rho)$. The bargaining solution can be graphically depicted by finding the tangency between the upper boundary of the bargaining set (i.e. the PPF) and the hyperbola asymptotic to the broken lines through $E(\rho)$. The bargaining solution is represented by point x_s . It clearly shows that the firms gain by settling the anti-dumping case. In addition, the probability ρ plays an important role in determining the bargaining outcome. As ρ increases (i.e. finding dumping is more likely), the bargaining power is shifted towards the domestic firm. To summarize, anti-dumping petitions serve as a vehicle to achieve cooperative levels of profit.

^a The timing of events could be thought of as stages in a game.

^b Bertrand competition is where firms with market power compete on the basis of price. The Nash outcome of Bertrand competition arises when the strategy or price chosen by each firm represents its best response to its rivals' price strategies.

^c It is assumed here that firms are risk neutral – that is when they are faced with an uncertain outcome (in this case, the uncertainty with regard to the final anti-dumping determination), they are only concerned with maximizing expected or mean profit. The expected profit for the domestic and foreign firm, $E\Pi(\rho)$ and $E^*\Pi(\rho)$, are given by $E\Pi(\rho) = \rho\Pi_D + (1-\rho)\Pi_N$ and $E^*\Pi(\rho) = \rho\Pi_D^* + (1-\rho)\Pi_N^*$

The study by Zanardi (2004a) extends Prusa's work by introducing coordination costs and bargaining power as factors that affect the likelihood of collusion between domestic and foreign firms. Prusa's model implies that all anti-dumping petitions will be withdrawn since firms always gain from collusion. Zanardi notes that only 17.8 per cent of all US anti-dumping cases during the period 1980-97 were subsequently withdrawn. Thus, he argues that only a fraction of anti-dumping cases are likely to end up with firms colluding, while the bulk of the cases continue through the anti-dumping process. He believes that this pattern in the data needs to be accounted for.

According to Zanardi's model of collusion, the likelihood that domestic industry will withdraw anti-dumping petitions, and subsequently collude, is affected by the cost of coordinating among the firms and the bargaining strength of domestic industry relative to foreign firms. The greater the number of firms, both domestic and foreign, that need to collude, the greater the coordination costs. This makes the possibility of arriving at an agreement more difficult. The greater the bargaining power of domestic firms, the greater the likelihood of getting foreign firms to agree to collude.

The paper by Staiger and Wolak (1992) discussed above also considers the possibility of self-enforcing agreements between the domestic industry and the foreign firm. The agreements take the form of a promise by the domestic industry not to initiate anti-dumping petitions in exchange for a promise by the foreign firm to export no more than a pre-specified amount. For the foreign firm, the main benefit of the agreement is that it can continue to maintain a high price at home. This was not possible when it was faced with anti-dumping action, since under those circumstances it had to channel more of its production to its home market and reduce prices accordingly. For the domestic firms, the agreement means that imports are limited to an amount that is fixed in advance and they are also able to avoid the costs of filing an anti-dumping petition. Even though no anti-dumping suits are initiated, the agreement results in a volume of trade that is not significantly different from the situation when domestic firms were filing such petitions.

Veugelers and Vandenbussche (1999) also investigate how anti-dumping policy influences the incentives for collusion. They start with the assumption that the domestic market prior to the adoption of anti-

dumping legislation may already have cartels to some degree. Assuming that none of the products sold by the domestic and foreign firms are too different or the cost structure of the firms too dissimilar, they show that anti-dumping policy can further increase collusion between foreign and domestic firms.⁷⁵

iv) Other effects

As was noted above, when the current output level reduces future production costs, domestic and foreign firms may dump products on foreign markets to gain experience (Gruenspecht, 1988). Anti-dumping enforcement, which poses a barrier to below-cost sales by foreign rivals, will reduce the incentive of foreign and domestic firms to undertake this "investment" to gain production experience. This may involve a welfare loss as society foregoes the opportunity of reducing future costs.

A similar concern about the possible impact of anti-dumping actions follows from Clarida's (1993) paper which was discussed above. His explanation for dumping was that it occurs because firms in a technologically backward country can only acquire technological know-how by actually producing that good. The entry of these new firms into the market can result in prices falling below average cost of production. If anti-dumping investigations succeed in penalizing these new entrants, it will put a stop to the process of upgrading by the technologically backward country.

Finally, even in the case of predatory dumping, the welfare consequences of anti-dumping law are ambiguous. Where the domestic firm is hampered by its inability to access credit during the period of predatory dumping, an anti-dumping law may not insulate the domestic firm from this form of dumping (Hartigan, 1996b). This is because the foreign firm's dumping may take place during a trough in the business cycle, in which case it will be difficult to prove that material injury to the domestic industry arises from dumping and not from other causes.

(c) WTO disciplines and anti-dumping measures

The beginnings of anti-dumping measures in national trade legislation can be traced back to the late 19th and early years of the 20th century. Canada

was the first country to introduce anti-dumping legislation in 1904. In 1916 the United States made it illegal to sell imported goods at prices substantially lower than its market value in its Anti-dumping Act of 1916. Before the outbreak of World War I, Australia, France, Japan, New Zealand and South Africa introduced anti-dumping and/or countervailing duty legislation.

International discussions on anti-dumping measures probably began with the League of Nations. In the 1920s, it tried to establish a coordinated approach to international trade relations because of upheavals in international markets and a surge in demands for protection against unfair competition. Several economic conferences of the League of Nations were held and in a conference in 1927 a report on dumping was prepared. The “Memorandum on the Legislation of Different States for the Prevention of Dumping” found that in the early 1920s existing anti-dumping laws were largely not enforced. Only Australia, Canada and South Africa applied their anti-dumping legislation. European countries, including Great Britain, New Zealand and the United States, hardly made use of their anti-dumping/countervailing duty legislation.

However, anti-dumping actions probably increased during the Great Depression of the 1930s. Irwin (2005) finds that US anti-dumping actions increased sharply between 1932 and 1939, with a peak level of 70 in 1939. In the aftermath of World War II, and in the midst of discussions about the multilateral institutions that would manage international economic relations, the “Havana Charter for an International Trade Organization” included a provision on anti-dumping and countervailing duties. Article 34 of the Charter defines the dumping margin (i.e. the difference between the export price and the normal price in the exporter’s domestic market), prescribes that any anti-dumping duty cannot exceed the dumping margin found, and that anti-dumping duties should be levied only if imports cause or threaten material injury to an established industry or materially retards the establishment of a domestic industry. The Charter also prescribes that the same product cannot be subject to both an anti-dumping and countervailing duty to compensate for both dumping and export subsidization.

GATT Article VI stipulates how WTO members can react to dumping without infringing WTO principles. The Agreement on Implementation of

Article VI of the GATT 1994, commonly referred to as the Anti-dumping or AD Agreement, sets forth specific procedures for conducting anti-dumping investigations consistent with GATT Article VI. GATT Article VI and the AD Agreement are quite unique in that they arguably represent explicit permission for governments to take action against market behaviour by private sector firms. However, if a WTO member affected by the anti-dumping measures of another member considers that the conditions of Article VI and the AD Agreement are not being met, it can seek action under the dispute settlement provisions of the WTO.

The following discussion focuses on the rules governing: (i) the trigger for anti-dumping investigations; (ii) the definition of domestic industry; (iii) causality between dumping and injury; and (iv) the application of anti-dumping measures.

i) The trigger

The economic discussion in the previous sub-section identified many possible motives for dumping and also considered under what conditions dumping may have beneficial or harmful welfare impact on the importing country. The welfare analysis looked beyond the impact on domestic producers, who suffer from increased import competition, and included the effect of dumping on consumers and downstream users of the imported product who typically benefit from the lower price. From this vantage point, WTO rules appear to discourage or prevent all types of dumping that cause injury to domestic producers, regardless of the wider economic impact.

What triggers an anti-dumping investigation is the allegation that an exporter’s dumping of products is causing injury to domestic industry. Article VI of the GATT defines dumping as products of one country being introduced into the commerce of another country at less than the normal value of the products. The ADA clarifies that this occurs if the export price of the product exported from one country to another is less than the comparable price, in the ordinary course of trade, for the like product when destined for consumption in the exporting country. To determine that dumping exists, investigating authorities must find the existence of a positive difference or margin between the price of the “like” product in the market of the exporting country and the export price.

In calculating the dumping margin, it is necessary to define what “like product” means and to specify the period of investigation.

For the purposes of the ADA, “like product” means a product which is identical, i.e. alike in all respects to the exported product, or in the absence of such a product, another product which, although not alike in all respects, has characteristics closely resembling those of the exported product.⁷⁶ Note that “like product” is equally relevant for the determination of the domestic industry.

While there is no explicit provision in the ADA about the period of investigation, the Committee on Anti-dumping Practices has recommended that it should normally be 12 months, but in no case less than six months, and it should terminate as close to the date of initiation as is practicable.⁷⁷ Much of the discussion of the determination of the dumping margin follows Czako et al. (2003) which contains a comprehensive and detailed explanation of the methods applied. They identify four key issues that an anti-dumping authority must settle to determine the dumping margin. They are the export price, the normal value of the like product, computation of any adjustments to these prices and finally the calculation of the dumping margin itself.

Export price

In the simplest case possible, the export price can be calculated based on the prices reported to the investigating authority by exporters. However, the ADA foresees a number of possible complications. There may be no export price or the authorities may judge the export price to be unreliable because of an association or a compensatory arrangement between the exporter and the importer or a third party. In these cases, the export price may be constructed on the basis of the price at which the imported products are first resold to an independent buyer, or if the products are not resold to an independent buyer, or not resold in the condition as imported, on the basis that the authorities may determine.⁷⁸

Even in the case when there is no association between the exporter and the importer, adjustments need to be made to the export price reported by the exporters. The Agreement requires authorities to make due allowance for differences which affect the price comparability of the exported good and the like product, including differences in conditions and terms of sale, taxation, levels of trade, quantities, physical

characteristics, and any other differences which are also demonstrated to affect price comparability.⁷⁹ Thus, the selling expenses of the exporter or any rebate that he may have granted will need to be deducted to obtain the relevant export price.

Normal value

In the simplest case, the normal value can be constructed from the sales price of the like product in the home market of the exporting country. However, the ADA allows for a number of other methods when circumstances make that impossible. There may be no sales of the like product in the ordinary course of trade in the home market of the exporting country or there may be only a low volume of sales in the home market of the exporting country (if it constitutes less than 5 per cent of the total sales of the exporter).⁸⁰ Under these circumstances, the normal value will be a comparable price of the like product when exported to an appropriate third country, provided that this price is representative, or the cost of production in the country of origin plus a reasonable amount for administrative, selling and general costs and for profits.

Another possibility would be when a product is not imported directly from the country of origin but is exported to the importing WTO member from an intermediate country. In this case, the normal value will be the price prevailing in the country of export.⁸¹ Again, even in the simplest case, adjustments have to be made to the calculated normal value to take into account differences in conditions and terms of sale, taxation, levels of trade, quantities, physical characteristics, and any other differences which are also demonstrated to affect price comparability.

GATT Article VI Ad Note recognizes the difficulty in determining the price comparability for dumping calculation purposes when the products are exported from a non-market economy. It provides that in such a case, a strict comparison with domestic prices in the country may not always be appropriate. Nor does GATT Article VI provide any specific guidance regarding how to determine normal value in such cases. Investigating authorities consequently resort to a variety of different benchmarks, including prices or constructed normal values in surrogate third countries, third-country export prices, and the construction of the normal value based on the factors of production of the non-market economy combined with prices for those factors in surrogate third countries.

Calculating the dumping margin

In general, there are two main ways in which the dumping margin may be established. It can be calculated on the basis of a comparison of a weighted average normal value with a weighted average of prices of all comparable export transactions or by a comparison of normal value and export prices on a transaction-to-transaction basis.⁸²

If the first method is employed, the weights used for the normal value may be the volume of sales of the like product in the home market of the exporting country, while the weights used for the export price may be the volume of exports. In the transaction-to-transaction approach, the number of export transactions need not match the number of sales of the like product in the home market of the exporting country. What the investigating authorities need to do is to identify an appropriate normal value which could be matched to every export price. This matching shall be in respect of sales at as nearly as possible the same time. Once this is done, the difference between the export price and normal value can be determined for each matched transaction. The dumping margin will be the weighted sum of the differences, with the volume of exports as the weights.

ii) Domestic industry

An investigation into dumping can be initiated following either an application or petition by the domestic industry or, exceptionally by the investigating authority itself. The ADA defines domestic industry as referring to: (i) domestic producers as a whole of the like products, or (ii) those whose collective output of the products constitutes a major proportion of the total domestic production of like products. In either case, the authorities may exclude producers related to exporters or importers, or producers that are importers themselves.⁸³ As noted in the previous section, this definition of domestic industry only includes producers of “like products” but not producers of “directly competitive products”, so the definition used in the anti-dumping context is narrower than in the safeguards context.

While producers are referred to in the plural in the definition of domestic industry, a single domestic producer may constitute the domestic industry under the ADA.⁸⁴ While the definition

provides for two possibilities, the Agreement does not indicate any hierarchy between these two options.⁸⁵ However, once an investigating authority has identified or chosen one of the options for its analysis, it must use this definition consistently and coherently throughout the investigation.

The structure of the domestic market or economy also has a bearing on what domestic industry means. Where the domestic market shows geographical segmentation – i.e. it could be divided into two or more competitive markets – the producers within each market may be regarded as a separate industry. Alternatively, the domestic country may have entered into a WTO-consistent bilateral or regional trade agreement. If the members of that bilateral or regional trade agreement achieve a level of integration to such an extent that they have the characteristics of a single, unified market, the industry in the entire area of integration will be taken to be the domestic industry.

The ADA does not allow WTO members to initiate an investigation unless a certain statutory percentage of the domestic industry supports the application, to the extent that the application can be considered to have been made “by or on behalf of the domestic industry”.⁸⁶ There are two thresholds to be met simultaneously. First, the application needs to be supported by those producers whose collective output is more than 50 per cent of the total production of that portion of the domestic producers expressing an opinion in favour or against the initiation. Second, the producers expressly supporting the initiation need to represent at least 25 per cent of total production – that is, not less than 25 per cent of the production of all domestic producers, whether expressing an opinion on the initiation or not.

There is some jurisprudence on how investigation should proceed with respect to domestic industry. In *US – Hot-Rolled Steel*, the Appellate Body held that the investigation and examination of injury to domestic industry “must focus on the totality of the domestic industry and not simply on one part, sector or segment of the domestic industry”.⁸⁷ Furthermore, in order to meet the “objective examination” requirement under Article 3.1 of the ADA, investigating authorities cannot examine parts of a domestic industry on a selective basis. Rather, if those authorities examine one part of a domestic industry, they must examine, in an even-handed manner, all the other parts of the industry

or alternatively, provide a satisfactory explanation as to why it is not necessary to do so. In the view of the Appellate Body, to examine only the poorly performing parts of an industry, even if coupled with an examination of the whole industry, may give a misleading impression of the data relating to the industry as a whole, and may overlook positive developments in other parts of the industry.⁸⁸

iii) Injury to domestic industry

To impose an anti-dumping measure, an investigating authority has to demonstrate that the domestic industry has been hurt by the pricing policy of foreign exporters. Investigating authorities have to show that there has been “injury” of the domestic industry, in the sense of material injury, threat of material injury, or material “retardation” or holding back of the establishment of the domestic industry.⁸⁹ As noted in the previous discussion on safeguards, the “material injury” standard in the ADA is lower than the “serious injury” standard set out in the Agreement on Safeguards and Countervailing Measures.

According to Article 3.1 of the ADA, determination of injury shall be based on positive evidence and involve an objective examination of both (a) the volume of the dumped imports and the effect of the dumped imports on prices in the domestic market for like products, and (b) the consequent impact of these imports on the domestic producers of such products. Positive evidence is interpreted as evidence that is affirmative, objective, and credible and with verifiable character.⁹⁰ In addition, only verifiable evidence that is disclosed to, or discernable by, the parties to the investigation can be considered to constitute positive evidence.⁹¹ Assumptions can be used as positive evidence provided that they are derived from a credible basis of facts.⁹² Meanwhile, objective examination indicates an examination in an unbiased manner, without favouring the interest of any interested party in the investigation.⁹³

The rest of Article 3 gives further guidance on how to handle an injury investigation. Article 3.2 specifies how the volume and the price effect of the dumped imports are examined. Article 3.3 deals with a situation where imports of a product from more than one country are simultaneously subject to anti-dumping investigations. Article 3.4 stipulates how to go about examining the impact of dumped imports on the domestic industry and Article 3.5 sets forth how to deal with the fact that

dumping by foreign exporters may not be the only factor causing injury to the domestic industry.

Article 3.2 of the ADA requires investigators to consider the existence of a significant increase in dumped imports⁹⁴ either in absolute or relative terms to production or consumption in the importing WTO member. However, the Appellate Body on *EC – Tube or Pipe Fittings* held that dumping duties can be imposed even when there has been no absolute or relative increase in dumped imports, i.e. the absence of significant increase in import volume does not mean non-existence of injury.⁹⁵ The examination of the price effects of dumped imports includes whether there has been a significant level of: (i) price undercutting, (ii) price depressing, or (iii) price suppressing. The panels in a number of cases held that there is no requirement that price analysis has to take place at a particular level of trade,⁹⁶ on a quarterly basis⁹⁷ or over a particular period of time.⁹⁸ Additionally, the *EC – Tube or Pipe Fittings* panel found that the fact that certain sales may have occurred at “non-underselling prices” does not eradicate the effects in the importing market of sales that were made at “underselling prices”.⁹⁹

Where imports of a product from more than one country are simultaneously subject to anti-dumping investigations, Article 3.3 of the ADA permits the cumulative assessment of the effects of dumped imports. The use of cumulation is subject to two conditions: (i) the dumping margin for the imports of each country must be more than *de minimis*¹⁰⁰ and the volume of imports from each country is not negligible,¹⁰¹ and (ii) a cumulative assessment is deemed appropriate in light of the conditions of competition between the imported products and the conditions of competition between the imported products and the like domestic product.

There is some WTO jurisprudence relating to cumulation. The panel in *EC – Tube or Pipe Fittings* confirmed that an investigating authority enjoys a “certain degree” of discretion in determining whether the use of cumulation is “appropriate” or not.¹⁰² But the decision to use cumulation must be based on an “objective examination” of “positive evidence” as specified under Article 3.1.¹⁰³ However, some observers worry that the unavailability of a precise definition of the terms “appropriate” and “conditions of competition” opens the door for national authorities to use cumulation at their discretion (Covelli, 2005).

Cumulation increases the likelihood of a positive finding that dumped imports have caused injury to domestic industry because it is much easier to identify and establish material injury arising from a larger volume of imports than it is to establish a sufficient level of injury independently for smaller levels of imports from specific supplier countries. Furthermore, if the effect of imports from different countries is assessed cumulatively, there will be a lower incentive for exporters from a given country to invest in their own defence, because they can “free-ride” on the legal defence of exporters from other countries. But by free riding, there is consequently a less effective cumulative effort in putting up a legal defence, thus increasing the possibility of the investigating authority determining that dumped imports have caused injury to domestic industry (Gupta and Panagariya, 2006).

Bown and Wauters (2008) argue that once exporters under-invest in legal defence, there will be a greater chance for anti-dumping authorities to base their investigations on the facts available. As a result, cumulation increases positive injury findings, which may help to explain why investigators tend to cumulatively assess injury. One silver lining to this is that cumulation allows a wider range of import sources to be covered by the investigation, thereby avoiding trade diversion effects and the distortions that these create (Blonigen and Prusa, 2003).

Article 3.4 of the ADA provides a list of indicators to be evaluated when examining whether the domestic industry has been injured by dumped imports. These indicators include: actual and potential declines in sales, profits, output, market share, productivity, return on investments, or utilization of capacity; factors affecting domestic prices; the magnitude of the dumping margin; actual and potential negative effects on cash flow, inventories, employment, wages, growth, and the ability to raise capital or investments. The Article also stipulates that this list is not exhaustive and case law has indicated that all the listed factors must be examined in an investigation.¹⁰⁴ In addition, all relevant economic factors and indices having a bearing on the state of the industry must also be evaluated, although no single factor is determinative.¹⁰⁵

Similar to the determination of serious injury in the safeguards context, the evaluation of all relevant factors under Article 3.4 was interpreted by a number of panels as requiring investigating authorities to carry out a reasoned analysis and a

thorough evaluation of the state of the industry.¹⁰⁶ In cases where authorities determine that dumped imports have caused injury to domestic industry, but where the investigation record shows positive trends or developments for some of the listed indicators in Article 3.4 alongside negative trends or developments for the other indicators, the authorities need to explain how and why, in light of the positive trend of some injury factors, they are still able to rule affirmatively.¹⁰⁷ In the view of the panel on *Egypt – Steel Rebar*, the mere presentation of tables of data on all listed factors is insufficient to meet the requirement of Article 3.4. Rather, there must be a process of analysis and interpretation of the facts established in relation to each listed factor.¹⁰⁸

The panel on *EC – Tube or Pipe Fittings* added that a meaningful investigation must also take into account the trends for each of the injury factors and indices rather than just a comparison of “end points”.¹⁰⁹ Interestingly, the panel on *EC – Tube or Pipe Fittings* found that Article 3.4 requirements “will be satisfied where it is at least apparent that a factor has been addressed, if only implicitly”.¹¹⁰ The Appellate Body supported this finding, reasoning that Article 3.4 calls for an evaluation of relevant factors, but does not address the manner in which the results of such evaluations be set out in the published reports; neither is the manner regulated under Article 3.1.¹¹¹

Also similar to the approach taken in the safeguards context, Article 3.4 of the ADA has been interpreted as not requiring that each and every injury factor must necessarily be indicative of injury. Rather, an examination of the impact of the dumped imports includes an evaluation of all relevant economic factors to produce “an overall impression of the state of the domestic industry”. Accordingly, injury determination should be made in the light of the overall development and interaction among injury indicators collectively.¹¹²

Horn and Mavroidis (2007a) suggest that the purpose of Article 3.4 of the ADA may be to ensure that anti-dumping duties are not imposed on the basis of a very narrow definition of injury to domestic industry, in a situation where most effects of the dumping are positive for the importing country. They argue that this may be reasonable as long as members have not agreed on a more precise definition of the concept of injury. However, they also argue that it may be a useless exercise to go through each factor individually as long as no

guidance is given on how to weigh the different components. It has also been suggested that some of the factors listed in Article 3.4 may actually reflect a healthy evolution of the domestic industry (Messerlin, 2000 and Wolfrum et al., 2008). The reduction of employment, for instance, may be the result of improvements in technology. Technological change may also lead to wage reductions.

Regarding threat of injury to domestic industry, Article 3.7 requires that: (i) the determination of the existence of threat of injury must be based on facts and not merely on allegation, conjecture or remote possibility, and (ii) the threat of injury must be imminent and clearly foreseen. A non-exclusive list of factors to be considered is specified under Article 3.7, including: (i) a significant rate of increase of dumped imports into the domestic market; (ii) sufficient freely disposable, or an imminent, substantial increase in, capacity of the exporter; (iii) whether imports are entering at prices that will have a significant depressing or suppressing effect on domestic prices; and (iv) the inventories of the product being investigated. According to the panel on *US – Softwood Lumber VI*, thorough consideration of these listed factors must go beyond a mere recitation of the facts in question, and must put them into context. However, the investigating authorities are not required to make an explicit finding or determination with respect to the factors considered. The same panel held that unlike the situation under Article 3.4 of the ADA, consideration of each of the factors listed in Article 3.7 is not mandatory. Consequently, a failure to consider or to adequately consider a particular factor would not necessarily demonstrate a violation of Article 3.7.¹¹³

The panel on *Mexico – Corn Syrup* read Articles 3.1 and 3.7 together and held that consideration of Article 3.7 factors only, which relate specifically to the likelihood of increased imports and the price effects of these imports, is not sufficient for a determination of threat of injury. Rather, factors under Article 3.4 must also be considered to establish a background against which the investigating authority can evaluate the likelihood of imminent future injury to the domestic industry.¹¹⁴ The panel on *US – Softwood Lumber VI* agreed with this approach and added that once the investigating authorities have already evaluated the Article 3.4 factors (e.g. in a material injury analysis), a second analysis of these factors is not necessarily required in the determination of threat of material injury.¹¹⁵

iv) Causality and non-attribution

This leads to the question of “causation” and of how to disentangle the different causes of injury to a domestic industry. Article 3.5 of the ADA stipulates that it must be demonstrated that the dumped imports are causing injury. It is worth noting in this context that in the Kennedy Round Anti-dumping Code, the investigating authority was required to demonstrate that dumped imports are the “principal cause of material injury”. The current legal text requires “only” the establishment of a positive causal link between dumped imports and injury, which represents a weakening of the original requirements.

Article 3.5 also stipulates that the “authorities shall examine any known factors other than the dumped imports which at the same time are injuring the domestic industry, and the injuries caused by these other factors must not be attributed to the dumped imports.”¹¹⁶ This requirement is often referred to as the “non-attribution test”. An illustrative list¹¹⁷ of known factors to be examined in such a test is specified in Article 3.5, including contraction in demand, changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology, export performance and productivity of the domestic industry. Yet, there is no definition of how a factor should be considered as a “known factor”.

The panel on *Thailand – H-Beams* interpreted “known factors” in Article 3.5 of the ADA as including factors “clearly raised before the investigating authorities by interested parties in the course of an AD investigation”. It also ruled that Article 3.5 has no express requirement for investigating authorities to seek out and examine the effects of all possible causal factors on their own initiative.¹¹⁸ The Appellate Body on *EC – Tube or Pipe Fittings* further clarified that what matters in the determination of the “known” manner of a factor is whether a factor was raised or not. It is not necessary that such a factor must be raised at each and every stage of the investigation; rather, once a factor was raised at some stage of the investigation, it is considered a known factor throughout the investigation. In other words, a factor cannot be known in one stage and unknown in the other.¹¹⁹

Although the text of the Subsidies and Countervailing Measures (SCM) Agreement and

the Anti-dumping Agreement (ADA) on causation are not identical, the Appellate Body on *US – Hot-Rolled Steel* recognized the “considerable similarities” between the two agreements regarding their non-attribution language.¹²⁰ Accordingly, the Appellate Body referred to interpretations in *US – Wheat Gluten* and *US – Lamb* of Article 4.2(b) of the SCM Agreement¹²¹ and interpreted the non-attribution test under Article 3.5 of the ADA as requiring authorities to separate and distinguish the effects of dumped imports from the effects of any other factors. This requires a satisfactory explanation of the nature and extent of the injurious effects of these other factors, as distinguished from the injurious effects of the dumped imports.¹²² At the same time, the Appellate Body held that there is no definitive method for the mentioned process of separating and distinguishing. Rather, the method is at the national authority’s discretion as long as the non-attribution requirement under Article 3.5 is respected.¹²³

In *EC – Tube or Pipe Fittings*, the Appellate Body addressed the question of whether the non-attribution language of Article 3.5 requires an investigating authority to examine the effects of the other causal factors collectively after having examined them individually. The Appellate Body held that the language of Article 3.5 does not compel such a collective assessment in each and every case because such an assessment is not always necessary to conclude that injuries ascribed to dumped imports are actually caused by those imports and not by other factors. At the same time, it recognized that there are special circumstances where the failure to undertake an examination of the collective impact of other causal factors may result in the effects of other causal factors being improperly attributed to dumped imports. Therefore, the Appellate Body concluded that an investigating authority is not required to examine the collective impact of other causal factors, provided that, under the specific factual circumstances of the case, it fulfils its obligation not to attribute to dumped imports the injuries caused by other causal factors.¹²⁴

Miranda (2009) has characterized the approach taken by panels to non-attribution as constituting a series of “threshold checks”, which ascend in difficulty. The first round of threshold checks involves determining whether any “other factors” were raised before the investigating authority and whether evidence relating to such factors was placed on the record. The second group of threshold checks

has to do with whether the “other factors” at issue could have caused injury. Where these threshold checks are met and there is a need to complete the “non-attribution” analysis, he argues that panels have used an “order of magnitude” test. This consists of comparing changes in a key indicator of injury of the domestic industry with changes in the factor concerned during the period of investigation. Essentially, he implies that where the changes in the factor concerned is of a lower order of magnitude than the changes in a key indicator of injury of the domestic industry, panels have upheld non-attribution findings. While Miranda (2009) commends the “order of magnitude” test as reflecting common sense insight and a useful first step in making operational the test for non-attribution, he acknowledges that the test has limitations and, in certain factual circumstances, it may not be conclusive.

This leads to the question of economic modelling. It has been argued that from an economic/statistical point of view, it would be desirable, if not necessary, to take into account the interaction between different “known factors” and that it would therefore be necessary to include all factors at the same time in order to determine how they interact and how much each of them contributes to injury (Horn and Mavroidis, 2007a). The same argument could be made in distinguishing between the impact of dumped imports from different sources. It would probably not be possible to perform the relevant analysis on a country-by-country basis, but it would be necessary to group imports from all sources together in the analysis in order to take account of interactions and to be able to identify the contribution of each (Horn and Mavroidis, 2007a).

Messerlin (2000) suggests using revenue losses as the single means of determining injury to domestic industry. He also suggests using partial equilibrium models to determine how dumping contributes to injury and to distinguish this from the contribution of other factors. A number of contributions to economic literature illustrate how simulations based on partial equilibrium models could be used to analyze injury. Grossman (1986a) is an early contribution to this literature. He looks at the injury to the steel industry caused by imports and other factors, using domestic production as a measure of the health of the domestic industry. Domestic production, in turn, is considered to be a function of the relative price of imports, the relative price of inputs, and an indicator of overall demand.

Pindyck and Rotemberg (1987) propose a different approach in which they adopt the view that any changes in imports are possible causes of injury regardless of the sources of those changes.

So far, formal economic analysis is rarely undertaken in injury determination. Blonigen and Prusa (2003) argue that “trends analysis” is commonly used by United States’ authorities. This essentially means reviewing charts and tables and confirming that profits and employment are down. If imports have also increased, the causality connection is assumed. In the late 1980s, United States’ authorities started to use a simulation model called Commercial Policy Analysis System (COMPAS) (Francois and Hall, 1993). This model is specifically designed to calculate the effect of dumping goods at a specified dumping margin on a domestic industry’s prices, domestic shipment volumes, and total sales revenues. Although a significant improvement over simple trends analysis, COMPAS may still have shortcomings. One of these is that results may be influenced by the analyst’s judgements and assumptions concerning the relationships between the outcome and the relevant factors. Prusa and Sharp (2001) have therefore argued in favour of using simultaneous equation econometric models.

One final consideration has to do with the use (or non-use) to which the non-attribution test is put. Anti-dumping duties are imposed to counteract the dumping margin so long as there is evidence that the domestic industry’s injury has been caused, either wholly or partly, by the dumped imports. Conceivably, the results of the non-attribution test could be used to quantify and deduct injury caused by factors other than dumped imports. Depending on the precision in which this analysis is undertaken, the results could conceivably be used to adjust the magnitude of the anti-dumping duties, since the dumping margin may only be responsible for part of the material injury to domestic industry (Mavroidis et al., 2008).

v) Application of anti-dumping measures

In this section, four issues relating to the application of anti-dumping measures will be covered: provisional measures, price undertakings, definitive anti-dumping duties and sunset reviews.

Anti-dumping measures may be applied provisionally on the condition that an investigation has already been

initiated, a preliminary finding has been made that dumping has caused injury to domestic industry and authorities have judged that anti-dumping measures are necessary to prevent injury being caused during the period of investigation.¹²⁵ Provisional duties can be applied no sooner than 60 days after the initiation of the anti-dumping investigation. They are limited in duration to between four and six months, except in cases where the investigating authority examines whether a duty less than the margin of dumping would be sufficient to remove the injury. In these cases, the duration may be between six and nine months. The provisional dumping duties will be refunded or amended depending on whether the final determination on the dumping margin is lower or higher than the provisionally estimated dumping margin.¹²⁶

After the authorities have made a preliminary finding that dumping has caused material injury to domestic industry, the exporters or the authorities may seek or suggest a “price undertaking”. This involves a commitment by exporters to increase their prices or to cease exports at dumped prices. The price increases are no higher than necessary to eliminate the margin of dumping. Notwithstanding an agreement on a price undertaking, the investigation of dumping and injury will be completed if the exporter or the authorities so decide. If there is a finding that dumping has not caused injury to domestic industry, the undertaking automatically lapses. In the event that dumping is found to have caused injury, the undertaking continues.

Assuming that investigating authorities have determined that there is dumping and that the dumping has caused material injury to domestic industry, a WTO member can apply definitive anti-dumping duties. However, the duties must not exceed the dumping margin. The ADA, in fact, encourages members to apply a duty that is less than the dumping margin if the lesser duty will be enough to eliminate the injury.¹²⁷ Definitive anti-dumping duties are applied on the date that the affirmative determination on dumping margin and injury is found.¹²⁸ As noted in the discussion earlier, anti-dumping duties are not applied on a most-favoured-nation – or non-discriminatory – basis, i.e. they target only those firms in countries where the dumped exports originate. In contrast to safeguard measures, the imposition of anti-dumping duties does not require the targeted countries to be compensated for the losses incurred because of the duties.

Article 11.3 of the ADA imposes a time limit on the maintenance of anti-dumping duties. They must be terminated within five years of their imposition, unless a review reveals that the expiry of the duty would probably lead to the continuation or recurrence of dumping and injury to domestic industry.¹²⁹ This review process is commonly referred to as the sunset review process.¹³⁰

The panel on *US – Corrosion-Resistant Steel Sunset Review* held that the likelihood determination must be based on positive evidence. It added that the sunset review must be based on a factual foundation relating to the past and present. Accordingly, the investigating authorities must evaluate this factual foundation and come to a “reasoned conclusion” about likelihood.¹³¹ The Appellate Body held that the words “review” and “determine” under Article 11.3 suggest that investigating authorities conducting a sunset review must act with an appropriate degree of diligence and arrive at a reasoned conclusion on the basis of information gathered as part of a process of reconsideration and examination.¹³² This appears to constrain the discretion of national authorities in a sunset review.

The same panel held that Article 11.3 does not prescribe any definitive methodology for a likelihood determination.¹³³ In relevant case law,¹³⁴ adjudicators have tended to consider that a determination of injury is not the same as a determination of likelihood of continuation or recurrence of injury in a sunset review, and that, consequently, requirements relevant to a determination of injury are not necessarily relevant to a determination of continuation or recurrence of injury. For example, the panel on *US – Corrosion-Resistant Steel Sunset Review* held that due to the lack of any cross reference to Article 5.6 and 5.8 in the text of Article 11.3, neither the evidentiary standards applied to the self initiation of an investigation under Article 5.6 nor the *de minimis* standard and negligibility standard under Article 5.8 is required to be applied in a sunset review.¹³⁵

The panel also considered that no obligation is imposed on investigating authorities to calculate or rely on dumping margins in a sunset review as these margins are not necessarily conclusive of a likelihood determination.¹³⁶ However, the Appellate Body added that once the investigating authorities chose to rely upon the dumping margin for a likelihood determination, the calculation of these margins must conform to the disciplines of

Article 2 and 2.4.¹³⁷ Similarly, the panel on *US – Oil Country Tubular Goods Sunset Review* held that investigating authorities are not required to make an injury determination in a sunset review and that obligations under Article 3 do not “normally” apply to the sunset review. However, to the extent that an investigating authority relies on an injury determination in conducting a sunset review, the obligation of Article 3 would apply.¹³⁸ The Appellate Body added that the absence of any cross-reference to Article 3 under Article 11.3 suggests that investigating authorities are not mandated to follow the provisions of Article 3 in making a likelihood of injury determination. However, by referring back to the obligation of basing a likelihood determination on positive evidence already interpreted by it, the Appellate Body found that the examination of factors under Article 3 is “relevant”.¹³⁹

The Appellate Body on *US – Oil Country Tubular Goods Sunset Review* held that re-establishing a causal link between likely dumping and likely injury is not required because adding such a requirement would have the effect of converting the sunset review into an original investigation.¹⁴⁰ Instead, what is required in a sunset review is to determine the effect of “the expiry of the duty” on the likelihood of “continuation or recurrence of dumping and injury”.¹⁴¹ Bown and Wauters (2008) opined that this indirectly requires the investigation of causation between future dumping and future injury. They admit that examining causal links between likely future dumping and likely future injury is difficult because of the prospective nature of the assessment. They and other economists suggest that the key questions to be addressed should be “what were the causes of injury in the first place?” and “whether the conditions surrounding these factors have changed in a way that removes them as likely future causes of injury” (Howse and Staiger, 2006).

As in the case of determining the cause of injury to domestic industry, administering authorities are free to choose appropriate methodologies to establish the likelihood of continuation or recurring dumping. Boltuck and Kaplan (1998) argue in favour of choosing methodologies that expressly consider the counterfactual state of the world (that is, the situation that would prevail in the absence of the phenomenon under consideration). Keck et al. (2007) suggest that sunset reviews make use of simulations regarding the probability of future events.

Overall, what has been the effect of WTO sunset review provisions on the duration of anti-dumping measures? Using data on revocations of anti-dumping measures from 1979 to 2005, Cadot et al. (2007) find that a five-year cycle for anti-dumping measures is more common after the creation of the ADA than before, with the likelihood of revoking anti-dumping measures after five years rising from about 2 per cent before the ADA to 45 per cent afterwards.

Their results appear to be at variance with the assessment by Bown and Wauters (2008) that the ADA imposes only minimal disciplines of a general nature on WTO members wishing to extend anti-dumping measures beyond their original five-year period. However, Cadot et al. (2007) suggest that compliance was at least partly voluntary. Nevertheless, they give part of the credit for the improvement to the ADA's sunset review discipline. Unfortunately, they find that much of the adjustment to the rules on sunset reviews came from small countries and new users of anti-dumping rules rather than the traditional or large users. Moore (2002) and (2006) arrives at a similar conclusion about some traditional or large users of anti-dumping measures, stating that their sunset review process has failed to produce significant reductions in the duration of anti-dumping measures.

(d) Conclusions

There is by now an immense literature describing the way that anti-dumping measures affect how firms and governments behave and the economic consequences of these measures. A great deal of it has highlighted the risks posed by anti-dumping action although there are explanations that point to the fact that in some cases it can enhance competition.

Anti-dumping measures can lead to a welfare loss if firms compete on price instead of on quantity. An anti-dumping duty raises the price that both firms will charge in the domestic market, penalizing domestic consumers and users. If the reason for dumping is the need of the foreign firm to maintain production capacity during periods of slack demand in its own market, anti-dumping measures can lead to a significant reduction in trade volumes. There is a possibility that the provision of such protection to one industry will lead to a mushrooming of protection to closely related industries, i.e. downstream industries.

If firms compete not only on price but also on the basis of the quality of the product, anti-dumping measures may adversely affect the fortune of the domestic firm in the long term if this leads the foreign firm to upgrade the quality of its product. To the extent that firms acquire experience or acquire technological know-how by producing, there is an economic rationale for them to continue producing and exporting even when price falls below average cost. If those firms come from technologically backward countries, penalizing them with anti-dumping duties can make it more difficult for them to catch up. Finally, anti-dumping can facilitate collusion between domestic and foreign firms at the expense of consumers.

The economic literature has also identified settings in which anti-dumping measures can improve economic welfare. If firms are Cournot competitors (i.e. choosing their production level by taking into consideration how much their rival produces), anti-dumping law can lead firms to behave in a way that is beneficial for domestic consumers, with the domestic firm expanding production in the hope of sufficiently depressing prices to trigger an anti-dumping investigation. While the domestic firm does not have the furthering of consumers' interests as its objective, it nevertheless ends up serving those interests because of the presence of anti-dumping law. The prisoners' dilemma (an outcome rendered inferior by a lack of cooperation) interpretation of reciprocal dumping by both countries suggests that if all countries succeed in disciplining price discrimination, consumer welfare will increase across the board.

All of this welfare discussion refers to the costs and benefits of anti-dumping measures. However, this Report has also examined the idea that the existence of flexibility makes it easier for countries to enter into agreements that result in greater trade liberalisation. A large part of the benefits from anti-dumping measures will come from the trade liberalization that is made possible by this flexibility.

WTO rules discourage or prevent all types of dumping that causes injury to domestic producers. From a narrow economic perspective, the rules on anti-dumping measures appear to give WTO members a large degree of flexibility, since they can be applied by establishing that dumped imports cause injury to domestic industry irrespective of whether dumping may increase welfare in the

importing country. However, the additional flexibility may be necessary to enable countries to commit to greater trade opening.

While the Anti-dumping Agreement provides a list of factors to be considered in determining injury to domestic industry, better guidance may be needed in how to weigh the different components. Determining the cause of injury is an area where economic concepts and methods may be usefully applied. Economic simulation models, for example, can estimate how certain factors contribute to injury and can attribute how much each factor contributes to that injury. With respect to the application of anti-dumping measures, the sunset review provision appears to have had some impact in reducing the duration of the measures. Unfortunately, most of these changes seem to be with new users of anti-dumping measures while less or hardly any change is discernible with the large or traditional users of these measures.

3. SUBSIDIES AND COUNTERVAILING DUTIES

In the GATT/WTO context, a countervailing duty (CVD) is a “special duty levied for the purpose of offsetting any subsidy bestowed directly or indirectly upon the manufacture, production or export of any merchandise” (GATT Article VI.3). From a legal point of view, CVDs are thus similar to anti-dumping duties, in that they are used to raise the domestic prices of imported goods that are considered to be “artificially” low in price. In both cases, the low prices are considered to result from “unfair” practices: dumping of goods by foreign firms in the case of anti-dumping; advantages afforded by foreign governments in the form of production or export subsidies in the case of countervailing duties. GATT/WTO rules allow importing countries to impose CVDs but impose strict disciplines on their use.

In this sub-section, we examine countervailing duties and their role in trade agreements from an economic perspective. At first sight, subsidizing exports may look like offering a present to the trading partner that is importing the subsidized products and countervailing may be seen as biting the hand that feeds you or shooting yourself in the foot. A closer look at the welfare effects of subsidies and countervailing duties and at the political economy of government interventions, however,

helps to clarify the role of CVDs. The sub-section starts with a short summary of the economic effects of subsidies followed by a discussion of the economics of countervailing duties. The second part discusses WTO disciplines and practices regarding CVDs, focusing on aspects that are of particular interest from an economic perspective. The conclusion pulls the threads together and discusses the role of CVDs in the Subsidies and Countervailing Measures (SCM) Agreement in the light of both economics and WTO disciplines.

(a) The economics of subsidies in brief⁴²

In a perfect market framework, i.e. perfect competition, perfect information, and no externalities (external effects not captured in market prices), subsidizing exports reduces national welfare because it results in the trading partner purchasing its imports more cheaply. However, certain groups in the exporting country are likely to benefit from the subsidy. If the perfect market assumption is relaxed, situations may arise where a government subsidy improves national welfare. An efficient subsidy would correct a market failure, bringing social and private costs and benefits into alignment. First, this sub-section examines the welfare implications of subsidies in a world of perfect markets. Second, a range of market imperfections or “failures” are introduced to reflect reality and to see how this modifies the welfare outcome. The market failures include externalities, economies of scale and imperfect competition.

i) Subsidies in perfect markets

First, let us consider the case where a large country introduces an export subsidy under the assumption that markets are perfect. There is no reason to focus on the small country case given that this discussion concerns subsidies in relation to CVDs.¹⁴³ A small country is, by assumption, a “price-taker” in the sense that it cannot affect its export prices. If this is the case, then there will be no reason for any importing country to impose CVDs on the subsidized exports. Similarly, this discussion does not concern the case of subsidies to compete with imports. However, production subsidies handed out to firms which export a significant part of their production will have price-reducing effects that can be countervailed. The discussion starts with the case of a perfect market.¹⁴⁴

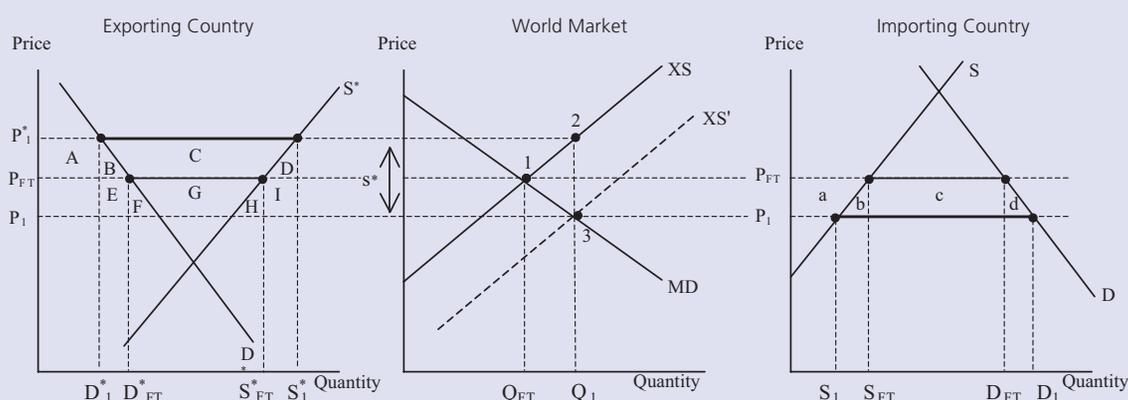
When the government of a large country grants an export subsidy to the producers of a particular good or service, these producers will initially earn more on their exports than on their domestic sales and thus they will have an incentive to export more. The price charged to domestic buyers, however, will soon increase to the level of the subsidised export price. Domestic demand will fall. Because the exporting country is assumed to be large, its increased exports will push down the world market price, deteriorating the country's terms-of-trade (i.e. the price of its exports relative to its imports). The importing country's terms-of-trade on the contrary will improve. Overall, despite an increase in traded flows, global welfare will decrease because the subsidy distorts the optimal allocation of resources. The subsidy will affect negatively the welfare of the exporting country, which will suffer

both from a deadweight (efficiency) loss and from a terms-of-trade (distributional) loss. While the terms-of-trade loss can be seen as a benefit for the importing country in the form of a terms-of-trade gain, the deadweight loss is a net loss for all parties.

The consequences of the subsidy are unevenly distributed in both the exporting and the importing countries. In the importing country, consumers or more generally buyers of the imported product will benefit from a lower price thanks to the subsidy, but import-competing producers will experience a loss. In the exporting country, subsidized producers will obviously benefit from the subsidy, while domestic consumers will be harmed because they will have to pay a higher price for the subsidized product and taxpayers will lose.

Box 8
Effects of an export subsidy

Figure 1
The effect of an export subsidy implemented by a large country



When studying the effects of an export subsidy, the size of the exporting country is crucial. When an export subsidy is implemented by a small exporting country, there is no effect upon the world price. When a large exporting country implements an export subsidy, it increases its exports and at the same time the world supply. This pushes the world price down due to terms-of-trade effects. Figure 1 represents the trade flows for one particular good between two large entities, one exporting and one importing country. To simplify the reading, all the exporting country's variables are denoted by an asterisk. The demand of the exporting country for the good is illustrated as D^* and its supply as S^* , generating an export supply curve denoted by XS . Similarly, in the importing country, demand

for the good is denoted by curve D and its supply by curve S , yielding an import demand curve MD . In free trade (FT), the world price is given by P_{FT} which corresponds to the intersection between the import demand and export supply in the world market, shown by point 1 in the middle panel.

The implementation of a specific subsidy (a fixed sum per unit) by the exporting country on its exports, denoted by s^* , shifts the export supply curve out to XS' . The export supply curve shifts down by the amount of the subsidy, reflecting the lower marginal cost of exports. Exports increase and the world price falls. In the importing market, the price falls from P_{FT} to P_1 which leads to an increase in demand from D_{FT}

to D_I (a move from point 1 to point 3 on the world market). On the other hand, the export subsidy raises the price in the exporting country and creates a wedge between the prices in the two markets equal to the subsidy. In other words, the price in the exporting country is determined by $P^*_{J=I} = P_I + s^*$. As a result, consumers in the exporting country reduce their consumption and producers export more at higher prices, as shown by the move from point 1 to point 2 on the export supply curve XS . Trade increases from Q_{FT} to Q_I .

The net welfare effect of an export subsidy on the importing country is positive. Indeed, although lower prices lead to lower production levels for import-competing firms, reducing their producer surplus by an amount equal to area a , as shown in the right diagram, the loss is more than compensated by an increase in consumer welfare,

which equals the sum of a , b , c and d . In the exporting country, the welfare effect is negative. The consumer welfare loss is equal to areas $A+B$; producers gain $A+B+C$ and the government expenditure is the area $B+C+D+E+F+G+H+I$. Therefore, there is a net welfare loss equal to the sum of B , the consumer deadweight loss, D , a deadweight loss associated with producers, and $E+F+G+H+I$, which is a terms-of-trade loss. The consumer loss is generated because some consumers are driven out of the market, and the producer deadweight loss is explained by the fact that additional and more expensive resources have to be used to increase exports, which would not have taken place without the export subsidy. At the world level, there is a deadweight loss equal to the sum of b and d plus the portion of the exporting country's terms-of-trade loss that is not compensated by a terms-of-trade gain in the importing country.

A production subsidy would have effects similar to those of an export subsidy. The main difference between the two is that with the production subsidy, the domestic price in the exporting country is pushed down by the fall in the world price prompted by the increase in supply. Consumers in the exporting country gain and so do producers, but the gains are more than offset by the loss to taxpayers.¹⁴⁵

The analysis above deals with subsidies that are provided in relation to some economic activity or another factor, such as production or export levels. Governments also frequently provide subsidies to finance wholly or partially the acquisition of fixed assets, such as technology, plant and equipment. Such subsidies may be paid only once or a limited number of times and are often referred to as non-recurring subsidies. These subsidies can have effects on competition that go beyond the period in which the subsidy is actually provided. They tend to have the effect of increasing investment by some firms in the relevant market. As a consequence, more firms will be active in the industry or existing firms will produce on a greater scale. This may have an impact on the conditions of competition in world markets. The duration of such effects on international competition depends, among other things, on the depreciation rate of the fixed asset and the evolution of demand in the years following the investment, as discussed in Grossman and Mavroidis (2003a).

ii) Subsidies in the presence of market failures

The *World Trade Report 2006* (WTO, 2006) analyzed three common examples of “market failures” that support the case for subsidy intervention: externalities, increasing returns to scale and imperfect competition.¹⁴⁶ The following discussion focuses on the use of subsidies in the presence of imperfect competition for strategic reasons, a case that plays an important role in the literature on countervailing duties.

Economists have identified a number of instances where, in the presence of imperfect competition, governments can use subsidies to help national firms earn extra profits. The simplest case is when a government finances predatory pricing by its national producers in export markets. As a result of the predatory prices, domestic producers in the country that is the target of predatory practices are driven out of business and subsidized producers gain a dominant position, which they exploit by setting a monopoly price. This argument has been criticized mainly on account of the fact that there is little empirical evidence to suggest that government-financed predatory pricing occurs to any significant extent (Sykes, 1989).

More sophisticated arguments have been elaborated as part of the so-called “strategic trade literature”. New trade theory models, characterized by

imperfect competition in the form of oligopoly or monopolistic competition, were used to identify specific circumstances where intervention in the form of subsidies would be desirable. The intuition is that interventions which alter the strategic relationship between firms can give one firm an advantage over another in imperfectly competitive markets, where each firm's commercial decisions (output and pricing) are dependent on those of its rival. This idea can be illustrated using a simple model developed by Brander and Spencer (1985).

The model has two firms, located in different countries, that only export to a third-country market. The justification for this unrealistic assumption is that it drastically simplifies the welfare analysis: changes in firms' profits correspond to changes in national welfare. Conflicting changes in consumer surplus are assumed away so that in order to maximize national welfare, governments only need to maximize the domestic firm's profits. Box 9 presents a simple diagrammatic analysis.

Box 9
Strategic trade policy

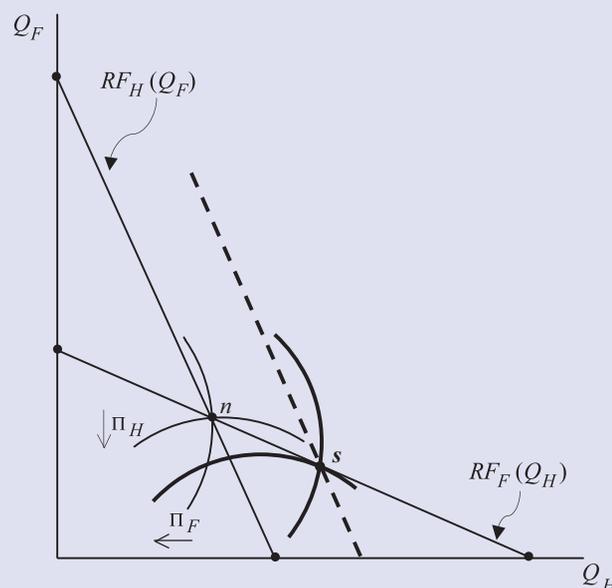
A rationale for export subsidies is that, in the presence of oligopolistic competition, a subsidy can shift profits from one industry to another. This box considers the simplest possible model where two producers, one home (H) and one foreign (F) firm, compete in outputs in a third country. The third country approach is taken in order to disregard consumer welfare effects and to concentrate on firm profits. So the aim of the home government is to help its domestic firm increase its profits in the international market.

intervention, the Cournot-Nash equilibrium is depicted by point *n* in quantity space, which corresponds to the intersection of the two reaction functions $RF_H(Q_F)$ and $RF_F(Q_H)$. The home reaction function, $RF_H(Q_F)$, defines the home firm's quantity that allows the highest profit to be reached, given the quantity of the foreign firm, Q_F . $RF_F(Q_H)$ can be interpreted in a similar fashion. The home and foreign profits are respectively Π_H and Π_F , and the arrows indicate in which direction profits of the firms increase.

Figure 1 is a graphical representation of the model when firms compete in the Cournot manner. Cournot competition is best understood as firms choosing their production level by taking into consideration how much their rival produces. For instance, without government

Now consider an interventionist government in country H that wishes to improve the profit of its firm. Graphically, the aim of the government is to move the home firm to a higher profit curve. One way would be to give the home firm an

Figure 1
Output subsidy and reaction functions in Cournot model



output subsidy that will reduce its marginal cost and provide incentive to increase its quantity (Q_H) in the third country. In Figure 1, an output subsidy shifts the reaction function of the home firm to the right (represented by the dashed line). The new Cournot-Nash equilibrium is denoted by point s . Note that the subsidy's

effect is to shift profit from the foreign to the home firm. The home firm is on a higher profit curve and conversely the foreign is on a lower. The main argument illustrated by Figure 1 is that governments can actively use subsidies to shift profits towards the industry receiving the subsidies.

Assuming that firms choose their best output given the output of the other firm (Cournot assumption), the model shows that a government can increase its national firm's profits by granting it a production subsidy. A production subsidy, which in this case is also an export subsidy, acts as a profit-shifting instrument; profits earned by the competing foreign firm are transferred to the domestic firm, since the subsidy allows the domestic firm to commit to a higher level of output. The intuition behind the proposal for intervention is based on the positive profits earned by both firms and the ability of the government to use subsidies to shift some of the foreign firm's profits to the domestic firm. Since the profits earned by the domestic firm are higher than the subsidy, it pays for the government to implement the subsidy policy. As mentioned, the foreign firm and thus the foreign country are worse off as a result of the subsidy.

This profit-shifting argument in favour of subsidies does not stand up well to changes in assumptions and great care is needed in translating it into policy prescription. Dixit (1984), Grossman (1986b) and Eaton and Grossman (1986) relax the basic assumptions of the Brander and Spencer analysis and show how doing so modifies the conclusions. For example, if each firm is assumed to choose its optimal price given the price of its rival – the so-called Bertrand assumption – the results are reversed and the optimal policy for the government is to tax the national firm rather than to subsidize it. Grossman's conclusion is that identifying those industries for which the argument for strategic export promotion is valid would be very difficult in practice.

iii) Arguments used by governments to justify subsidies¹⁴⁷

Governments use subsidies to pursue a variety of objectives, either because they consider that some malfunctioning of the markets impedes them from delivering efficient outcomes or because they

consider market outcomes unsatisfactory. Subsidies in the context of environmental policies and research and development (R&D) support tend to be justified on the basis of positive or negative externalities. Subsidies in the context of industrial policies have been related to a variety of market failures, such as learning-by-doing effects, asymmetrical information, and capital market failures. The use of subsidies to redistribute income is not linked to imperfections in the market, but to society's desire to change the market outcome.

Whatever the objective pursued by governments, subsidies tend to be only one of a range of possible instruments to achieve it. The optimal policy instrument is situation-specific and needs to be determined on a case-by-case basis. Subsidies have a number of advantages compared with other instruments. They represent a relatively transparent form of government intervention, to the extent that expenses and recipients are reported in the government's budget. Given their direct impact on prices, subsidies tend to have less undesirable side-effects than other instruments in situations where the government wishes to change market signals (prices), for example in the presence of environmental or knowledge externalities that are not fully reflected in market prices. But subsidies also have disadvantages. Because they have such a direct impact, beneficiaries have a strong incentive to lobby in favour of continued subsidization. In other words, the use of subsidies makes the government prone to undue influence by recipient industry groups or other groups in society. One way of reducing this danger is to link subsidization to objective performance criteria whenever possible.

(b) The economics of countervailing duties

In the absence of market failures, subsidies that increase exports will most likely hurt competing producers in countries that import the subsidized

product. At the same time, the subsidy is likely to reduce the price of the imported product in those same countries. The overall welfare effect of the subsidy in the importing country will presumably be positive, given that the subsidy corresponds to a discount on the price of imports. With imperfect competition, producers may earn above-normal profits, and subsidies can be used to shift those profits. The loss in profits could more than offset the consumer gain from lower prices.

This sub-section analyzes the trade and welfare effect of CVDs, both in a perfect market and in the presence of imperfect competition and discusses the economic rationale for using them. In the perfect market, CVDs improve the situation of the producers competing with subsidized imports and provide tariff revenue but they tend to raise the price of goods and harm consumers. Overall, the countervailing country is presumed to be worse off with the duty in place than without it but it could be better off than before the subsidy was imposed. The two main caveats to this proposition are that CVDs can improve the importing country's terms-of-trade, and that they may deter subsidization altogether. This would bring benefits to producers in the importing country who must compete with subsidized goods in their export markets. In the presence of market failures, CVDs can be used for "rent extraction" or capturing profits arising from such failures, which may provide a further argument for using them. The sub-section concludes with a discussion of the economic rationale for CVDs.

i) Perfect markets

The previous sub-section considered the case of a large country subsidizing its exports. Turning now to the countervailing country, this sub-section will first consider the case where there is only one large importing country and then compare it with the case of a small importing country. As previously, the difference is that when a large importing country imposes a tariff, the resulting fall in demand pushes the price down, while the small country's trade policy has no influence on world prices.

When a government imposes a tariff on imports of the subsidized product, its price increases and demand falls. If the country is large enough, this lower demand will depress the world price of the product, mitigating the initial price increase in the protected market and reducing the price in

the subsidizing country. Trade falls. If the tariff increase matches the subsidy, trade will return to its pre-subsidy level. The countervailing duty completely eliminates the distortion associated with the subsidy. In this case, the only effect is a transfer of income from taxpayers in the subsidizing country to the government (taxpayers) in the importing country (Markusen et al., 1995). Welfare as a result of the CVD is still greater than before the subsidy programme by the amount of the tariff revenue but whether it is greater or smaller than before the imposition of the CVD depends on the relative importance of the distortion introduced by the duty compared to the terms-of-trade gain. If the country is large enough, the terms-of-trade gains could more than compensate the efficiency loss from the duty.

A subsidy granted by a large country will affect importing countries in the same way whether they are large or small. It will increase supply on the world market and will push down the price. The effect of the CVD, however, will differ depending on the size of the country that imposes it. If the country that imposes it is small, the CVD will have no effect on the world price. The tariff increase needed to return to the pre-subsidy price will be less significant than in the large country case and only part of the subsidy will be transferred to the countervailing country. A small countervailing country will no doubt be worse off with the CVD than without it but still with the subsidy. The distortion from the duty will not be offset by a terms-of-trade gain. If only one small importer imposes a CVD, there will be no feedback effect on the subsidizing country. If, however, many small importers countervail, the price will fall and there will be a feedback effect on the subsidizing country.¹⁴⁸

Sykes (1989) discusses reasons why the terms-of-trade gains argument should not be interpreted as a justification for the use of CVDs. First, the subsidizing government is likely to recognize that countervailing duties absorb part of the subsidy and may respond by curtailing or abolishing the programme. Because the importing country gains from the subsidy, it would be worse off in the case where the market returns to the pre-subsidy situation. Second, even if the subsidy remains in place, it would be difficult to assess the welfare effect of the CVD. A considerable amount of information on demand and supply would be needed to measure and compare the size of the deadweight loss with the terms-of-trade gain.

Another theoretical scenario in which CVDs may generate positive welfare effects that may exceed the negative distortion effects is examined by Sykes (1989). His examination concerns the case where the importing country is also exporting the product either to the subsidizing country or to

third-country markets, which might be the case because of transport costs. In this case, if the CVD prompts the subsidizing country to eliminate its export subsidy, prices may increase in some of those third markets, which may benefit exporters in the countervailing country.

Box 10
The effects of an export subsidy combined with a CVD

As was shown previously, an export subsidy creates a wedge between the prices in the two markets, with the price paid by consumers in the importing country corresponding to P_I and the price perceived by the producers in the exporting country to $P_1^* = P_I + s^*$. The subsidized price causes injury to the domestic producers who then lobby for protection in the form of a countervailing tariff.

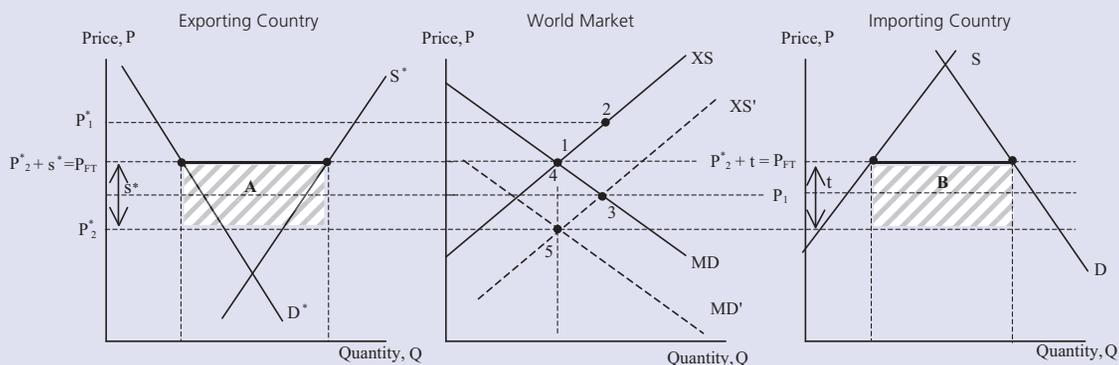
Introducing a countervailing tariff (denoted by t) shifts the import demand to the left and drives a second wedge between the prices in the two markets, illustrated by the move from point 3 to points 4 and 5. The tariff has the effect of raising the price in the importing country. However, since the increase is less than the amount of the tariff due to the terms-of-trade effects, part of the tariff is reflected in a decline in the export price. Therefore, the price in the importing country will increase from P_I , the subsidized price, to the free trade price P_{FT} . Similarly, the countervailing tariff will push down the exporters' price to $P_2^* = P_{FT} - t$. Nonetheless, since the subsidy is still in effect, the true price perceived by the

producers is $P_2^* + s^* = P_{FT}$, which is equal to the price under free trade.

The major implication of a combined policy is that, because output and prices in both markets have returned to their initial free trade levels, the distortionary impact of the subsidy is neutralized. Global welfare returns to its free trade level. The only effect that remains is the transfer of income from the foreign country (the shaded area A) to the domestic country in the form of a tariff revenue (shaded area B). In other words, what the foreign government spends as an export subsidy is collected by the domestic country in the form of tariff revenue.

If the importing/countervailing country is too small to affect the large exporting country's price, the countervailing tariff raises the price of the good in the importing country by the full amount of the tariff and does not affect the price of the exporting country. In other words, a much smaller countervailing tariff is required to re-establish the subsidized price (P_I) to the free trade level (P_{FT}) in the importing market.

Figure 1
The effects of an export subsidy combined with a countervailing tariff: the case of large countries



In the production subsidy case, the main difference is that the CVD does not eliminate the distortion. The country that imposes the CVD can completely offset the distortion caused by the subsidy and return to the pre-subsidy situation. Production and consumption in the subsidizing country, however, do not revert to the pre-subsidy situation. Consumers benefit from the tariff-induced reduction of the price (the terms-of-trade effect) while production falls but not all the way to the pre-subsidy level. There is thus both a transfer from taxpayers in the subsidizing country to taxpayers in the importing country and a distortion in the subsidizing country (Baylis, 2007).

ii) Imperfect competition in product markets

The situation is again more nuanced in markets with imperfect competition. In the presence of imperfect competition, the exporting nation does not necessarily lose and the importing country does not necessarily gain from export subsidies. As explained above, there is a simple argument where governments subsidize predatory pricing and a more elaborate argument where governments subsidize to improve the strategic position of their producers. The former argument is fairly straightforward. The government of the country targeted by the subsidized predatory pricing should countervail the subsidized imports to prevent damage to domestic producers and the monopolization of its domestic market. While this argument makes some theoretical sense, its validity is limited in practice. First, as already mentioned, there is very limited empirical evidence suggesting that government-financed predatory pricing occurs to any significant extent (Sykes, 1989). Second, assuming that predatory pricing poses a threat, CVDs would only be needed as a remedy if anti-trust law should not or cannot be employed.¹⁴⁹

The strategic trade policy literature has shown that, under certain conditions, it may be optimal for one government to use an export subsidy and for the other to use some form of CVD. Dixit (1984) analyzes the case of a homogeneous product being traded in a market dominated by a small number of firms (i.e. an oligopoly), where firms choose their best output given the output of the other firm (Cournot assumption). There is a given number of firms located in each country, which both sell on their domestic market and export to the other market. In this setting, Dixit shows that a partly

countervailing duty may be desirable when a foreign country subsidizes exports. Under oligopoly, the foreign export subsidy increases the foreign firms' sales and profits in the home market. It shifts monopoly profits to the subsidized producers at the expense of their competitors. It may thus be optimal for the home government to use a tariff to "claw" back some of this profit despite the fact that the tariff raises the price and lowers consumer benefits.

Dixit also shows that if a country has a cost advantage over imports even after any subsidies from the foreign country, its best policy is a prohibitive tariff plus a domestic subsidy to eliminate the domestic oligopoly distortion. Dixit (1988) generalizes Dixit (1984) by allowing for various types of oligopolistic behaviour and product differentiation. The broad conclusion is also that some theoretical support can be found for partial CVDs. Dixit, however, warns against a misuse of his results. First, before his theoretical results are used to justify tariffs, it should be examined whether other policies can achieve the same benefits more efficiently than trade restrictions. Second, there is a risk that vested interests distort the picture, which may result in the emergence of welfare-reducing policies while providing gains to powerful special groups.

Spencer (1988b; 1988a) extends the analysis to CVDs in the context of capital or investment subsidies. The papers focus on the issue of whether the chosen level of duty actually serves the purpose of offsetting a foreign subsidy so as to maintain the competitiveness of domestic firms. They also examine whether GATT/WTO-compatible CVDs would be sufficient to deter subsidies. Spencer (1988a) shows that while the maximum duty allowed under GATT/WTO rules is just sufficient to offset a direct export subsidy, it is not necessarily sufficient to offset subsidies for the purchase of additional capital equipment. A set of conditions under which firms in the importing country will be injured is developed. They depend on both the nature of the production function in a subsidized firm and the magnitude of the subsidy. Also shown is that in a few cases, maximum CVDs would not be sufficient to deter governments from subsidy policies based on profit-shifting motives. Such cases are not likely to be very important in practice, however. Spencer (1988b) notes that the usefulness of a GATT/WTO-compatible countervailing duty as a deterrent is likely to depend mainly on a commitment by the importing country to impose the duty in an immediate and decisive manner.

The structure in Dixit (1984; 1988) allows for simultaneous selection of export subsidies and possibly offsetting tariffs. As argued by Brander (1995), using the term “countervailing” to describe simultaneously selected duties may be misleading. In practice, subsidies are applied first and they may possibly be countervailed later with a tariff. Collie (1991) considers this sequence of interventions in a model otherwise similar to Dixit (1988) to analyze the effects of retaliation on the profit-shifting argument for export subsidies. He models trade policy as a multi-stage game. First, the foreign country sets its export subsidy. Second, the domestic country responds by selecting an optimal tariff. He finds that when the home country uses a tariff and a production subsidy, its optimal response to an export subsidy is to increase its tariff and reduce its subsidy.

As for the foreign country, knowing the likely response of the home country, its optimal response will generally be a positive subsidy.¹⁵⁰ In this case, retaliation does not negate the profit-shifting argument for export subsidies. When the home country, however, can only use a tariff but no production subsidy, the optimal response is a less than fully countervailing tariff while the optimal foreign policy would be an export tax. Collie (1991) considers this second case to be more realistic than the first and therefore concludes that in practice the possibility of retaliation with a countervailing tariff is sufficient to eliminate the foreign country’s incentive to use an export subsidy. This result supports earlier analysis by Grossman (1986b) and Bhagwati (1988).

Collie (1994) extends Collie (1991) by allowing the timing of trade policy interventions to be explained by the model. As in Collie (1991), the domestic country uses an import tariff to extract profits from the foreign firm and uses a production subsidy to correct domestic distortions due to imperfect competition. At the same time, the foreign government uses an export subsidy to shift profits from the domestic firm. Different scenarios are considered, each of which corresponds to a game. In these games, the domestic and foreign governments can either choose their trade policy simultaneously or sequentially.

Collie shows that the home government will always prefer to set its trade policy before the foreign government. This results in the home government committing not to use countervailing

duties. Consequently, this leads the foreign firm to use a larger export subsidy because using a countervailing duty is no longer a credible threat. Consequently, both countries are better off. The domestic market benefits from the foreign export at a lower price and the foreign firm benefits from a lower tariff regime. The conclusion is that imperfect competition does not provide an economic rationale for countervailing duties.

Qiu (1995) also examines whether and how retaliation by a domestic country can efficiently reduce the profitability of export subsidization in a two-firm model. His analysis differs from that of Collie (1991) in that he assumes that there can be no CVD if there is no subsidy and that there can be a delay between the imposition of the subsidy and retaliation. Qiu identifies a number of factors that lessen the efficacy of CVDs. He demonstrates that free trade is almost always the optimal trade policy in the face of likely retaliation but that a foreign country may find subsidizing exports attractive when retaliation by the domestic country is extremely slow. This is because when considering whether to subsidize exports, the foreign country compares the benefit from profit-shifting before retaliation begins with the loss once retaliation gets under way. Qiu also shows that the GATT/WTO constraint (i.e. a countervailing duty cannot exceed the amount of the subsidy) lessens the punishment and gives more room for export subsidization. Finally, Qiu argues that some voluntary export restriction agreements, under which both the domestic and foreign firm benefit, can arise to avoid the imposition of a CVD.

Along the same lines, Hartigan (1996a) shows how retaliatory restrictions under GATT/WTO rules might lead to the behaviour that the rules seek to deter. The rules require that the country harmed by a subsidy establishes that injury has occurred to the pertinent industry, requiring that the subsidy be currently in existence. They also mandate that the CVD should not exceed the level of subsidy. Hartigan argues that the GATT/WTO provisions fail to take into account that a subsidy, even if it is in place for a relatively short period, may have detrimental effects on an industry after it is eliminated.¹⁵¹ Using a simple two-firm model, he shows that the home country, if it abides by the GATT/WTO rules when imposing a CVD, is unable to restore the competitive balance in the industry due to the costs incurred by consumers having switched to different products. In his view,

the requirement that injury be established by the home government creates an advantage for the foreign government.

Building on earlier work by Wright (1998), Piracha (2004) explores how different levels of information have an effect on strategic trade policy. He considers a scenario where the costs of the home firm are private information signalled to the home government by the amount of output they produce. The set-up is a two-stage game, where the home government sets its export subsidy in the first stage, while the foreign government imposes a countervailing tariff in the second stage.

Piracha finds that the best strategy for the domestic government is to use an export tax since it implies a lower tariff by the foreign government. Having understood this behaviour, the home firm will act strategically by misrepresenting itself in order to get the lowest export tax possible. It will do this by producing at an inefficiently low level. Piracha argues that these inefficiencies can be so distorting that the home government ends up giving subsidies in order to reduce the distortion, even when a subsidy is clearly not the best policy. As far as the foreign government is concerned, it uses the same level of tariff whether the home firm signals its costs or not.

iii) Imperfect labour markets

Public support for protection is often based on the perception that competition from imports may lead to costly industry adjustments and cause persistent unemployment. Indeed, there are theoretical arguments in favour of using countervailing duties as a means of facing up to these adjustment costs and the redistribution of resources that results from subsidized imports. This argument assumes that workers' earnings encompass more than the competitive wage.¹⁵² For example, strong labour unions may take advantage of monopoly power to raise wages above the competitive level. Alternatively, employers may raise wages above the competitive level to increase employees' productivity or efficiency.

If workers earn additional income, a foreign subsidy may no longer have an unambiguously beneficial effect. As demonstrated by Sykes (1989), part of the reduction in domestic producer surplus (the sum of profits earned by suppliers) resulting from the foreign subsidy is not compensated by an increase

in consumer surplus (the difference between the willingness to pay and the actual price the consumer pays). If the foreign subsidy has a negative impact on welfare, a CVD that would eliminate it will have a positive effect on welfare but a CVD could enhance welfare even further if the subsidy has a positive effect on welfare.

In theory, trade policy (i.e. the use of CVDs) is only a second-best solution to the type of labour market failure discussed above. Economic principles would suggest that the best form of intervention would be to directly address the source of the market distortion. However, it may not be politically acceptable to intervene in the labour market. In this case, there would be a second-best argument for using trade policy, such as CVDs.¹⁵³ Moreover, as detailed by Sykes (1989), there are a number of other objections to the use of CVDs to address labour market failures. Sykes notes that if information problems prevent the use of first-best policies, they may also prevent the use of countervailing duties. More fundamentally, a general safeguard, which is not dependent upon subsidization, may be preferable, even if it is not an ideal response.¹⁵⁴

However, if subsidies are applied for a limited period and industry adjustment costs are most severe immediately after subsidised imports are introduced, different and possibly greater forms of protection may be needed than for other types of import competition. In particular, it would not require protection measures that facilitate industry adjustment. Long-term adjustment would not be needed because of the temporary nature of subsidies and short-term adjustment would not be advisable because of the high costs associated with this. In other words, if subsidies are applied for a particularly short period, specific contingent measures may be warranted. Sykes (1989), however, argues that there is no empirical evidence suggesting that subsidy programmes are generally temporary. Moreover, other sources of import competition, such as exchange rate fluctuations, may be even more temporary.

Conventional economic wisdom suggests that the hardship of economic upheaval is usually better alleviated with tools other than restrictive trade policies (Sykes, 1989). Retraining programmes, public employment agencies, social security and other measures directly targeted at affected workers introduce less distortions than trade restrictions. However, the taxes levied to finance alternative

redistribution policies can also introduce severe distortions. In any case, assuming that there is a case for using trade restrictions to correct the distribution of income, it is again questionable whether CVDs would necessarily be the best protectionist option.

iv) The economic rationale for CVDs

Having examined the welfare effects of subsidies and CVDs, two related questions need to be considered: why do governments use countervailing duties and what role do CVDs play in trade agreements?

With regard to the first question, the presumption is that governments do not use CVDs solely to improve national or global welfare. Examination of the welfare effects of subsidies and CVDs suggests that in the absence of market failures, CVDs would normally reduce overall national welfare. The question then is why do governments use them. A first answer could be that market imperfections are everywhere. In other words, the cases where CVDs increase welfare would be more frequent than economists tend to believe. Another possible explanation is that governments use CVDs to help producers compete with subsidized imports. The welfare analysis outlined above has shown that the principal beneficiaries of CVDs are indeed those producers. If, as suggested in the political economy literature, governments do not necessarily maximize national welfare but rather pursue policies that benefit certain constituencies, they may indeed use countervailing duties to help producers who have been harmed or are likely to be harmed by foreign subsidies.

In the light of this observation, the related question of the role of CVDs in trade agreements is now considered. If the rationale of a trade agreement is to eliminate beggar-thy-neighbour policies, i.e. policies that have a negative impact on trading partners, countervailing duties can be seen as instruments that allow importing countries to neutralize the negative impact from subsidies (Horn and Mavroidis, 2005).¹⁵⁵

As shown above, the government of an importing country can use CVDs to restore the price that existed before the subsidy, thereby leaving domestic consumers and producers unaffected by the subsidy. In the process, it collects tariff revenue which makes it better off than before the subsidy. In this

particular case, the negative impact of the subsidy does not necessarily correspond to a reduction in overall economic welfare. If the presumption is that the subsidy does not lead typically to a loss of overall economic welfare but only to a loss of producer surplus (the sum of profits earned by suppliers), the countervailing duty should be seen as an attempt to protect domestic producers from the harmful effects of foreign subsidies rather than to promote global efficiency.

As pointed out by Grossman and Mavroidis (2003a), this interpretation finds support in a number of provisions of the SCM Agreement. If countervailing duties are intended to neutralize subsidies that inflict a welfare loss on trading partners, they should only be applied when a subsidy can be shown to have this negative effect. As discussed below, the SCM Agreement confines the use of CVDs to situations where the importing country can provide evidence that an industry has been injured by subsidized imports.

Sykes (1989) discusses the argument that CVDs may be part of a larger multilateral system aimed at discouraging trade-distorting subsidies and at facilitating trade concessions. He observes that a system of constraining subsidies can only be effective if it is properly enforced. He suggests that countervailing duties may be part of the enforcement mechanism.¹⁵⁶ While Sykes is aware that, in a narrow sense, CVDs are often detrimental to national economic welfare, his view is that there might be systemic gains from the use of countervailing duties by all countries. The threat of CVDs may allow governments to resist political pressures for wasteful subsidization at home. The use of countervailing duties by all countries may also deter subsidies that would injure each nation's exporters in their overseas markets.

If countervailing duty laws and the SCM Agreement aim to discourage wasteful subsidies, an interesting question is whether they are effective in achieving this objective.¹⁵⁷ Sykes (1989) notes that CVDs are unlikely to be very useful as a means of enforcing international constraints on subsidies unless the duties are imposed multilaterally. This is because CVDs imposed by a single country are likely to deter subsidization by other governments only haphazardly and not necessarily when such deterrence is most likely to improve the welfare of the country that imposes the duty.

As shown in Section D, CVDs have not been used frequently and they have only been used by a small number of nations. Part of the reason for this is the injury test, which restricts the number of countries that can countervail to those with an industry competing with imports (Sykes, 2003a). In any case, uncoordinated and unilateral countervailing measures may only divert subsidies towards markets where no countervailing action may be taken. Also, countervailing duties will only be employed against subsidy programmes if and when those become known to trading partners. If detection takes time, the beneficiaries of the subsidy may derive considerable benefit before the countervailing duty is applied. Finally, an effective dispute settlement mechanism may be sufficient to make countries limit the use of subsidies.

Sykes (1989) also discusses the argument that countervailing duty laws might serve to prevent governments from using subsidies to circumvent new tariff rates and thereby facilitate tariff concessions that would not otherwise be made. Sykes notes that this claim is weak because it is difficult to evaluate given that no counterfactual scenario is observable.

(c) WTO discipline and practice on CVDs

Subsidies were already common in the mercantilist era of the 17th and 18th centuries but the earliest attempt to control them dates back to 1862. This involved the inclusion in trade treaties of clauses stating that signatory governments would not grant various kinds of subsidies (Viner, 1923). While the first countervailing duty law was a provision in the US Tariff Act of 1890 that applied to certain types of sugar, the first general countervailing duty law covering all subsidized imports was enacted by Belgium in 1892. The United States introduced its first general countervailing duty law in 1897 and was followed by India in 1899, Switzerland in 1902, Serbia in 1904, Spain in 1906, France and Japan in 1910, Portugal in 1921, British South Africa in 1914 and New Zealand in 1921. The United States has been a pioneer in the use of countervailing duty law and has made much greater use than other countries of countervailing duties (CVDs).¹⁵⁸ Article VI of the 1947 GATT Agreement, which allowed for countervailing duty laws subject to certain restrictions, was derived from a United States' proposal based on the Anti-dumping Act of 1921.

Article VI disciplined the use of CVDs under the GATT.¹⁵⁹ In the Uruguay Round, it was complemented with more detailed provisions that form part of the Subsidies and Countervailing Measures (SCM) Agreement¹⁶⁰ or were included in the Agreement on Agriculture.¹⁶¹ The rules require there to be both subsidized imports and injury to a domestic industry and a causal link between the two. Additionally, all the required procedures under the SCM Agreement must be followed.

There are significant commonalities between the disciplines on countervailing and those on anti-dumping measures. In many cases, the wording of the agreements is the same. The requirements regarding the determination of injury and causality, for example, are identical to those discussed in the context of anti-dumping. The requirements regarding the determination of the existence of a subsidy have already been analysed in the *World Trade Report 2006*. There are also a number of commonalities with the provisions regulating safeguards. In this sub-section, the focus is on disciplines and practices that are specific to CVDs and refer the reader to the sub-sections on anti-dumping (AD) and safeguards wherever the disciplines are identical to those specified by these agreements.

Insofar as subsidies are “measures by Members affecting trade in services”, in the sense of Article I:1 of the General Agreement on Trade in Services (GATS), they are covered by this Agreement. This implies that, regardless of the existence of specific commitments in the sub-sectors concerned, the most-favoured-nation (MFN) principle of non-discrimination in Article II:1 must be respected. In addition, whenever a sector is made subject to commitments, Article XVII ensures, in the absence of scheduled limitations, that foreign services and service suppliers are granted national treatment – i.e. the principle of giving others the same treatment as one's own nationals. Under Article XV of the GATS, WTO members are also committed to negotiating any additional disciplines that may be necessary to prevent subsidies from having trade-distorting effects;¹⁶² these negotiations shall also address “the appropriateness of countervailing procedures”. However, in over ten years, very limited progress has been made under this mandate. The issue of countervailing procedures has rarely been raised. This sub-section focuses, therefore, on GATT/SCM disciplines.

The sub-section is in four parts followed by a conclusion. The first part discusses the initiation of a countervailing duty procedure, the second focuses on the existence and amount of the subsidy, building on the discussion in WTO (2006), the third examines the determination of injury to domestic industry and of a causal link between subsidization and injury, while the fourth considers the application of a countervailing duty.

i) Initiation: the two tracks

Under the GATT and the SCM Agreement, there are two different tracks, sometimes referred to as the multilateral track and the unilateral track, that a WTO member may pursue if it believes that its interests are being harmed by subsidies provided by another member. Under the multilateral track, a WTO member may challenge another member's subsidy by bringing a dispute to the WTO dispute settlement system. The challenge may be based on an allegation that the subsidy is prohibited, or that it is causing one of three types of adverse effects (one of which is injury to domestic industry caused by subsidized imports). If the complainant wins the case, the defendant is asked to withdraw the subsidy or, in the case of an adverse effects case, to remove those adverse effects. If this does not happen, authorization for imposition of countermeasures will be given to the complaining member.¹⁶³

Under the unilateral track, a WTO member can launch a countervailing investigation to determine whether subsidized imports are causing injury to its domestic industry (for obvious reasons, the unilateral track is unavailable where the adverse effect relates to the member's exports to other markets). If after an investigation, the member determines that subsidized imports are causing injury to domestic industry, it may impose a CVD in accordance with the provisions of the SCM. While the provisions of Part II or Part III (the sections of the SCM Agreement dealing respectively with prohibited and actionable subsidies) can be invoked in parallel with those of Part V (the section that deals with countervailing measures), only one form of relief will be available in the end.¹⁶⁴

The unilateral track is similar to the approach taken in the AD Agreement. Procedural rules for the initiation of countervailing investigations are very similar to those for anti-dumping actions. Initiation of the unilateral track can be conducted by or on

behalf of the domestic industry, or by the authority itself based on sufficient evidence of a subsidy, injury to domestic industry and causal link between the two. As in the case of AD, an application shall be considered to be made by or on behalf of the domestic industry if: (i) it is supported by domestic producers whose collective output constitutes more than 50 per cent of the total production of the "like" product produced by the portion of the domestic industry expressing their opinion (either oppose or support) to the application; and (ii) producers who expressed supporting opinion must account for at least 25 per cent of total production of the like product produced by the domestic industry.¹⁶⁵

An application shall be rejected if: (i) the evidence of either subsidy or injury to domestic industry is not sufficient; (ii) the amount of subsidy is *de minimis* (i.e. the minimal amounts of domestic support that are allowed even though they distort trade); or (iii) the volume of subsidized imports, actual or potential, or the injury is negligible.¹⁶⁶ There is a minor difference between *de minimis* thresholds in the AD and the SCM agreements. Whereas a margin of dumping of 2 per cent or less is considered as *de minimis* in the AD Agreement, a subsidy would be considered *de minimis* only if it represents less than 1 per cent of the value of the goods.¹⁶⁷ Article 27.10 of the SCM Agreement explicitly requires the termination of a countervailing investigation when the investigating authorities determine that the volume of the subsidized imports from a developing country member represents less than 4 per cent of the total imports of the like product in the importing member. The exception to this is if the imports from this group of exporting members collectively account for more than 9 per cent of the total imports of the like product in the importing member. Other than this, there is no explanation of how the import volume or injury to domestic industry can be considered as "negligible" under the SCM Agreement.

The existence of the two tracks is specific to subsidies. There is no substitute track in the case of safeguards, and dumping is a private practice that cannot be challenged through the dispute settlement mechanism. So far, and despite the broader scope of the multilateral track which unlike the unilateral track can be used against both subsidized imports and subsidized competition on export markets, the unilateral track has been used far more often than the multilateral track. From the point of view of the industry or government which believes that its

interests are being harmed by subsidized imports, the unilateral track has several advantages.

First, countervailing investigations are initiated by industries while governments typically have considerable discretion in deciding whether to file a complaint to the WTO. Second, it takes much less time to obtain relief under the unilateral track. Provisional CVDs can already be imposed 60 days after the date of initiation of the investigation while it may well take two to three years to obtain any relief under the multilateral track. Third, the national government has control over the unilateral track, and firms may feel more comfortable dealing with their national administration and domestic laws compared with getting involved in a government-to-government dispute settlement process. Fourth, the remedy is different. While the countervailing duty “neutralizes” the effect of the subsidy, relief under the multilateral approach would take the form of the withdrawal of the subsidy or the elimination of the adverse effects. Only if the subsidizing member does not take the appropriate steps, and in the absence of agreement on compensation, may the WTO’s Dispute Settlement Body grant authorization to the complaining member to take countermeasures.

From a systemic point of view, the two tracks could thus be seen as complementary in the sense that the multilateral track has a broader scope but that where the two tracks are available, the unilateral track more effectively enforces the subsidies disciplines than the multilateral track. In this case, countervailing duties would be needed to achieve deeper commitments. Sykes (2003a), however, questions the effectiveness of CVDs in deterring wasteful subsidization, and argues that if this is the case, there would be an argument in favour of dropping the unilateral track and keeping only the multilateral track. However, he ends up by rejecting this argument and argues in favour of keeping the unilateral track on the ground that WTO law does not properly distinguish truly harmful subsidies. In his view, “the role of countervailing duties may be primarily to defuse political pressure for action against ‘unfair’ practices while doing little violence to the ability of sovereign governments to act as they wish.” (Sykes, 2003a, 25). Another argument in favour of the unilateral track is that, as discussed above, CVDs can be used to neutralize the effect of subsidies, while this may be more difficult under the multilateral track.

ii) *The trigger*

A subsidy shall be subject to the provisions of Part V of the SCM Agreement, which disciplines the use of countervailing measures if it satisfies the definition of a subsidy provided in Article 1 of the Agreement and if it is specific in accordance with the provisions of Article 2. Article 1.1 defines a subsidy in terms of “a financial contribution by a government or any other public body within the territory of a Member”, where a “financial contribution” is defined by an exhaustive list of measures that qualify as such. These include direct transfer of funds, potential transfers of funds and liabilities, revenue foregone as a result of tax exemptions, the provision of goods and services by a government, other than general infrastructure, or the purchase of goods by a government. Finally, a subsidy would also be deemed to exist if a government entrusted or directed a private entity to carry out these functions or made payments to a funding mechanism. Various aspects of the list of financial contributions contained in Article 1.1(a) of the SCM Agreement have been subject to dispute.¹⁶⁸

A subsidy is only deemed to exist if in addition to constituting a financial contribution, a measure also confers a benefit as specified in Article 1(b).¹⁶⁹ The SCM Agreement does not provide an explicit definition of the term “benefit”, which the adjudicating bodies are left to interpret on a case-by-case basis. As discussed in the *World Trade Report 2006*, a number of cases have dealt with the question of how to establish that a benefit has been conferred.¹⁷⁰ In *Canada – Aircraft*, the Appellate Body confirmed the panel’s findings rejecting an interpretation of benefit based on whether there was a “net cost” to the government and focusing rather on the recipient of the subsidy.¹⁷¹ The Appellate Body in *Canada–Aircraft* also held that a determination of whether a benefit exists for the recipient of a subsidy implies a comparison with market conditions.¹⁷²

A number of cases also considered the issue of the “pass-through” of benefit, either in situations involving the privatization of assets previously acquired by a state-owned enterprise with a financial contribution by the government or in situations where a subsidy bestowed on an upstream producer (which use those inputs to produce inputs for other industries) could benefit the downstream producers (which use those inputs to produce goods at a later stage of the production process). These cases, which raised a number of interesting economic issues, were reviewed by economists.¹⁷³

With regard to privatization, in *US – Countervailing Measures on Certain Products from the European Communities*, the Appellate Body modified the position it had taken in *US – Lead and Bismuth II* and ruled that a change in ownership at fair-market prices provides a rebuttable presumption that a subsidy no longer exists, meaning that there may be circumstances in which an investigatory authority can find otherwise.¹⁷⁴ To reach this conclusion, the Appellate Body used the distinction between the exchange value of goods and services and their scarcity value.¹⁷⁵ The Appellate Body noted that it could imagine circumstances in which the market price of the assets would not reflect “the exchange value of the continuing benefit”.¹⁷⁶ When this is the case, an investigating authority could legitimately find that a benefit of past non-recurring financial contributions to a state-owned enterprise continues to exist after privatization. Grossman and Mavroidis (2007b) criticize this finding. In their view, the price at which a change in ownership takes place has no bearing on the subsequent competitive conditions, which, in their view, is the standard according to which the existence of a benefit should be evaluated.¹⁷⁷ The sales price at which a privatization takes place, therefore, is not relevant to the determination of the continued existence of benefit from a subsidy. The amounts paid become sunk costs which have no bearing on subsequent profit-maximizing behaviour. This issue is returned to below during the discussion on sunset reviews.

As regards specificity, a subsidy is to be considered specific if access to it is explicitly limited to certain enterprises or industries. Conversely, if eligibility of enterprises is based on objective criteria and neutral conditions, which are economic in nature and horizontal in application, such as size, and if eligibility of the subsidy is automatic, specificity does not exist.¹⁷⁸ Article 2 of the SCM Agreement acknowledges, however, that a subsidy programme may appear non-specific according to these principles, but may turn out to be specific in the way it is implemented. Article 2.1(c) illustrates some of the factors to be examined in this regard. Articles 2.2 and 2.3 specify respectively that subsidies which are limited to certain enterprises located within a designated geographical region are specific and that export subsidies and subsidies dependent on the use of domestic over imported goods are deemed to be specific. Further information is provided on pp 196-199 of the *World Trade Report 2006*, where the discussion of the definition of subsidies and

specificity is more detailed and refers to relevant case law.

Under the unilateral track, the amount of the subsidy needs to be calculated at different stages of the procedure. The amount should be indicated, if possible, in the application.¹⁷⁹ It needs to be determined as part of the investigation and it serves to determine the level of the countervailing duty. Article 14 of the SCM Agreement guides the calculation of the amount of a subsidy in terms of the benefit to the recipient. The guidelines set out certain benchmarks – for example, usual investment practice, comparable commercial loan, adequate remuneration – for determining whether a benefit has been conferred via a subsidy.

A benefit is considered to be conferred only when advantages in comparison to these benchmarks can be found – for example, government provision of goods or services at less than adequate remuneration or government provision of a loan at a more favourable interest rate than a comparable commercial loan. While Articles 14(b) and (c) specify clearly how to calculate benefit in the case of a loan and a loan guarantee, there is no similar guideline in Article 14(a) and (d) about government provision of equity capital and government provision of goods or services or purchase of goods.¹⁸⁰ Interpretation by WTO adjudication of Article 14 is discussed below.

In *EC – Countervailing Measures on DRAMS Chips*, the panel stressed that although the investigating authority is entitled to considerable leeway in adopting a reasonable methodology for calculating benefit, a basic reasonableness test must be passed.¹⁸¹ In both *US – Softwood Lumber III* and *US – Softwood Lumber IV*, a dispute was raised concerning the interpretation of Article 14(d), which says:

“The provision of goods or services or purchase of goods by a government shall not be considered as conferring a benefit unless the provision is made for less than adequate remuneration, or the purchase is made for more than adequate remuneration. The adequate remuneration shall be determined in relation to prevailing market conditions for the good or service in question in the country of provision or purchase (including price, quality, availability, marketability, transportation and other conditions of purchase or sale).”

The Appellate Body on *US – Softwood Lumber IV* reversed the panel’s interpretation of Article 14(d) and concluded that an investigating authority may use a benchmark other than private prices of the goods in question in the country of provision, when it has been established that those private prices are distorted, because of the predominant role of the government in the market as a provider of the same or similar goods. Additionally, the alternative benchmark chosen must relate or refer to, or be connected with, the prevailing market conditions in that country and must reflect price, quality, availability, marketability, transportation and other conditions of purchase or sales, as required by Article 14(d).¹⁸² Importantly, the Appellate Body further hinted that while different factors can result in one country having a comparative advantage over another with respect to the production of certain goods, any comparative advantage would be reflected in the market conditions prevailing in the country of provision and, therefore, would have to be taken into account and reflected in the adjustments made to any method used for the determination of adequacy of remuneration, if it is to relate or refer to, or be connected with, prevailing market conditions in the market of provision.¹⁸³

Horn and Mavroidis (2005) comment on some of the issues discussed in the panel report on *US – Preliminary Determination with Respect to Certain Softwood Lumber from Canada* that are of particular interest from an economic perspective. They see this case as an illustration of some of the conceptual difficulties in defining what a subsidy is. The discussion focuses on two main issues: (a) whether Canadian provincial government can be said to provide goods; (b) how to define the no subsidy benchmark, against which the actual situation is to be compared. With regard to the second question, they identify several conceptual problems with the no-subsidy benchmark imposed by the SCM Agreement.

First, it does not take into consideration whether differences between the benchmark and actual government policy reflect the pursuit of legitimate government policies. Second, the interpretation of the private sector benchmark as referring to prices in existence in the importing country ignores the possibility that the benchmark may be significantly affected by any subsidization. Third, using foreign prices as a benchmark is not without problems as those could differ from the prices in the allegedly subsidizing country for various reasons other than beggar-thy-neighbour behaviour.

iii) Determination of injury and causation

The definition and the guidelines for the determination of injury to domestic industry and causation in the countervailing duty context are the same as in the anti-dumping context. Injury is defined in both footnote 45 of the SCM Agreement and footnote 9 of the AD Agreement as material injury to a domestic industry, threat of material injury to a domestic industry or material retardation (i.e. significant hold-up) of the establishment of an industry. The wording of the guidelines for the determination of injury under Article 15 of the SCM Agreement is almost identical to that under Article 3 of the AD Agreement.

Injury determination is required to be based on positive evidence and to involve an objective examination of: (a) the volume of the subsidized imports and the effect of the subsidized imports on prices in the domestic market for “like” products; and (b) the consequent impact of these imports on the domestic producers of such products. The factors to take into account when considering the volume and the price effect are also the same as provided for under the AD Agreement. However, there is no reference to the rate of subsidization while the AD Agreement refers to the margin of dumping and there is an additional factor regarding whether there has been an increased burden on government support programmes in the case of agriculture.¹⁸⁴ The definitions of like product and domestic industry in the two contexts are the same.¹⁸⁵ Due to this substantial similarity between the SCM Agreement and the AD Agreement, WTO panels and the Appellate Body have often cross-referenced their interpretation concerning these similar provisions. This results in substantial consistency in the rulings in SCM and AD Agreement disputes.¹⁸⁶

As for determination of a threat of material injury to domestic industry, a non-exhaustive list of factors to be considered is provided under Article 15.7 of the SCM Agreement, which is similar to the list provided under Article 3.7 of the AD Agreement. However, a new factor is introduced into the list, i.e. “the nature of the subsidy or subsidies in question and the trade effects likely to arise therefrom” must be considered to determine the existence of a threat of material injury.

Grossman and Mavroidis (2003a), following up on their conclusion that the requisite injury test is not

consistent with the promotion of global economic efficiency (see above), propose to replace it with an alternative injury test that would better serve this objective. In their view, “the SCM Agreement would better serve the objective of promoting efficiency in trade relations if Members were limited in their application of countervailing measures to circumstances in which they demonstrated that foreign subsidies have been damaging to aggregate economic welfare” (Grossman and Mavroidis, 2003a, 198).

The establishment of the causal link between subsidized imports and injury to the domestic industry is a prerequisite for the imposition of a CVD. Like Article 3 of the AD Agreement, Article 15 of the SCM Agreement requires that the causation determination be based on an examination of all relevant evidence before the authorities. The non-attribution investigation (i.e. whether the injury is due to factors other than subsidized imports) must also be conducted in both contexts, and all known factors other than the subsidized imports must be examined. A non-exhaustive list of such other factors is provided in Article 15.5 of the SCM Agreement, which is similar to Article 3.5 of the AD Agreement.¹⁸⁷ As in the case of anti-dumping investigations, national authorities are free to choose a methodology that they consider appropriate to analyze causation. As in the case of anti-dumping, economic inference and econometrics are rarely used for this purpose, even though possible approaches have been discussed in the literature on countervailing measures (Benitah, 1999; Knoll, 1989; Diamond, 1989; Sykes, 1997).

Regarding the panel report on *US – Preliminary Determination with Respect to Certain Softwood Lumber from Canada*, Horn and Mavroidis (2005) reflect on the link between benefits to Canadian lumber producers and injury to United States’ competitors. They show that because of the market structure of the industry and of the complicated nature of the contractual terms under which standing timber is turned into logs, an economically satisfactory injury analysis would be extremely complex. It would need to take into account the interaction between the contested measures and other government measures, such as export restrictions on logs. Also, a “pass-through” analysis should be required both in the case of vertical integration (i.e. one firm engaged in different types of production within the production process) and of arm’s-length relationships in order to establish causation.¹⁸⁸

iv) Application of countervailing measures

Article VI.3 of the GATT requires that no CVD shall be levied on any imported product in excess of an amount equal to the estimated bounty or subsidy determined to have been granted directly or indirectly for the manufacture, production or export of such product. A similar requirement is also found in Article 19.4 of the SCM Agreement, which specifies that the amount of the subsidy should be calculated in terms of subsidization per unit of the subsidized and exported product. Accordingly, the amount of subsidy must be calculated for the purpose of imposing CVDs, as discussed in sub-section (i) above. Like anti-dumping duties, CVDs are not most-favoured nation (MFN), i.e. they are to be levied, in the appropriate amounts in each case, on a non-discriminatory basis on imports of the relevant product from all sources found to be subsidized and causing injury to domestic industry.

Like an anti-dumping duty, which should remain in force only as long as and to the extent necessary to counteract dumping that is causing injury to domestic industry, a CVD should remain in force only as long as and to the extent necessary to counteract subsidization that is causing injury. The authorities should review the need for continuing to impose CVDs on their own initiative or upon request by any interested party.¹⁸⁹ Identical to Article 11.3 of the AD Agreement, Article 21.3 of the SCM Agreement imposes a time limit on maintaining CVDs. These duties must be terminated within five years of being imposed unless the authorities determine in a review that the expiry of the duty would be likely to lead to continuation or recurrence of subsidization and injury to domestic industry.

The lack of indication in the text of Article 21.3 of the SCM Agreement regarding whether the *de minimis* threshold and the evidentiary standards for self-initiation in the original investigation are applicable in sunset reviews or not was interpreted by the Appellate Body as having its meaning.¹⁹⁰ While an investigating authority may only initiate a CVD investigation if it has sufficient evidence of subsidization, injury and a causal link between the two, no such requirements exist to self-initiate a five-year or sunset review of a CVD in Article 21.3.¹⁹¹ Similarly, the *de minimis* threshold (see sub-section *i* above), which makes a subsidization not countervailable in the original investigation,

does not have the same effect in the sunset review context.¹⁹² Additionally, similar to jurisprudence in the AD Agreement context, the panel in *US – Carbon Steel* held that the determination of likelihood of recurrence or continuation of subsidization or injury to domestic industry must be based on a sufficient factual basis and that investigating authorities are required to consider relevant factual evidence already in their possession.¹⁹³

US – Countervailing Measures on Certain EC Products specifically dealt with privatization in a sunset review. In this case, the Appellate Body ruled that before deciding to continue to impose countervailing duties in regard to pre-privatization, non-recurring subsidies, the investigating authority in a sunset review is obliged to determine whether the benefit from the prior subsidization to the state-owned producers continues to accrue to the privatized producer. In the Appellate Body's view, the same standards should apply for showing continuing existence of benefits from financial contributions in sunset reviews as in original investigations or administrative reviews.¹⁹⁴ The Appellate Body was also called upon to rule on the legality of the methods used by the United States Department of Commerce (DoC) in assessing the impact of a change of ownership on the continued existence of a benefit from a subsidy. The Appellate Body found that the two methods used by the DoC were inconsistent with the SCM Agreement.¹⁹⁵

(d) Conclusions

The first part of this sub-section focused on the economic rationale for using countervailing duties. In the perfect markets case, countervailing duties typically have a negative effect on overall welfare in the country imposing them. There are two main caveats to this proposition. First, in theory, CVDs can improve the importing country's terms-of-trade (i.e. the price of its exports relative to its imports). If the terms-of-trade gain from the duty is larger than the efficiency loss, there may be an overall welfare argument for the government to impose countervailing duties. Second, CVDs may deter subsidization altogether and thereby confer benefits to producers in the importing country who compete with subsidized goods in their export markets.

In an imperfect market, there are further explanations for the use of CVDs in terms of overall welfare. If wages are fixed, for example, a subsidy can harm the

importing country, which provides a second-best¹⁹⁶ argument for imposing countervailing duties. Also, with imperfect competition in the product markets, CVDs can be used for "rent extraction" (capturing monopolistic profits) which may provide a further argument for governments to use these duties. If governments do not use countervailing duties primarily to improve national welfare, then why do they use them? As explained above, the presumption is that CVDs are used by governments to help domestic producers competing with subsidized imports.

The first part of the sub-section also examined the role of countervailing duties in trade agreements. Under perfect market conditions, CVDs are detrimental to the national economic welfare of the importing country, but the economic literature sees two main roles for CVDs. The first is to neutralize subsidies and the second is to discourage them. If the rationale of a trade agreement is to reciprocally eliminate beggar-thy-neighbour policies, CVDs can be seen as instruments that allow importing countries to neutralize negative effects from subsidies bestowed by large countries.

As discussed, the government of an importing country can impose countervailing duties so as to restore the price that existed before the subsidy, thereby leaving domestic consumers and producers unaffected by the subsidy. The second explanation which has been offered is that governments use CVDs to discourage subsidies that harm the interests of importing countries, and in particular of producers competing with subsidized imports. CVDs are seen as part of a larger multilateral system aimed at discouraging trade-distorting subsidies and at facilitating trade concessions. While CVDs are often detrimental to national economic welfare, there might nevertheless be systemic gains from the use of countervailing duties by all countries.

The second part of the sub-section examined WTO discipline and practice on countervailing duties from an economic perspective. Because of the significant commonalities between the disciplines on countervailing and those on anti-dumping, the discussion focused on features that are specific to CVDs. At the initiation level, the existence of two tracks – unilateral and multilateral – is specific to subsidies. A comparison between the two tracks suggests that there are good reasons – the quicker timeframe, for example – for industries and governments seeking relief from subsidized imports

to prefer the unilateral track. In other words, the multilateral track appears to offer a considerably weaker defence mechanism against subsidized imports than CVDs. Given, however, that CVDs cannot be used against subsidized competition in export markets, while serious prejudice cases can be brought under the multilateral track, the two tracks could be seen as complementary. If this is the case, CVDs may well play a role in achieving deeper commitments. Along the same lines, it could be argued that CVDs can be used to neutralize the effect of subsidies, while this may be more difficult and less immediate under the multilateral track. With regard to the determination of the existence and amount of the subsidy, economists have emphasized the conceptual difficulties in defining what a subsidy is. With regard to injury to domestic industry, some economists have noted that the requisite injury test is not consistent with the promotion of economic efficiency. They have proposed to replace it with an alternative injury test that would consider overall economic welfare. Other economists have shown that in certain circumstances, an economically satisfactory injury analysis could be extremely complex.

4. OTHER SELECTED MEASURES OF CONTINGENCY PROTECTION

Previous sub-sections have discussed three measures of contingency protection (safeguards, anti-dumping measures and countervailing duties) that allow WTO members to temporarily suspend their tariff commitments. There are, however, several other ways in which governments may react to the emergence of economic difficulties. Section B.2 has reviewed these possible measures and categorised them as measures that suspend commitments, weak tariff bindings and no disciplines. How do governments choose which instrument to use among those available? To help answer this question, this sub-section analyzes three additional measures of flexibility: renegotiations, tariff increases compatible with existing bindings and export taxes.

Renegotiations are examples of flexibility measures defined in terms of procedural disciplines rather than circumstances for their use. Furthermore, they are a permanent form of exception to WTO commitments rather than a temporary suspension of these commitments. Tariff increases within existing bindings – i.e. maximum agreed limits – are examples of flexibilities provided by the nature

of the commitments: that is, tariff bound rates are ceilings rather than target levels for tariffs.¹⁹⁷ Export taxes are examples of flexibility measures that apply to exports rather than imports. In the WTO system, they are examples of flexibility measures that are provided by the incompleteness of members' commitments.

(a) Renegotiation of commitments

Commitments under the WTO can be renegotiated. Article XXVIII of the GATT and Article XXI of the General Agreement on Trade in Services (GATS) define conditions under which WTO members are allowed to withdraw concessions (bound tariff reductions or specific commitments), if compensation is offered to other members affected by the withdrawal. Unlike other contingent measures discussed in this Report, which are temporary, renegotiations are permanent measures. In other words, renegotiations alter the commitments of members indefinitely (or, more precisely, until they are renegotiated at a later stage).

As originally envisaged by the drafters of the GATT, contingent measures and renegotiations are two forms of flexibility that serve different purposes (Hoekman and Kostecki, 2001). While the goal of contingent measures is to provide temporary protection, renegotiation is intended to be a means through which WTO members seek a permanent rebalancing of concessions within the WTO. This sub-section reviews first the main features of the rules governing renegotiation and their economic rationale. In particular, the sub-section addresses the question of whether, and under what circumstances, it makes economic sense to renegotiate commitments in response to changes in economic and political conditions. It then considers why members may use renegotiation as a form of contingent protection.

i) Renegotiation: a brief review of practices and legal aspects

GATT Article XXVIII and GATS Article XXI allow WTO members to withdraw previous commitments. While several texts provide an in-depth analysis of the legal aspects of renegotiation and its practice (Hoda, 2001; Hoekman and Kostecki, 2001; Dam, 1970; Jackson, 1997), this sub-section highlights some key features of these articles, which forms the basis for the subsequent economic analysis.

It focuses on four aspects which are particularly relevant from an economic point of view.

1. Timing of renegotiation: GATT Article XXVIII allows WTO members to modify or withdraw a concession on the first day of each three-year period starting from 1 January 1958 or any other period specified by the contracting parties.¹⁹⁸ However, there are exceptions to this rule which may allow contracting parties to renegotiate within the three-year period. These concern: (i) “special circumstances”; and (ii) “reserved rights”.¹⁹⁹ GATS Article XXI entitles a renegotiation at any time after a period of three years from the date that the initial commitment entered into force.²⁰⁰

2. Compensation: the key feature of the renegotiation process is that compensation may be offered to “affected members”,²⁰¹ in the GATS context, or to WTO members holding special rights. These comprise: (i) members with which the concession was initially negotiated (i.e. members that have initial negotiating rights (INRs));²⁰² (ii) members having a principal supplying interest (PSI);²⁰³ and (iii) members with substantial interest (SI),²⁰⁴ in the GATT context. It is worth noting that in the GATT context while INR and PSI right-holders are entitled to negotiate, SI members have only the right to consultation. Compensation aims at maintaining a balance between the situation before the renegotiation and the new trade pattern that emerges over time.

3. Withdrawal of equivalent concessions: in the GATT context, as long as relevant members (INR, PSI and the member seeking to withdraw or modify its concessions) enter into a renegotiation, concessions may be modified or withdrawn even when an agreement cannot be reached. The WTO members with SI are allowed to withdraw equivalent concessions if they are dissatisfied with the renegotiation agreement among relevant members.²⁰⁵ Unlike retaliation in other areas, which can be targeted at specific members, a withdrawal of concessions would have to take place on a most-favoured-nation (MFN) – non-discriminatory – basis. All members with INR, PSI and SI are authorized to withdraw equivalent concessions if no agreement is reached after the renegotiation. In the GATS context, no modification or withdrawal is allowed before an arbitration procedure has been conducted at the request of any affected member to settle the failure of the renegotiation. Affected members who participated in the mentioned arbitration are allowed

to retaliate if the findings of the arbitration are not followed by the member seeking the modification or withdrawal of its concession.²⁰⁶

4. Renegotiation and developing countries: when developing countries need to modify or withdraw concessions, Article XXXVI.8 of the GATT needs to be taken into account. This article provides that developed contracting parties do not expect reciprocity for renegotiation of commitments of less-developed members.²⁰⁷ This means that the amount of compensation to be paid by a developing country would in principle be smaller than that by a developed country. Similarly, Article XVIII.7 of the GATT 1994 is a provision on renegotiation of concessions that is open only to developing countries. This provision has the specific purpose of promoting the establishment of an industry in a developing country. It can be invoked at any time and requires no authorization, but has very rarely been used.

ii) The economics of renegotiation

Data on renegotiations show some distinctive patterns (see also Section D). First, renegotiations were a major instrument used by GATT contracting parties in the pre-WTO period (1948-1995), but much less so in the post-WTO period (1995-2007). Second, the data show a substantial variability by sector and by country. Namely, industrialized countries shifted away from renegotiation of commitments. While some of this variability across time, sector and country may be explained by procedural aspects, the economic reasons have not been systematically analyzed and represent an important avenue for future research. In the remainder of this section, some speculative explanations are provided.

The first question concerns the economic rationale for allowing countries to modify their trade policy commitments in a trade agreement. In short, renegotiations are valuable as they introduce an additional element of flexibility in the WTO system. This sub-section concludes with a discussion of the reasons why countries may use renegotiations of commitments as a form of contingent protection.

Rationale for renegotiation

As with other types of trade remedies in the GATT/WTO system, the possibility of renegotiation permits WTO members to make deeper and more

robust commitments to an open trading regime.²⁰⁸ As explained in Section B.1, the GATT/WTO is necessarily an incomplete contract. Since countries cannot foresee everything that will happen in the future, it is likely that they will become dissatisfied with certain situations. Accordingly, the possibility of renegotiation is an appealing means of allowing countries to achieve better results than those that would be attainable under existing commitments.

A first interpretation of the role of renegotiations under GATT Article XXVIII can be provided in light of the traditional approach to trade agreements discussed in Section B.1. According to this approach, trade agreements allow governments to escape a terms-of-trade driven “prisoners’ dilemma” (i.e. the escalation of a trade war). The possibility of renegotiations in the GATT/WTO system suggests that trade cooperation may be interpreted as a game with multiple stages. Members agree on an initial set of tariffs with the understanding that, as new and unexpected events unfold, governments may choose to alter the initial agreement knowing that any renegotiation will follow Article XXVIII. In particular, Bagwell and Staiger (1999; 2002) emphasize that, as Article XXVIII permits tariffs to be renegotiated subject to “substantially equivalent” concessions being withdrawn by the party to which a proposal is being made (see points 2 and 3 above), renegotiations will preserve the world price implied by the initial agreement. In other words, renegotiation of commitments under Article XXVIII allows signatories to preserve the essence of the agreement over time as new and unexpected events unfold.

There is another related type of argument that can be used to rationalize the presence of renegotiations in the GATT/WTO system – the mechanism allows an efficient “breach” of the contract. This argument also rests on the contractual incompleteness of the GATT/WTO. Schwartz and Sykes (2002) argue that the phrase “substantially equivalent” in the context of GATT Article XXVIII means that an adversely affected country is permitted to re-impose protection up to a point that its welfare is restored to the original level. Thus, the GATT/WTO system provides for a type of compensation scheme. Since a country will only propose a renegotiation if it yields a welfare gain, and since the compensation scheme ensures that other countries are made no worse off by the new arrangement, the renegotiation yields an efficient outcome. This form of “efficient breach”, which increases overall welfare, provides a reason

for including the possibility of renegotiation in trade agreements (Schwartz and Sykes, 2002).

Renegotiation as contingent protection

Why do countries use renegotiation as contingent protection? As discussed above, the renegotiation of commitments plays a role similar to safeguards, exceptions, etc. in that it introduces flexibility into the WTO system. While serving similar purposes, these different instruments are imperfectly interchangeable.

As discussed more extensively in Section C.5, WTO members can and do choose between different contingent measures. In the presence of a wide choice of policy tools, governments select the measure (or the policy mix) which maximizes the chance of fulfilling their objective. Whether pursuing pure economic efficiency or political economy objectives, the costs and benefits of using the available policy measures is determined by the legal framework that regulates these policies as well as the specific economic problems facing the government.

Unfortunately, economic research in this area is missing or very scant and the following analysis can only be speculative. Notwithstanding these limitations, three arguments may help to explain the use of renegotiations as a tool of contingent protection. First, while generally imposing a time constraint (this is the case for Article XXVIII of the GATT but not for Article XXI of the General Agreement on Trade in Services – see point 1 above), the legal text does not specify the circumstances under which concessions can be suspended. Moreover, Article XXVIII of the GATT and Article XXI of the GATS allow a WTO member to change commitments with respect to another specific member, provided that the general level of reciprocal concessions is unchanged. This indicates that renegotiation has a broader applicability than other measures, such as safeguards, general exceptions and waivers, that have more narrowly defined conditions.

A second argument focuses on the “reputation” costs of different measures that alter commitments under the WTO (Hauser and Roitinger, 2002). As argued by Hauser and Roitinger, a measure that alters market access in a particular sector may imply two types of costs for the implementing government: a compensatory market access cost in other sectors

and a reputation cost (i.e. a loss of credibility with respect to trading partners). Under Article XXVIII of the GATT and Article XXI of the GATS, when a member renegotiates its commitments, other members affected by the measure can ask for compensation (see point 2 above). If the parties reach no agreement, each affected member can suspend substantially equivalent concessions (point 3 above). In this context, explicit renegotiation implies a clear compensation cost, which excludes reputation losses, as a change of commitment is accompanied either by a compensatory concession or a withdrawal of commitment by the trading partner.

At the other extreme, contingent measures, such as anti-dumping and countervailing duties, do not imply any compensation cost but may well cause a loss in reputation to the WTO member that applies them if used extensively. When reputation considerations are of particular interest to a country, seeking renegotiation of concessions may provide a better form of flexibility than, for instance, anti-dumping and countervailing duties.

A final consideration relates to the different use of renegotiation across countries. As briefly discussed (see also Section D), industrialized countries which extensively used renegotiation under Article XXVIII of the GATT in the early years of the multilateral trading system slowly moved away from it. However, the use of contingent measures, such as anti-dumping actions, has grown substantially over the years in the industrialized world. This is not the case for most developing countries, whose use of renegotiations has been more constant.

Three points may help to explain this pattern. First, developing countries may, in principle, face a smaller compensation requirement relative to developed countries when they modify or withdraw concessions (see point 4 above). This implies that for this group of countries it may be relatively easier to enact renegotiations than to implement contingent measures. Second, developing economies are expected to have a larger credibility gain from participation in the GATT/WTO system. If this is the case, they may be more sensitive to the reputation loss associated with contingent measures that do not involve compensation. Finally, and perhaps more importantly, as discussed in other parts of the Report, anti-dumping measures require an institutional infrastructure that only some WTO members possess. Therefore, in addition to the legal

and reputational aspects discussed above, members may be prompted by institutional factors (in this case, the lack of an institutional infrastructure for anti-dumping measures) to revert to renegotiations as a form of contingent protection.

(b) Incompleteness of tariff bindings

The concept of tariff binding – i.e. committing not to increase a duty beyond an agreed level – is at the heart of the multilateral trading system. In the WTO, like in the GATT previously, market access commitments take the form of tariff bindings. GATT, Article II.1.(a) stipulates that “each contracting party shall accord to the commerce of the other contracting parties treatment no less favourable than that provided for in the appropriate Part of the appropriate Schedule annexed to this Agreement.” The treatment provided for in the schedule of concessions is the so-called “bound tariff”. As is evident from Article II.1.(a), tariff bindings do not take the form of single rigid set values for the tariff. They are expressed as “ceiling values” for tariffs. In other words, when WTO members bind the tariff for a given tariff line, they commit to set the tariff for a particular line anywhere between zero and the ceiling indicated by the bound tariff.

While the main objective of the WTO, as stated in the preamble to the Marrakesh Agreement, is the reduction of tariffs, members seem to have recognized the importance of binding tariffs even when the binding does not entail any immediate reduction. GATT Article XXVIII *bis*.2.(a) states that tariff negotiations may be directed towards the reduction of duties or the binding of duties at existing levels. Successive tariff negotiations have thus aimed both to reduce tariffs and to progressively extend the coverage of bindings.

Today, virtually all tariffs on agricultural products are bound and many countries have bound all or almost all their tariffs on non-agricultural products. However, tariffs have not always been bound at the level of existing applied rates or below. In the Uruguay Round, WTO members agreed that there should be a substantial increase in the number of bindings. More precisely, credit was granted to developing countries for binding tariffs at ceiling levels sometimes far above the level of their applied tariffs.²⁰⁹ As a result, members who committed to ceiling levels ended up with a binding overhang or,

as it is known in the WTO, with “water” in their tariffs, i.e. a wedge between their bound and applied tariffs. Since the Uruguay Round, more water has been added as members unilaterally reduced their applied tariffs without binding the reductions. This binding overhang introduces a form of flexibility in WTO commitments.

In this sub-section, two issues are considered in relation to the presence of the binding overhang. First, the economics of tariff bindings and the binding overhang is discussed. Second, how much flexibility is available as a result of incomplete coverage and binding overhang is examined.

i) The economics of bindings

In the trade policy debate, it is often argued that the binding of tariffs, even at or above the level of the corresponding applied rate, increases the stability of tariffs and reduces the uncertainty confronting exporters regarding trade policy. There is, however, relatively little theoretical work on this topic. A small number of quite recent theoretical contributions examine the economic rationale for weak tariff bindings, i.e. bindings that specify the maximum level at which a government commits to set its applied tariff (strong bindings would specify the precise level at which a government commits to set its applied tariff). The implications of random tariff regimes, however, remain mainly unexplored. Economists have given little attention so far to quantifying the benefits of tariff bindings or other commitments in the context of underlying protection processes that vary over time (Francois and Martin, 2004).

Bagwell and Staiger (2005) examine the reasons why governments do not negotiate precise tariff levels and instead set tariff bindings that define upper bounds above which they agree not to set their applied tariffs. They also examine why governments sometimes set their tariffs at levels significantly below their bindings. Using a two-country, two-goods trade model in which governments are subject to political pressures from import-competing producers, they model the negotiation by the two governments concerning their tariff commitments and their choice of applied tariffs.

Bagwell and Staiger first consider a case where the binding can be externally enforced and show that in this setting, governments prefer negotiating commitments that take the form of weak bindings

(with a maximum rather than a precise tariff level). They next show that, if commitments take the form of weak bindings, they will be set at levels that are higher than those governments would choose for strong – or precise – bindings. They also show that, if commitments take the form of weak bindings, governments facing less political pressure than expected will set their applied tariffs significantly below the bound level. Finally, assuming that commitments cannot be externally enforced, they find that the above results hold for values of the discount rate (the discounted present value of bindings) not exceeding a certain threshold.

In a recent paper, Horn et al. (2008) propose a related economic rationale for weak bindings. In their explanation, the optimal trade agreement includes rigid weak bindings because of the presence of contracting costs, and not because governments are subject to political pressure. Weak bindings are appealing because they combine rigidity and discretion in the sense that the ceiling does not depend on the state of the world, while the government has discretion to set its tariff below the ceiling. Maggi and Rodriguez-Clare (2007) propose a different explanation where governments choose weak bindings because they allow the government to extract payments from lobbies even after a trade agreement is signed.

The study by Francois and Martin (2004) is to our knowledge the only paper that looks at the effect of binding tariffs on the cost of protection.²¹⁰ Relying on a general equilibrium model under uncertainty they show that the expected cost of protection relative to a free trade benchmark decreases both with the level and the variability of protection. Therefore, a simple way to estimate the relative reduction in the cost of protection associated with the introduction of a binding involves estimating the mean (as a measure of the level) and the standard deviation (as a measure of variability) of protection before and after the new binding. To illustrate whether the introduction of tariff bindings has a significant impact on the cost of protection through its effect on the variability of the trade policy, they apply their approach to examine the effects of the introduction of bindings on wheat in seven OECD countries after the Uruguay Round. The authors chose this case because they had access to annual *ad valorem* equivalents of trade barriers for agricultural products for the period 1979-1993 in those countries, and because Uruguay Round tariff bindings on wheat were typically set at

levels substantially higher than the average rates of protection applied prior to the Round.²¹¹ Their results show relatively large estimated reductions in the cost of protection resulting from the binding despite the level at which it was set. In the case of the EU, roughly one half of the gain is derived from the reduction in variability alone, with the other half derived from the reduction in the average rate of protection.

In recent work, researchers have estimated the cost of “water” in the tariffs instead of considering the benefit of bindings. This change of tack has been partly triggered by concern about a possible protectionist backlash in reaction to the economic crisis. Bouët and Laborde (2008) have used a computable general equilibrium model to estimate the welfare cost of raising applied tariffs to their bound level. In a scenario where applied tariffs of major economies are raised fully to the bound tariff rates, world trade would decrease by 7.7 per cent.²¹² This increase in duties would reduce world welfare by USD 448 billion.²¹³

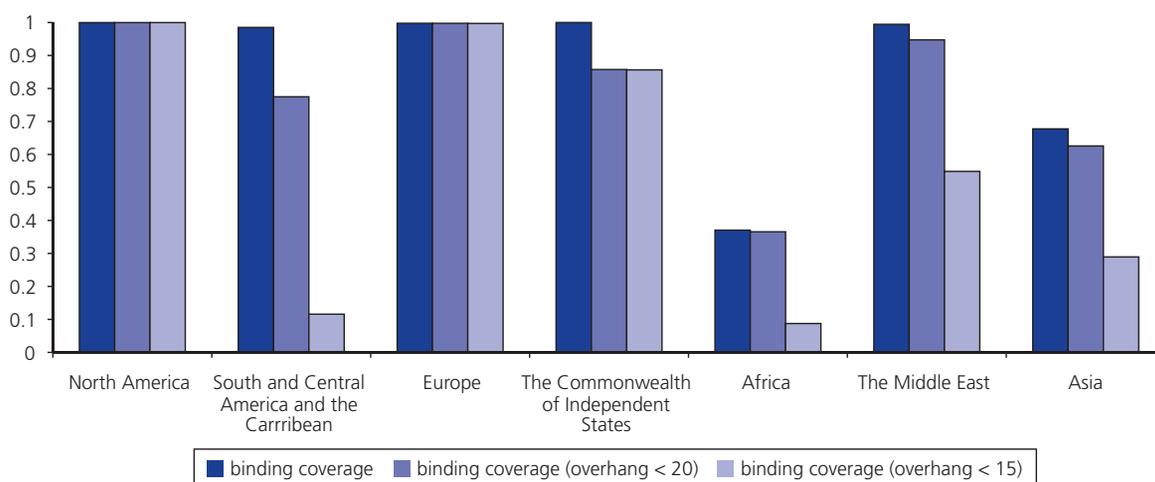
Achard et al. (2008) focus on the cost of “water” in manufacturing products. They first identify the products with high trade flows and the highest level of water. Their analysis shows that water and its costs are concentrated in certain products. The products that top their list in terms of water and trade

flows are concentrated in automotive, electrical and electronic products. They then estimate the costs associated with raising these tariffs to their bound level. This is done by calculating the cost of current imports if the higher bound rate was applied instead of the current applied rate. Their results suggest that for several countries, the import bill would increase substantially.

ii) Flexibility in the schedules of commitments

Both the coverage of tariff bindings and the “water” between bound and applied tariffs differ considerably between countries.²¹⁴ Chart 1 shows the average ratios of binding coverage, by region. Because these averages do not take into account the additional flexibility afforded by the water, corrected ratios, which take the water into account, are also shown. To factor in the role of the water, a binding coverage was recalculated at or above a level 15 excluding 6-digit subheadings bound(20) percentage points higher than the level of the applied rate. The results show that in most of the developing world, 70 to 90 per cent of the tariffs could be raised by 15 percentage points without violating WTO commitments. They also show that most bound tariffs could not be raised by more than 20 percentage points without violation. Whether water exceeding 15 percentage points provides sufficient flexibility to governments to use tariffs for contingent protection is an open question.

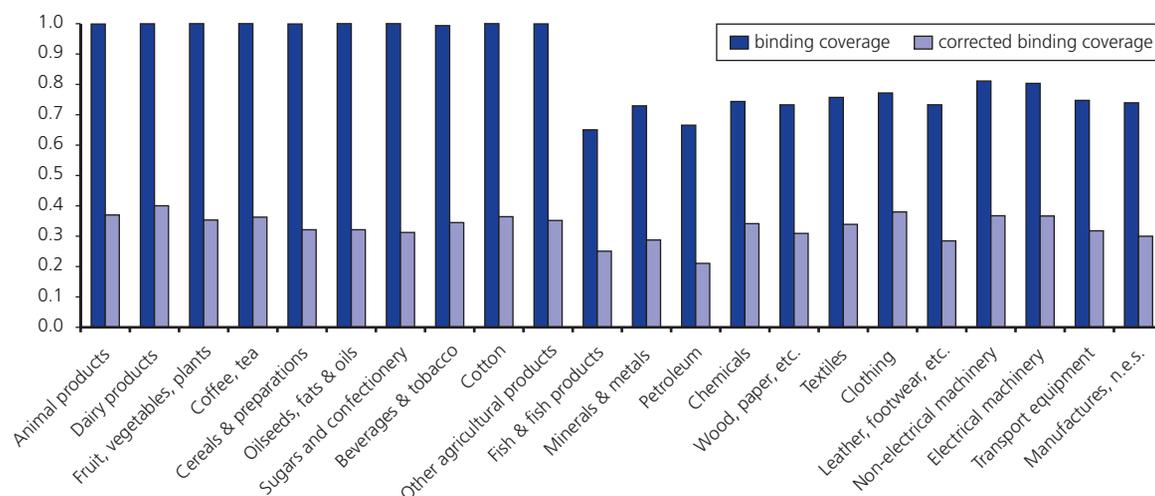
Chart 1
Binding coverage including and excluding subheadings with an overhang exceeding 20 resp. 15 percentage points, by region



Note: Binding coverage is the number of fully bound ad valorem 6-digit subheadings divided by the total number of 6-digit subheadings, excluding non ad valorem and partially bound lines. Binding coverage (overhang <20 respectively 15) is calculated as the number of fully bound ad valorem 6-digit subheadings with no binding overhang or with a binding overhang not exceeding 20 (15) percentage points, divided by the same denominator as binding coverage. Region averages are weighted with the weight of each country equal to its share in the region’s total imports.

Source: WTO Secretariat.

Chart 2
Binding coverage including and excluding subheadings with an overhang exceeding 15 percentage points, by product category



Note: Binding coverage by country and sector used to calculate the “uncorrected” average by product category is from the World Tariff Profiles.* The corrected binding coverage is calculated as the number of fully bound *ad valorem* 6 digit subheadings with no binding overhang or with a binding overhang not exceeding 15 percentage points, divided by the number of *ad valorem*, non partially bound 6-digit subheadings per product category. Category averages are simple averages across countries.

* Binding coverage is calculated at the tariff line level and non *ad valorem* bindings are taken into account.

Source: WTO Secretariat.

Chart 2 shows ratios of unweighted average coverage and ratios of “corrected” coverage, by categories of products. The corrected figures show that, when water is taken into account, flexibility is relatively evenly distributed across product categories even if a few exhibit somewhat smaller coverage ratios.

The data show that the margin of manoeuvre available to certain governments to raise their tariffs is considerable. An important question is what does it take for governments to use available flexibility and actually raise their tariffs in order to afford protection to an industry. The answer to this question will clearly differ between countries. It seems clear, however, that in most countries raising tariffs takes time and effort.

In most democracies, tariff changes can be proposed by members of the legislature, by the executive, or in some cases even by citizens. Customs tariff laws are subsequently typically formulated by the ministry of finance or the ministry of commerce, but other relevant ministries are often involved or at least consulted. In many cases, a government agency advises the government on trade policy and coordinates tariff policy across ministries. Draft custom tariff laws must then be approved by the legislature which most of the time has the ultimate authority to legislate on customs matters. For countries that are members of a customs union,

changing a tariff also requires the consent of other members. In any case, governments will need to convince a majority of the legislature to support the change in tariff.

So far the discussion of the flexibility available under specific binding commitments has focused on tariffs. Other specific WTO commitments, however, may exhibit similar characteristics. Unfortunately, very little is known about the gap between commitments and applied measures in other areas. One area related to tariffs where commitments may allow for a certain amount of flexibility is the so-called “other duties and charges” (ODCs).

GATT Article II:1(b) stipulates that the products described in the schedules of commitments “shall be exempt from other duties or charges of any kind imposed in excess of those imposed at the time a concession was granted”. In the Uruguay Round, WTO members agreed to include any other duty or charge existing on 15 April 1994 in their schedules and to eliminate all those that had not been notified. ODCs include all taxes levied on imports in addition to the customs duties which are not in conformity with Article VIII (Fees and Formalities) of GATT 1994.²¹⁵ Summary statistics on ODCs provided in the schedules of commitments show that 60 WTO members have bound ODCs. Of

those 60 countries, 15 have all their ODCs bound below 15 per cent. This leaves 45 countries with the possibility of raising their ODCs up to the sometimes very high level of their bound ODCs. Several countries have bound ODCs for all or almost all their tariff lines, at an average level exceeding 80 per cent, with maximum values above 200 per cent. In the absence of information on applied ODCs, it is difficult to assess the amount of flexibility available to members with bound ODCs. The high values of these bindings, however, suggest that this flexibility might be considerable.

In the area of services, WTO members have negotiated specific market access and national treatment commitments as part of the Uruguay Round and subsequent negotiations on basic telecommunications and financial services, or as part of their accession negotiations. The scope of these commitments is discussed in trade literature, and ample evidence of its incompleteness is provided. On average, across all

schedules of commitments, a typical WTO member has undertaken commitments on some 50 sub-sectors, thus covering about one-third of the total (Adlung and Roy, 2005). While the coverage of the commitments is relatively well documented, there is little evidence of the degree to which members' commitments under the GATS match regulatory practices "on the ground" in member countries. It has been argued that the majority of commitments negotiated and scheduled in the Uruguay Round were in fact "standstill" bindings, committing the country concerned only to maintain the current level of access. This assertion, however, has not been substantiated. Box 11 summarizes the results of one of the very few studies that addresses the issue of "water" in specific commitments. It covers a wide range of countries but is restricted to the banking sector. Note that the banking sector was covered in the 1997 negotiations on financial services, which resulted in more liberalization than the pre-1995 negotiations.

Box 11
"Water" in banking sector commitments

Barth et al. (2008) use country-by-country data on banking regulation matched with new data on financial services commitments in the General Agreement on Trade in Services (GATS) to assess the degree to which the level of access guaranteed by commitments under mode 3 ("commercial presence" – i.e. a foreign company setting up subsidiaries or branches to provide services in another country) matches that provided on the ground.

The GATS commitments data consist of information on specific entry of firms, permissible activities, and operations requirements applying to the banking sector. The "reported practices" data consist of a comparable set of cross-country information based on the World Bank's 2003 survey of banking supervisory authorities (Barth et al., 2006). The authors construct an index that allows them to gauge the overall degree of a country's openness to the entry of foreign banks, as reflected in each set of data. They then compare country-by-country values for the GATS commitments and the reported practices

index values. More specifically, for the 65 countries for which both variants of the market openness index can be calculated, they calculate the "degree of discrepancy" between the two variants, i.e. the difference between the value of the two variants. A negative (positive) value of the degree of discrepancy indicates that reported practices are in fact less (more) restrictive than a country's WTO commitments would indicate.

The results show a negative value of the degree of discrepancy for 19 of the 65 countries and a zero value in four cases. For all the other countries in their sample, the discrepancy is positive. In other words, about one-third of the countries in the sample exhibit "water" – or room for manoeuvre – in their commitments. Apart from Hungary and Malta, all the other countries with water in their commitments are developing countries. Table A reproduces the results for all countries with zero or negative discrepancies – i.e. with less restrictive practices than their commitments would indicate.

Table
Degree of discrimination against foreign-owned banks relative to domestic banks:
reported practices compared with WTO commitments

	Degree of discrimination under WTO commitments	Degree of discrimination in reported practices	Degree of discrepancy
Aruba	5.0	5.0	0.0
Lesotho	0.0	0.0	0.0
Lithuania	5.0	5.0	0.0
Luxembourg	0.0	0.0	0.0
Bahrain	25.0	23.8	-1.3
Kenya	20.0	17.5	-2.5
Moldova	10.0	7.5	-2.5
Hungary	8.3	5.0	-3.3
Ghana	20.0	13.8	-6.3
Malta	15.0	8.8	-6.3
Albania	15.0	7.5	-7.5
India	46.6	31.3	-15.4
Trinidad and Tobago	60.0	34.6	-25.5
Tunisia	50.0	21.3	-28.8
El Salvador	53.3	21.3	-32.1
Rwanda	60.0	25.0	-35.0
Namibia	60.0	23.8	-36.3
Guatemala	60.0	21.3	-38.8
Belize	60.0	20.0	-40.0
Gambia	60.0	20.0	-40.0
Botswana	60.0	13.3	-46.7
Fiji	60.0	10.0	-50.0
Guinea	60.0	10.0	-50.0

Source: Barth et al. (2008).

Note: Aruba, which is part of the Kingdom of the Netherlands has a separate schedule of specific commitments on financial services that are different from those of the Netherlands.

(c) Lack of bindings on export taxes

The discussion has so far focused on contingent measures that apply to imports. However, in some circumstances export restrictions may be preferred to import restrictions or they may be the only instrument available to address unforeseen difficulties. Therefore, flexibility measures to restrict exports may be needed in a trade agreement to allow governments to be able to address these situations that may not be foreseen at the time that the agreement is signed. Like contingent measures to raise import barriers, in a trade agreement flexibility measures that restrict exports can be useful as they act as a safety valve that allows parties to agree to more extensive commitments.²¹⁶

The important role of export restrictions as a form of contingent measure has clearly emerged in the context of the recent food crises. In the attempt to control for inflationary pressures and to prevent situations of severe food shortages to poor people arising from the sharp increase in food prices in

the first half of 2008,²¹⁷ many countries introduced measures to restrict exports. For example, India and China banned exports of rice, Argentina, Russia and Kazakhstan restricted exports of wheat.

In GATT/WTO, there are two different forms of flexibilities to restrict exports: general exceptions to prohibition of export quotas and bans and lack of binding commitments for export taxes. Export quotas and bans can be justified under Article XX (General Exceptions) and Article XXI (Security Exceptions) of the GATT. For example, they can be applied for policy objectives such as protection of national treasures of artistic, historic or archaeological value and conservation of exhaustible natural resources as well as for reasons of international safety. In addition, Article XI:2 of the GATT explicitly allows temporary export bans and restrictions to prevent and relieve critical shortage of foodstuffs or other products. In contrast, export taxes are allowed, but unlike tariffs, they have, in general, not been bound – or given a ceiling – in the commitments of WTO members. This lack of

binding is a form of flexibility that is due to the incompleteness of the WTO agreements.²¹⁸

The focus of this sub-section is on the use of export taxes as a form of contingent measure. First, it looks at the circumstances under which it may make economic sense to use export taxes. Then, a brief overview is provided of the legal context in which export taxes may be used.

i) The economics of export taxes as a contingency measure

Governments justify the use of export taxes on several grounds. An analysis of WTO Trade Policy Reviews conducted from 1995 to 2008 shows that governments use export taxes primarily to insulate a country from sudden price rises, to improve government revenue, to develop infant industry and to protect the environment. The use of export taxes in these four cases is discussed below.²¹⁹

As a preliminary remark, it is worth keeping in mind that economic theory argues that export taxes are unlikely to be a first-best policy. However, the use of export taxes can be supported on the basis of second-best arguments. Developing more efficient stock markets and financial markets, introducing a flexible exchange-rate regime, extending the tax base and improving the tax administration system could all contribute to solving the problems listed above at a smaller economic cost. Under certain circumstances, a second-best argument for using export taxes, however, can be made.

To control inflationary pressures

An increase in the international price of a commodity that is also consumed domestically may create inflationary pressures at home. Import tariffs do not address the problem as their principle effect is to increase domestic prices. Many countries have used export taxes to keep inflation under control.

The rationale for using export taxes to reduce the effects of higher prices from abroad is the following: by making exporting less attractive, export taxes divert part of the production from the foreign to the domestic market. This, in turn, increases domestic supply of the taxed commodity, thus creating a downward pressure on its domestic price that may partially offset the inflationary pressures coming from higher prices abroad. In addition, when

export taxes are applied to commodities used in the production processes of other firms, the lower costs for the processing industry may result in lower prices for processed goods.

There are, however, limits to the use of export taxes as an instrument to control inflation. First, when export taxes are applied to “intermediate” goods, consumers may not benefit from lower prices. The extent to which lower production costs, due to lower costs of the intermediate commodity, are translated into lower prices for processed goods depends on the market structure. If markets are dominated by a small number of firms that are able to control market prices, consumers might not benefit from lower prices for the processed commodity.²²⁰

Second, export taxes may have long-term inflationary consequences on the economy. Because of their effect on domestic prices, export taxes may reduce the incentive of firms to invest in the production of the commodity on which they are applied.²²¹ As a consequence, the long-term supply of the good might fall, thus resulting in higher domestic prices.

Finally, there is a problem of policy coordination. Recent evidence related to the food crisis shows, for example, that while export bans have helped to contain domestic price rises in countries where they have been adopted, they have contributed to a worsened food crisis. According to Dollive (2008), restraints that Argentina, China and Ukraine imposed on the export of maize and wheat from 2006 to 2008 contributed significantly to the increase in world prices for these crops. In the case of soybeans, Deese and Reeder (2007) conclude that a liberalization of the soybeans sector could significantly lower the world price of raw soybeans (-14 per cent) and the same is true for processed forms.

To increase government revenue

Export taxes are a source of tax revenue for the government. To maintain a steady tax revenue during periods of recessions, export taxes can be used as contingent measures. For example, export tax revenue is a large source of tax revenue for the Argentinean government. Following devaluation of the peso in 2002, the rates and scope of export taxes were both increased. The recession and currency devaluation had severely affected government revenue collection and created strong inflationary

pressures. Therefore, export taxes were introduced on a large number of new products, with the stated objective to “attenuate the effects of exchange-rate fluctuations on domestic prices and counter the erosion of tax revenues” (Argentina Trade Policy Review 2007, page 30). The impact on tax revenue was significant; export duties accounted for over 15 per cent of total tax revenue on average between 2002 and 2004, while the average from 1990 to 2005 is less than 7 per cent.

The advantage of using export taxes rather than tariffs to increase government revenue during periods of recession and currency devaluation is that export taxes are a tax on the windfall gains of exporters.²²² Tariffs, in contrast, are a tax on consumers. However, an efficient application of export taxes requires high administrative costs. To reduce domestic instability regarding tax revenue, countries need to use a system of variable tax rates – that is, high rates when export prices are high (e.g. following devaluation) and low rates when they are below a threshold level. The causes that have prompted the implementation of a tax can often peter out quickly. A change in economic conditions requires a quick policy reversal. However, many countries, especially developing countries, lack such political and institutional flexibility.

To support industry

Export taxes on intermediate goods act as an indirect subsidy to manufacturing or processing industries as they reduce the domestic price of intermediate products. Therefore, export taxes can be used by governments as an instrument for developing infant industry or for supporting a declining processing industry. The objections raised in Section B.2 for the use of import restrictions for these purposes also hold for the use of export taxes: economic intervention can be justified only in the presence of some form of market failure. Other important issues concern their redistributive effects and their distorting effects when international markets are imperfectly competitive. First, export taxes on raw commodities redistribute income from primary commodity suppliers to processors. This might increase income inequality within a country and severely affect the poorest sections of the population. Second, when markets have imperfect competition, a one-to-one “pass-through” of benefits from farmers to processors cannot be expected. Therefore, export taxes may be ineffective

in developing infant industry and introduce further distortions.

To protect the environment

Export taxes and bans have frequently been applied to live fishery products, wildlife, and hides and skins of certain endangered species, or to prevent exports of dangerous materials.²²³ To understand why and when export taxes are used by governments for the purposes of environmental protection and sustainable development, it is important to understand the causes of environmental problems. These include different sources of market failures and government policy failures. Market failure comes about when property rights are not well defined. If anyone, without restrictions, can fish from the sea, collect wood from the forests or hunt wild animals, the likely result is the over-exploitation of these resources.²²⁴ Government policy failures relate to the failure to introduce adequate environmental taxes to address environmental problems. If appropriately designed, these policies would be the best way for producers and consumers to assume the full cost, inclusive of the environmental damage, of their activity.²²⁵

When markets and governments fail and no management schemes are in place, the demand from the world market may accelerate the depletion of resources. The use of export taxes may act in these circumstances as a second-best policy. There are, however, some risks associated with this policy. Suppose that a government introduces export taxes on logs to address the problem of deforestation. First, low log prices in the home country may encourage inefficient logging practices, thus increasing wastage. Second, low prices of inputs may discourage firms from investing in the introduction of sustainable development technologies in the processing industry.

ii) Legal context

GATT Article XI, on the General Elimination of Quantitative Restrictions, prohibits WTO members from instituting or maintaining “prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measure” (XI:1) with respect to both imports and exports. This explicitly defines export taxes and import duties as a means by which members may legally restrict exports and imports, but prohibits quotas.²²⁶

While Article II:1 (b) of the GATT 1994 prohibits import duties on products bound in WTO members' schedules of commitments "in excess of those set forth and provided therein", no provisions require specifically a binding obligation regarding export duties.²²⁷ Consequently, while precise conditions need to be satisfied to allow a temporary suspension of commitments, there are no limitations regarding the timeframe for an increase in export taxes, nor the circumstances and procedure to increase export taxes defined in the WTO agreements. Potentially, this may allow governments significant scope to use export taxes as a protectionist measure rather than a contingent measure.

A limitation to the use of export taxes is imposed by the general MFN principle that applies "to customs duties and charges of any kind imposed on or in connection with importation or exportation" (GATT Article I paragraph 1). In addition, an issue may exist as to whether prohibitive export taxes should be considered consistent with the prohibition of bans and quotas. In this case, general exceptions under Article XX and Article XXI of the GATT would apply, whereby export restrictions could be justified, for example, for environmental and sustainable development or safety reasons.

Another interesting issue relates to the use of export taxes on domestic materials to ensure essential inputs to a domestic processing industry. The possibility to use quantitative export restrictions in this case is foreseen in Article XX(i) of the GATT.²²⁸ The article relates to the adoption of a policy to reduce domestic prices below world prices and to the objective of the government to stabilize the economy. However, it requires that "such restrictions shall not operate to increase the exports or the protection afforded to such domestic industry". In other words, quantitative export restrictions on domestic materials cannot be used as an implicit export subsidy to the processing industry.

For some WTO members, the use of export taxes may be limited by their commitments. In the Marrakesh Agreement establishing the WTO, members have not included commitments on export taxes in their schedules of commitments, but the possibility for members to agree to legally binding commitments on export taxes exist. Several countries that have recently joined the WTO, including China, Mongolia, Saudi Arabia, Ukraine and Vietnam, have negotiated commitment schedules for export duties during the negotiations for their accession.

The extent to which export taxes are liberalized in their commitments varies across countries. For example, China's WTO Accession Protocol includes a commitment to eliminate all taxes applied to exports, with the exception of 84 listed tariff lines.

Commitments on export taxes negotiated in accession protocols are an "integral part" of the WTO Agreement (see the Panel Report on *China-Auto Parts*, para. 7.740). Therefore, they are enforceable under the Dispute Settlement Understanding. Furthermore, to the extent that escape clauses on the commitments on export taxes are not included in the accession protocols, some of the contingent measures built into the WTO Agreement apply. For example, the Council for Trade in Goods approved on 9 July 2007 a request by Mongolia for a five-year waiver on its accession commitment on cashmere. In its accession protocol, Mongolia committed to phase-out export duties on raw cashmere within ten years (Mongolia acceded in 1997). The request for an extension of this phase-out period by another five years has been made on the grounds that the local cashmere industry was facing serious difficulties, that the industry is very important for the Mongolian economy and on the basis of environmental concerns. With regard to environmental issues, the Mongolian government claimed that the increase in exports of raw cashmere has encouraged the growth of goat herds that has surpassed the sustainability of the country's pasture lands.²²⁹

Limitations to the use of export taxes exist in some regional trade agreements and national regulations. Recognizing that export taxes distort trade, many regional trade agreements have prohibited them. For example, export taxes are prohibited among the member countries of the European Union, the North American Free Trade Agreement (NAFTA), the Caribbean Community (CARICOM), the Southern Common Market (MERCOSUR) and the Australia New Zealand Closer Economic Agreement (ANZCERTA). Some bilateral trade agreements also prohibit export taxes. Examples include Canada-Chile, Canada-Costa Rica, Japan-Singapore and EU-Mexico.

National legal issues can explain the extensive use of export taxes in some countries rather than others.²³⁰ For example, unlike import tariffs, in Argentina the revenue from export taxes accrues to the Federal Government and does not have to be redistributed to the provinces. According to Nogués

(2008), this in part explains the intensive use of this instrument by Argentina. In contrast, export taxes are prohibited by the Constitution of the United States (Article I, Sections 9 and 10). According to Irwin (2009), the ban on export taxes was the outcome of a compromise reached to reconcile the positions of the Northern and the Southern states (especially South Carolina) at the Constitutional Convention. The South demanded a ban on export taxes to protect the interests of the southern staple-exporting states (large exporters of tobacco, indigo and rice), who feared that export taxes may have been easily used by the Congress as a means of raising government revenue at the expense of large-scale exports of a few states.

To sum up, in the WTO export taxes are disciplined but, unlike tariffs, they are generally not bound at specified levels. Therefore, although they are subject to the general MFN principle of non-discrimination, export taxes provide governments with a large margin of flexibility. Potentially, WTO members may heavily restrict trade by imposing export taxes, without having to comply with specified procedural requirements, without having to demonstrate the existence of specified circumstances and without the limitation imposed by sunset reviews. Differences across countries regarding how they use export taxes as a contingent measure arise from their specific commitments under the WTO, commitments within regional trade agreements or requirements in national legislations.

5. CHOOSING AMONG DIFFERENT MEASURES

In Sections B and C, a multitude of circumstances have been discussed in which governments may wish to resort to contingent measures, be it for economic efficiency or political economy reasons, and the effects of the various measures have been described. The most common contingent measure is a tariff. This may come in the form of an anti-dumping or countervailing duty, a safeguard or a renegotiated tariff above and beyond bound rates.

Unless governments specifically wish to use quotas or tariff rate quotas, which are allowed only in the context of safeguard measures and which have different economic implications than a tariff under certain conditions (as discussed in Section C.1.b.(v)), what determines a government's decision to implement a tariff hike in one guise or another?

In Section D below, it will become apparent that some instruments, notably anti-dumping measures, are used far more frequently than others, such as safeguards, and that this trend has accelerated over time. Of course, the specific economic issue at hand might offer an explanation. In this case, there is a possibility that foreign governments and firms are more engaged in "unfair" practices than they used to be.

Comparing anti-dumping and safeguard petitions in the United States, Hansen and Prusa (1995) show that with industry seeking to maximize profits,²³¹ anti-dumping/countervailing petitions must either be easier to win, be associated with lower costs or provide protection that results in greater profits. Hence, one of the main reasons for the popularity of anti-dumping measures over other measures may be differences in the applicable rules, both at the international and domestic level.

Not all of the textual differences in the relevant WTO agreements may influence, in practice, the selection of contingent measure. For example, while the standard for determining injury to domestic industry is higher for safeguards ("serious" injury as opposed to "material" injury for anti-dumping/countervailing measures), the jurisprudence to date does not seem to have "worked out" a hard and fast distinction between the two concepts that would be sufficiently precise to tilt the balance in favour of the measure subject to the nominally lower standard. Differences in the legal framework that shape the requirements for, and consequences of, different contingent measures are probably at the heart of selection decisions, but broader political considerations, such as a potential loss of reputation when applying unilateral policies alleging "unfair" conduct on the part of trading partners, may also play a role. In making the comparison between measures, the discussion below mainly draws on the description in previous sub-sections of the conditions under which different contingent measures are available under WTO rules.

(a) No compensation for anti-dumping and countervailing duties

The general obligation regarding tariff renegotiations as well as use of safeguards is to compensate trading partners while there is no compensation requirement when anti-dumping/countervailing measures are used (owing to the "unfair" character

of dumped/subsidized imports). This has often been cited as a possible reason for the popularity of anti-dumping/countervailing measures compared with renegotiations and safeguards. While the compensation requirement is firm in the case of tariff renegotiations, it is waived for the first three years if safeguard measures are taken in response to “absolute” (or so it is claimed) increases in imports (Article 8.3 of the Agreement on Safeguards).

Bown (2002b) observes that in cases where compensation is due, governments have an incentive to use anti-dumping measures, even if no dumping of goods has taken place. In the worst-case scenario, the country imposing the anti-dumping duty may lose a WTO dispute. If it does not bring the measure into conformity with WTO rules, it would be obliged to provide compensation (or face retaliation by the complaining member), which may not be different from the compensation it would be required to give in any event under the Agreement on Safeguards or in renegotiations. Consequently, it will prefer to use an anti-dumping measure if a small chance exists that it can win a dispute.²³² In fact, even if it is sure to lose a dispute, it can make use of anti-dumping actions “for free” while the case is examined by the Dispute Settlement Body.²³³

(b) Extending anti-dumping and countervailing duties

Once tariffs are re-negotiated under GATT Article XXVIII and compensation is provided, the higher levels become the new permanent bindings. Hence, the duration of the measure in this case is of no concern (although the ability to reach certain objectives, such as industrial adjustment, may be undermined if protective measures cannot be restricted to a certain timeframe, as discussed in Section C.1.a above). Anti-dumping/countervailing duty rules allow for the extension of these measures (potentially *ad infinitum*) if the sunset review finds that a continuation or recurrence of dumping or subsidization and injury to domestic industry is likely.

In contrast to safeguards, some of the statutory time limits, such as a span of five years for the initial anti-dumping/countervailing measure versus four years for safeguards, are more lenient and no “minimum” time breaks exist that would prevent a seamless re-imposition of measures, as in the area of safeguards. Cadot et al. (2007), using a version

of the database put together by Bown (2007), find that anti-dumping measures last an average of almost six years across countries (compared with about two years for safeguards). Exactly one half of anti-dumping measures exceed the initial five-year limit. For some countries, the average length has been almost nine years. Seemingly, the “likelihood” standard does not constitute a major hurdle for the frequent extension of anti-dumping measures beyond five years.

(c) Discrimination under anti-dumping and countervailing measures

Another principal difference of anti-dumping/countervailing measures as opposed to all other forms of contingent measures discussed in this Report is that the measures are country- and producer-specific. The difference in the scope of protection would seem to favour MFN-based measures, such as safeguards, as they afford protection against imports from all sources and avert the potential for trade diversion. However, anti-dumping/countervailing action can be made non-discriminatory if petitions against all major trading partners are filed simultaneously. By the same token, this flexibility allows countries imposing anti-dumping/countervailing duties to take into account the retaliatory capacity of affected countries.

The possibility to discriminate under anti-dumping/countervailing duties may lead to them being used against small trading partners and reduce the incentive for governments to implement MFN-based forms of protection. However, in reality, the primary targets of anti-dumping measures are large trading partners, such as China, the European Union, Japan, the Republic of Korea and the United States.²³⁴ Moreover, safeguard measures may be fashioned more or less in a discriminatory way, notably via quota modulation under SGA Article 5.2.b. This allows WTO members imposing safeguards to afford smaller quotas to countries whose imports have increased disproportionately. Yet, the conditions attached to quota modulation are strict and its application is limited to four years.

While discrimination and the resulting reduction in retaliatory threats may be in the interest of countries applying contingent measures, it has been suggested that a general preference for country-specific as opposed to MFN-based contingent measures might exist. As mentioned in Section C.1.b.(v), an “across-

the-board” application of trade remedies might have an impact on many countries whose exports do not contribute (much) to the injury suffered by the domestic industry. This unnecessarily increases the risk of retaliation owing to the larger number of affected countries, including in reaction to trade deflection.

Another argument relates to the global “dynamic” effects of MFN-based versus country-based measures discussed in Section C.1.a. The paper by Crowley (2006) assumes that a foreign country experiences a technological advantage and the “home” country puts in place a (time-limited) safeguard measure to allow the domestic industry to close the technology gap. According to the author, a country-specific measure applied only against the technological leader accelerates the adoption of new technology in both the domestic country and other foreign countries that are lagging behind. A “multi-country” safeguard would create an additional advantage for the domestic industry, but would slow down technological progress in other foreign markets. It follows, therefore, that countries with a low risk of becoming subject to contingent measures might prefer such measures to be country-specific in order to minimize the risk of incurring the higher costs that MFN-based measures would entail.²³⁵

(d) Relationship with trading partners

When taking contingent measures, governments may wish to limit the damage done to trading partners, whose cooperation may be needed regarding different matters. One way to appease exporting nations (short of offering appropriate compensation) is to let them share in the scarcity premia (rents) associated with the increase in protection (Bown and Crowley, 2005). Formerly, the prime tool to manage trade in this manner was an agreement on voluntary export restraints (VERs). Owing to their lack of transparency and discriminatory character, VERs have subsequently been banned under the Subsidies and Countervailing Measures Agreement. However, under the Anti-dumping Agreement, voluntary price undertakings are allowed. Under this system, exporting firms agree to increase their prices to a level that eliminates the margin of dumping – i.e. the difference between the export price and the normal price in the exporter’s domestic market. This flexibility to achieve outcomes similar to VERs may be another reason for the attractiveness of anti-dumping measures.

Hauser and Roitinger (2002) raise the concern of “reputation costs”, a more subtle concept of a loss of credibility in international cooperation, that may vary among different measures. Anti-dumping and countervailing measures may be considered particularly “hostile” because they are put in place unilaterally and involve an explicit accusation of unfair practices. Especially if used extensively, they may carry some “political” cost. However, as noted in the previous paragraph, price undertakings instead of anti-dumping duties may to some extent communicate a “cooperative” spirit and subdue the associated political costs.

(e) Domestic institutional considerations

Governments have some leeway in implementing WTO rules within their own domestic institutional framework. Those involved in the decision-making process regarding contingent measures may differ between presidential and parliamentary systems and the process may involve several bodies. In the United States, for example, safeguard petitions are examined and decided by the International Trade Commission (ITC) but the President makes the final decision concerning whether to provide relief, the type of relief and how long it will last (WTO document G/SG/N/1/USA/1). Conversely, the competence to investigate anti-dumping/countervailing petitions is shared between the ITC, which deals with injury to domestic industry, and the Department of Commerce, which deals with dumping and subsidization. A favourable decision requires the approval of both institutions, and imposing the duty in such cases is automatic and mandatory (Hansen and Prusa, 1995). The discretionary authority of the President increases the uncertainty of a positive outcome on safeguards compared with anti-dumping/countervailing duties, especially since the President is held to take the “national economic interest” into account, i.e. he has broader considerations that also include consumer welfare (Baldwin, 1985).

It may be assumed that similar reasons play a role in explaining the popularity of anti-dumping measures in other countries as well. From an institutional point of view, the opposite would normally be expected. Especially in developing countries, the resource intensity of anti-dumping measures may be of particular concern – for instance, in relation to the processing and verification of foreign firm data, including through investigations in the territory of

other WTO members. However, Section D shows that some developing countries have become heavy users of anti-dumping measures. This is puzzling in light of the substantial amount of “water”, i.e. the gap between bound and applied duties, that exists in the tariff lines of many developing countries. This “water” would allow the countries to make WTO-consistent tariff hikes without appealing to contingent trade rules.²³⁶ On the other hand, as mentioned in Section C.4, institutional processes, e.g. the need for legislative approval of changes in applied tariff schedules as opposed to contingent measures being driven by the executive branch of government, may explain this heavy use of anti-dumping measures.

All in all, it seems that none of the points raised above can individually or conclusively explain the popularity of anti-dumping measures over the other contingent measures discussed in this Report. However, the combination of elements – namely, the lack of a compensation requirement, the possibility to continue measures after sunset reviews, the ability to discriminate among trading partners, the option to manage trade through price undertakings and, possibly, the existence of effective institutional arrangements – provide a flavour of the flexibility with which anti-dumping policies can be handled. Collectively, these reasons may tilt the cost-benefit considerations of policy-makers in their favour.

6. CONCLUSIONS

One of the main objectives of this Report has been to analyze whether WTO rules provide governments with sufficient flexibility to address unanticipated difficulties, on the one hand, and to prevent the protectionist abuse of contingent measures on the other hand. In other words, do WTO rules contribute to beneficial and stable trade cooperation? In reviewing key WTO disciplines concerning the various measures discussed in this Report, a number of elements have emerged that support the notion that the costs of flexibility can be contained. This appears to be the case in relation to the main reasons for signing a trade agreement, the avoidance of terms-of-trade conflicts and the possibility of retaining credibility vis-à-vis domestic stakeholders.

In regard to terms-of-trade considerations, the basic idea of “compensation”, which is attached to the use of safeguards and the possibility of renegotiating commitments, is in keeping with the idea of preserving the originally “agreed” terms-of-trade. By the same token, anti-dumping and countervailing duties can be seen as a “compensating” response to an “unfair” manipulation of the terms-of-trade. As far as credibility is concerned, the available contingent measures appear to be sufficiently disciplined to ensure that commitments are not undermined by excessive flexibility. Credibility is therefore fundamentally preserved. The limited timeframe for safeguards, anti-dumping measures and countervailing duties as well as the need to provide evidence of injury to domestic industry and what has caused it are key requirements in this regard. At the same time, some requirements have proven to be challenging while others have turned out to be less of an obstacle to the implementation of certain measures. Clearly, in practice, the debate on how to achieve the optimal balance between flexibility and the preservation of commitments will continue.

Endnotes

- ¹ Of course, formally the “trigger” also necessarily involves in each and every case some modality of injury. See below.
- ² Measures may, under certain conditions, also be taken in response to a determination of a threat of material or serious injury respectively, or as in the case of anti-dumping and countervailing measures, a determination of material retardation of the establishment of an industry. These differences are not discussed in depth in this Report.
- ³ Moral hazard occurs when the behaviour of a party changes as a result of being more insulated from risk, such as in the case of the risk-spreading that underlies insurance or the presence of a safeguard mechanism in trade policy.
- ⁴ In a seminal paper, Grossman and Helpman (1994) explain the process by which special interest groups go about influencing trade policies. The authors assume that lobbies make implicit offers of political contributions as a function of specific sets of trade policies adopted by the government. The government takes into account these offers as well as the welfare of voters at large. In its considerations, the government trades off some reductions in the welfare of the latter against larger interest group contributions and sets policy such that its own objectives, including re-election, are maximized. Baldwin (1989) also notes that governments’ broader social concerns, the preservation of the status-quo or the desire to promote various national and international goals can explain the use of trade protection. Supposedly, governments are again driven by re-election perspectives. Hansen (1990), Moore (1992), Liebman (2004) and others, on the basis of empirical analyses, claim that, at least to some extent, political considerations, such as the location of the requesting industry in the voting district of a key political decision-maker, can explain the probability of the United States International Trade Commission’s (ITC) granting of contingent protection. See also Section D.3.b.
- ⁵ On the role of retaliation in trade agreements, see *World Trade Report 2007* (WTO, 2007).
- ⁶ It may be assumed that investment in R&D has external benefits accruing to consumers, which the domestic industry does not take into account in its investment decision (market failure). It, therefore, under-invests in its attempt to catch up.
- ⁷ In fact, under protection, domestic firms are also encouraged to innovate quickly, since the earlier a successful discovery is made, the longer the higher profits from protection can be enjoyed.
- ⁸ Sykes (2006b) and Sykes (1991) summarize the reasons why declining industries often represent the best organized lobbies. First, producer groups anticipate that politicians may find it easier to justify to their constituencies protection for an industry that faces difficulties and might cause hardship to dislocated workers. Second, as mentioned before, in an industry that faces difficulties, the return to lobbying for protection increases relative to the return from productive activity. Finally, price increases in declining industries due to protection can be assumed not to lead to the entry of new competitors unlike in prospering industries, where the additional gains would be competed away by new entrants. As mentioned in section B.1, the latter point provides an additional argument why governments are willing to include safeguards in a trade agreement. While firms in the declining domestic import-competing sector can enjoy the rents from protection, firms in the growing foreign export sector may be relatively less alarmed since, with reduced profit margins, the rate of entry by competitors is slowed down. The latter observation is owed to an anonymous referee.
- ⁹ See Section A for a historical overview of the evolution of GATT/WTO rules on safeguards.
- ¹⁰ The transitional special textiles and clothing safeguard clause expired at the end of 2008 and the transitional product-specific safeguard mechanism is due to expire at the end of 2013. See WTO documents WT/L/432: 9-10, and WT/ACC/CHN/49: 46-48. For an analysis of the specific features of the transitional product-specific safeguard mechanism of China, see Bown and Crowley (2007a) and Bown (2009).
- ¹¹ In fact, the Preamble of the SGA explicitly recognizes the importance of structural adjustment.
- ¹² Panel Report on *US – Steel Safeguards*, para. 10.98. This issue was not reviewed by the Appellate Body. For a critical discussion of macroeconomic events as a source of “unforeseen developments”, see also Messerlin and Fridh (2006). Stevenson (2004) provides an overview of the findings with regard to unforeseen developments in a range of definitive safeguard decisions between 1995 and 2002.
- ¹³ See, for example, Panel Report on *Argentina – Footwear*, paras. 8.141 and 8.152; and Appellate Body Report on *Argentina – Footwear*, para. 144.
- ¹⁴ Some rise in imports must be expected when new obligations are incurred under a trade agreement.
- ¹⁵ The Appellate Body stated even more explicitly that it was not sufficient to examine “simply trends in imports during the past five years – or, for that matter, during any other period of several years” (Appellate Body Report on *Argentina – Footwear*, para. 130). This also precludes a simple comparison of import levels at the end points of the investigation period, as Argentina had done.
- ¹⁶ It should also be noted that the SGA is silent on the duration of the investigation period and its breakdown, and the choice, therefore, is left to the discretion of investigation authorities. See Panel Report on *US – Line Pipe*, para. 7.196.
- ¹⁷ This also implies that there are no statutory percentages of the industry that need to support the application such as the ones found in the Agreement on Anti-dumping (AD) or the Agreement on Subsidies and Countervailing Measures (SCM).
- ¹⁸ See Panel Report on *Korea – Dairy*, para. 7.55-7.58 and 7.68-7.69; and Panel Report on *Argentina – Footwear*, para. 8.123, and Appellate Body Report, paras. 136 and 139.
- ¹⁹ See Panel Report on *Argentina – Footwear*, paras. 5.232-5.235, 5.261-5.262, 8.127-8.128 and 8.209-8.211, and Appellate Body Report, para 136. Assessment of capacity utilization was also found to be flawed in *Argentina – Preserved Peaches* (Panel Report, paras. 7.98-7.99).
- ²⁰ Neither does the SGA contain the warning found in the respective legal texts on anti-dumping and countervailing measures that “not one or several of these factors can necessarily give decisive guidance”.
- ²¹ Of course, this consideration is moot if in reality petitioners discuss their draft complaint with the authorities prior to filing and, through such contacts, get a clear idea as to their chances of success, even under a “diffuse test”. In jurisdictions with a long history of trade remedy practice, the factual patterns sought by the authorities to rule affirmative on injury may be well-known, and petitioners may not tend to file cases with facts that deviate too much from those that the authorities view as a paradigm. These observations are owed to an anonymous referee.

- 22 Appellate Body Report on *US – Wheat Gluten*, para. 69; Appellate Body Report on *US – Lamb*, para. 179.
- 23 See, for instance, Appellate Body Report on *Argentina – Footwear*, paras. 144-145.
- 24 Panel Report on *Argentina – Footwear*, para. 8.164; see also paras. 8.244 – 8.246.
- 25 Panel Report on *US – Wheat Gluten*, paras. 8.97-8.101.
- 26 Panel Report on *US – Wheat Gluten*, paras. 8.92-8.96.
- 27 Panel Report on *US – Steel Safeguards*, paras. 10.310 and 10.312.
- 28 Panel Report on *Argentina – Footwear*, paras. 8.250-8.252.
- 29 Panel Report on *Argentina – Footwear*, paras. 8.251-8.254. Similarly, in *US – Steel Safeguards*, the panel held that “relative price trends as between imports and domestic products will often be a good indicator of [causal link] given that price changes have an immediate effect on profitability [...], and] profitability is a useful measure of the state of the domestic industry” (Panel Report on *US – Steel Safeguards*, para. 10.320).
- 30 Panel Report on *Argentina – Footwear*, paras. 8.254-8.263 and footnote 557.
- 31 Panel Report on *US – Steel Safeguards*, paras. 8.377-8.381.
- 32 Panel Report on *US – Steel Safeguards*, paras. 10.429-10.430 and 10.517-10.521.
- 33 Panel Report on *US – Lamb*, paras. 7.234-7.238; Appellate Body Report, paras. 168 and 180; Appellate Body Report on *US – Wheat Gluten*, paras. 69-70; Appellate Body Report on *US – Line Pipe*, para. 215. This is generally known as the first step of the two-step approach for the non-attribution analysis established by the Appellate Body in the *US – Wheat Gluten* case.
- 34 Appellate Body Report on *US – Wheat Gluten*, para.69; Appellate Body Report on *US – Line Pipe*, para. 217; Appellate Body Report on *US – Lamb*, para. 175. This is generally known as the second step of the two-step approach for the non-attribution analysis established by the Appellate Body in the *US – Wheat Gluten* case.
- 35 See Appellate Body Report on *US – Lamb*, paras. 178 – 180; see also Appellate Body Report on *US – Hot Rolled Steel*, paras. 223-228, where similar issues under ADA Article 3.5 are examined.
- 36 Appellate Body Report on *US – Line Pipe*, para. 260.
- 37 Appellate Body Report on *US – Wheat Gluten*, paras. 85-92.
- 38 This is in line with Section 201 of the United States’ Trade Act of 1974 (the US-implementing legislation on safeguards), which stipulates that imports must be a “substantial cause of serious injury”, meaning a cause which is important and not less important than any other cause (Hansen and Prusa, 1995). As pointed out by Irwin (2003) and Ledet (2003), in this respect, it goes beyond the requirements of the WTO SGA.
- 39 Appellate Body Report on *US – Wheat Gluten*, paras. 67-79.; Panel Report, paras. 8.139 and 8.152.
- 40 Appellate Body Report on *US – Lamb*, paras. 184-188.
- 41 For example, in *US – Line Pipe*, the failure to demonstrate how the injurious effects of other factors, such as a decline in the oil and gas industry as a key customer of line pipe, were separated from those caused by increased imports was inconsistent with the requirements contained in SGA Article 4.2.b. See Appellate Body Report on *US – Line Pipe*, para. 220. In *US – Steel Safeguards* it was argued that injury to the domestic industry was caused, *inter alia*, by an increase in the costs of goods sold. The ITC’s counter-argument that import competition had suppressed prices and prevented domestic firms from recovering these costs (and, therefore, were the more important cause of injury) did not amount to a reasoned and adequate explanation, according to the panel. At the same time it acknowledged that a proper analysis of the relationship between the costs of goods sold and the operating margins of the domestic producers could probably have supported the ITC’s case. At a minimum, the general lack of coincidence during the investigation period (with the exception of a brief window in 1999-2000) between changes in the costs of goods sold and operating margins should have been explained if indeed these costs played a significant role for the situation of the domestic industry. See Panel Report on *US – Steel Safeguards*, paras. 7.1269-7.1277 and 10.439-10.440.
- 42 Put simply, at a given price imports satisfy excess demand, i.e. the difference between domestic supply and domestic demand.
- 43 Miranda (2009), while acknowledging the tenets of economic theory about the endogeneity of imports and certain domestic factors, argues that a causal link between increased imports and injury factors can be seen to exist if the “double causation” standard is fulfilled, i.e. if “unforeseen developments” lead to an “import surge” which in turn leads to “serious injury”.
- 44 In fact, a lack of coincidence between certain factors and injury indicators, such as the costs of goods sold and operating margins, as observed for most of the investigation period in the *US – Steel Safeguards* case, might only indicate that other factors happen simultaneously that are responsible for part of the injury. Grossman and Mavroidis, *US – Steel Safeguards*, in Horn and Mavroidis (2007) eds., *WTO Case Law – Legal and Economic Analysis*, pp. 68-69.
- 45 See also the debate between Sykes (2004; 2006a) and Lee (2006a; 2006b).
- 46 A third type of economic tool that has been used in trade remedy investigations is simulation models that portray the condition of the domestic industry and can isolate the effects of an exogenous shock holding everything else constant. The US ITC occasionally has applied such techniques. For instance, in the *US – Steel Safeguards* dispute, the United States put forward the results of an economic model (similar to the one described in United States Trade Representative, 2002) in order to illustrate the effect of the safeguard measures in question on supply and demand and to show that these tariffs were not applied beyond the extent necessary (Panel Report on *US – Steel Safeguards*, para. 7.1566, footnote 3619). The complaining parties noted, *inter alia*, that such a model should also have been used in the causation and non-attribution analysis (Panel Report on *US – Steel Safeguards*, paras. 7.1649 ff). However, while simulation models can illustrate the state of the domestic industry in response to an exogenous shock or policy change, they are less suitable to decompose the relative contribution to injury of several simultaneous factors.
- 47 For further ground-breaking papers on the role of political motives in the choice of trade policy instruments, see Cassing and Hillman (1985) and Falvey and Lloyd (1991).
- 48 Choi (1996) develops a similar mechanism for declining industries based on the political support argument proposed by Magee (1989).
- 49 As was said before, such factors might be productivity declines in the domestic industry owing to a lack of technological upgrading. These factors might then need to be addressed through instruments other than tariffs if the state of serious injury of the industry is to be fully remedied. This observation also seems to be in line with a safeguard-applying member’s obligation to provide evidence, at certain intervals, that the industry is indeed adjusting and to progressively liberalize the safeguard measure during the period of application (SGA Articles 7.2 and 7.4). However, the panel in *Korea – Dairy* emphasized that there was no obligation to establish

- a specific adjustment plan *before* a measure could be adopted. See Panel Report on *Korea – Dairy*, para. 7.108.
- 50 See, for instance, Panel Report on *Argentina – Footwear (EC)*, para. 8.289.
- 51 On the US economic model, see Panel Report on *US – Steel Safeguards*, paras. 7.1563-7.1576; on issues of judicial economy, see Panel Report on *US – Steel Safeguards*, paras. 10.700-10.715, particularly para. 10.706.
- 52 Of course, quotas allocated on the basis of historical market shares are inherently discriminatory against new market entrants.
- 53 Quota modulation is explicitly excluded in the case of mere threat of serious injury. This is the only provision in the Agreement on Safeguards that establishes a difference in legal effects between serious injury and a threat of serious injury. See Appellate Body Report on *US – Line Pipe*, para. 173.
- 54 For an overview and empirical assessment of possible discriminatory impacts of safeguards, see Bown and McCulloch (2003).
- 55 It is an open question whether developing countries originally excluded from the application of a safeguard measure (on the basis of having a market share of less than 3 per cent) and whose import volumes grow subsequently on account of trade diversion can become subject to such measures at a later time.
- 56 See, for instance, Pauwelyn (2004).
- 57 See, for instance, Appellate Body Report on *Argentina – Footwear*, paras. 107-114; Appellate Body Report on *US – Wheat Gluten*, paras. 95-96; Appellate Body Report on *US – Line Pipe*, paras. 181 and 187; and Appellate Body Report on *US – Steel Safeguards*, paras. 439-444.
- 58 Notifications under both SGA Article 8.1. and Article 8.2 are to be made to the Council for Trade in Goods, pursuant to SGA Article 12.5.
- 59 The fact that VERs imply compensation through the rents created for the exporting country, thereby maintaining some broad “reciprocity”, and are negotiated rather than imposed unilaterally may make them attractive from an economic point of view. However, being negotiated outside the multilateral framework, VERs were considered little transparent and highly discriminatory and, ultimately, were prohibited explicitly under the SGA. Others have added that VERs were not strictly “voluntary” and existed as a consequence of pressure from external sources, which made exporters “agree” to the lesser of two evils (Low, 1993).
- 60 The extension is not available if modulated quotas are applied (SGA Article 5.2.b).
- 61 Bagwell and Staiger (2005) have argued that a “dynamic use constraint” of that nature is an important tool, like the need to provide compensation or the threat of retaliation, to prevent the abuse of a safeguard mechanism in a trade agreement.
- 62 Viner lists ten motives for dumping. They are: (i) to dispose of a casual overstock; (ii) unintentional; (iii) to maintain connections to a market in which prices are, on remaining considerations, unacceptable; (iv) to develop trade connections and buyers’ goodwill in a new market; (v) to eliminate competition in the market dumped on; (vi) to forestall the development of competition in the market dumped on; (vii) to retaliate against dumping in the reverse direction; (viii) to maintain full production from existing plant facilities without cutting domestic prices; (ix) to maintain the economies of larger-scale production without cutting domestic prices; and (x) on purely mercantilist grounds. In Viner’s analysis, the motives (i) to (ii) lead to sporadic dumping; motives (iii) to (vii) lead to intermittent dumping while motives (viii) to (x) lead to continuous dumping.
- 63 In imperfectly competitive markets, firms are said to engage in Cournot competition when they compete on the basis of their level of output (Cournot, 1838). They choose the profit-maximizing output level independently of one another, i. e. they take their rivals’ level of output as given.
- 64 This is equivalent to the exporting firm having to absorb the cost of transport.
- 65 See Avinash Dixit’s analysis of the Brander-Krugman model in <http://web.mit.edu/krugman/www/dixit.html>.
- 66 The 1916 Act prohibits dumping if it is “done with the intent of destroying or injuring an industry in the United States, or of preventing the establishment of an industry in the United States, or of restraining or monopolizing any part of trade and commerce in such articles in the United States.”.
- 67 Shin uses the two-screen approach (Joskow-Klevorik) standard in anti-trust to examine whether United States’ anti-dumping filings would satisfy the first screen (i.e. structural preconditions for predation) and found that only 39 of 169 cases passed the first screen.
- 68 The two papers by Hartigan assume Bertrand competition (Bertrand, 1883). In imperfectly competitive markets, firms are said to engage in Bertrand competition when they compete through their choice of the price at which they will sell their output.
- 69 It should be noted that Viner also included the cyclical motive for dumping among his explanations.
- 70 Opportunity cost refers to the cost associated with the use of resources in their next-best alternative.
- 71 The importing country’s welfare is increased in the second period even if an anti-dumping duty is imposed on imports. This is because under conditions of imperfect competition, and assuming that the domestic and foreign firm competes on quantity, a tariff improves domestic welfare (see Brander and Spencer, 1984 and Eaton and Grossman, 1986).
- 72 Fischer was considering a more general question than Reitzes. He wants to know how the strategic interaction between firms is affected when protectionist policy is enforced with an endogenous probability. He is interested in policies like anti-dumping, countervailing duties, import quotas, voluntary export restraints, etc. which to a large part are triggered by the actions of the exporting firm but which are also affected by how the firms in the importing country behave.
- 73 An upstream industry is any industry that produces inputs for other industries that are closer to the product market. Downstream industry refers to an industry which produces goods at a later stage of a production process, sequence or line.
- 74 An opposite outcome occurred in the *US – Steel Safeguard* case where the entry of imported slab was restricted (Durling and Prusa, 2003). This did not hurt mini-mills since their technology does not use traditional slabs but it did hurt traditional mills who import slab. As a result, several important United States’ steel firms testified against the safeguard action.
- 75 This result is derived from a situation in which policymakers maximize the sum of consumer surplus, producer surplus and tariff revenue. They also show that if products are sufficiently differentiated, anti-dumping policy may have a pro-competitive effect by splitting-up existing cartels. But this outcome is only possible when authorities are assumed to only maximize the sum of domestic producer surplus and tariff revenues, and ignore consumer welfare.
- 76 Article 2.6 of the AD Agreement.
- 77 See WTO document G/ADP/6.

- 78 Article 2.3 of the AD Agreement.
- 79 Article 2.4 of the AD Agreement.
- 80 Article 2.2 of the AD Agreement.
- 81 Article 2.5 of the AD Agreement. However, comparison may be made with the price in the country of origin, if, for example, the products are merely transhipped through the country of export, or such products are not produced in the country of export, or there is no comparable price for them in the country of export.
- 82 Article 2.4.2 of the AD Agreement.
- 83 Article 4.1 of the AD Agreement.
- 84 See Panel Report on *EC – Bed Linen*, para. 6.72.
- 85 See Panel Report on *Mexico – Steel Pipes and Tubes*, para. 7.322.
- 86 Article 5.4 of the AD Agreement.
- 87 See Appellate Body Report on *US – Hot Rolled Steel*, para. 190.
- 88 See Appellate Body Report on *US – Hot Rolled Steel*, para. 204.
- 89 Footnote 9 of the AD Agreement.
- 90 Appellate Body Report on *US – Hot-Rolled Steel*, para. 192.
- 91 Appellate Body Report on *Thailand – H-Beams*, para. 107.
- 92 Appellate Body Report on *Mexico – AD Measures on Rice*, para. 204.
- 93 Appellate Body Report on *US – Hot Rolled Steel*, para. 193.
- 94 The Appellate Body in *EC – Bed Linen Article 21.5* held that imports from sources not found to have been dumping are not to be included in the volume effect examination (see para. 115).
- 95 Appellate Body Report on *EC – Tube or Pipe Fittings*, footnote 114.
- 96 Panel Report on *Egypt – Steel Rebar*, para. 7.73.
- 97 Panel Report on *Thailand – H-Beams*, para. 7.168.
- 98 Panel Report on *Guatemala – Cement II*, para. 8.266.
- 99 Panel Report on *EC – Tube or Pipe Fittings*, para. 7.277.
- 100 The dumping margin is said to be *de minimis* if it is less than 2 per cent of the export price (Article 5.8 of the Anti-dumping Agreement).
- 101 The volume of dumped imports is said to be negligible if the volume of dumped imports from a particular country is found to account for less than 3 per cent of imports of the like product in the importing member, unless the countries which individually account for less than 3 per cent of the imports collectively account for more than 7 per cent of imports of the like product in the importing member.
- 102 Panel Report on *EC – Tube or Pipe Fittings*, para. 7.241. The panel added that “cumulation must be suitable or fitting in the particular circumstances of a given case in light of the particular conditions of competition extant in the marketplace.”
- 103 See Panel Report on *EC – Tube or Pipe Fittings*, para. 7.243. This follows the approach of the Appellate Body on *US – Hot Rolled Steel*, paras. 192-193 of its report.
- 104 Appellate Body Report on *Thailand – H-Beams*, para. 125. Specifically, the Appellate Body upheld the panel’s finding that all the factors listed under Article 3.4 must be evaluated and that the injury determination of the Thai investigating authority was inconsistent with Article 3.4 because, *inter alia*, three listed factors were not considered. See also Panel Report on *EC-Bed Linen*, para. 6.159; Panel Report on *Mexico – Corn Syrup*, para. 7.128; Panel Report on *Guatemala – Cement II*, para. 8.283.
- 105 Article 3.4 of the AD Agreement. See Appellate Body Report on *US – Hot-Rolled Steel*, paras. 194-195.
- 106 Panel Report on *EC – Tube or Pipe Fittings*, para. 7.314; Panel Report on *Thailand – H Beam*, para. 7.236; Panel Report on *Korea – Certain Paper*, para. 7.272 and Panel Report on *Egypt – Steel Rebar*, para. 7.44.
- 107 Panel Report on *Thailand – H-Beam*, paras. 7.248-7.251, 7.255-7.256.
- 108 Panel Report on *Egypt – Steel Rebar*, paras. 7.42-7.45.
- 109 Panel Report on *EC – Tube or Pipe Fittings*, para. 7.316.
- 110 Panel Report on *EC – Tube or Pipe Fittings*, paras. 7.310-7.311. In this case, Brazil challenged EC’s injury determination which failed to examine independently the factor of “growth”. The EC argued that although no separate record was made of its evaluation of “growth”, its consideration of this factor is implicit in its analysis of other factors, including sales, output, profits, market share, productivity and capacity utilization. The panel observed that the record of EC’s investigation showed that during the evaluation of other listed factors, the EC had touched upon “the performance and relative diminution or expansion of the domestic industry” which indicated that the “growth” factor was implicitly examined. In the panel’s view, such an implicit examination is sufficient to meet the Article 3.4 requirement and it is not required to make a separate record of the evaluation of each Article 3.4 factor in every anti-dumping investigation.
- 111 Appellate Body Report on *EC – Tube or Pipe Fittings*, paras. 157, 159, 166. The Appellate Body also noted that “whether a panel conducting an assessment of an anti-dumping measure is able to find in the record sufficient and credible evidence to satisfy itself that a factor has been evaluated, even though a separate record of the evaluation of that factor has not been made, will depend on the particular facts of each case.” The Appellate Body observed that the panel conclusion on the factor “growth” was reasonable under the particular fact of the case (para. 161).
- 112 Panel Report on *EC – Tube or Pipe Fittings*, para. 7.329.
- 113 Panel Report on *US – Softwood Lumber VI*, paras. 7.67-7.68.
- 114 Panel Report on *Mexico – Corn Syrup*, paras. 7.126, 7.131-7.132.
- 115 Panel Report on *US – Softwood Lumber VI*, para. 7.105.
- 116 The Appellate Body on *US – Hot-Rolled Steel* held that the non-attribution language applies solely to the situation where dumped imports and other known factors are causing injury to the domestic industry at the same time (Appellate Body Report on *US – Hot-Rolled Steel*, para. 223).
- 117 Panel Report on *Thailand – H-Beams*, paras. 7.231, 7.274-7.275. See also Panel Report on *Egypt -Steel Rebar*, para. 7.115.
- 118 Panel Report on *Thailand – H-Beams*, para. 7.273. See also Panel Report on *EC – Tube or Pipe Fittings*, para. 7.359.
- 119 Appellate Body Report on *EC – Tube or Pipe Fittings*, para. 178.
- 120 Appellate Body Report on *US – Hot Rolled Steel*, para. 230.
- 121 See also the discussion on safeguards in the previous section.
- 122 Appellate Body Report on *US – Hot Rolled Steel*, paras. 223, 226, 228. See also Appellate Body Report on *EC – Tube or Pipe Fittings*, para. 188.
- 123 Appellate Body Report on *US – Hot Rolled Steel*, para. 224; Appellate Body Report on *EC – Tube or Pipe Fittings*, para. 189.

- 124 Appellate Body Report on *EC – Tube or Pipe Fittings*, paras. 191-192.
- 125 Article 7.1 of the AD Agreement.
- 126 Articles 9 and 10 of the AD Agreement.
- 127 Article 9.1 of the AD Agreement.
- 128 This is a bit of a simplification, in the sense that there is limited retroactivity of definitive measures. See Article 10 of the AD Agreement.
- 129 The five-year period counts either (i) from the date of the original imposition; or (ii) from the date of the most recent administrative/changed circumstances review under Article 11.2, if the review at hand covered both dumping and injury, or (iii) from the date of the most recent sunset review.
- 130 Noting that during the review process, anti-dumping duties still remain in place and that a review should normally be completed within 12 months, see last sentence of Article 11.3 and Article 11.4 of the AD Agreement.
- 131 Panel Report on *US – Corrosion-Resistant Steel Sunset Review*, paras. 7.271, 7.279.
- 132 Appellate Body Report on *US – Corrosion Resistant Steel Sunset Review*, paras. 111, 114. The Appellate Body on *US – Oil Country Tubular Sunset Review* adopted a similar approach, adding that the positive evidence requirement is not necessarily violated even when there are inferences drawn from projections into the future due to the prospective nature of a sunset review (Appellate Body Report on *US – Oil Country Tubular Sunset Review*, paras. 179-180, and 341).
- 133 Panel Report on *US – Corrosion-Resistant Steel Sunset Review*, para. 7.166.
- 134 Relevant cases are *US – Corrosion Resistant Steel*, *US – Oil Country Tubular Goods Sunset Review* and *United States – Anti-dumping Measures on Oil Country Tubular Sunset Review*. At issue in these cases was the Sunset Policy Bulletin (SPB), a document used by the United States Department of Commerce in making its sunset review determinations. The panels in these cases concluded that the SPB is inconsistent with Article 11.3 of the ADA because it establishes an irrebuttable presumption that termination of the anti-dumping duty would be likely to lead to continuation or recurrence of dumping, and therefore is inconsistent with the obligation to determine the likelihood of continuation or recurrence of dumping based on a sufficient factual basis, taking into consideration the circumstances of the case at issue. The Appellate Body reversed these findings, ruling that the panels in each case failed to make an objective assessment of the matter, including an objective assessment of the facts of the case, as required by Article 11 of the DSU. Essentially, the Appellate Body found that the panels did not adequately assess the evidence in order to come to their conclusion that the SPB establishes an irrebuttable presumption regarding likelihood of continuation or recurrence of dumping.
- 135 Panel Report on *US – Corrosion-Resistant Steel Sunset Review*, paras. 7.26, 7.27, 7.67, 7.68, 7.70.
- 136 Panel Report on *US – Corrosion-Resistant Steel Sunset Review*, para. 7.166.
- 137 Appellate Body Report on *US – Corrosion Resistant Steel Sunset Review*, paras. 127-128.
- 138 Panel Report on *US – Oil Country Tubular Goods Sunset Review*, paras. 7.273, 7.274.
- 139 Appellate Body Report on *US – Oil Country Tubular Goods Sunset Review*, paras. 278, 281, 284.
- 140 Appellate Body Report on *US – Anti-Dumping Measures on Oil Country Tubular Goods*, para 123.
- 141 Appellate Body Report on *US – Anti-Dumping Measures on Oil Country Tubular Goods*, para 123.
- 142 As evidenced by the reactions of governments to the current economic crisis, subsidies could in principle be used to respond to adverse shocks. In this Report, however, the focus is on the use of tariffs for contingent protection purposes and subsidies will only be discussed in relation with countervailing duties.
- 143 A more general discussion of the economics of subsidies can be found in WTO (2006).
- 144 A perfect market is a market where all actors are acting rationally and with full information, where there are no transaction costs, where the number of participants is sufficiently large that no individual participant can influence the price, and where external effects are excluded.
- 145 See the graphical presentation in Baylis (2007).
- 146 Industries characterized by increasing returns to scale will typically also be characterized by imperfect competition, as discussed below.
- 147 See WTO (2006) for an in-depth discussion of some stated objectives of governments for using subsidies.
- 148 Sykes (1989) discusses the multi-country case in detail.
- 149 Sykes (1989) argues that United States' anti-trust law cannot be employed to deal with foreign government-financed predation.
- 150 The optimal response is a positive subsidy if demand is non-linear but no subsidy in the linear case.
- 151 Hartigan (1996a) uses the word "hysteresis", i.e. the persistence of effects after the cause of the effects has been removed. On this particular point, see United States' Arguments in WT/DS212 *US – CVDs on certain EC products*.
- 152 More precisely, the assumption is that the marginal worker earns a premium over the returns available in the next best alternative wage rate and exceeds the market clearing wage. Under this assumption, the measure of producer surplus used in the first part of this sub-section is inaccurate.
- 153 If the source of the distortion is efficiency wages, correcting it would undermine the incentive system that rests on such wages.
- 154 Sykes (1989) discussed US contingent protection. He argued in favour of using the "escape clause" which had several advantages, in his view, compared with the countervailing duty law. It applied to all imports, imposed only temporary restrictions, used serious unemployment as evidence of serious injury, tailored the magnitude of protection to the circumstances at hand, etc.
- 155 Along the same lines, Bagwell and Staiger (2002) have shown that exporting governments may decide to establish international regulations on the use of subsidies in order to avoid destructive subsidy wars.
- 156 Baylis (2007) argues that CVDs could be thought of as a form of litigation law, where penalties are intended to induce parties to take care in their actions and decrease the probability of injury, but the litigation mechanism is subject to abuse by those filing the claims.
- 157 As mentioned above, the strategic trade literature has explored games where countervailing duties can deter the use of subsidies. There may also be some systemic arguments explaining the use of countervailing duties as part of a mechanism to enforce subsidies disciplines or as a means to achieve deeper tariff cuts in negotiations (see sub-section B.1).
- 158 A 1994 study of the US Congressional Budget Office examines the reasons for the greater use of countervailing duties by the US (Congressional Budget Office, 1994).
- 159 In the Tokyo Round, a subsidies code was negotiated where most of the substantive and procedural restrictions on the use of countervailing duties that were later included in the SCM Agreement can be found. The Code, however, was accepted by only a limited number of GATT signatories. See Sykes (2003a).

- 160 The Appellate Body on *Brazil – Desiccated Coconut* stated that countervailing duties may only be imposed in accordance with GATT Article VI and the SCM Agreement. [Appellate Body Report on *Brazil – Desiccated Coconut*, para. 15].
- 161 WTO disciplines on subsidies are inscribed under Article III.8, VI and XVI of GATT, the SCM Agreement and the Agreement on Agriculture.
- 162 GATS core disciplines, in particular its MFN and national treatment obligations, do not discipline the use of export subsidies. Such subsidies may therefore appear to be natural candidates for the additional disciplines referred to in Article XV:1.
- 163 SCM Agreement Article 4 for prohibited subsidies and Article 7 for other subsidies.
- 164 SCM Agreement Article 10, footnote 35.
- 165 SCM Agreement Article 11.
- 166 SCM Agreement Article 11.9.
- 167 For developing countries, the *de minimis* threshold is 2 per cent (SCM Agreement, Article 27.10).
- 168 See, in particular, the panel report on *US – Export Restraints*. See also the discussion in WTO (2006).
- 169 For a discussion on establishing “benefit” in the case of non-recurring subsidies, see Grossman and Mavroidis (2003a).
- 170 See WTO (2006, 197).
- 171 Appellate Body Report on *Canada – Aircraft*, para. 154.
- 172 Appellate Body Report on *Canada – Aircraft*, para. 157.
- 173 See WTO (2006, 197) and the discussion in Grossman and Mavroidis (2003a) and Horn and Mavroidis (2005).
- 174 See Appellate Body Report on *US – Countervailing Measures on Certain EC Products*, para 127.
- 175 Appellate Body Report on *US – Certain Products*, para 122.
- 176 This, according to the Appellate Body, might be the case if for example the government intervenes in the market to induce outcomes that it considers to be socially or politically desirable. See Appellate Body Report on *US – Countervailing Measures on Certain EC Products*, paras 122-123.
- 177 Note that this standard has no textual basis in the SCM Agreement or in the case law.
- 178 Prohibited subsidies (see Article 3 of the SCM Agreement) are deemed specific according to Article 2.3 of the SCM Agreement.
- 179 Article 11.2 of the SCM Agreement.
- 180 The amount of benefit in case of a loan (or loan guarantee) by a government shall be the difference between the amount that the firm receiving the loan (or the loan guarantee) pays on the government loan (or the loan guaranteed by the government) and the amount the firm would pay on a comparable commercial loan which the firm could actually obtain on the market (or a comparable commercial loan absent the government guarantee).
- 181 *Id.* paras. 7.212-7.215.
- 182 Appellate Body Report on *US – Softwood Lumber IV*, paras. 100-103.
- 183 Appellate Body Report on *US – Softwood Lumber IV*, para.109. The Appellate Body reversed the panel’s finding on Article 14(d); however refused to complete the examination of whether the method used by the United States’ Department of Commerce (DOC) is consistent with Article 14(d) because the relevant facts are not undisputed (para.128).
- 184 ASCM Article 15.2, 15.4 and 15.6.
- 185 ASCM footnote 46 and Article 16.
- 186 Such a consistent interpretation is in line with the Ministerial Declaration On Dispute Settlement Pursuant to the Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994 or Part V of the SCM Agreement which recognized the need for a consistent resolution of disputes arising from anti-dumping and countervailing duty measures.
- 187 In *EC – Countervailing Measure on DRAMS Chips*, the panel referred to the jurisprudence concerning Article 3.5 of the AD Agreement and concluded that Article 15.5 contains a similar requirement to separate and distinguish the injury caused by factors other than subsidized imports. (para. 7.404).
- 188 See also Horn and Mavroidis (2007b).
- 189 SCM Agreement, Article 21.1 and 2.
- 190 For a detailed discussion, see Grossman and Mavroidis (2007a) and Meagher (2003).
- 191 Appellate Body Report on *US – Carbon Steel*, para. 118.
- 192 Appellate Body Report on *US – Carbon Steel*, paras. 87-89.
- 193 Panel report on *US – Carbon Steel*, paras. 8.92 – 8.95. and 8.117-8.119.
- 194 See the discussion on the existence of benefits above.
- 195 See Grossman and Mavroidis (2007b) for a discussion of the Appellate Body ruling on this issue. In an effort to implement the rulings and recommendations of the Dispute Settlement Body following these disputes, the DOC introduced a new method for determining whether a previously bestowed subsidy continued to benefit a private firm. The panel on *US – Countervailing Measures on Certain EC Products Article 21.5* recognized the consistency of the DOC’s application of this new method for revising the assessment on the continued existence of benefit following the privatization of a French company. Specifically, the panel found that the non-recurring benefit was passed through beyond the privatization as one of the analyzed sale segments was found to be not for fair market value even when the arm’s length analysis was found to lack adequate and reasoned explanation. The panel reasoned that the conclusion on arm’s length is not dispositive with regard to the continued existence of benefit and the arm’s length test in an analysis of privatization conditions is “an ancillary examination that provides the context for, and otherwise informs, the decision on fair market value” (panel report, paras. 7. 157-7.158, 7.172).
- 196 The argument is second-best because it applies in a situation where a unique first-best optimum cannot be attained because of pre-existing market imperfections. In this case, whether the second-best measure is welfare-improving will depend on the specific circumstances at hand.
- 197 As discussed in Section B, economists call these type of commitments “weak” bindings.
- 198 Article XXVIII.1 and the Ad note 1 to paragraph 1 of Article XXVIII.
- 199 Article XXVIII.4 and 5.
- 200 GATS Article XXI.1(a).
- 201 Article XXI.2(a) which refers to any member whose benefit may be affected by the proposed modification of withdrawal of commitment.
- 202 Further clarifications are in the Uruguay Round Understanding on the Interpretation of Article XXVIII of GATT 1994 (Understanding XXVIII).
- 203 There are two different criteria for determining the PSI status. The traditional one is an “import” criterion according to which PSI status is given to the member having the larger import share in the market of the member seeking to modify or withdraw its concession over a reasonable period of time prior to the renegotiation. An “export” criterion

- was introduced in the Uruguay Round Understanding on GATT Article XXVIII as a means of better representing the interests of small exporters. According to this criterion, a member gains PSI status if the concession in question affects trade which constitutes a major part of the total exports of the member concerned. See the Ad notes 4 and 5 to GATT Article XXVIII.1. Further details can be found in the Understanding XXVIII.
- 204 The member with substantial interest is also determined by the contracting parties. The expression “substantial interest” is intended to be construed to cover only members which have significant share in the market of the member seeking to modify or withdraw its concession. The practice has been to recognize it for members having 10 per cent or more of the import market share. See the Ad note 7 to GATT Article XXVIII.1. The Understanding XXVIII provides further details.
- 205 GATT Article XXVIII.3(b).
- 206 GATS, Article XXI.3 and 4.
- 207 See GATT Article XXXVI.8 and relevant Ad note.
- 208 On the rationales for flexibilities in trade agreements, see Section B.
- 209 GATT Document MTN.GNG/MA/W/13 describes the chairman of the negotiating group on market access guidelines on credit for tariff bindings.
- 210 Stahl and Turunen-Red (1995) show that the uncertain future can create an incentive for trade agreements: since payoffs of all players are subject to political changes, trade agreements that limit policy variations can provide long-run gains.
- 211 The case of wheat is rather specific because the variability of *ad valorem* equivalents of non *ad valorem* rates is typically much higher given the variability of the prices used in their computation than that of *ad valorem* tariff rates.
- 212 For unbound lines, the authors apply the existing average binding overhang to compute new tariffs.
- 213 Note that the authors also consider less extreme scenarios which are of less interest from the perspective of this Report.
- 214 See WTO et al. (2008) for detailed country tariff profiles.
- 215 Art VIII stipulates that such taxes should be limited in amount to the approximate cost of services rendered and shall not represent an indirect protection to domestic products or a taxation of imports or exports for fiscal purposes.
- 216 The role of flexibilities in a trade agreement is discussed in Section B.1.
- 217 Between early 2003 and mid-2008 internationally traded food prices increased by 138 per cent (World Bank, 2009). This trend was then reverted by the abrupt slowdown of the global economy subsequent to the financial crisis.
- 218 See Appendix B.1 on the economic justifications for contract incompleteness.
- 219 Other objectives include: to improve terms-of-trade, to operate quality control on exports, to favour export diversification, to respond to tariff escalation, protect environment, etc. For a review on the economics and the empirical evidence of use of export taxes, see Piermartini (2004).
- 220 For example, empirical evidence on the effects of the introduction of export taxes on palm oil by the Indonesian Government in 1994 suggest that market intermediaries rather than final consumers appropriate most of the benefits of the tax. One suggested explanation is the palm oil market structure in Indonesia, where the five biggest refiners represent over 60 per cent of the industry and control the leading brand-name in the cooking oil (Marks et al. 1998 and Larson, 1996).
- 221 In the case of Indonesia, for example, Larson (1996) finds that export taxes on palm oil contributed to increased uncertainty regarding the profit margins of the palm oil refining industry and reduced the scope for effective risk management, thereby hindering investments. In addition, the tax on palm oil put downward pressure on the price of coconut oil and many coconut factories closed down.
- 222 The reason is that a devaluation increases the price of exported goods denominated in domestic currency.
- 223 See evidence in Section D.1.
- 224 This phenomenon is known as the “tragedy of the commons”.
- 225 See the discussion on environmental policy in the *World Trade Report* (WTO, 2006).
- 226 Accordingly, economists in general argue in favour of price-based measure as opposed to quantitative measures to restrict trade. The main reason is that the former are transparent and simple to administer. In contrast, bans are not credible long-term and often lead to smuggling, and quotas introduce a strong discretionary element in the trading system. Quota allocation arrangements may encourage the formation of powerful cartels and, in general, rent-seeking activities.
- 227 For a brief overview on recent legal issues related to export taxes, see Kazeki (2005) and Crosby (2008).
- 228 Article XX(j) that refers to the application of a policy “essential to the acquisition or distribution of products in general or in local supply” may also be relevant in this case.
- 229 See http://www.wto.org/english/news_e/news07_e/good_counc_9july07_e.htm
- 230 For evidence on the intensity of the use of export taxes across countries, see Section D.
- 231 In other words, an industry seeking import relief lobbies for the option that maximizes expected profits in light of the lobbying costs involved and the associated subjective probability of success. See Moore and Suranovic (1992).
- 232 This argument seems to be more theoretical than of a practical relevance, since an anti-dumping duty-imposing country would not win a dispute absent any sort of supporting evidence.
- 233 The average duration of a dispute so far has been about two years from the date of request for consultations until the date of circulation of an Appellate Body report. If averages for the reasonable period of time during which implementation must occur as well as the time for a compliance panel and Appellate Body compliance report are added the total process starting from the request for consultations can take over three and a half years. See *World Trade Report 2007* (WTO, 2007).
- 234 There is probably good reason for the predominance of major economies – the need for an affirmative injury determination means petitioners would be very reluctant to exclude large traders.
- 235 These arguments bring to the fore the more general discussion of the economic rationale for MFN. While MFN is not an efficiency principle, it has other advantages, notably when further dynamic and political economy considerations come into play. In relation to technology adoption, Choi (1995) notes that if any competitive advantage obtained by one country could be taxed away *ex post* by discriminatory trade measures, companies would invest less than they would if they were guaranteed equal treatment independent of their origin. Horn and Mavroidis (2001) and others also have shown that MFN reduces the risk of trade policy capture by special interest groups and, hence, diminishes the risk of political abuse, the absence of which is taken for granted by Crowley (2006). See *World Trade Report 2007* (WTO, 2007) for an extensive discussion of MFN.

²³⁶ In fact, one may compare the information on anti-dumping duties contained in Bown (2007) to the gap that may exist between bound and applied rates in these tariff lines, notably in developing countries. Such a comparison shows that a number of countries have indeed imposed anti-dumping duties, despite the “water” in the respective tariff. In some cases, the “water” has even been larger than the reported anti-dumping duty.

D EMPIRICAL EVIDENCE

The premise of this Report is that trade contingency measures are a necessary part of any trade agreement. The flexibility granted by these instruments allows countries to make greater liberalization commitments since they realize that they can temporarily be relieved of such commitments under difficult circumstances – whether home-grown or the consequence of the policies of other countries. In the absence of such measures, countries might not even contemplate signing new trade agreements or entering into new rounds of negotiations. Previous sections have reviewed the theoretical literature that could provide support for this view and marshalled the arguments accordingly.

In this section, we turn to the empirical literature and examine whether it supports the proposition that contingency trade measures are introduced in a trade agreement to facilitate trade liberalization or whether it shows that these measures give countries an opportunity to backslide on negotiated commitments.

The Report has identified the circumstances when there is an economic rationale to use trade remedies. In general, these include situations when there is a sudden increase in competitive pressure from foreign imports. The second question that this section addresses is whether flexibilities are used to manage difficult situations arising from increased import competition or whether they become tools for protection. Finally, economic theory stresses that there are costs associated with the use of contingency measures. Temporary protection may have negative effects on competition and on a country's overall welfare. This section reviews the estimates of the size of these costs.

At the outset, it should be noted that there has been significantly more research carried out on anti-dumping (AD) activity than on any other trade contingency measure, and more research on the United States than on any other country. This uneven emphasis will be reflected in the contents of this section. There is an obvious need to widen the range of empirical research beyond AD activity and beyond the experience of the United States.

Before turning to the three issues identified above, the section begins by describing some of the available data on the contingency trade measures

and other flexibilities that are the subject of this Report. It portrays patterns and trends in the use of the various forms of flexibilities. It also highlights some of the limitations of the data, and the need for better, more timely and comprehensive notifications by WTO members.

1. PATTERNS AND TRENDS IN THE USE OF CONTINGENCY MEASURES

(a) Available databases and sources of data

There are six measures that are considered in detail in this Report: AD measures, countervailing duties (CVDs), safeguards, modification of concessions in WTO agreements, increases in applied tariffs up to the maximum agreed ceiling – or binding – and the use of export taxes. There are databases or data sources corresponding to each of the measures that are either maintained by the WTO Secretariat or by external sources.

i) Anti-dumping database

The empirical analysis on anti-dumping measures undertaken in this Report has relied on data compiled by the WTO Secretariat and by others (see below). It consists of notifications received from WTO members/GATT contracting parties of anti-dumping initiations and final measures from 1979 to 2007. The data also include a list of the affected members/contracting parties.

It should be noted that recent years have seen a concerted effort, largely involving academics, to develop databases on worldwide AD activity. The most detailed global anti-dumping database is that developed by Bown (2007). It draws on previous efforts by Blonigen (2008), Prusa (2001), Miranda et al. (1998) and Zanardi (2004b).

Bown's database contains detailed data on anti-dumping measures for 19 WTO members, which collectively make up a substantial fraction of the cases worldwide.¹ It goes beyond the information available from WTO notifications. Among other information, the database includes: the Harmonized System (HS)² codes of the products under

investigation; the identities of the domestic firms that have initiated AD actions as well as the foreign firms that are the subject of AD actions; the level of the dumping margin (i.e. the difference between the export price and the normal price in the exporter's domestic market) found by investigating authorities; the provisional and final AD measures (specifying whether they are duties or price undertakings); and the dates when the provisional and final AD measures were imposed.

ii) CVDs database

The database, compiled by the WTO Secretariat, contains information on countervailing duty initiations and final measures notified from 1974 to 2007, the reporting WTO members, the affected members and the HS codes of the products concerned.

iii) Safeguards database

The WTO Secretariat's database contains information on safeguard initiations and final measures notified by WTO members from 1995 to 2007. A total of 40 members have notified safeguard initiations and measures since the establishment of the WTO. The database also classifies by HS "chapter" or section the products which were subject to safeguard initiations and measures.

iv) Renegotiations database

The WTO Secretariat's database catalogues 335 cases of multilateral negotiations initiated by 58 GATT contracting parties/WTO members from 1948 to 2007. It contains data on the member/contracting party initiating the renegotiation (under GATT Article XXVIII), the product(s) covered by the renegotiation, the official document numbers, the previous level of concession, the proposed modification of the concession, whether the renegotiations were successfully concluded and any agreement on compensation. The database only provides a general description of the product(s) involved in the renegotiation; however, in many cases, it has been possible to match product descriptions to the corresponding chapter or section of the HS nomenclature.

v) Export taxes

Information on export taxes was collected from the WTO's Trade Policy Reviews (TPRs) published

between 1995 and 2008. There are two main problems with the classification of information extracted from the TPRs. The first is related to the frequency of TPRs, which for individual WTO members depends on their shares in world trade.³ This review mechanism implies that there is more information for some countries than for others. In order to allow for comparison across countries and across products, we have used, for each country, information drawn from the latest TPR available.

The second problem is the varying degree of detail at which information on the product level is reported. In order to allow for a comparison across products and not to lose too much information, we collected data at the HS 2002 two-digit classification level. This enabled us to analyze the intensity of use of export taxes. At times, however, only a general description of the product subject to an export tax is provided and no corresponding HS 2002 two-digit code could be assigned to it.⁴ Finally, export taxes on re-exported goods, statistical charges, guarantee funds, stamp duties, re-export taxes, income taxes, corporation taxes, automation fees, exit duties, export development charges and consent fees were not taken into account.

vi) Tariffs

To assess how frequently governments take advantage of the incomplete coverage of their tariff bindings and the binding overhang (i.e. the gap between a member's bound and applied tariffs – see Section C.4) to raise their tariffs, we used the CAMAD database.⁵

CAMAD contains applied tariff rates at the national level for selected countries and years. To facilitate comparisons, we aggregated all the tariff information to the six-digit level of the Harmonized System. Because we were interested in changes in tariffs between two consecutive years, we could only use a subset of the database which contains up to about 70 countries depending on the years and up to 11 years (1996 to 2006) depending on the countries. The size of the samples thus varies considerably across years. This must be kept in mind when interpreting the results (see Table 3 below).

Note also that the initial database was split into two parts according to the nomenclature used. From 1996 to 2002, products were classified using the Harmonized System 1996 and from 2002 onwards

the Harmonized System 2002 was used. In order to get a global picture, we merged those two parts, keeping the initial nomenclature. Finally, non *ad valorem* tariffs were dropped in order to avoid confusing changes in prices with changes in tariffs.

vii) Caveats

Before describing the pattern that emerges from the data, it is essential to recognize several important shortcomings of the databases used in this section.

There is a paucity of information on anti-dumping, CVD and safeguard initiations and measures prior to the 1980s. The description of the patterns and trends is therefore largely drawn from experience since the 1980s, which may not give a complete picture. Taking AD measures as an example, although the conventional view is that few anti-dumping cases existed prior to 1980, Irwin (2005) has shown that this is incorrect in the case of the United States. He found that AD filings were quite

pronounced during the late 1930s, even rivalling the large number of US cases in the early 1980s and 1990s. In addition, there was a steady and fairly substantial stream of US cases from the mid-1950s until the mid-1960s.

Furthermore, almost all of the information is on the number of initiations and measures. While this is important, it is equally vital to know how much trade they affect and how large the duties are. Certainly, there is a lot of information to suggest that, on average, trade remedy duties are many times greater than applied MFN rates (i.e. non-discriminatory tariffs) (Prusa, 2001). Box 12 attempts to provide some information on the magnitude of AD duties.

With respect to changes in the binding overhang, this section is only able to analyze changes to applied tariffs made from 1995 onwards. Finally, it has not been possible systematically to track WTO members' use of export taxes over time.

Box 12 **Anti-dumping duties**

Bown's global anti-dumping (AD) database contains information on both provisional and final anti-dumping duties. We utilize information from this database to indicate the magnitude of these duties for frequent users of AD measures and how they compare with applied MFN rates.

It is important to start with some qualifications about the data in Bown's database. First, many AD tariffs are specific duties. Second, many are specified as ranges (e.g. 20 per cent to 50 per cent) rather than a given *ad valorem* rate. Finally, there are many missing data. Even though we are unable to employ the specific duties and the duties given as ranges, there are enough observations of *ad valorem* AD duties to construct statistically useful indicators of the average for some but not all countries. For example, the table below does not contain estimates of AD duties for Australia and India, even though these countries are major users of anti-dumping measures.

The average anti-dumping duties applied by developed and developing countries are shown in the table below. The average applied MFN rates for all products from 1996 to 2007 for these countries are also shown for reference. Some tentative conclusions can be drawn. First, there is considerable variation in the average AD duties applied by WTO members. They range from 12 per cent to 90 per cent. Second, developing countries apply higher AD duties than developed countries. Third, AD duties are significantly higher than the average applied MFN rates of members (although it should be noted that the AD duties cover a longer period starting from 1980 and are concentrated in certain sectors). For most of the members listed in the table, average AD duties are twice as high as applied MFN rates; for some members they are as much as eight times higher than average applied MFN rates.

Table: Average AD duties for selected users (in per cent)

Users	Average AD duties (1980-2005) ^a	Average applied MFN rates (All products) (1996-2007)
<i>Developed</i>		
Canada	12.1	4.2
EC	17.6	6.4
United States	41.4	5.2
<i>Developing</i>		
China	21.4	13.8
Mexico	89.5	15.8
Indonesia	21.5	8.5
Korea, Rep. of	27.4	12.6
Peru	30.9	10.9
South Africa	29.1	7.0
Turkey	29.1	12.9

^a There is considerable variation in the period for which data on AD duties is available for each country. The period of coverage is 1985-2005 for Canada; 1987-2005 for the EC; 1980-2005 for the United States; 1997-2005 for China; 1987-2003 for Mexico; 1996-2004 for Indonesia; 1986-2004 for Rep. of Korea; 1992-2002 for Peru; 1992-2004 for South Africa; and 1990-2004 for Turkey.

Source: Bown (2007) and WTO Integrated Database (IDB).

(b) Trends

Information about the use of measures over time is available for AD, CVD and safeguard initiations and measures, renegotiations and the use of binding overhangs. It has not been possible to obtain time series observations on the application of export taxes by WTO members. The sub-section on trends focuses on two key questions. First, has the use of these measures grown, declined or remained the same over time? Second, to what extent can the changing pattern over time be consistent with the use of these instruments as tools of flexibility?

For example, is the global business cycle closely linked with the frequency of their use, with the number of trade contingency actions rising during

periods of economic weakness? Does previous or ongoing trade liberalization lead to greater use of contingency instruments?⁶ The answers provided here are based on aggregate data and on a descriptive analysis of the information. Sub-sections 2 to 4 review more country-specific and measure-specific studies that arrive at far more definitive conclusions about the nature of the measures.

i) AD duties, CVDs and safeguard measures

For the most part, we shall rely on the frequency or number of anti-dumping, CVD and safeguard initiations and measures as indicators. Box 13 provides some cautionary notes about relying exclusively on the number of trade remedy actions.

Box 13

Cautionary note on relying on the number of initiations/measures

Use of other instruments of flexibility

The increase in the total number of AD investigations/measures has to be seen in the light of the use of other trade policy measures as instruments of flexibility. Up to the late 1950s, quantitative restrictions, licensing requirements, and foreign exchange controls had been widespread. Combined with the still substantial amount of tariff barriers,

they may have made the use of AD/CVD/safeguard actions by GATT contracting parties largely irrelevant. Over time, those measures were eventually eased or eliminated. Tariffs were also reduced through successive rounds of multilateral trade negotiations and through unilateral market opening. Politically sensitive sectors, such as agriculture and textiles and clothing, were also brought under GATT rules. This suggests that because of continued trade liberalization and the elimination of traditional

instruments of protection, the more frequent use of AD/CVD/safeguard actions by an increasing number of WTO members today may constitute the substitution of one set of instruments of flexibility for another.

More trade means more frequent use of contingency measures

Since 1979, the value of world exports has risen by an average of 7.1 per cent per annum. This is more than twice the annual rate of growth of AD initiations (3.3 per cent per annum) over the same period. The rate of expansion of world trade was also about one percentage point higher than the annual growth in global AD measures (6.5 per cent per annum). Thus, the number of measures per dollar of trade may have actually declined over the years. Of course, this point obscures the fact that trade contingency measures are not targeted evenly against countries. As pointed out later in this section, a number of developing Asian countries have been subjected to a significant share of anti-dumping actions.

EU enlargement

The steady enlargement of the European Union over the last few decades has reduced the possible number of AD/CVD/safeguard measures being taken by individual countries.

The numbers of schedules of commitments and administrations have consequently been reduced and trade within the EU is no longer subject to these trade policy measures. It is noteworthy that many AD/CVD/safeguard measures were previously taken against WTO members which are now EU members or no longer centrally planned economies.

Differences in restrictiveness

Relying on the number of initiations or measures gives equal weight to all cases even though the final duties may differ substantially from one case to the other. In anti-dumping, for example, the number of measures does not indicate what dumping margin was found and whether the duty that the authorities levy corresponds to the full dumping margin or only a part of it.

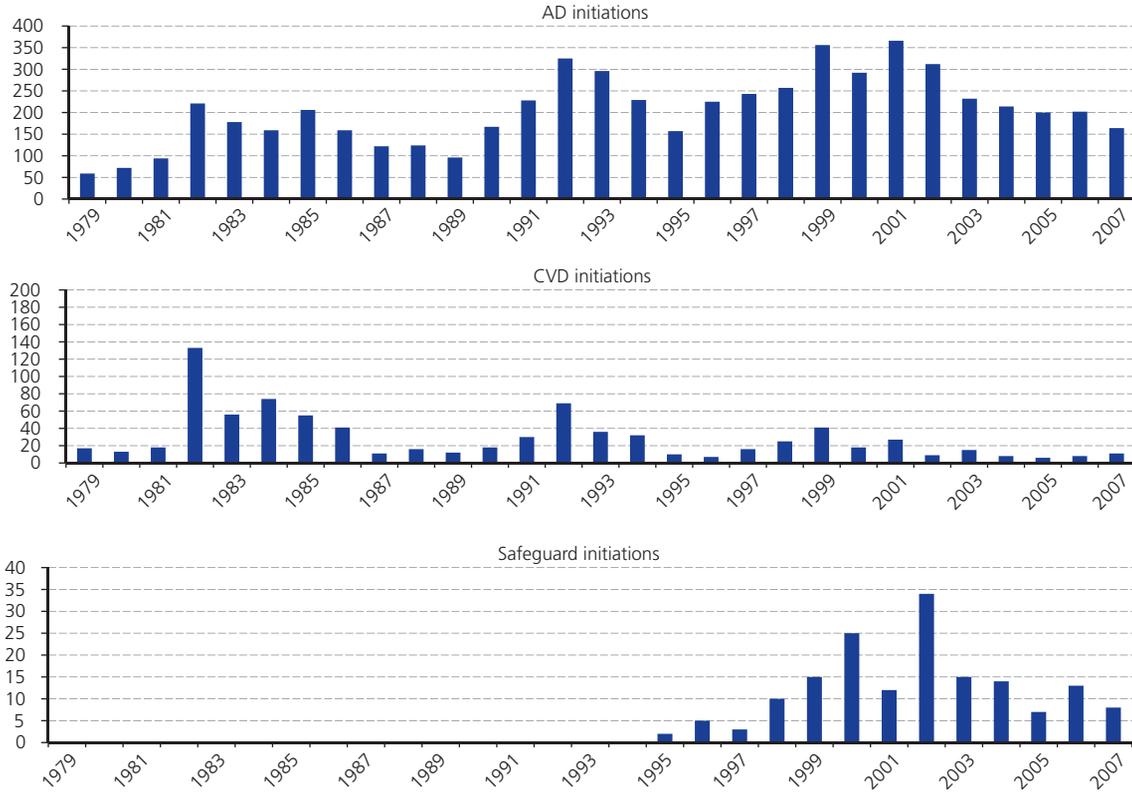
Another difficulty is that the product subject to a trade contingency measure may differ in economic importance, depending on its volume and value, which country is applying the measure, and who the supplier is.

Irwin (2005) has distinguished between the number of cases and the number of commodities/tariff lines affected. In many cases there are several companies affected by one tariff line. Therefore, counting cases by company or by commodity can give a different picture.

Varying patterns can be observed in the use of trade contingency measures over time (see Chart 3 and Chart 4). There has been a pronounced increase in the frequency of anti-dumping initiations (and measures), with some tapering off after the global slowdown in 2001-02. There appears to be a reduction, for the most part, in the recourse to countervailing actions, particularly compared with the 1980s. There is far less information about safeguard actions (only available from 1995 to 2007) so any conclusions about trends should be treated with some caution. Having said that, there is nevertheless a distinct increase in the frequency of cases, which is probably related to the global downturn in 2001-02, and an equally sharp reduction in the number of cases afterwards.

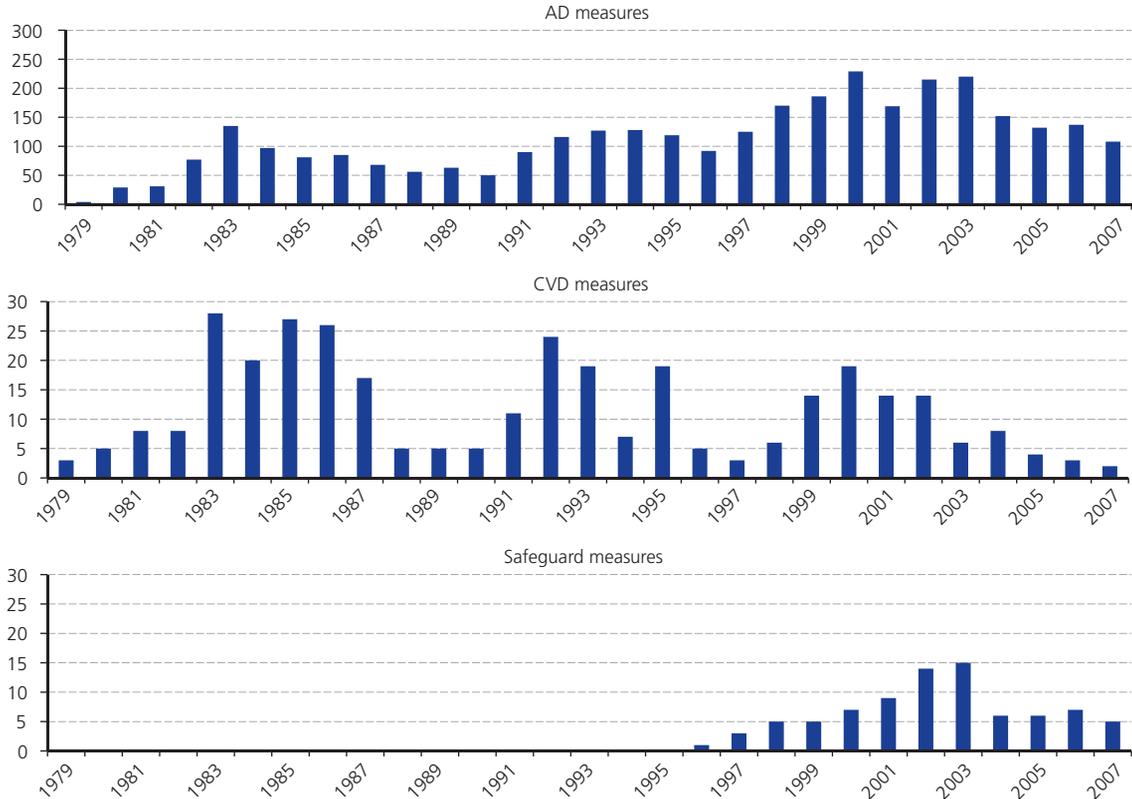
There could be any number of reasons for the increase in the application of trade contingency measures. Many countries that did not have laws on these measure have enacted legislation on trade remedies in recent years. This may, in part, explain why the increase in the use of trade remedies has come from non-traditional users, primarily developing countries. The reduction in tariffs worldwide, from bilateral, regional, plurilateral and multilateral initiatives, have made countries more open and more vulnerable to disruptions arising from foreign trade (Tharakan, 1995). Finally, the impressive growth in global trade in the past three decades means that there is simply a lot more imports that could be the subject of trade contingency action.

Chart 3
Annual initiations of AD, CVD and safeguard investigations



Source: WTO Secretariat.

Chart 4
Annual number of new AD, CVD and safeguard measures



Source: WTO Secretariat.

The data show a far greater reliance by countries on anti-dumping measures than either CVDs or safeguards. On average, countries initiate 205 AD, 26 CVD and 12 safeguard investigations per year; they also apply, on average, 113 AD, 11 CVD and 7 safeguard measures annually. It should be noted of course that simply counting the number of safeguard investigations and measures would tend to underestimate the number of countries they impact since such actions will apply in a non-discriminatory way, while in the AD/CVD context each country/product combination counts as a separate investigation and measure. Some of the possible factors affecting countries' choices among these measures were discussed in Section C.

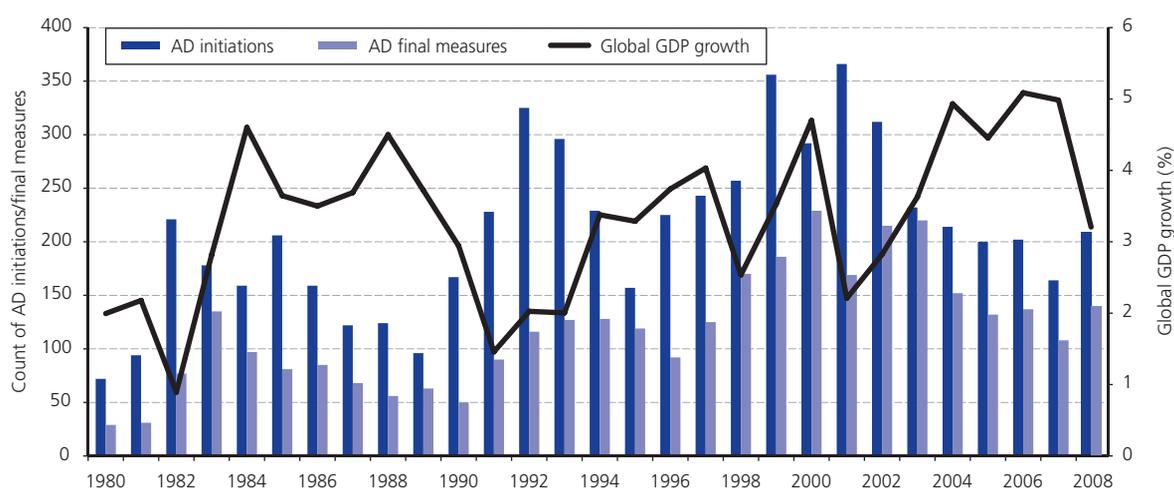
The possible link between trade contingency measures and the level of macroeconomic activity has been noted in several places in this Report. For example, Section B argued that trade contingency measures can be seen as tools for economic adjustment, enabling affected industries to deal more efficiently with the effects of unforeseen external economic events (shocks). In the discussion below, a number of papers cited are able to link countries' recourse to AD action to changes in GDP and the real exchange rate. Thus, within the growth trend noted above, there may be cyclical forces at work which also affect how frequently trade contingency measures are used.

Chart 5 illustrates the pattern for all the countries which, according to the WTO anti-dumping

database, had at least one AD initiation from 1979 to 2008. Thus, it goes beyond the countries for which the link between AD and macroeconomic conditions was documented by existing empirical studies. The chart plots the frequency of AD initiations against global GDP growth over the past three decades. In general, the use of AD initiations rises during slowdowns in the global economy. This is particularly evident during severe downturns: in 1980-82 (recession and the debt crisis); 1991-92 (economic contraction and the Iraq war); 1997-98 (Asian financial crisis); and 2001-02 (bursting of the dotcom bubble and the terrorist attacks on 11 September). With these data, there is some statistical evidence of a negative relationship between global AD activity and macroeconomic conditions, but not all evidence supports this.⁷

The current global economic crisis provides another opportunity to examine the link between anti-dumping actions and the business cycle. In 2008, the number of AD initiations increased by 28 per cent compared with 2007. Eighteen WTO members reported initiating a total of 208 new investigations compared with 163 initiations reported for 2007. The number of new measures applied also increased by about the same rate in 2008. A total of 15 members reported applying 138 new AD measures, 29 per cent higher than the 107 new measures reported for 2007.

Chart 5
Trade contingent measures and the global business cycle



Note: Global GDP growth is from the IMF World Economic Outlook database (April 2009).

Source: WTO Secretariat.

ii) Renegotiations

Chart 6 shows the pattern of requests since 1948 for GATT Article XXVIII renegotiations of WTO members' schedules of commitments. The chart only reflects the number of requests from members and does not take into account the number of products for which modification of concessions is being requested. Requests for modification of concessions appear to have been more frequent during the early years of the GATT and seem to have dropped off after the mid-1980s. Given that use of GATT Article XXVIII is just one of a set of trade contingency measures, this decline needs to be examined in light of whether other measures were consequently used more frequently. The decline may reflect the growing attractiveness of other trade contingency measures.

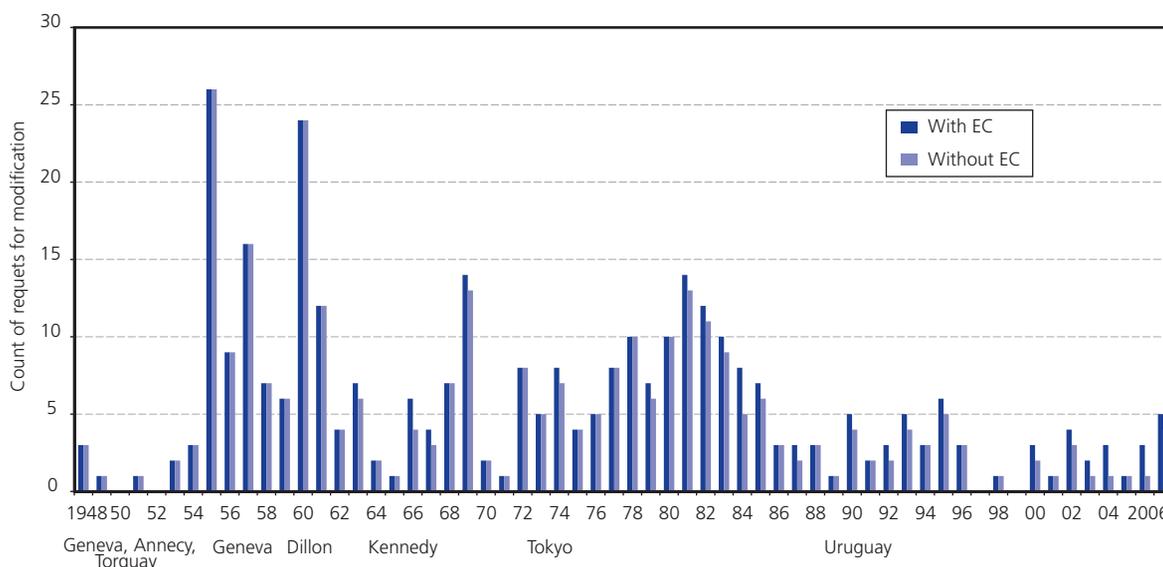
A large number of the requests for renegotiations have come from the European Communities. For the purpose of the chart, the requests of the EC in its earlier forms (EC-6, EC-9, EC-12, EC-15 and EC-25) have been added together but the requests made by its member states before joining the EC are counted separately.⁸ Since it is possible that the number of such requests is related to the process of European integration, Chart 6 shows the data with and without the EC requests. Overall, there does not appear to be much of a difference in the pattern over time, whether the EC requests are included or not.

There has been little empirical work attempting to explain the use of GATT Article XXVIII by WTO members. One of the rare studies is by Bown (2004b), who examines members' choice between GATT-legal measures (which includes renegotiations) and GATT-illegal measures for implementing protection. Bown concludes that a member will choose a GATT-legal measure, such as renegotiations, over a GATT-illegal measure only if it faces a credible threat of retaliation with the latter choice. However, the study does not address the protection offered by GATT Article XXVIII compared with other GATT-legal trade contingency measures, such as safeguards.

One reason for the large number of requests for renegotiations is that WTO members may be guilty of making an over-optimistic assessment of their ability to implement commitments agreed to during the round of multilateral trade negotiations. Some of the market access commitments may turn out to entail industry adjustment costs of a magnitude that makes it impossible for that member to implement them.

There have been eight successful rounds of multilateral negotiations since the founding of the GATT: Geneva (1947), Annecy (1949), Torquay (1950), Geneva (1956), Dillon (1960-61), Kennedy (1963-67), Tokyo (1973-79) and the Uruguay Round (1986-94). Chart 7 plots the relationship between the number of

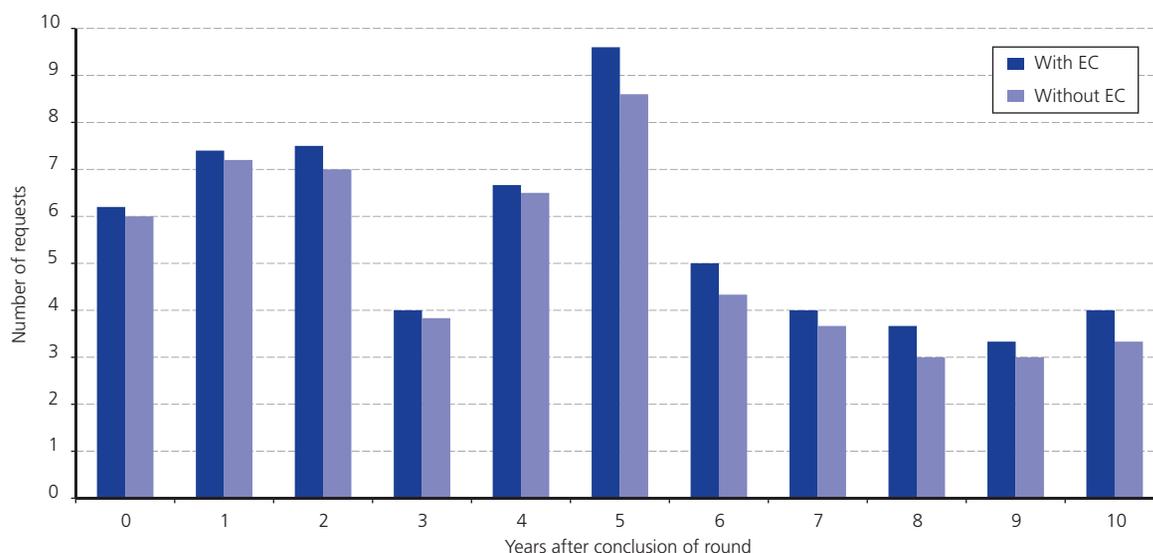
Chart 6
Number of Article XXVIII requests, by year



Note: For the European Communities, requests made by EC-6, EC-9, EC-12, EC-15 and EC-25 are summed up but the requests made by its member states before joining the EC are counted separately.

Source: WTO Secretariat.

Chart 7
Number of Article XXVIII requests after round of negotiations



Note: For the European Communities, requests made by EC-6, EC-9, EC-12, EC-15 and EC-25 are summed up but the requests made by its member states before joining the EC are counted separately.

Source: WTO Secretariat.

requests for modifications of commitments and the number of years after the conclusion of each of these multilateral trade rounds. The chart shows that on the year that a multilateral trade round is concluded there is an average of 6.2 requests for renegotiations. One year after the conclusion of a round, this rises to an average of 7.4 requests.

The chart also reveals that the average number of requests for renegotiation of commitments subsequently peaks five years after a successful round, and then declines in subsequent years. This pattern in the data holds whether the EC is included or not. The data support the hypothesis that the demand for flexibility rises after a successful round of multilateral trade negotiations as countries discover that they may have promised too much and need to reverse some of their commitments made even before they are implemented.

iii) Using the flexibility available in schedules of commitments

As discussed in Section C, governments may be in a position to raise their tariffs without violating their WTO commitments if they have not bound all their tariff lines and/or if there is a gap between their applied rate and their bindings – or agreed ceilings. Whether governments make use of this flexibility, or prefer to use other flexibilities, when they want to raise their level of protection in reaction to an

external event, depends on a number of factors. This sub-section examines how often governments have raised their tariffs in the past ten years. In doing this, the assumption is that the tariffs that were raised were either unbound or that the tariff binding allowed the applied tariff to be raised.

Countries may have many reasons to raise their tariffs. They may, for instance, have to raise them when they join a customs union and the common external tariff is higher than their pre-custom union tariff. Or, they may prefer to raise tariffs because they lack the necessary capacity to comply with the procedural requirements for the use of anti-dumping, safeguards or CVDs. In other words, the tariff increases identified in this sub-section should not all be interpreted as a use of the flexibility available in tariff bindings for contingency protection purposes. The objective here is to present the facts more than to interpret them.

Table 3 shows how many countries (for which data are available) have increased their tariffs and how many tariffs (as measured by the six-digit classification of products in the Harmonized System) have increased. This information is shown by year and by size of the tariff increase. Given that the number of countries for which data are available varies across years, this information is indicated in the first row. The variation in the size of the sample prohibits comparisons across years. The second row

Table 3
Number of tariff increases: selected members and selected years

	1996- 1997	1997- 1998	1998- 1999	1999- 2000	2000- 2001	2001- 2002	2002- 2003	2003- 2004	2004- 2005	2005- 2006
Sample size (number of WTO members)	19	22	24	37	44	40	46	35	58	72
Total number of positive tariff increases	2473	16174	23050	5896	4777	2587	3178	4825	8195	3452
Number of countries with positive tariff increases	15	17	20	31	37	28	20	28	49	50
Ranges (in percentage points)										
10 ≤ Δt < 15 number of cases	20	168	666	950	223	95	618	294	2508	763
number of countries	5	10	10	17	20	17	10	21	28	30
15 ≤ Δt < 20 number of cases	7	33	25	24	103	61	153	187	527	116
number of countries	4	6	5	11	15	8	8	17	25	10
Δt ≥ 20 number of cases	17	50	294	60	528	748	17	40	230	448
number of countries	5	5	4	8	14	11	6	9	18	7

Source: Based on WTO data, 1996-2006.

shows the total number of products (according to six-digit sub-headings) which experienced a tariff increase over two consecutive years, while the third row shows how many countries increased tariffs for at least one product sub-heading. Between 2005 and 2006, for instance, 50 countries out of a total of 72 for which data are available raised tariffs on 3,452 product sub-headings. The remaining rows indicate the number of countries and the number of tariff lines which increased and by how much. For example, out of the total of 72 countries, seven increased tariffs for at least one product sub-heading by 20 percentage points or more between 2005 and 2006. Taken together, these seven countries raised the tariffs of 448 six-digit product sub-headings by 20 or more percentage points.

The figures suggest that the number of tariff increases has been significant in the last decade. Between 2005 and 2006, the year for which the largest set of data is available (72 countries), a total of 3,452 tariff increases were made. Most of the increases were smaller than 10 percentage points. However, 35 of the 72 countries increased some tariff(s) by 10 percentage points or more.⁹ For 763 product sub-headings, an increase of at least 10 but less than 15 percentage points was made, while 116 increases were larger or equal to 15 but smaller than 20 percentage points. A total of 448 were equal to or larger than 20 percentage points. The total of more than 560 tariff increases equal to or exceeding 15 percentage points made by 72 WTO members between 2005 and 2006 compares with a

total of approximately 200 anti-dumping initiations or less than 150 AD final measures, and only a few safeguards or countervailing duties in 2005 or 2006.

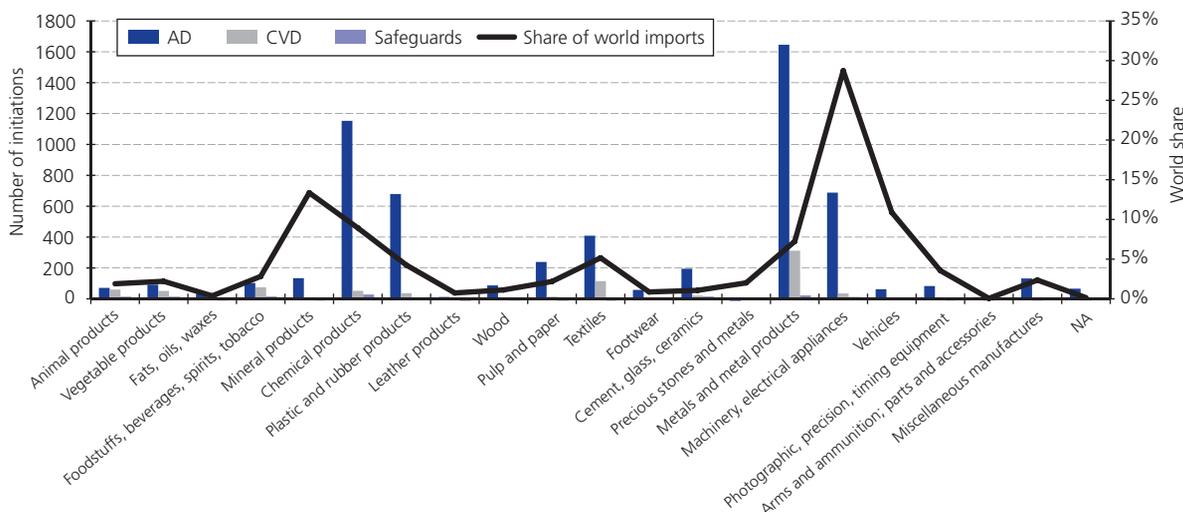
(c) Sectoral pattern

i) AD measures, CVDs and safeguards

The evidence shows that anti-dumping measures, CVDs and safeguards are concentrated in certain sectors: metals and metal products, chemical products, plastic and rubber products, machinery and electrical appliances, and textiles and textile articles (see Chart 8). Metals and metal products (27.6 per cent of all AD initiations) and chemical products (19.4 per cent of all anti-dumping initiations) accounted for nearly half of all AD initiations over the last 29 years (1979-2007).

One plausible explanation for this sectoral distribution is that it is due to a sector's relative importance in world trade. This turns out not to be the case since the frequency of the measures against the most targeted sectors is disproportionate to those sectors' share of world trade. For example, metal and metal products and chemical products, which together account for nearly half of all AD initiations, made up only 7.2 per cent and 8.9 per cent respectively of world imports during the 2000-07 period (see Chart 8). It is likely that those industrial characteristics which have been identified in the theoretical literature discussed in Section C and those that will be discussed below

Chart 8
Number of initiations and world import share, by HS section

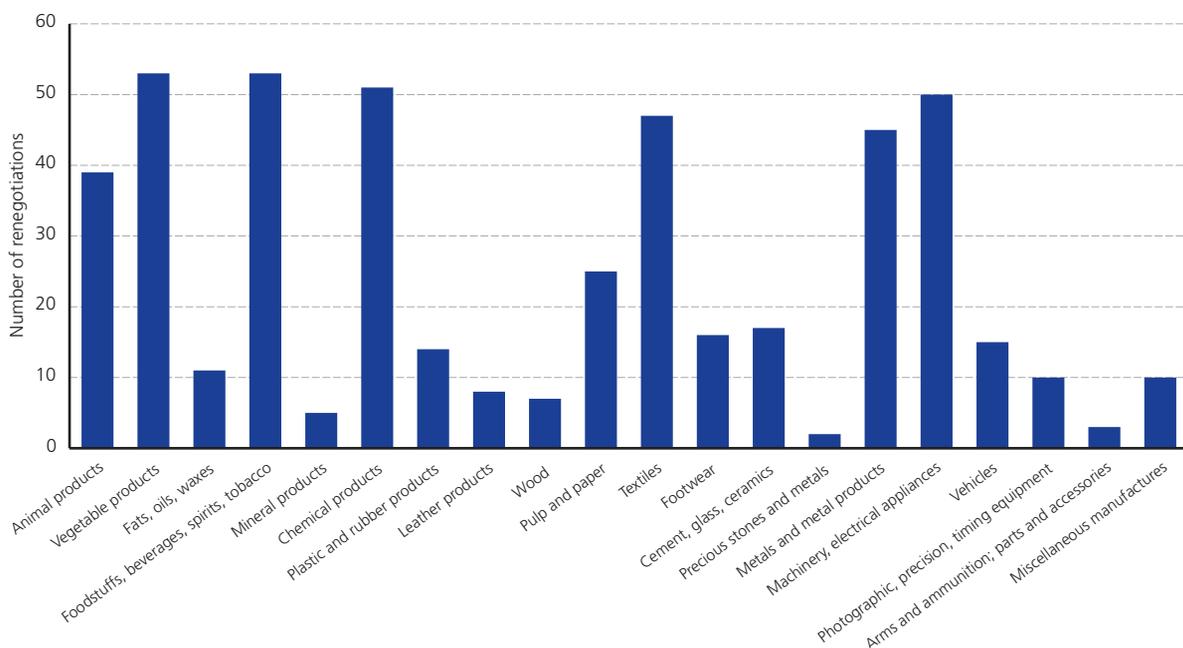


Note: Period of coverage: (1) Anti-dumping: 1979-2007; (2) Countervailing: 1975-2007; (3) Safeguards: 1995-2007.
 Source: WTO Secretariat; UN COMTRADE.

better explain the sectoral pattern of the measures. These industrial characteristics include the presence of economies of scale, susceptibility to business cycle downturns, capital intensity of the industry, exposure to trade (both on the import and export

side) and the political importance of the sector as measured, for example, by the size of employment. Many of these features appear to characterize the sectors which are the most frequent object of AD measures, CVDs and safeguard actions.

Chart 9
Number of renegotiations, by HS section



Note: For the European Communities, requests made by EC-6, EC-9, EC-12, EC-15 and EC-25 are summed up but the requests made by its member states before joining the EC are counted separately.
 Source: WTO Secretariat.

ii) Renegotiations

There is a greater diversity of sectors involved in renegotiations, although those sectors frequently targeted by AD, CVD and safeguard actions, such as metal and metal products, chemical products, plastic and rubber products, machinery and electrical appliances, and textiles and textile articles, figure prominently as well (see Chart 9).

As mentioned earlier in this section, modification of concessions may present a way for WTO members to undo commitments that, in the light of time and new circumstances, could not be implemented by the member. One of the major breakthroughs of the Uruguay Round was to put agricultural trade more firmly under multilateral rules. Given that this was the first time that tariff bindings would be applied in any significant manner to agricultural products and also given the difficulty encountered by members in negotiating market access commitments, it would not be surprising if some of the initial commitments would subsequently have to be renegotiated. This turns out to be the case. From 1995 to 2007, there were 32 requests for modifications of concessions. Of these, 28 requests were in whole or in part concerned with agricultural products as defined in the Agreement on Agriculture.¹⁰ This appears to confirm the role that modification of concessions plays as an instrument of trade flexibility.

iii) Export taxes

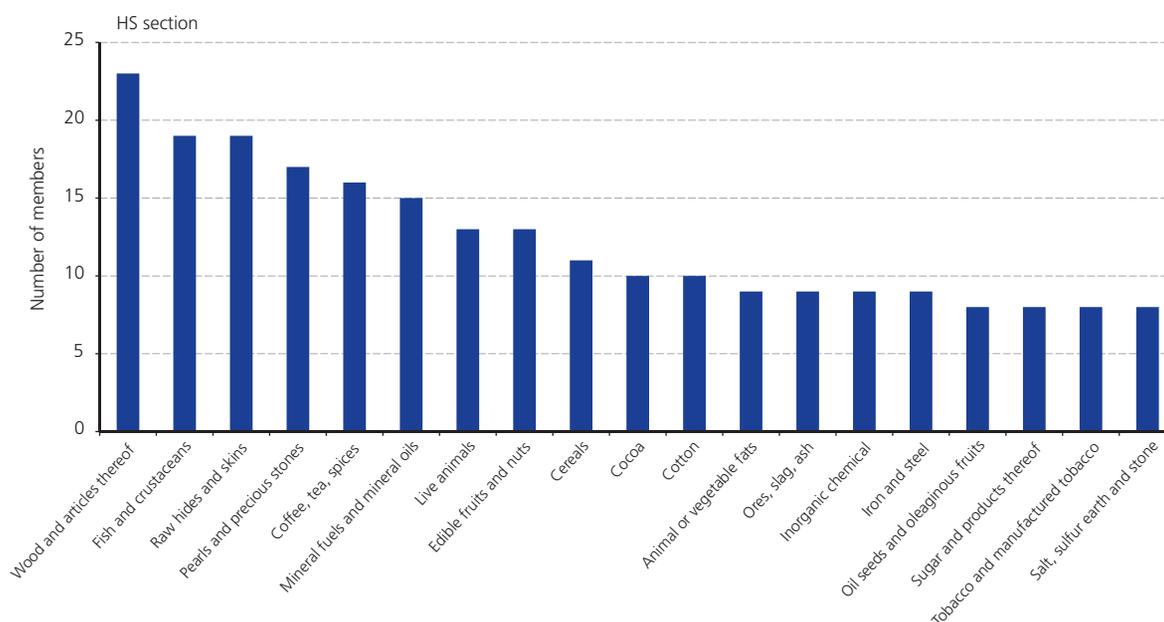
Export taxes are mainly imposed on forestry products, fishery products, hides and skins products, gold and precious stones, agricultural products, such as sugar, coffee and cocoa, mineral and metal products and cereals (see Chart 10). The sectoral pattern is different from that observed for AD measures, CVDs and safeguards.

The data collected from the WTO's Trade Policy Reviews published between 1995 and 2008 show that most WTO members applying export taxes do so quite narrowly. There are only a few countries that apply export taxes on products covered by more than 10 HS chapters (out of a total of 99 HS chapters). The vast majority of members apply export taxes on less than five HS chapters. Of these, 18 members apply export taxes on only one product.

iv) Tariff increases

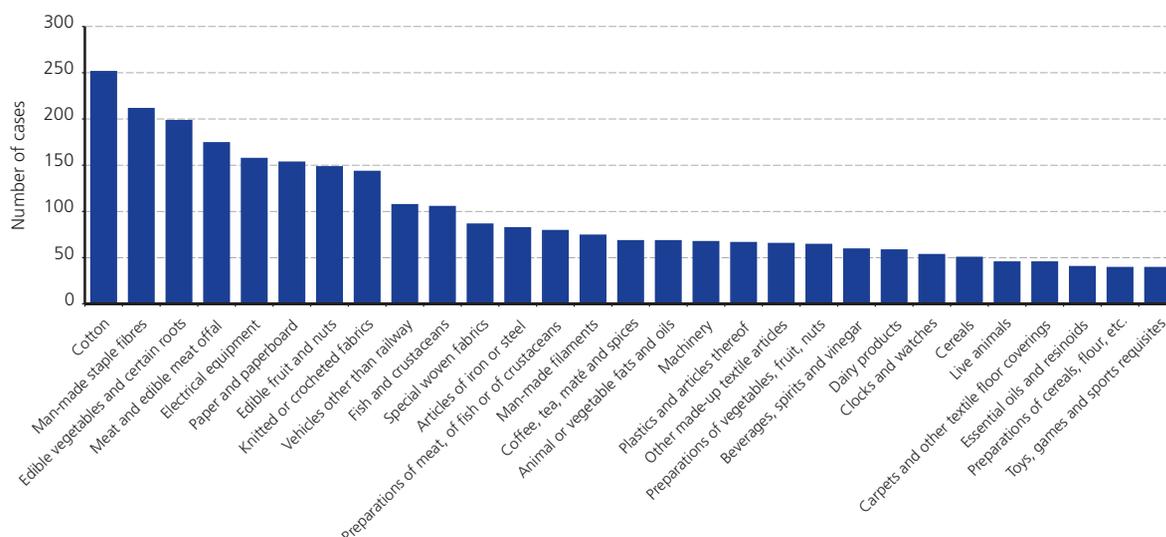
The distribution of tariff increases across product groups is relatively even compared with that of AD measures. From 1996 to 2006, tariff increases larger than 15 percentage points have been made at least once to products in 87 of the 97 HS chapters. Chart 11 shows the 30 chapters with 40 or more tariff increases larger than 15 percentage points. Among the chapters with the highest incidence of tariff increases are both agricultural and non-agricultural

Chart 10
Number of members applying export taxes, by HS chapter



Source: WTO Trade Policy Reviews various publications (1995-2008).

Chart 11
Number of cases of tariff increases of at least 15 percentage points, by product, 1996-2006



Note: Only chapters for which the number of cases of at least 15 percentage points is more than 40 are shown.
 Source: WTO Secretariat.

products. Metals and metal products and chemical products, which accounted for nearly half of the anti-dumping cases in the last 30 years, do not figure prominently in the list of chapters with the highest incidence of tariff increases.

(d) Country pattern

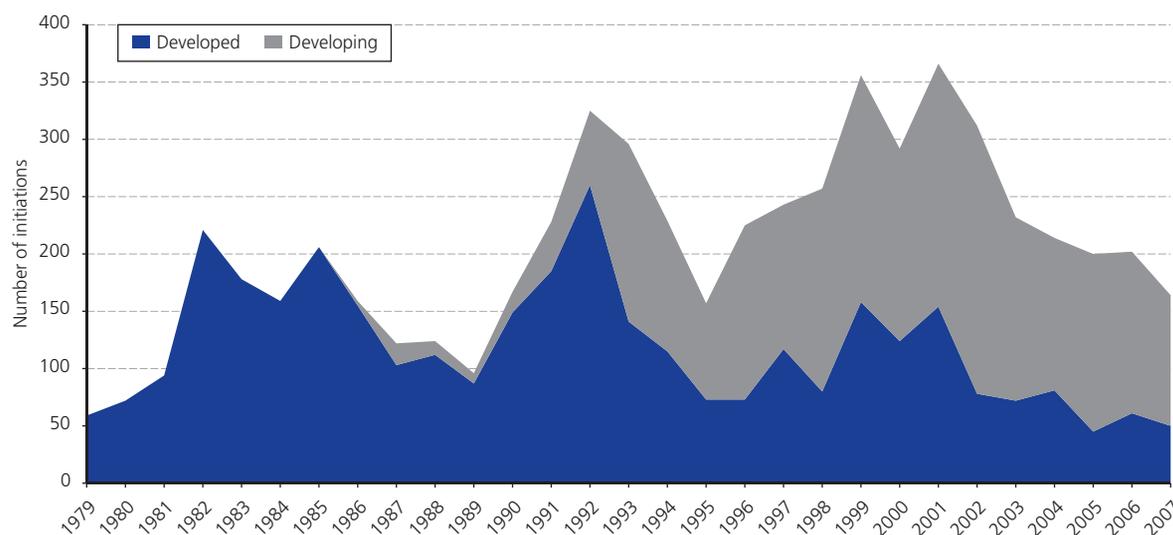
i) Anti-dumping actions

Prior to the 1990s, developed countries (primarily Australia, Canada, European Communities and the

United States) were responsible for up to 97 per cent of all AD initiations and 98 per cent of all measures (see Chart 11). However, from the 1990s onwards, developing countries became more active users of AD measures. Since 1 January 1995, they have accounted for 64 per cent of all AD initiations and two-thirds of AD measures. The top five developing countries using AD measures are India, Argentina, Mexico, South Africa and Brazil.

This change in the composition of the users of AD actions was also accompanied by a transformation in the make-up of the countries targeted by AD

Chart 12
AD initiations, by level of development



Source: WTO Secretariat.

Table 4
Number of AD initiations, by user and target, 1995-2007

Users	Targets		Total
	Developed	Developing	
Developed	262	904	1,166
Developing	566	1,488	2,054
Total	828	2,392	3,220

Source: WTO Secretariat.

petitions. Prior to the 1990s, developed countries were the target of nearly 57 per cent of AD initiations. From the mid-1990s onwards, developing countries became the object of more than 74 per cent of the initiations. From 1995 to 2007, the top five targeted members were China, Republic of Korea, Chinese Taipei, Indonesia and India. The large part of this growth arose from the actions of developing countries themselves. From 1979 to 89, only a total of 13 AD investigations were initiated by developing countries against other developing countries. However, since 1995, a total of 1,488 petitions have been initiated by developing countries against imports from other developing countries (see Table 4).

ii) CVDs and safeguards

Developed countries are the major users of countervailing duties while developing countries are the principal targets of such measures (see Table 5). This general pattern holds for both the GATT (pre-1995) and WTO periods (post-1995). Developed countries account for 73 per cent of all initiations and 86 per cent of all measures. Developing countries are the subject of 66 per cent

of all countervailing initiations and 61 per cent of all countervailing measures.

The pattern of use is completely opposite in the case of safeguards. Since the establishment of the WTO, developing countries have been responsible for 88 per cent of all safeguard initiations and 89 per cent of all safeguard measures (see Table 6).

Chart 13 shows the WTO members who have been frequently involved in GATT Article XXVIII renegotiations. As explained earlier, the number of requests for renegotiations does not take into account the number of products that are subject to the request for modification of concessions and not much can be inferred from it in terms of the number of tariff lines that were renegotiated. The top five members for requesting renegotiations are South Africa, Australia, New Zealand, the EC and the United States. The figure for the EC includes all the requests made by the EC as it expanded its membership over time, i.e. requests made by EC-6, EC-9, EC-12, EC-15 and EC-25 are added together but the requests made by its member states before joining the EC are counted separately.

Table 5
Number of CVD initiations, by user and target, 1975-2007

Users	Targets		Total
	Developed	Developing	
Developed	228	387	615
Developing	57	172	229
Total	285	559	844

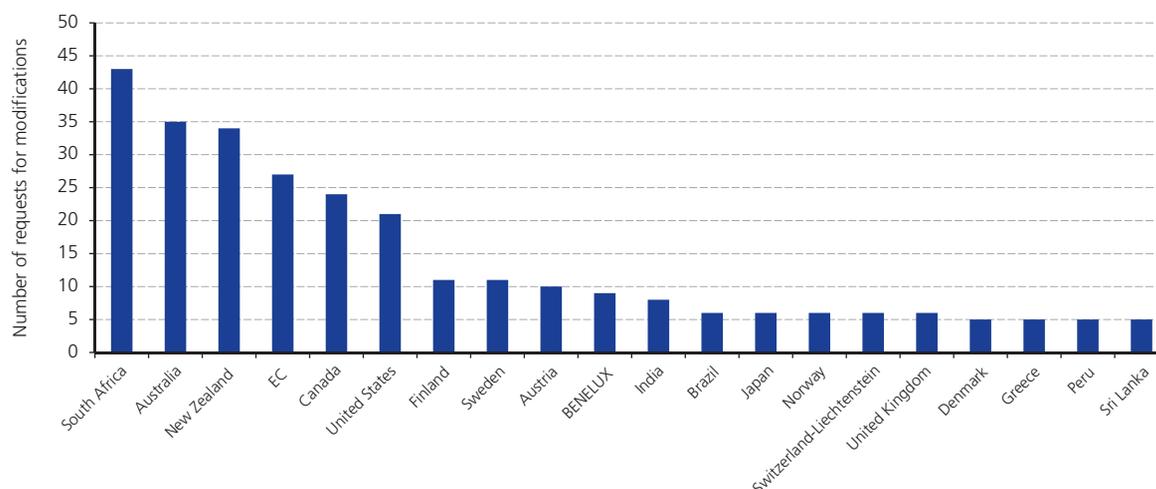
Source: WTO Secretariat.

Table 6
Safeguard initiations, by user and target, 1995-2007

Users	Initiations	Measures
Developed	20	9
Developing	143	74
Total	163	83

Source: WTO Secretariat.

Chart 13
Number of requests for renegotiations, by member



Note: For the European Communities, requests made by EC-6, EC-9, EC-12, EC-15 and EC-25 are summed up but the requests made by its member states before joining the EC are counted separately.

Source: WTO Secretariat.

iii) Export taxes

Export taxes are mainly used by developing and least-developed countries (LDCs). Of the 23 LDCs reviewed in terms of Trade Policy Reviews, 18 imposed export duties, 38 of the other 70 developing countries renewed taxed exports, while only five out of 30 OECD countries used them. Table 7 reports some of the major users of export taxes in terms of the number of products at HS2 level, according to TPRs.

iv) Tariff increases

It is important to re-emphasize that because of the incompleteness of the data, figures should be interpreted with great care. Among the countries for which tariff data were available for at least two consecutive years from 1996 to 2006, 70 raised the tariff of at least one product subheading by more than 15 percentage points. Chart 14 shows the number of tariff increases larger than 15 percentage points for those countries with more than 20 such increases from 1996 to 2006. The six countries with the largest number of tariff increases in this data set

are all African countries. It is apparent that this list differs quite significantly from the list of new users of anti-dumping actions.

There are two possible interpretations of the findings. One is that the use of tariff increases is for different reasons than those motivating anti-dumping protection. An alternative interpretation is that the countries that chose to raise their tariffs have done so for the same reasons as the new users of AD actions, but that it is less costly for them to increase tariffs than to establish and administer an anti-dumping system.

(e) Summary

While some caution is warranted in interpreting the data, for the most part the findings are consistent with the notion that some contingency measures are used as tools of flexibility. The frequency of anti-dumping actions, countervailing duties and safeguards seems to be linked to changes in the business cycle. For instance, there is some statistical evidence of an increase in global AD activity during macroeconomic downturns.

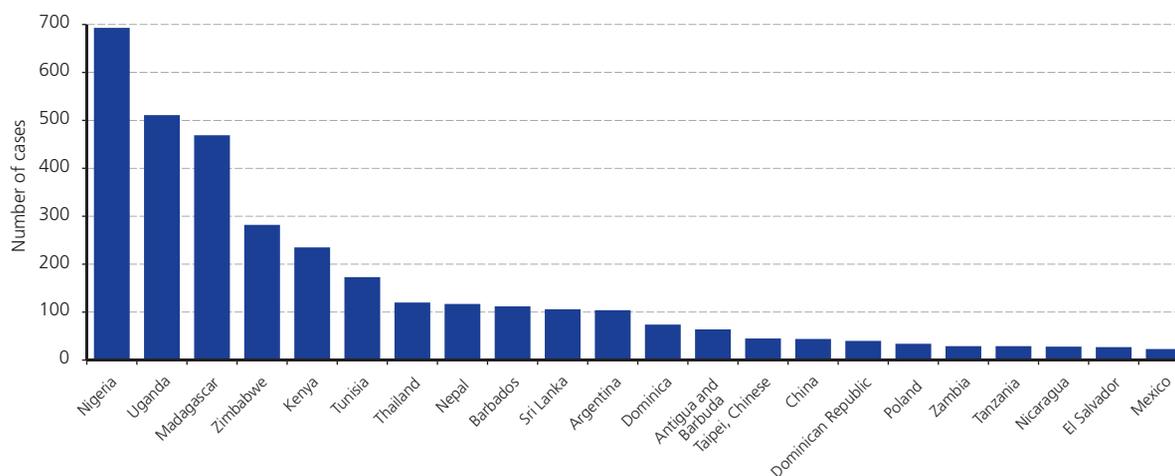
Table 7
Number of products subject to export taxes as reported in TPRs 1995-2008, selected countries

Argentina	22	Guyana	7
Sri Lanka	10	Thailand	7
Mexico	8	Mongolia	7
China	8		

Source: TPRs 1995-2008.

Note: Only products listed in the TPRs that could be associated to a HS2 category are taken into account.

Chart 14
Number of cases of tariff increases of at least 15 percentage points, by country, 1996-2006



Note: Only countries for which there are at least 20 cases of tariff increases of at 15 percentage points or more are shown.

Source: WTO Secretariat.

The frequency of renegotiations of commitments rises after a successful round of multilateral trade negotiations. This is consistent with the explanation that countries only discover belatedly that they are unable to implement their new market access commitments. The large number of requests for modification of agricultural market access commitments after the Uruguay Round, when agriculture was brought more firmly under trade rules, provides further support for this explanation.

The evidence is less clear for increases in tariffs. The sectoral pattern of the tariff increases (while remaining beneath the bound rates) is less concentrated in sectors such as steel and chemicals where anti-dumping action is more frequent. Finally, while export taxes may be used to deal with contingencies such as increases in prices or inflation, their use is often due to other public policy goals, such as generating tax revenues, supporting downstream industries and achieving non-economic objectives.

2. CONTINGENCY MEASURES AND THE MULTILATERAL TRADING SYSTEM

A central theme of this Report is the employment of trade contingency measures by countries as a tool of temporary protection to enable them to address circumstances¹¹ that are unpredictable at the time when a trade agreement is signed. The theoretical literature reviewed in Section B.1 suggests that these flexibilities work as an escape clause that

maintains the overall stability of the world trading system, allowing governments to undertake deeper commitments and reducing the economic and political costs of signing the agreement.

However, economic theory also points to the risk that if the rules for flexibilities are too loose, they can undermine the commitment role of a trade agreement and lead to members backsliding in terms of their commitments. Unfortunately, there is not much empirical literature testing the proposition that trade contingency measures are employed primarily to facilitate further trade liberalization. Much more research, whether it be of a quantitative or qualitative nature or focused on developed or developing countries, needs to be undertaken to see whether trade contingency measures have played this role or not.

One widely noted study is by Finger and Nogués (2006), who examine the experience of seven Latin American countries (Argentina, Brazil, Colombia, Chile, Costa Rica, Mexico and Peru) with trade liberalization and trade contingency measures (see Box 14). Their overall assessment of these seven cases is that the possibility of anti-dumping actions and safeguards was politically necessary to obtain support for liberalized trade policies. In other words, the creation of trade defence mechanisms was often part of the grand bargain to obtain industry acquiescence to liberalization. Once in place, the mechanisms served as a means to deal with protectionist pressures that would otherwise have grown into large-scale threats against the whole policy of trade openness. Furthermore, the

mechanisms contributed to maintaining openness to international trade and to preventing any erosion in the liberalization that was achieved.

To guard against the potential abuse of trade contingency measures, Finger and Nogués point to provisions such as the lesser duty rule and national interest clause that were introduced by some of the Latin American countries in their anti-dumping law. The first provision would require that any anti-dumping duty be lower than the dumping margin (i.e. the difference between the export price and the normal price in the exporter's domestic market) calculated by investigating authorities if such a lower duty is adequate to remove the injury to domestic industry.

The second provision would allow the deciding authority to take no anti-dumping measure or to modify the measure, even if dumping and injury to domestic industry were found, if the larger national interest would thereby be better served by it. Some governments supplemented their safeguard processes with requirements for an adjustment plan and an economic report that quantifies the impact of the requested restriction on final and intermediate consumers and the public interest. The economic report allowed a broader appreciation of the benefits and costs of safeguard protection, not just to domestic industry, but to all affected sectors. Box 14 examines in more detail some of the case studies reported in that volume.

Box 14

The use of contingency measures in Latin America: evidence based on country case studies

The 1990s saw an increase in the use of trade remedies, especially anti-dumping actions, by developing countries. In particular, many Latin American countries began introducing trade remedy legislation and started using these measures intensively. The experience of these countries in the use of trade contingency measures is particularly interesting because it illustrates the role of these policies during liberalization processes.

Many Latin American countries embarked on the process of trade liberalization during the late 1980s or early 1990s. Argentina and Brazil combined a process of unilateral liberalization started at the end of the 1980s with the creation of a customs union (Mercosur) with Paraguay and Uruguay, which entered into force in 1994. Mexico consolidated its trade reforms initiated in 1983 by signing the North American Free Trade Agreement (NAFTA) with the United States and Canada.

In the case of Argentina, Brazil and Mexico, trade liberalization was part of wider macroeconomic reforms that included stabilization programmes to control inflation associated with pegged or fixed exchange rates, general deregulations of domestic markets in the form of privatization and reduction in controls on capital flows. All three countries had laws concerning trade contingency measures (in particular, anti-dumping actions) in place at the start of their liberalization processes. However, those laws were usually not in line with WTO regulations and did not include safeguards.

The situation changed in the mid-1990s with reforms in AD laws and the introduction of safeguard provisions. In Argentina, the number of AD petitions increased progressively from 1992 onwards, following the same evolution as imports into the country, and climbed again with the entry into force of Mercosur. In Brazil and Mexico, the use of AD started in 1988 and 1987 respectively and reached its maximum in terms of number of initiations in 1993. In all three countries, AD measures were much more extensively used than safeguard measures.¹²

According to Finger and Nogués, the increasing use of AD actions after committing to tariff reductions supports the idea of contingency measures acting as a means to mitigate domestic forces opposed to liberalization by granting temporary protection to sensitive sectors. Without a political promise that domestic industry would be provided the protection that trade agreements allow against “unfair” competition, industry would not have accepted liberalization.

The authors point to other salutary effects from the use of trade remedies. The administrative content of the rules provided the basis for Latin American leaders to change the culture of decision-making from one based on relationships to one based on transparent and objective processes. Trade remedy authorities in these countries often exploited the discretion in the rules not to grant protection even though the standards would have been met. In other words, the rules would have

justified protection in more cases than actual protection was provided.

Finally, Finger and Nogués emphasize that the trade liberalization achieved was not reversed as in previous economic crises. To them, this

indicated that in countries such as Argentina the possibility of using contingency measures may have contributed to the determination of successive governments not to reverse the hard-won achievement of trade liberalization.

The conclusions from the Finger and Nogués (2006) study do not go unchallenged. Miranda (2007) has argued that the experiences of Latin American countries in administering anti-dumping law as part of trade reform programmes were far from consistently positive. Many of the trade remedy measures applied by Latin American countries were challenged at the WTO and found to be inconsistent with WTO requirements.

The argument that flexibilities are required by countries when they commit to further trade liberalization is also compatible with the evidence that the great majority of regional trade agreements

allow the use of AD actions, CVDs and safeguards concerning intra-regional trade. As discussed in Box 15, the few preferential trade agreements which have abolished AD, countervailing or safeguard measures are characterized by deeper integration and a greater degree of coordination or harmonization of their “behind-the-border” policies. This does not imply that the demand for flexibility vanishes as preferential trade agreements achieve deeper integration. Rather, it seems to suggest that deeper forms of integration may require a different set of contingency measures. For example, the structural funds in the EU are one such measure.

Box 15

Contingency measures in preferential trade agreements (PTAs)

There is very little empirical research on the use of trade contingency measures in PTAs. The available databases on contingency trade measures described in the previous section do not usually indicate whether the action taken against a particular country is a “global”, “regional” or “bilateral” action. Hence it is not possible to ascertain if a particular contingency measure has been taken as a result of increased price and import competition from a PTA partner. Furthermore, some of the measures that are the subject of this Report, such as the binding overhang (i.e. the gap between a member’s bound and applied tariffs), have a meaning only within the framework of the multilateral trading system and have no direct counterpart in free trade agreements.

The notion of “binding overhang” is unique to the GATT and the WTO where market access commitments in merchandise goods by members are expressed in terms of bound rather than applied duties.¹³ In free trade agreements, the parties are required to eliminate applied tariffs, although there may be important sectors which are exempt from the requirement and there may be a prolonged period of transition.

Estevadeordal et al. (2009) analyze the market access provisions in 50 of the main PTAs around the world, examining not only tariffs, but a host of other market access related measures, such as non-tariff measures (NTMs), special regimes, rules of origin (RoO), customs procedures and so-called “other” measures. They find that PTAs are able to eliminate duties on 90 per cent of tariff lines by the tenth year of implementation of the agreement. Trade-weighted measures of the depth of liberalization yield similar results. However, there are some parties to PTAs (in general, developing countries) and sectors, such as agriculture, textiles and apparel, and footwear, that do not achieve the benchmark.

The matter may be more complex in the area of trade in services. Similar to merchandise goods, the market access commitments of WTO members under the General Agreement on Trade in Services (GATS) are “bindings” and do not necessarily reflect the actual policy regime applying to the services sector.¹⁴ With respect to free trade agreements, it is possible to broadly distinguish between three approaches to services liberalization that are followed.

One track is the “positive list” approach (such as the GATS) where liberalization applies only to scheduled sectors, and parties further specify the market access and national treatment commitments they will offer to their PTA partners’ service suppliers. The other track is the “negative list” approach in which services sectors are liberalized unless otherwise indicated through lists of reservations for existing non-conforming measures and for future measures, although the study by Roy et al. (2007) suggests that many PTAs using this approach simply bind their existing services regimes. The third track involves a mixture of the two approaches in which some sectors are liberalized following the negative list approach, while other sectors are liberalized following the positive list approach.

A fairly large number of PTAs continue to approach services liberalization using the positive list approach. For example, the study by Roy et al (2007) referred to earlier reviews of the services provisions in 32 PTAs that have been concluded since 2000. It finds 12 PTAs in their sample with a positive list approach, and another four which adopt a mixture of the two approaches. Fink and Jansen (2009) also identify a significant number of PTAs in the Asia-Pacific region with a positive list or hybrid approach to services liberalization. Stephenson and Prieto (2002) find a greater preponderance of negative list approaches to services liberalization in the Americas, reflecting the large number of PTAs that Canada, Chile, Mexico and the United States have signed with countries of the region and their preference for the negative list approach.

The distinction between the scheduled and applied services regime and the notion of an overhang can still be meaningfully applied to free trade agreements which pursue the positive list approach, or a hybrid of the two approaches, to services liberalization. There is useful information that can be inferred from how the overhang is utilized by the parties to the free trade agreement as a tool for flexibility. To our knowledge, however, no research has looked at the question of how the overhang is used in services agreements in PTAs, and whether they are used as a tool to respond to unanticipated events. Again, there is very little information about the treatment of export taxes in PTAs,

although Deese and Reeder (2007) point out that United States’ free trade agreements specifically prohibit export taxes.

There is some research on the nature of contingency trade rules in regional trade agreements. Teh et al. (2009) map the AD, countervailing and safeguard provisions in 74 PTAs and find that the great majority of the PTAs continue to allow the use of trade remedies regarding intra-regional trade.¹⁵ Only nine PTAs have managed to abolish AD actions; five PTAs have done away with countervailing measures; and another five PTAs have disallowed safeguard actions against PTA partners. This seems consistent with the argument that flexibility is required by countries when they commit to further trade liberalization.

However, when the authors test what factors explain why some PTAs are able to dispense with contingency trade measures, they find that these PTAs have a larger share of intra-regional trade and “deep integration”. This refers both to the depth and breadth of liberalization achieved among the members of a regional arrangement and the degree of coordination or harmonization of their policies.¹⁶ Preferential arrangements that create a political or monetary union would represent deep integration. So too would agreements that create a common market through free movement of goods, capital and labour. Deep integration would include the adoption of harmonized or common behind-the-border measures, such as standards, sanitary and phytosanitary measures, and competition policy. Thus, it would appear that beyond a certain point, deeper market integration favours the abandonment of trade contingency measures.

This does not mean that the demand for flexibility vanishes as regional trade agreements achieve deeper integration. Rather, what appears to happen is that deeper integration calls for a different set of instruments to achieve flexibility. De Araujo et al. (2001), for example, have argued that the implementation of common macro- and micro-economic policies in the EC reduced the social and political cost related to the removal of AD actions. They point to the role that resources transferred to new member states (structural funds) played in easing the need for AD as a trade adjustment measure. Thus, there is likely to be a set of flexibility measures that will correspond

to the degree of integration that is achieved by a regional or bilateral trade agreement.

In the same way that the members of the GATT abandoned the old instruments of flexibility, such as exchange rate controls, quantitative restrictions, balance of payments safeguards,

voluntary export restraints, through successive rounds of multilateral trade negotiations and expanded the areas covered by trade rules, so too is it likely that the more integrated regional agreements will replace the current set of contingency measures with a different set of flexibility instruments.

A number of more formal (econometrically-based) papers have attempted to address the question of whether trade contingency measures facilitate more liberalization or whether they are a way for countries to backslide on negotiated commitments. However, these papers do not allow us to answer directly the question of whether contingency measures are introduced by countries in a trade agreement so that they can undertake deeper commitments. To answer this question, the case of trade agreements with contingency measures would need to be compared with the case of trade agreements without trade contingency measures.

Instead, as discussed in Box 15, existing trade agreements have eliminated some but not all forms of flexibilities to address contingency situations. For this reason, econometrically-based studies frame the question of the trade-off between commitments and flexibilities in different ways. Focusing on anti-dumping actions, the first two papers under consideration examine whether the use of contingency measures or the existence of AD laws, respectively, leads to future tariff reductions. A second set of papers asks whether past trade liberalization leads to a future increase in the use of trade contingency measures.

Taking macroeconomic conditions, initial tariff levels both at the national and sectoral level, and industry and country characteristics into account, Moore and Zanardi (2009) test whether past anti-dumping activity (either initiations or final measures) leads to or increases the likelihood of future reductions in applied tariffs.¹⁷ They look at the experience of a sample of 23 developing countries from 1988 to 2004. The countries accounted for the large majority of all AD actions by developing countries during this period.

The authors find that the evidence for these countries is not supportive of the safety valve argument, i.e. that protectionist pressures can be contained by the possibility of using trade remedies in the future. Past use of AD actions is not associated with further

tariff reductions. Instead, it may have led to less rather than more trade liberalization. As the authors note, however, these results must be treated with caution as they do not take into account the value of trade affected in each AD case and are sensitive to the assumptions underlying the specification of the empirically estimated equation.

Kucik and Reinhardt (2008) empirically test what they call the “flexibility hypothesis” in the context of the GATT/WTO negotiations. This hypothesis states that the opportunity provided by flexibility provisions (contingency measures such as safeguards, anti-dumping activity and CVDs) to escape obligations incorporated in multilateral agreements, without having to face excessive retaliation from trade partners, may encourage signatories to engage in deeper commitments and sustain them over time. In their empirical work, they examine four testable predictions: a country joining the GATT/WTO will be more likely to create (and use) a domestic AD mechanism; a country with a domestic AD mechanism will be more likely to join the GATT/WTO; having an AD mechanism will prompt a country to agree to lower tariff bindings than it otherwise would, when it joins the GATT/WTO; and having an AD mechanism will prompt a country to sustain lower applied tariffs than it otherwise would, after it joins the GATT/WTO. They find support for all four hypotheses in their empirical tests.

As noted above, a second approach to the problem is to examine post-liberalization use of trade-contingency measures. All of the studies to be reviewed find an increase in the use of anti-dumping actions in the aftermath of trade liberalization. The study by Feinberg and Reynolds (2007) looks at the pattern of AD activity and reductions of bound tariffs under the Uruguay Round for a sample of 24 countries. They find that, at least for the developing countries in their sample, tariff reductions agreed to under the Uruguay Round not only increased the likelihood of a country using AD protection, but also the total number of AD petitions.¹⁸ Had tariffs not been

reduced by the Uruguay Round, they estimate that AD cases would have been 23 per cent less from 1996 to 2003. They interpret this increased frequency in filings as the means used by a developing country to compensate for the trade liberalization it has agreed to undertake within a WTO agreement.

However, other economists provide a different interpretation of the increased frequency of anti-dumping cases following trade reform. Moore and Zanardi (2008) examine the experience of 29 developing and seven developed countries from 1991 to 2002. In the case of several developing countries which are frequent users of AD action, they find evidence of a “substitution effect”, where trade contingency measures take the place of previous tariff protection. Their argument is that countries reduce their level of tariff protection only to subsequently claw it back through more frequent use of trade contingency measures. They find no similar statistically significant “substitution effect” for other developing countries or for the seven developed countries.

The study by Bown and Tovar (2008) focuses on India, noting that it underwent major trade reform at the beginning of the 1990s and that it had subsequently resorted to intensified use of safeguards and anti-dumping activity. The study sought to identify the reasons for Indian safeguard and AD actions. It found that even taking other factors into account, products that underwent larger tariff cuts as a consequence of the trade reform were, by the early 2000s, subject to an increase in the use of safeguards and AD measures. The study interprets this as evidence of a country finding its trade liberalization commitments too deep to sustain.

To sum up, there is case study evidence of links between contingency measure legislation, its use and the extent that a country has agreed to liberalize its commitments. The argument that contingency measures are needed to encourage countries to undertake deep trade liberalization is also compatible with the existing studies on contingency measures in preferential trade agreements. Evidence based on econometric analysis is, however, ambiguous. While some recent studies provide support for the view that trade flexibilities allow for more trade liberalization commitments (by showing that the adoption of AD law and the use of AD measures are associated with further liberalization), other studies cast doubts on these conclusions. Much more research is needed on whether trade contingency measures have enabled countries to commit to further trade liberalization.

3. FACTORS EXPLAINING THE USE OF TRADE CONTINGENCY MEASURES

This section will survey the available empirical literature to ascertain whether contingency measures are being used to respond to economically difficult situations arising from increased import competition. Thus it focuses on the factors that explain countries’ use of these measures. These factors can be grouped into four broad categories: changes in the business cycle and real exchange rate; industry characteristics; the existence of trade contingency legislation; and differences in trade contingency practices by national authorities. While there is evidence that anti-dumping, countervailing and safeguard actions are associated with increased economic difficulties faced by domestic industry, other factors are linked to the characteristics of the industry and national practices.

(a) Macroeconomic factors

A number of papers have shown how the frequency of trade contingency measures is linked to reductions in overall demand and changes in the real exchange rate. In an anti-dumping investigation, the petitioning domestic industry has to demonstrate that dumping is taking place and that it has suffered material injury as a consequence. A decrease in the level of domestic economic activity makes it more likely for domestic industry to suffer reductions in sales, profits and employment, all of which make it easier to prove injury. However, real exchange rate changes have opposing impacts on the dumping margin (i.e. the difference between the export price and the normal price in the exporter’s domestic market) and injury to domestic industry.

When the domestic currency undergoes a real exchange rate appreciation, the general response of a foreign exporter servicing the domestic market is to lower the domestic currency price of its exports.¹⁹ This will enhance the competitiveness of exports against domestic industry and make an injury finding more likely. However, this price response implies that the foreign exporter has increased the domestic currency price of shipments to the domestic market relative to its home market by less than the appreciation of the domestic currency, reducing the likelihood of a dumping finding. A real exchange rate depreciation will have the opposite effect, making it easier to show dumping

but increasing domestic industry's competitiveness against imports and making injury less likely.

Leidy (1997) investigates whether domestic macroeconomic conditions influence the pressures for firms to seek anti-dumping and countervailing protection using United States' data from 1980 to 1995. The evidence suggests that such pressures have advanced during macroeconomic downturns and receded with higher levels of resource utilization. The simplest specification of the model he employs indicates that a one percentage point increase in the US unemployment rate results in an expected 54 additional AD and/or CVD petitions in the first year. The conclusion that administered protection ebbs and flows with the state of the economy is fully supported by a variety of alternative specifications of the model he employs.

Feinberg (1989) examines the relationship between real exchange rate changes and anti-dumping filings in the United States from 1982 to 1987. He finds evidence that real exchange rate depreciation of the dollar against the yen led to an increase in AD filings by US firms against Japanese imports. Given the opposing effects of real exchange rate changes on dumping and injury findings, his result suggests that the impact on the dumping margin outweighs the impact on injury to domestic industry. However, he finds no link between US dollar depreciation and AD filings against imports from Brazil, Mexico or the Republic of Korea.

The Leidy (1997) and Feinberg studies only looked at the experience of the United States. A later study by Knetter and Prusa (2003) extends the country coverage to include the other "traditional users" of anti-dumping activity – Australia, Canada and the EU. They expect to find that a decline in domestic GDP leads to an increase in AD filings, since a decrease in GDP makes it more likely that domestic firms perform poorly and therefore increases the chances of finding material injury. Also, a weak domestic economy might lead foreign firms to reduce prices on shipments to the importing country, which increases the likelihood of a dumping finding.

As for foreign GDP, the relationship is more ambiguous. A weak foreign economy may lead foreign firms to lower their prices. This may cause material injury to domestic firms, but since they might lower their prices to all destinations, the effect on the probability of dumping depends on

the method used (price or production cost criteria). Knetter and Prusa find that the number of AD filings increases as the petitioning country's real GDP declines. They estimate that a one-standard deviation fall in domestic real GDP increases AD petitions by 23 per cent. However, they uncover no statistically significant link between AD filings and the foreign country's GDP growth.

With respect to real exchange rate changes, in contrast to Feinberg, the authors find that real exchange rate appreciation is associated with more AD initiations, with a one-standard deviation real appreciation of the domestic currency increasing AD filings by a third. Thus, their results suggest that in the case of real exchange rate changes, the effect on injury to domestic industry is greater than the effect on the dumping margin.

Given the growing importance of developing countries in anti-dumping filings, studies have begun to explore the role of macroeconomic conditions in explaining their AD initiations. Niels and Francois (2006) study Mexico's experience with AD protection between 1987 and 2000 and conclude that pressures for AD protection are influenced by macroeconomic factors. Specifically, they find that the number of AD complaints in Mexico increases when its real exchange rate appreciates or its current account deficit widens, and when manufacturing output slows down.

Aggarwal (2004) examines the anti-dumping history of 99 countries from 1980 to 2000. His sample includes OECD members, non-OECD developed countries, and upper-income, middle-income and lower-income countries. He concludes that while domestic macroeconomic factors (measured by the lag in the growth rate in industrial value added) are important for developed countries, they turn out not to matter for developing countries. Rather, AD actions in developing countries appear to be a response to rising trade pressures and to tariff rate reductions. Developing countries that are in the process of lowering their tariff barriers tend to be active users of AD measures.

(b) Industry characteristics

This sub-section attempts to find answers to two related questions. First, what economic characteristics of an industry make it more likely to seek the use of trade contingency measures? Second, what features of an industry (economic or otherwise) make

investigating authorities more willing to allow it to use such measures? In the case of anti-dumping, which is the measure that has received the most research attention, the main reasons for filing petitions seem to be the level of imports, the size of employment and the capital intensity of the industry (Blonigen and Prusa, 2003). Recent studies have also highlighted the export orientation of domestic industry as a factor that determines the frequency of AD filings.

With respect to the factors that make investigating authorities more willing to allow domestic industry to make use of trade contingency measures, economic factors such as a reduction in profits or increasing imports are important but a “political” element reflecting the size or importance of the affected industry appears to play a role in determining the frequency of AD filings.

The seminal work by Finger et al. (1982) on administered protection distinguished between the “low” (technical) and “high” (political) tracks of deciding on AD, countervailing and safeguard cases in the United States. Low-track cases are decided according to technical criteria established by law, administrative regulations and precedent. Higher-track cases are less circumscribed by rules and regulations and require a decision by government officials entrusted with discretionary authority, but who are subject to political accountability. The authors differentiate between international and domestic political influences on administered protection.

The size of the domestic industry and the degree of industry concentration indicate its political importance. These factors have a significant impact on the probability of a positive finding. The share of exports that go to the investigated country and whether it is a developed country indicate that country’s political clout. A low share of exports and developing country status reduces the likelihood of trade contingency measures being applied to the investigated country.

Finger et al employ the capital-labour ratio, average wage, the presence of economies of scale and the number of products under investigation to represent the technical factors. They find that US decisions on the existence of dumping were explained by the technical-track factors, while decisions on injury to domestic industry were best explained by the political-track factors.

Hansen (1990) analyzes the factors determining AD activity, CVDs and safeguards granted by the United States International Trade Commission (ITC). Unlike earlier studies, she accounts for both the probability of industry filing for protection (the demand from domestic industry for contingency measures) and the probability of obtaining the protection (use of contingency measures by the government).

Hansen finds that industries with higher levels of imports have a higher probability of filing for protection while industries with already high tariff rates and with growing employment are less likely to seek the use of trade contingency measures.²⁰ She finds that the probability of the ITC granting the contingency protection increases with the size of the US trade deficit, the size of the domestic industry as measured by employment, change in the industry’s employment and other factors that take account of the industry’s political power and influence.²¹

Baldwin and Steagall (1994) examine the economic factors that best explain the material/serious injury to domestic industry and the reason for decisions of the ITC in anti-dumping, countervailing and safeguard cases.²² Their empirical study covers 1980 to 1990 for AD and countervailing cases, and 1974 to 1988 for safeguard cases.

With respect to AD and countervailing decisions, the authors find four common factors explaining ITC decisions: a measure of import penetration (ratio of imports to consumption); recent changes in capacity utilization; recent increases in “unfair” (dumped or subsidized) imports; and whether the products have been the subject of previous AD or CVD investigations. In addition, a decline in employment tends to increase the chances of the ITC finding injury to domestic industry in CVD cases. In safeguard cases, affirmative decisions tend to be associated with a downward trend in industry profits and employment and short-term reductions in macroeconomic activity (real GNP). While the authors judge that most of these factors measure the relationship between injury to domestic industry and the causes specified in US legislation, there are some factors such as the import penetration ratio and the level of employment which may not.

Sabry (2000) studies the industry characteristics associated with anti-dumping filings and the outcome of AD actions (positive final ruling by the ITC).²³ He finds that the probability of an industry filing an AD case increases with the degree of

import penetration, the level of concentration in the industry and the rate of capacity utilization. The likelihood of an affirmative outcome becomes greater as the import penetration ratio increases and as capacity utilization and demand prior to the anti-dumping filing decline.

Going beyond the US case, Tharakan and Waelbroeck (1994) compare the dumping/ countervailing duty and injury determinations of the EU with the United States and find that there is broad similarity between the EU and the US patterns. They analyze the relative importance of the technical and political tracks in the EU's AD/CVD decisions using similar variables as in Finger et al. (1982).²⁴ In line with the US pattern, they find that the technical factors dominate the EU's anti-dumping decisions while the political factors are more important in the EU's determinations of injury to domestic industry.

Finally, it turns out that the export orientation of domestic industry has an impact on the frequency of AD petitions. In a situation where firms in the domestic industry may be competing with the foreign firm in a third market, a successful anti-dumping initiation filed by domestic industry against the foreign firm may divert the latter's sales to the third market and harm the exports of domestic firms to the third market. If the profits of domestic firms are reduced to a greater extent by competition in the third market than in the domestic market, the domestic firms may be willing to forego recourse to AD protection (Furusawa and Prusa, 1996).

Alternatively, domestic and foreign firms may be competing in each other's market, as in the reciprocal dumping model of Brander and Krugman (1983). The greater the share of imports and the lower its exposure to retaliation, the more likely a firm will be to file an anti-dumping case (Blonigen, 2000). The chances of being subject to retaliation are greater when the firm has significant exports to the same country against which it is petitioning. The study by Blonigen (2000) finds that the threat of retaliation significantly lowers the likelihood of US AD initiations against imports from Australia and New Zealand.²⁵

(c) National practices

Research has also focused on studying the practices followed by the authorities responsible for trade

contingency measures. The literature suggests that while multilateral agreements have increased the uniformity of these measures, there are nevertheless significant differences concerning which measures are chosen, the likelihood of positive findings and the impact of the measures.

i) Changing practices over time

Prior to the 1970s, anti-dumping investigations in the United States were handled by the US Treasury. Irwin (2005) has found that most of these investigations were dismissed by the US Treasury as lacking evidence of dumping. By contrast, he notes that since the Department of Commerce took over responsibility for anti-dumping investigations virtually all petitions have been able to prove dumping and have moved on to the next stage of the process, i.e. determining whether injury to domestic industry has taken place.

Blonigen (2006) notes that the dumping margin (i.e. the difference between the export price and the normal price in the exporter's domestic market) calculated by the US Department of Commerce (DOC) rose from an average of 15.5 per cent in the early 1980s to an average of 63 per cent by 2000. During the same period, the proportion of cases in which the US International Trade Commission (ITC) found material injury to domestic industry rose from 45 per cent to 60 per cent. He concludes that changing DOC practices have played the major role in raising dumping margins.

Hansen and Prusa (1996) study the impact of the 1984 amendment to the US AD/CVD law. This required the ITC to add together – or “cumulate” – imports from different sources when evaluating the existence of material injury to domestic industry. Prior to this, if more than one country was named in a case, the ITC could choose whether to consider the countries' imports separately or collectively. Using data on cases filed between 1980 and 1988, the authors find that “cumulation” increased the probability of an affirmative injury decision by 20 to 30 per cent.²⁶

ii) Differences across countries

Studies of the anti-dumping practices by ten WTO members that are major users of AD actions – Australia, Brazil, China, the EC, India, Indonesia, Mexico, South Africa, Thailand and the United

States – were summarized by Horlick and Vermulst (2005). They identify a number of problem areas in AD practice covering both procedural and substantive issues.

Procedural issues: The authors find that in some countries too much information is treated as confidential. This leaves parties involved in an investigation without a meaningful way to defend their interests. In other countries, there is a perceived lack of sufficient disclosure of the essential facts that have led investigating authorities to apply contingency measures. In certain countries, there was a lack of administrative or judicial review of decisions reached by anti-dumping authorities.

Substantive issues: The authors highlight the large degree of discretion exercised by national authorities in deciding on a range of important issues. These include the use of constructed normal values in the absence of actual data deemed adequate for the purpose, the treatment of non-market economies and how injury to domestic industry, dumping margins and the causes of injury are determined. The authors also point out that too much confidentiality in authorities' decision-making has caused problems, such as delays in taking decisions and lack of clarity.

Blonigen and Prusa (2003) further highlight a number of salient AD practices where countries differ substantially. These include price undertakings by exporters in lieu of anti-dumping measures, the use of provisional measures, and the lesser duty rule, which stipulates that the anti-dumping duty be lower than the dumping margin if the lower duty is adequate to remove the injury to domestic industry. Their paper finds that price undertakings are more commonly used by some WTO members (e.g. Australia and the EC) than by others (e.g. Canada and the United States).

Papers by Vandenbussche and Waughy (2001), Veugelers and Vandenbussche (1999) and Moore (2005) have identified a number of potential pitfalls regarding price undertakings. These include anti-competitive effects that are worse than even voluntary export restraints (VERs) in the presence of Bertrand duopoly²⁷ and a loss in product-quality leadership by the domestic industry.

Blonigen and Prusa note that most WTO members require a preliminary determination of injury to

domestic industry before collecting duties, but that many more recent users of anti-dumping start collecting duties a few days after the authorities have accepted the AD petition. They also emphasize how countries differ in whether the AD duty levied is equal to or less than the calculated dumping margin (the lesser duty rule).²⁸ Canada and the United States mandate that the anti-dumping duty should be equal to the calculated dumping margin. However, Argentina, Australia, Brazil and the EC impose an AD duty that is less than the dumping margin if a lesser duty is adequate to remove the injury. The lesser duty rule is further discussed in Finger and Nogués (2006) in the context of the Latin American experience with trade reform and the use of trade contingency measures (see Box 14).

Finally, Finger et al. (1982) notes that the United States' most "political" trade remedy measure is safeguards. This is because a recommendation to take a safeguard measure must be made by the US President, while both anti-dumping and countervailing actions only need to be decided by the federal bureaucracy. As they emphasize, decisions taken by civil servants minimize the political nature of making a decision. This may explain why there are more AD and CVD filings than safeguards in the United States.

(d) Trade remedy law

Section C referred to a rich vein of economic research that has provided new insights into how the presence of trade remedy laws could alter the pricing and output behaviour of domestic and foreign firms, lead to collusion among firms and to other types of strategic interaction. This subsection focuses on empirical studies that look at whether the withdrawal of trade remedy cases is a sign of collusion and how trade remedy law affects the strategic behaviour of governments. Empirical research that touches on how the existence of trade remedy law affects firms' behaviour is covered in sub-section 4.

Staiger et al. (1994) provides empirical evidence on the collusive use of United States anti-dumping law. According to the model by Prusa (1992) (see Box 5 in Section C), the AD investigation process allows domestic firms to use the threat of AD duties against their foreign rivals and to agree a trade-restrictive arrangement with foreign firms. The agreement is subsequently implemented once the domestic firm

withdraws the AD petition. Prusa's (1992) model implies that a withdrawn petition could have lasting effects on imports if the investigation process allows foreign and domestic firms to coordinate output or prices subsequently. However, the study by Staiger et al. (1994) finds little evidence that withdrawn petitions lead to restricted trade.

A later study by Taylor (2004) arrives at a similar result. He analyzes the effects of anti-dumping cases initiated from 1990 to 1997 that ended in withdrawn petitions without a suspension agreement or VER. He uses monthly import data to estimate the price and quantity effects of the withdrawn cases. He finds that withdrawn petitions do not lead to a decrease in the quantity nor increase in the price of the imports in question. Since withdrawn cases do not have significant trade effects, he concludes that withdrawn petitions are not a sign of collusion among firms.

There is some evidence that being the target of trade contingency measures can trigger the adoption of contingency laws and retaliatory actions by the targeted countries. Vandenbussche and Zanardi (2008) reviewed the pattern of countries' adoption of anti-dumping laws from 1980 to 2003. They tested various hypotheses that may explain why countries adopted such laws and why they did so at a particular point in time. Their findings are consistent with the notion that adoption of AD law is a form of retaliation. The total number of AD actions that a country has been subjected to strongly affects the probability of its adoption of AD law.

There is a similar finding in political science literature. Among the findings in the paper by Kucik and Reinhardt (2008) is that retaliation is one of the main reasons for countries' adoption of AD law.²⁹ Examining data on 137 countries from 1981 to 2003, they confirm that a country that has been repeatedly targeted by other countries' AD actions has a strong incentive to establish and use an AD mechanism of its own.

Going beyond the adoption of AD laws, Prusa and Skeath (2002) find evidence that strategic considerations are an important explanation for AD actions taken between 1980 and 1998.³⁰ They discover that countries file about half of their cases against countries that had previously used AD actions against them, suggesting a type of retaliatory behaviour. This proportion is slightly

lower for traditional users (predominantly the EU, the United States, Canada and Australia) but slightly more for new users. Feinberg and Reynolds (2006) also test whether AD filings are motivated by retaliation. Using data on AD filings and measures for 41 countries from 1996 to 2003, they examine the pattern of AD filings in specific industries and countries compared with past AD actions by the target country in that particular industry and for other industries. They find evidence of retaliation as a motive for AD filings.

These results raise the concern that retaliatory anti-dumping activity may lead to a vicious cycle of more AD action. To counter such a possibility, Vandenbussche and Zanardi (2008) recommend revising WTO rules on AD to rule out retaliatory use of AD measures. On the other hand, the rising threat of retaliatory AD actions may have an eventual dampening effect on AD activity. Blonigen and Bown (2003) test the deterrent hypothesis in the case of the United States and find that the threat of retaliation substantially reduced US AD activity from 1980 to 1998. However, the study by Feinberg and Reynolds (2006) discussed above, which covers a larger sample of countries (41) but a shorter period of time, does not find a deterrent effect caused by the threat of AD retaliation. More research on this is needed to see whether these conflicting results could be resolved.

4. THE ECONOMIC IMPACT OF CONTINGENCY MEASURES

As discussed, empirical evidence shows that trends and patterns in the use of some forms of contingency measures – namely, safeguards, AD actions and CVDs – are compatible with the argument that these measures act as a safety valve in circumstances when governments may otherwise be tempted to renege on previous commitments. This is an important benefit of such measures. However, economic theory stresses that there are also costs associated with the use of contingency measures.

Economic theory highlights that contingency measures may affect domestic and foreign economies in many ways. The mere threat of contingency measures may affect companies' behaviour and thus market outcomes even if the relevant legal instruments are not actually used. Once they are used, i.e. when protection is provided, the effects of contingency measures on domestic industry and on foreign and domestic economies is not necessarily

straightforward to predict. Anti-dumping duties can, for instance, lead to unintended market effects that dilute the trade protection effect, such as tariff jumping (i.e. if foreign producers establish a production facility within the domestic economy in order to avoid the AD duty) and trade diversion (i.e. a situation where imports from countries targeted by contingency measures are replaced by imports from other countries). The duties can also hurt domestic consumers because they raise domestic prices.

Most empirical studies on the economic impacts of contingency measures examine only one of the channels mentioned above. Therefore, an overall assessment of the economic impact of the use of contingency measures is difficult. Furthermore, the bulk of the empirical literature focuses on individual measures, in particular anti-dumping measures, and due to data availability there is a predominance of empirical studies on the United States and the European Union.³¹

(a) Producers' adjustments to anti-dumping legislation

In countries with anti-dumping legislation, AD procedures typically involve the calculation of dumping margins.³² The further the export market price is below the home market price, the more likely that investigating authorities will find that exporters are dumping and the more likely that AD measures are put in place.

Economists have argued that foreign firms, being aware of the role of dumping margins, may alter their pricing behaviour in order to avoid AD duties. Empirical research on the United States has confirmed that this is indeed the case. Herander and Schwartz (1984), for instance, find that a higher probability of being subject to AD filings decreases foreign firms' dumping margin, where dumping margins are measured as the percentage difference between the price charged by the foreign firm in its home market and the price it charges in the US market, using export prices as the base. Staiger et al. (1994) find that the mere filing of an AD case leads to a decrease in imports and increase in domestic production. Domestic production also increases when authorities rule that dumping is taking place but do not impose a duty because foreign producers enter into price undertakings with the importing country authorities.

To avoid anti-dumping measures, foreign firms may also decide to invest directly and produce in economies equipped with AD or safeguard laws rather than to export to those countries. This phenomenon is sometimes referred to as "*quid pro quo* FDI". Blonigen and Feenstra (1997) find some evidence that the threat of contingency measures has had an impact on the levels of Japanese FDI into the United States, in particular non-acquisition FDI. The increase in FDI has been greater in response to the threat of safeguards than to the threat of AD measures.

(b) Effects of contingency measures

While the previous sub-section has highlighted that the mere presence of contingency law may affect the strategic behaviour of domestic and foreign firms, this sub-section focuses on the effects of using contingency measures.

i) Trade diversion

Contingency measures are typically used to reduce imports. If only one or a small group of exporting countries are targeted, as in the case of anti-dumping measures, this action may lead to trade diversion, i.e. a situation where imports from countries targeted by protection are replaced by imports from other countries. Trade diversion would lessen the ability of contingency measures to reduce overall imports. In addition, trade diversion entails costs as "efficient imports" are replaced by imports from less efficient producers in third countries that are not subject to the contingency measures.

The empirical literature has analyzed this potential for trade diversion. The paper by Krupp and Pollard (1996), for instance, focuses on anti-dumping cases in the United States' chemical industry filed from 1976 to 1988. In about half of the cases they examined, imports targeted by AD action fell during the investigation, and this was especially true for the cases that ended in anti-dumping measures being taken. In about half of the cases, imports not targeted by an AD investigation rose during the investigation period, and in more than half of the cases these imports rose after the conclusion of the case.

Prusa (1997) extends the analysis beyond US chemical imports and finds evidence of substantial trade diversion in manufacturing, with the value of

non-named imports rising by 20 per cent one year after the case and over 40 per cent after five years. However, studies focusing on the EU appear to reach a somewhat different conclusion.

The study by Konings et al. (2001) analyzes the pattern of import flows of “named” versus “non-named” importers in EU anti-dumping cases initiated between 1985 and 1990. They find that trade diversion in the EU arising from AD actions is low. They conjecture that this may be due to: (i) lower market concentration levels in Europe; (ii) lower AD duties, as a result of injury margin protection, as opposed to the US system of protection based on the dumping margin – these lower duties limit the advantage enjoyed by foreign firms not subject to the duties; and (iii) greater uncertainty regarding the actual levels of protection in the EU in comparison with the United States. Focusing on India, Ganguli (2008) finds that AD duties reduce the overall level of imports, despite evidence of an increase in imports from countries not subjected to AD duties.

Evidence of trade diversion as a result of contingency measures has been found for AD action, countervailing duties and safeguards. A study focusing on the United States (Bown, 2004a) finds even stronger trade-diverting effects resulting from the use of safeguards in the steel sector in 2002 than from the AD/CVD measures applied in the same sector in the 1990s. One reason for this result advanced in the study is that even though safeguards are in principle applied on a non-discriminatory MFN (most-favoured nation) basis, there is scope for discrimination in the form of exceptions – for example, Preferential Trade Agreement (PTA) partners, developing countries and certain categories of products/firms.

The importance of trade diversion appears to differ across sectors. While research on trade in manufactured products in the United States has shown that trade diversion is significant, a recent paper studying US agricultural AD and CVD cases from 1980 to 2005 (Carter and Gunning-Trant, 2007) finds that for agricultural products targeted by trade contingency measures, trade diversion is relatively unimportant. In the specific cases covered by the study, proximity to the market is vital. This makes a single exporting country a relevant source of imports, thus minimising trade diversion.

Discriminatory contingency measures may also distort a foreign country’s exports to third markets.

Bown and Crowley (2007b) study the effects of the use by the United States of anti-dumping duties on Japanese exports of roughly 4,800 products into 37 countries between 1992 and 2001. They find that import restrictions applied by the United States deflected Japanese exports to third countries and also reduced overall exports of the affected products.

In particular, the authors estimate that US AD duties led to a 5 per cent to 7 per cent increase in Japanese exports to the average third country market (trade diversion) as well as a 5 per cent to 19 per cent decrease in Japanese exports of the product subject to AD duties to the average third country market (trade deflection). The quantification of the trade-diverting effects of contingency measures is important as they may potentially trigger follow-up use of AD duties in other countries.

ii) Anti-competitive effects

If anti-dumping duties succeed in reducing imports, there is less competition in the domestic market, and domestic firms have the possibility to increase their mark-ups. If this occurs, domestic consumers are hurt in two ways: they suffer from the loss of cheap imports from abroad and they are faced with higher prices due to domestic producers exploiting their market power. Konings and Vandebussche (2005) test whether AD protection affects the market power of import-competing domestic firms in the case of the EU. They find an increase in mark-ups of domestic firms after AD duties were imposed in all cases apart from “seamless steel tubes”, where following the use of AD measures the imports were mostly replaced by other countries.

In a study that focuses on the US steel industry, Blonigen et al. (2007) find that AD duties as well as safeguards and CVDs have had no impact on market power in that industry. However, voluntary export restraints (VERs) that act like quantity restraints (quotas) have led to mark-ups in the US steel industry. The effect of VERs is found to be significant and the authors cannot reject the hypothesis that firms colluded.

iii) Tariff-jumping FDI

The anti-competitive effect of AD duties is reduced if they lead to tariff jumping, i.e. if foreign producers establish a production facility within the domestic economy in order to avoid the AD duty.³³ While this

may benefit consumers, producers may be worse off. As discussed in Section C, some economists argue that tariff-jumping FDI may even be less desirable than dumped imports for domestic producers. Early papers focusing on Japanese FDI into the United States concluded that tariff-jumping FDI certainly takes place (Barrell and Pain, 1999; Blonigen and Feenstra, 1997; Belderbos, 1997; Belderbos and Sleuwaegen, 1998).

In a more recent paper, Blonigen (2002) uses data on FDI into the United States from various sources and uses firm and product data to examine changes in FDI in reaction to AD duties. He finds evidence of a tariff-jumping response to AD but at a more modest level than the findings in previous studies. Moreover, he finds that the main factor determining the probability of FDI is if the foreign firm is already a multinational and not from a developing country.

iv) Catching-up and industry recovery

It has often been argued that anti-dumping action is not really about protecting domestic markets from unfair imports, but rather an industrial policy tool in disguise. Konings and Vandebussche (2008) test this hypothesis by evaluating the impact of anti-dumping action on domestic firms' productivity. First, the authors establish that firms in protected industries have on average lower initial productivity than firms in sectors not involved in AD measures. Second, they find that on average a firm's productivity increases following the use of AD action, but this is not enough to close the gap with more productive firms. Moreover, firms with initial high productivity experience productivity losses due to AD action.

Safeguards are often implicitly meant to help targeted industries recover from economic difficulties. Liebman (2006) measures the impact of US safeguards on steel prices in 2002 to test whether these safeguards had the desired effect. He finds that other factors, such as positive macroeconomic conditions, increasing demand from China, and declining production capacity following bankruptcies and mergers, had a bigger impact than safeguards in leading to price increases and that these factors account for the industry's recovery. However, Liebman finds that AD duties had a positive and significant effect on prices.

v) Overall effects

Contingency measures not only affect domestic producers but also domestic consumers and government income. To the extent that these measures lead to higher domestic prices, consumers may be negatively affected. In order to measure the impact that contingency measures have on overall welfare, it is necessary to take into account all effects, i.e. including those on consumers.

One way to estimate the impact on overall welfare is to use computable general equilibrium models.³⁴ There are few studies that have followed this approach. One exception is Gallaway et al. (1999). This work shows that in spite of the minor volume of imports affected, the overall cost of such duties can be very large. In particular, the authors estimate that in 1993 the collective net economic welfare cost of the hundreds of active US AD/CVD orders amounted to US\$ 4 billion dollars.

Trade contingency measures applied to intermediate goods in a production process indirectly affect producers of the final goods. Using an econometric approach, Hughes et al. (1997) examine how AD filings have affected customers of domestic producers requesting protection. They find that import restrictions benefit domestic producers in the protected industry. However, they have conflicting findings regarding the impact that contingency measures have on the customers of the protected product.

According to neoclassical trade models, contingency measures benefit domestic producers at the expense of consumers, who have to contend with increased prices. In contrast, trade models that include strategic interaction show that if the contingency measures result in technological spillovers exist among producers, suppliers and customers, trade protection will improve the global competitiveness of related domestic industries, and therefore benefit both producers and consumers. To test this empirically, the authors use daily stock market data of semi-conductor producers and customers (firms that use semi-conductors as input). They studied the impact of 19 events related to anti-dumping filings that resulted in the 1986 United States/Japan semi-conductor trade accord. The authors find evidence that supports the strategic trade hypothesis. In other words, portfolios composed of both semi-conductor producers and semi-conductor consumers

had positive and significant unanticipated returns in response to the same specific events.³⁵

5. CONCLUSIONS

Existing empirical literature on the economic impact of contingency measures is limited. While there is now greater interest in the use of these measures by developing countries, much of the literature has tended to focus on the use of anti-dumping measures in the United States and in the European Union.

A review of the available data on trade contingency measures suggests the need for better, more timely and comprehensive notifications by WTO members. Notwithstanding some of the gaps in the data, an examination of the patterns and trends in the use of anti-dumping action, countervailing duties, safeguards and modification of concessions is generally consistent with the use of these measures as tools of flexibility. The evidence is, however, less clear for tariff increases and the use of export taxes.

Does the empirical literature support the proposition that the existence of trade contingency measures allows countries to make deeper commitments to trade liberalization? Unfortunately, there is not much empirical literature testing this hypothesis. There is evidence from case studies that contingency measures have assisted some countries in their process of trade reform. However, the results from studies using more formal econometric analysis are ambiguous. Much more research is needed to examine whether contingency measures have enabled countries to commit to further trade liberalization.

Does the empirical literature support the proposition that trade contingency measures are used to manage difficult situations arising from increased import competition? There are hardly any empirical studies that look at this question in terms of tariff increases, modifications of concessions and the use of export taxes. Some support for the hypothesis comes from the empirical literature which shows that countries' use of anti-dumping action is explained by movements in the business cycle and the real exchange rate. There is also support from the

literature focusing on industry-level factors and evidence of injury to domestic industry. However, there may be other factors at work as well.

The empirical literature documents what appears to be a "political" element in determining whether contingency measures should be used. The decision-making process seems to reflect the size or importance of the affected industry. The empirical literature also points to strategic behaviour by firms and governments as reasons for anti-dumping actions. There are a number of differences in practices across countries on procedural and substantive matters that may affect which measure is chosen, the likelihood of positive findings regarding injury to domestic industry and the impact of the contingency measures.

Existing empirical evidence on the economic impact of adopting contingency measures shows that there are costs associated with the use of these measures, but the magnitude of these costs is uncertain.

Contingency measures can have a negative impact on domestic consumers because they result in higher domestic prices, either directly through the application of a measure or indirectly through its effect on domestic producers' market influence. Available studies estimate significant welfare costs from the application of anti-dumping measures and countervailing protection. However, the results from existing studies indicate that the effects of contingency measures on the market power of the import-competing industry differ by country.

There is no conclusive evidence that trade contingency measures are effective in reducing import competition or helping an industry in its restructuring or in catching up technologically. On the one hand, contingency measures will lead to imports from targeted countries being replaced by imports from other countries (trade diversion) and to foreign producers establishing a production facility within the domestic economy in order to avoid the anti-dumping duty (tariff jumping). On the other hand, other economic factors appear to be more important in promoting industrial recovery or accelerating technological catch-up.

Endnotes

- 1 In alphabetical order, the members are: Argentina, Australia, Brazil, Canada, Colombia, China, Chinese Taipei, European Communities, India, Indonesia, Japan, Mexico, New Zealand, Peru, Republic of Korea, South Africa, Turkey, United States and the Bolivarian Republic of Venezuela. Collectively, they accounted for 91.2 per cent of all anti-dumping investigations conducted and 91.5 per cent of all anti-dumping measures applied from 1995 to 2004 (Bown, 2007).
- 2 The Harmonized Commodity Description and Coding Systems (HS) is a nomenclature developed by the World Customs Organization (WCO) for classifying internationally traded products. Currently, this nomenclature comprises about 5,000 commodity groups, each identified by a six-digit code, arranged in a hierarchy of headings, chapters and sections. The system is used by more than 200 countries and economies as a basis for their customs tariffs and for the collection of international trade statistics. For the purpose of this Report, the products that were the subject of renegotiations, trade contingency initiations and measures were classified based on the 21 sections of the Harmonized System.
- 3 Annex 3 of the Marrakesh Agreement states that: “The first four trading entities so identified (counting the European Communities as one) shall be subject to review every two years”. Currently, the first four trading entities are the European Communities, the United States, Japan and China. For the other WTO members, the procedure is as follows: “the next 16 shall be reviewed every four years. Other Members shall be reviewed every six years, except that a longer period may be fixed for least-developed country Members” (ibid).
- 4 For example, the 2008 TPR on Madagascar records an export tax on “mining product”. But there is no HS 2002 two-digit sector defined as mining product; therefore, this information was not included in the analysis. In addition, several countries applied a generalized export tax on all goods. They are recorded as applying an export tax on all 99 HS 2002 two-digit product categories.
- 5 The Common Analytical Market Access Database (CAMAD) is the result of a joint effort by the WTO, the United Nations Conference on Trade and Development (UNCTAD) and the International Trade Centre (ITC) to integrate their tariff data.
- 6 Section B.2 has provided a categorization of circumstances for which there are economic reasons to justify a temporary increase in tariffs. Two such circumstances are business cycle downturns and unforeseen costs of industry adjustment following trade liberalization.
- 7 Poisson and negative binomial regressions were run on the count of anti-dumping initiations as well as anti-dumping measures on global GDP growth. Only the Poisson regression of anti-dumping initiations on GDP growth was statistically significant and had the right (negative) sign.
- 8 The EC-6 refers to the original six signatories of the Treaty of Rome (Belgium, France, Germany, Italy, Luxembourg, Netherlands); EC-9 includes in addition Denmark, Ireland, and the United Kingdom; EC-12 adds Greece, Portugal and Spain; EC-15 adds Austria, Finland and Sweden; and EC-25 includes in addition Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovak Republic and Slovenia.
- 9 Note that the number of countries per range is not mutually exclusive and cannot simply be added together. For example, there are only 35 distinct countries, not 47, with tariff increases of 10 points or more in 2005-2006.
- 10 Annex I of the Agreement on Agriculture defines the scope of products (“agricultural products”) covered by that Agreement.
- 11 See Section B.2 for a categorization of these circumstances.
- 12 See data in Bown (2007).
- 13 Article II of GATT 1994 requires a member to accord to the commerce of other members treatment no less favourable than that provided for in its schedule of concessions. This schedule contains members’ tariff bindings.
- 14 GATS Article XVI stipulates that each member shall accord services and service suppliers of any other member treatment no less favourable than that provided for under the terms, limitations and conditions agreed and specified in its schedule of commitments. This schedule contains the market access and national treatment services bindings of members.
- 15 Another study that deals with the issue is the paper by Prusa and Teh (2006) which examines how the frequency of AD cases has been affected by the increasing number of preferential trade agreements.
- 16 The term “deeper” integration comes from Lawrence (1996), who uses it to refer to a process in which increased cross-border economic transactions between countries erode the traditional segmentation between areas of domestic policy-making and areas of international policies. See Hoekman (1998) as well.
- 17 The study is based on applied MFN tariffs at the three-digit ISIC (International Standard Industrial Classification) level.
- 18 The study does not mention whether the transition period for the implementation of commitments is taken into account.
- 19 In the general case, the foreign firm will not fully offset the relative cost change arising from the real exchange rate shock with the change in the mark-up.
- 20 The degree of concentration in the industry was not statistically significant in the equation of the demand for contingent protection.
- 21 As proxies for the political influence of the industry, Hansen uses information about party affiliation (Republican or Democrat), membership in the trade subcommittee of Ways and Means, and membership rank of the congressional representative of the district in which the industry is located.
- 22 The authors use probit models to ascertain the significance of a set of economic variables in affecting the likelihood of an affirmative ITC material/serious injury finding. They tried various specifications and report only the best regression results. A probit model is a statistical tool that estimates the probability of an event occurring, which in this example is an affirmative ITC injury finding, based on a set of explanatory variables. It assumes that this probability follows a normal distribution.
- 23 He also examines the determinants of the dumping margin calculated by the US DOC. This tends to increase with the dumping estimate reported by the petitioning industry, the capacity utilization rate and the import penetration ratio.
- 24 International political influence is measured by the share of exports that go to the investigated country and whether it is developed or not. Domestic political influence is indicated by industry concentration and industry size (measured by employment level or value added). The technical factors include capital intensity, average wage,

- existence of scale economies and the number of products covered by the investigation.
- ²⁵ See also the discussion of “tit-for-tat” retaliation in sub-section (d) below.
- ²⁶ The ITC’s decision-making process is modelled using a probit model with explanatory variables that include indicators (i.e. dummy variables) for the time period before and after the 1984 amendment, capacity utilization, change in shipments, import penetration, named country and industry-specific effects, and measures of political influence.
- ²⁷ Under a Bertrand duopoly, two firms behave strategically and compete in price, choosing their respective prices simultaneously.
- ²⁸ Article 9.3 of the AD Agreement only stipulates that the amount of the AD duty shall not exceed the margin of dumping.
- ²⁹ As discussed later in the section, the paper’s central concern is not with retaliation but with the use of AD as a tool of flexibility that increases a country’s ability to accede to the WTO. However, in the process of statistically trying to establish this hypothesis, they include the retaliation motive as one of a set of other variables that may better help explain adoption of AD law.
- ³⁰ Earlier papers by Finger (1993) and Prusa (2001) have noted similar behaviour.
- ³¹ See Blonigen and Prusa (2003) for a survey of the literature on the economic effects of anti-dumping activity.
- ³² See Section C.2. on the calculation of AD margins.
- ³³ Vandebussche and Zarnic (2008) provide evidence that contingency measures indeed hurt targeted foreign producers. They study the effects of the 2002 US safeguards in steel on European firm’s mark-ups and find evidence that EU steel firms saw their mark-ups decrease due to US safeguards, this impact being stronger for single-product firms than multi-product firms.
- ³⁴ See Piermartini and Teh (2005) for an introduction to computer general equilibrium models.
- ³⁵ Also Feinberg and Kaplan (1993) focus on the relationship between upstream and downstream domestic producers, but they take neoclassical theory as a starting point. They argue that an AD or a CVD in the upstream market that increases input prices and thus costs for the downstream domestic firms will cause downstream producers to seek protection too, because it has a higher probability of proving injury and more to gain from import protection. Accordingly they test empirically whether AD/countervailing cases in the upstream sector have been followed by AD/countervailing cases in the downstream market and they find (weak) evidence that this has indeed been the case.

E CONCLUSIONS

The present Report coincides with a severe global economic crisis. The serious deterioration in the economic situation of many countries around the world is provoking protectionist pressures.

In the present circumstances, transparency and effective monitoring of trade and trade-related measures make a decisive contribution to helping WTO members manage their trade policies. Free-flowing information on policies affecting trade is essential to cooperation among countries seeking to manage the crisis.

This Report is intended to contribute to a better understanding of WTO trade contingency measures, thus helping WTO members weather the current crisis.

Three main themes have emerged from the Report. First, a trade-off exists for WTO members between wanting flexibility in a trade agreement and making binding commitments. Second, there are both benefits and costs associated with trade contingency measures which members adopt to address increases in import competition. Third, differences in legal framework and political economy factors help to explain how governments choose which contingency measures to use.

It is important to distinguish between the motivation for having flexibilities in trade agreements and their effects. Flexibilities allow governments to commit to deeper opening in a trade agreement while reducing the economic and political opposition to the agreement. However, the fact that trade contingency measures are necessary to ensure further trade opening does not mean that there are no negative consequences. In the absence of market failures, trade restrictions will cause losses in economic welfare.

One of the main questions examined in the Report is whether WTO provisions provide a balance between supplying a government with sufficient flexibility to address unanticipated economic difficulties and limiting the use of that flexibility for protectionist purposes. The answer to this question depends on the role of trade agreements.

If trade agreements are intended to allow trading partners to escape a “prisoners’ dilemma” – where the absence of cooperation results in making

both parties worse off than they would be with cooperation – the inclusion of escape clauses should not upset the balance of concessions that parties commit to within the agreement. If trade agreements are intended as a way for governments to make binding commitments to their private sector, escape clauses should not undermine that objective.

In this respect the Report highlights features of contingency measures that have an important bearing on how the balance is struck. They include the standards for the injury test and causality, whether compensation is required, and whether a measure is temporary.

The Report has examined multilateral rules that apply to trade contingency measures. Despite some differences, the legal provisions on safeguards, anti-dumping actions and countervailing duties ensure that these measures can be used when domestic industry is injured. No consideration is taken of how the economy as a whole is affected – a feature of the system regarded as a weakness by some.

A second aim of the Report has been to identify the factors that explain why a government chooses a particular contingency measure. We have indicated that this decision depends on how easy it is to invoke a measure, the possibility to discriminate among sources on imports, the possibility to extend the period of applicability of a measure, reputation costs, and whether the government may be required to provide compensation. While multilateral agreements have increased uniformity among countries in respect of trade remedy practices, significant differences nevertheless remain in terms of procedural and substantive issues. These issues have an impact on which measure is chosen, the likelihood of measures actually being taken, and the effect of the measure.

The existing empirical evidence on contingency measures supports the theoretical argument that flexibilities are needed in a trade agreement to address future difficulties that cannot be foreseen at the time that an agreement is signed. Contingency measures are more likely to be used in difficult economic circumstances, be they sector-specific or of wider application. Nevertheless, existing evidence cannot exclude the possibility that these measures are used as a protectionist device. Although there is case

study evidence that flexibilities allow countries to commit to deeper market opening, recent attempts to show this on the basis of economic analysis offer ambiguous results.

The empirical section of the Report has identified the need for better data and more timely notification by WTO members of contingency measures. In addition, it has emphasized the need for further empirical research on a number of issues, including the links between flexibilities and depth of commitments in a trade agreement, the role of contingency measures as a deterrent, the cost of contingency measures and the choices made among alternative measures of contingent protection.

The decision to impose contingency measures is made by individual members. Data for 2008 show an increase in WTO-sanctioned trade remedies. The number of anti-dumping actions, in particular, has increased. Export taxes have been introduced in response to the food crisis. In the midst of a global recession, the fact that decisions on contingency measures are made at the national level may simply lead to higher protection, with limited benefits in terms of meaningful relief from injury.

The global recession has uncovered what could be considered a coordination problem. A single country's use of a contingency measure within a trade agreement, triggered by unexpected import competition or a downturn in its domestic industry,

gives the industry the opportunity and time to recover. However, such a reprieve will be difficult in the midst of a global recession, particularly when other countries are imposing trade contingency measures.

The Great Depression in the 1930s showed that protectionism in the face of a global crisis can deepen and lengthen a crisis. While WTO members have an unchallenged right to use contingency measures that are consistent with WTO rules, at a time of global crisis the proliferation of such measures among trading partners would have adverse economic effects with few of the positive offsetting effects that are invoked to justify such measures.

Restraint in the use of restrictive trade measures will contribute to a more rapid recovery from the current crisis. Evidence to date suggests some increase in the use of measures that restrict trade, but so far against a background of general restraint. While it is a comparatively straightforward matter to detect the use of contingency measures of the kind analysed in this Report, it is more difficult to identify trade-restrictive measures and subsidies with adverse trade effects that may be embedded in financial rescue and fiscal stimulus packages. In all cases, a better use of the current WTO transparency and peer review mechanisms can make an important contribution to helping members better prepare for exiting the current crisis.

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TECHNICAL NOTES

Composition of geographical and other groups Regions

North America				
Bermuda	Canada*	Mexico*	United States of America*	
Other territories in the region n. e. s				
South and Central America and the Caribbean				
Antigua and Barbuda*	Argentina*	Bahamas**	Barbados*	Belize*
Bolivarian Rep. of Venezuela*	Bolivia*	Brazil*	Chile*	Colombia*
Costa Rica*	Cuba*	Dominica*	Dominican Republic*	Ecuador*
El Salvador*	Grenada*	Guatemala*	Guatemala*	Guyana*
Haiti*	Honduras*	Jamaica*	Netherlands Antilles	Nicaragua*
Panama*	Paraguay*	Peru*	Saint Kitts and Nevis*	Saint Lucia*
Saint Vincent and the Grenadines*	Suriname*	Trinidad and Tobago*	Uruguay*	
Other territories in the region n. e. s				
Europe				
Albania*	Andorra**	Austria*	Belgium*	Bosnia and Herzegovina **
Bulgaria*	Croatia*	Cyprus*	Czech Republic*	Denmark*
Estonia*	Finland*	France*	FYR Macedonia*	Germany*
Greece*	Hungary*	Iceland*	Ireland*	Italy*
Liechtenstein	Liechtenstein*	Lithuania*	Luxembourg*	Malta*
Montenegro**	Netherlands*	Norway*	Poland*	Portugal*
Romania*	Serbia**	Slovak Republic*	Slovenia*	Spain*
Sweden*	Switzerland*	Turkey*	United Kingdom*	
Other territories in the region n. e. s				
Commonwealth of Independent States (CIS)				
Armenia*	Azerbaijan**	Belarus**	Georgia*	Kazakhstan**
Kyrgyz Republic*	Moldova*	Russian Federation**	Tajikistan**	Turkmenistan
Ukraine**	Uzbekistan**	Other territories in the region n. e. s		
Africa				
Algeria**	Angola*	Benin*	Botswana*	Burkina Faso*
Burundi*	Cameroon*	Cap Verde*	Central African Republic*	Chad*
Comoros	Congo*	Congo, Dem. Rep. of*	Côte d'Ivoire*	Djibouti*
Egypt*	Equatorial Guinea**	Eritrea	Ethiopia**	Gabon*
Gambia*	Ghana*	Guinea*	Guinea-Bissau*	Kenya*
Lesotho*	Liberia	Libyan Arab Jamahiriya**	Madagascar*	Malawi*
Mali*	Mauritania*	Mauritius*	Morocco*	Mozambique*
Namibia*	Niger*	Nigeria*	Rwanda*	Sao Tome and Principe**
Senegal*	Seychelles**	Sierra Leone*	Somalia	South Africa*
Sudan**	Swaziland*	Tanzania*	Togo*	Tunisia*
Uganda*	Zambia*	Zimbabwe*	Other territories in the region n. e. s	
Middle East				
Bahrain*	Iran, Islamic Rep. of**	Iraq**	Israel*	Jordan*
Kuwait*	Lebanon**	Oman*	Qatar*	Saudi Arabia*
Syrian Arab Republic	United Arab Emirates*	Yemen**	Other territories in the region n. e. s	
Asia (including The Pacific and Oceania)				
Afghanistan**	Australia*	Bangladesh*	Bhutan**	Brunei Darussalam*
Cambodia*	China*	Fiji*	Hong Kong, China*	India*
Indonesia*	Japan*	Kiribati	Korea, Republic of*	Lao People's Dem. Rep.**
Macao, China*	Malaysia*	Maldives*	Mongolia*	Myanmar*
Nepal*	New Zealand*	Pakistan*	Palau	Papua New Guinea*
Philippines*	Samoa**	Singapore*	Solomon Islands*	Sri Lanka*
Taipei, Chinese*	Thailand*	Tonga*	Tuvalu	Vanuatu**
Viet Nam*	Other territories in the region n. e. s			

* WTO members (As of 31 December 2008)

** observer governments

n.e.s. not elsewhere specified

Composition of geographical and other groups

Other groups

ACP (Africa, Caribbean and Pacific)				
Angola	Antigua and Barbuda	Bahamas	Barbados	Belize
Benin	Botswana	Burkina Faso	Burundi	Cameroon
Cape Verde	Central African Republic	Chad	Comoros	Congo
Dem. Rep. of the Congo	Cook Islands	Côte d'Ivoire	Cuba	Djibouti
Dominica	Dominican Republic	Equatorial Guinea	Eritrea	Ethiopia
Fiji	Gabon	Gambia	Ghana	Grenada
Guinea	Guinea-Bissau	Guyana	Haiti	Jamaica
Kenya	Kiribati	Lesotho	Liberia	Madagascar
Malawi	Mali	Marshall Islands	Mauritania	Mauritius
Micronesia	Mozambique	Namibia	Nauru	Niger
Nigeria	Niue	Palau	Papua New Guinea	Rwanda
Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	Samoa	Sao Tome and Principe
Senegal	Seychelles	Sierra Leone	Solomon Islands	Somalia
South Africa	Sudan	Suriname	Swaziland	Timor Leste
Togo	Tonga	Trinidad and Tobago	Tuvalu	Uganda
United Republic of Tanzania	Vanuatu	Zambia	Zimbabwe	
Africa				
North Africa				
Algeria	Egypt	Libyan Arab Jamahiriya	Morocco	Tunisia
Sub-Saharan Africa, comprising of:				
Western Africa				
Benin	Burkina Faso	Cape Verde	Côte d'Ivoire	Gambia
Ghana	Guinea	Guinea-Bissau	Liberia	Mali
Mauritania	Niger	Nigeria	Senegal	Sierra Leone
Togo				
Central Africa				
Burundi	Cameroon	Central African Republic	Chad	Congo
Dem. Rep. of the Congo	Equatorial Guinea	Gabon	Rwanda	Sao Tome and Principe
Eastern Africa				
Comoros	Djibouti	Eritrea	Ethiopia	Kenya
Madagascar	Mauritius	Seychelles	Somalia	Sudan
Tanzania	Uganda			
Southern Africa				
Angola	Botswana	Lesotho	Malawi	Mozambique
Namibia	South Africa	Swaziland	Zambia	Zimbabwe
Territories in Africa n.e.s.				
Asia				
West Asia				
Afghanistan	Bangladesh	Bhutan	India	Maldives
Nepal	Pakistan	Sri Lanka		
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 Dem. Rep.
Macao, China	Malaysia	Mongolia	Myanmar	New Zealand
Papua New Guinea	Philippines	Republic of Korea	Samoa	Singapore
Solomon Islands	Taipei, Chinese	Thailand	Tonga	Tuvalu
Vanuatu	Viet Nam	Other countries and territories in Asia and the Pacific n.e.s.		
LDCs (Least-developed countries)				
Afghanistan	Angola	Bangladesh	Benin	Bhutan
Burkina Faso	Burundi	Cambodia	Central African Republic	Chad
Comoros	Congo, Dem. Rep. of	Djibouti	Equatorial Guinea	Eritrea
Ethiopia	Gambia	Guinea	Guinea-Bissau	Haiti
Kiribati	Lao People's Dem. Rep.	Lesotho	Liberia	Madagascar
Malawi	Maldives	Mali	Mauritania	Mozambique
Myanmar	Nepal	Niger	Rwanda	Samoa
Sao Tome and Principe	Senegal	Sierra Leone	Solomon Islands	Somalia
Sudan	Tanzania	Timor Leste	Togo	Tuvalu
Uganda	Vanuatu	Yemen	Zambia	
Six East Asian traders				
Hong Kong, China	Korea, Republic of	Malaysia	Singapore	Taipei, Chinese
Thailand				

Composition of geographical and other groups

Regional integration agreements

Andean Community				
Bolivia	Colombia	Ecuador	Peru	
ASEAN (Association of South East Asian Nations)/ AFTA (ASEAN Free Trade Area)				
Brunei Darussalam	Cambodia	Indonesia	Lao People's Dem. Rep.	Malaysia
Myanmar	Philippines	Singapore	Thailand	Viet nam
CACM (Central American Common market)				
Costa Rica	El Salvador	Guatemala	Honduras	Nicaragua
CARICOM (Caribbean Community and Common Market)				
Antigua and Barbuda	Bahamas	Barbados	Belize	Dominica
Grenada	Guyana	Haiti	Jamaica	Montserrat
Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	Suriname	Trinidad and Tobago
CEMAC (Economic and Monetary Community of Central Africa)				
Cameroon	Central African Republic	Chad	Congo	Equatorial Guinea
Gabon				
COMESA (Common Market for Eastern and Southern Africa)				
Burundi	Comoros	Congo, Dem. Rep. of	Djibouti	Egypt
Eritrea	Ethiopia	Kenya	Libyan Arab Jamahiriya	Madagascar
Malawi	Mauritius	Namibia	Rwanda	Seychelles
Sudan	Swaziland	Uganda	Zambia	Zimbabwe
ECCAS (Economic Community of Central African States)				
Angola	Burundi	Cameroon	Central African Republic	Chad
Congo	Congo, Dem. Rep. of	Equatorial Guinea	Gabon	Rwanda
Sao Tome and Principe				
ECOWAS (Economic Community of West African States)				
Benin	Burkina Faso	Cape Verde	Côte d'Ivoire	Gambia
Ghana	Guinea	Guinea- Bissau	Liberia	Mali
Niger	Nigeria	Senegal	Sierra Leone	Togo
EFTA (European Free Trade Association)				
Iceland	Liechtenstein	Norway	Switzerland	
European Union (25)				
Austria	Belgium	Cyprus	Czech Republic	Denmark
Estonia	Finland	France	Germany	Greece
Hungary	Ireland	Italy	Latvia	Lithuania
Luxembourg	Malta	Netherlands	Poland	Portugal
Slovenia	Slovak Republic	Spain	Sweden	United Kingdom
GCC (Gulf Cooperation Council)				
Bahrain	Kuwait	Oman	Qatar	Saudi Arabia
United Arab Emirates				
MERCOSUR (Southern Common Market)				
Argentina	Brazil	Paraguay	Uruguay	
NAFTA (North American Free Trade Agreement)				
Canada	Mexico	United States		
SAARC (South Asian Association for Regional Cooperation)/ SAPTA (South Asian Preferential Trade Arrangement)				
Bangladesh	Bhutan	India	Maldives	Nepal
Pakistan	Sri Lanka			
SADC (Southern African Development Community)				
Angola	Botswana	Congo, Dem. Rep. of	Lesotho	Madagascar
Malawi	Mauritius	Mozambique	Namibia	South Africa
Swaziland	United Republic of Tanzania	Zambia	Zimbabwe	
WAEMU (West African Economic and Monetary Union)				
Benin	Burkina Faso	Côte d'Ivoire	Guinea- Bissau	Mali
Niger	Senegal	Togo		

