

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 the 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.

