

## C ECONOMICS, DISCIPLINES AND PRACTICES

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

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

### 1. SAFEGUARDS

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

credibly the use of safeguards in the context of a trade agreement is a key condition for governments to prevent moral hazard<sup>3</sup> and to be able to achieve the intended objectives. This premise provides a natural lead into sub-section (b), which presents the main provisions contained in the Agreement on Safeguards (SGA) and their interpretation through WTO case law. It will also describe to what extent the underlying economic logic of how and when to apply safeguards is reflected in these disciplines, and how economists have sometimes struggled with the implementation of certain legal requirements.

#### (a) Economic arguments for disciplining the use of safeguards

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

### (b) WTO disciplines and practices on safeguards

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

**Box 4**  
**“Automatic” safeguards in agriculture**

**Special safeguard (SSG)**

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

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

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

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

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

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

**Special safeguard mechanism (SSM)**

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

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

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

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

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

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

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

#### **Box 5**

#### **Is there a need for a services safeguard?**

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

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

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

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

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

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

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

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

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

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

### i) Imports

#### Unforeseen developments

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

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

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

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

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

### Increased imports

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

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

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

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

### *ii) Domestic industry*

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

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

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

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

### *iii) Serious injury*

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

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

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

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

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

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

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

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

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

##### Causal link

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

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

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

However, it appears that a general coincidence between imports and injury does not presuppose a co-movement of trends in imports and each and every injury factor at all times.<sup>25</sup> In *US – Wheat Gluten*, the complainant (EC) noted that, for instance, the industry's capacity utilization and sales worsened at the beginning of the investigation period and increased thereafter (1996-1997) in parallel to a surge in imports. The United States countered that despite the slight improvements in these factors at the end of the period, there was an overall negative trend during the entire investigation period (1993-1997), with the 1997 figures remaining far below their pre-import surge levels. It also pointed out that the industry continued to operate at a loss, i.e. that some injury factors had also worsened in 1996-1997.<sup>26</sup>

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

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

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

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

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

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

### Non-attribution

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

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

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

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

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

In addition, the Appellate Body noted that neither the reasoning by the ITC (showing that none of the factors examined constituted a more important cause<sup>38</sup> of serious injury than increased imports) nor the finding by the panel (that increased imports in and of themselves had to be sufficient to cause serious injury) were supported by the Agreement.<sup>39</sup> This issue also arose in *US – Lamb*, where again, the Appellate Body observed that the ITC had not offered an explanation of the effects of other factors nor separated these effects from the threat of serious injury caused by increased imports.<sup>40</sup> Similar shortcomings were found in other safeguards cases.<sup>41</sup> In summary, the Appellate Body clarified that the SGA did not require “but for causation”, i.e. that other factors could be equally or even more important contributors to injury as long as these effects were properly identified to avoid misattribution of injury to imports. In that regard, it emphasized the need to provide a solid explanation of the relevant relationships. This also implies that allegations of causation may prove unfounded if an alternative explanation of the facts can be brought to bear that renders the defendant’s explanation inadequate.

#### Causation analysis: some economic observations

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

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

#### *Modelling the relationship between imports and domestic factors*

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

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

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

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

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

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

### *Measuring the contributions of different factors*

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

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

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

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

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

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

*v) Application of safeguard measures*

Tariffs, quotas or tariff-rate quotas?

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

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

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

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

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

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

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

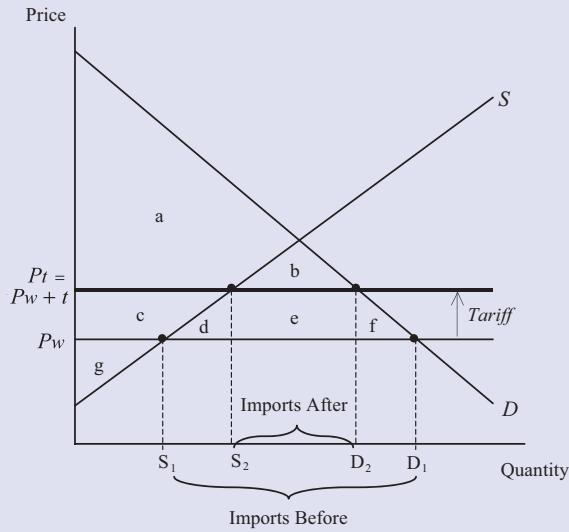


Figure 1: The effect of a tariff

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

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

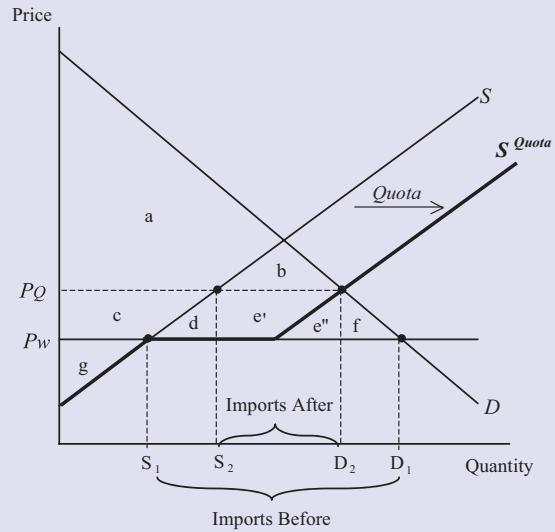


Figure 2: The effect of a quota

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

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

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

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

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

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

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

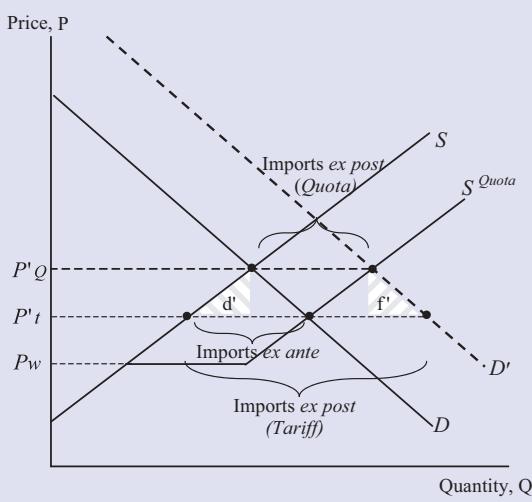


Figure 3: The difference between a tariff and a quota

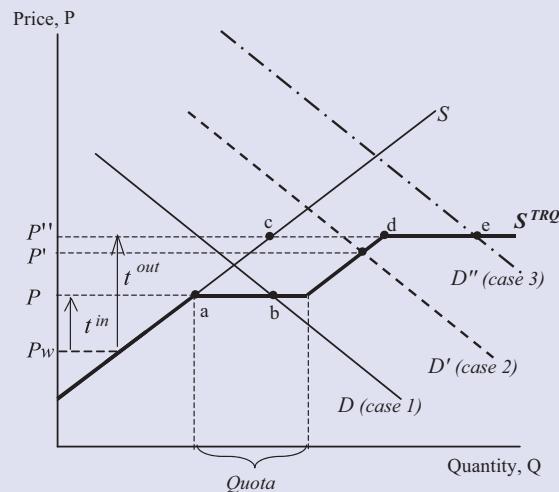


Figure 4: The effect of a tariff-rate quota (TRQ)

### Size of safeguard measures

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

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

From this interpretation, it follows that a permitted safeguard measure, such as a tariff, would be lower than the tariff that would be needed to completely remove the serious injury to domestic industry without requiring any adjustment to other injury factors.<sup>49</sup> With other elements in the safeguard determination being defective, notably the non-attribution analysis under SGA Article 4.2.b, panels for reasons of judicial economy rarely needed to examine claims regarding the appropriate level of measures under Article 5.1.<sup>50</sup> In the *US – Steel Safeguards* case, a model was used by the ITC which allowed the effects of trade remedies on supply and demand and ultimately prices in the affected industry to be modelled. This was done to

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

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

### Scope of safeguard measures and MFN application

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

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

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

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

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

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

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

### Compensation

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

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

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

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

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

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

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

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

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

**Table 2**  
**Suspension of concessions pursuant to SGA Article 8.2**

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

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

Source: WTO Secretariat.

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

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

### (c) Conclusions

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

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

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

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

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

## 2. DUMPING AND ANTI-DUMPING MEASURES

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

### (a) Why do firms dump goods?

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

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

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

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

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

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

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

Reciprocal dumping occurs because of two features outlined by Brander and Krugman: domestic and foreign firms act as Cournot<sup>63</sup> competitors and both firms incur transport costs when they export. Cournot competition and the existence of transport cost give the domestic firm a larger share of the domestic market but still leave the foreign firm with a foothold in the domestic market. Furthermore, since a Cournot competitor perceives a demand elasticity – that is, the degree of responsiveness to a price change – equal to the industry elasticity divided by its own market share, each firm faces a more elastic – or more price-responsive – demand in its export market. This difference between the demand elasticities faced by the imperfectly competitive firms in the domestic and foreign markets creates the condition for dumping (the f.o.b. – free on board – price for exports is below the price charged in the home market).<sup>64</sup> Since both firms face this difference in demand elasticities in the domestic and foreign markets, there is reciprocal dumping.<sup>65</sup>

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

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

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

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

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

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

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

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

Finally, dumping can also be a way for firms to gain valuable experience or increase their technological knowledge, thereby increasing economic efficiency. In Clarida (1993), countries have different levels of technological knowledge. He assumes that firms in the technologically backward country can only acquire technical know-how from engaging in production. If world demand is high enough, entry into the market by these firms can push down the world price below the opportunity cost<sup>70</sup> of production, with the result that firms in the backward country take part in dumping.

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

### *i) Welfare effects of dumping*

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

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

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

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

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

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

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

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

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

#### *i) Trade diversion*

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

#### *ii) Tariff-jumping foreign direct investment (FDI)*

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

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

### *iii) Strategic behaviour*

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

#### Non-cooperative outcomes

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

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

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

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

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

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

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

Another perspective on strategic interaction prompted by anti-dumping actions is provided by Hoekman and Leidy (1992). They examine how the provision of anti-dumping protection to an “upstream” industry is likely to also prompt “downstream” industries<sup>73</sup> to seek similar protection.<sup>74</sup> If the increasing input prices associated with upstream anti-dumping protection harm the competitiveness of import-competing downstream firms, then anti-dumping protection provides little benefit to both sectors. They both lose since downstream industries face higher input prices while the upstream industry loses its customers (the downstream sector). However, since protection in the upstream market inflicts injury on downstream industries, this provides them with a basis on which to also seek anti-dumping protection. The paper’s principal conclusion is that there is a tendency for anti-dumping protection to cascade down the production stream, with the protection initially provided to the upstream industry ultimately being extended to the downstream sector as well. Furthermore, the knowledge that the downstream sector will be able to secure similar protection makes it easier for the upstream industry to petition for anti-dumping relief in the first place.

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

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

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

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

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

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

### Collusion

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

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

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

#### **Box 7** **How anti-dumping measures can be used to facilitate collusion**

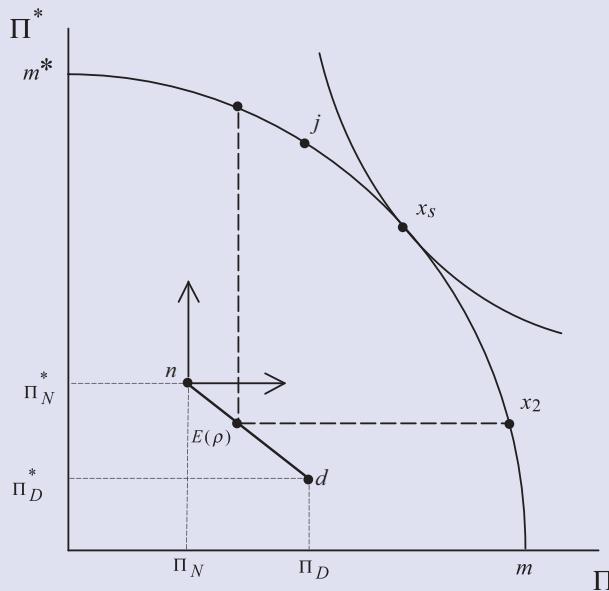
The model developed by Prusa analyzes withdrawn anti-dumping cases as the result of collusion between domestic and foreign industries. Prusa argues that the prospect of anti-dumping duties is used by the domestic industry to threaten the foreign industry to agree to collude. If the foreign industry does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

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

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

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

**Figure 1**  
**Representation of the game in profit space**



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

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

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

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

<sup>a</sup> The timing of events could be thought of as stages in a game.

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

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

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

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

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

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

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

#### *iv) Other effects*

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

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

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

### **(c) WTO disciplines and anti-dumping measures**

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

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

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

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

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

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

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

### *i) The trigger*

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

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

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

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

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

### Export price

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

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

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

### Normal value

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

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

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

### Calculating the dumping margin

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

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

#### *ii) Domestic industry*

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

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

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

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

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

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

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

### *iii) Injury to domestic industry*

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

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

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

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

Article 3.2 of the ADA requires investigators to consider the existence of a significant increase in dumped imports<sup>94</sup> either in absolute or relative terms to production or consumption in the importing WTO member. However, the Appellate Body on *EC – Tube or Pipe Fittings* held that dumping duties can be imposed even when there has been no absolute or relative increase in dumped imports, i.e. the absence of significant increase in import volume does not mean non-existence of injury.<sup>95</sup> The examination of the price effects of dumped imports includes whether there has been a significant level of: (i) price undercutting, (ii) price depressing, or (iii) price suppressing. The panels in a number of cases held that there is no requirement that price analysis has to take place at a particular level of trade,<sup>96</sup> on a quarterly basis<sup>97</sup> or over a particular period of time.<sup>98</sup> Additionally, the *EC – Tube or Pipe Fittings* panel found that the fact that certain sales may have occurred at “non-underselling prices” does not eradicate the effects in the importing market of sales that were made at “underselling prices”.<sup>99</sup>

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

There is some WTO jurisprudence relating to cumulation. The panel in *EC – Tube or Pipe Fittings* confirmed that an investigating authority enjoys a “certain degree” of discretion in determining whether the use of cumulation is “appropriate” or not.<sup>102</sup> But the decision to use cumulation must be based on an “objective examination” of “positive evidence” as specified under Article 3.1.<sup>103</sup> However, some observers worry that the unavailability of a precise definition of the terms “appropriate” and “conditions of competition” opens the door for national authorities to use cumulation at their discretion (Covelli, 2005).

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

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

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

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

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

The panel on *EC – Tube or Pipe Fittings* added that a meaningful investigation must also take into account the trends for each of the injury factors and indices rather than just a comparison of “end points”.<sup>109</sup> Interestingly, the panel on *EC – Tube or Pipe Fittings* found that Article 3.4 requirements “will be satisfied where it is at least apparent that a factor has been addressed, if only implicitly”.<sup>110</sup> The Appellate Body supported this finding, reasoning that Article 3.4 calls for an evaluation of relevant factors, but does not address the manner in which the results of such evaluations be set out in the published reports; neither is the manner regulated under Article 3.1.<sup>111</sup>

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

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

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

Regarding threat of injury to domestic industry, Article 3.7 requires that: (i) the determination of the existence of threat of injury must be based on facts and not merely on allegation, conjecture or remote possibility, and (ii) the threat of injury must be imminent and clearly foreseen. A non-exclusive list of factors to be considered is specified under Article 3.7, including: (i) a significant rate of increase of dumped imports into the domestic market; (ii) sufficient freely disposable, or an imminent, substantial increase in, capacity of the exporter; (iii) whether imports are entering at prices that will have a significant depressing or suppressing effect on domestic prices; and (iv) the inventories of the product being investigated. According to the panel on *US – Softwood Lumber VI*, thorough consideration of these listed factors must go beyond a mere recitation of the facts in question, and must put them into context. However, the investigating authorities are not required to make an explicit finding or determination with respect to the factors considered. The same panel held that unlike the situation under Article 3.4 of the ADA, consideration of each of the factors listed in Article 3.7 is not mandatory. Consequently, a failure to consider or to adequately consider a particular factor would not necessarily demonstrate a violation of Article 3.7.<sup>113</sup>

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

#### *iv) Causality and non-attribution*

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

Article 3.5 also stipulates that the “authorities shall examine any known factors other than the dumped imports which at the same time are injuring the domestic industry, and the injuries caused by these other factors must not be attributed to the dumped imports.”<sup>116</sup> This requirement is often referred to as the “non-attribution test”. An illustrative list<sup>117</sup> of known factors to be examined in such a test is specified in Article 3.5, including contraction in demand, changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology, export performance and productivity of the domestic industry. Yet, there is no definition of how a factor should be considered as a “known factor”.

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

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

the Anti-dumping Agreement (ADA) on causation are not identical, the Appellate Body on *US – Hot-Rolled Steel* recognized the “considerable similarities” between the two agreements regarding their non-attribution language.<sup>120</sup> Accordingly, the Appellate Body referred to interpretations in *US – Wheat Gluten* and *US – Lamb* of Article 4.2(b) of the SCM Agreement<sup>121</sup> and interpreted the non-attribution test under Article 3.5 of the ADA as requiring authorities to separate and distinguish the effects of dumped imports from the effects of any other factors. This requires a satisfactory explanation of the nature and extent of the injurious effects of these other factors, as distinguished from the injurious effects of the dumped imports.<sup>122</sup> At the same time, the Appellate Body held that there is no definitive method for the mentioned process of separating and distinguishing. Rather, the method is at the national authority’s discretion as long as the non-attribution requirement under Article 3.5 is respected.<sup>123</sup>

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

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

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

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

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

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

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

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

#### *v) Application of anti-dumping measures*

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

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

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

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

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

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

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

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

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

Article 2 and 2.4.<sup>137</sup> Similarly, the panel on *US – Oil Country Tubular Goods Sunset Review* held that investigating authorities are not required to make an injury determination in a sunset review and that obligations under Article 3 do not “normally” apply to the sunset review. However, to the extent that an investigating authority relies on an injury determination in conducting a sunset review, the obligation of Article 3 would apply.<sup>138</sup> The Appellate Body added that the absence of any cross-reference to Article 3 under Article 11.3 suggests that investigating authorities are not mandated to follow the provisions of Article 3 in making a likelihood of injury determination. However, by referring back to the obligation of basing a likelihood determination on positive evidence already interpreted by it, the Appellate Body found that the examination of factors under Article 3 is “relevant”.<sup>139</sup>

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

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

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

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

#### (d) Conclusions

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

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

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

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

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

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

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

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

### 3. SUBSIDIES AND COUNTERVAILING DUTIES

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

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

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

#### (a) The economics of subsidies in brief<sup>142</sup>

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

##### *i) Subsidies in perfect markets*

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

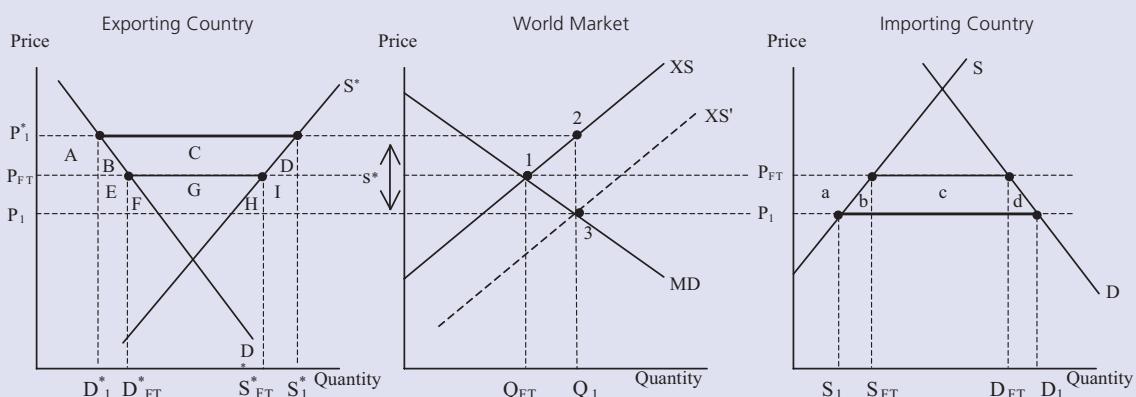
When the government of a large country grants an export subsidy to the producers of a particular good or service, these producers will initially earn more on their exports than on their domestic sales and thus they will have an incentive to export more. The price charged to domestic buyers, however,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

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

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

#### Box 8 Effects of an export subsidy

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



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

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

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

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

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

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

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

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

## *ii) Subsidies in the presence of market failures*

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

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

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

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

**Box 9**  
**Strategic trade policy**

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

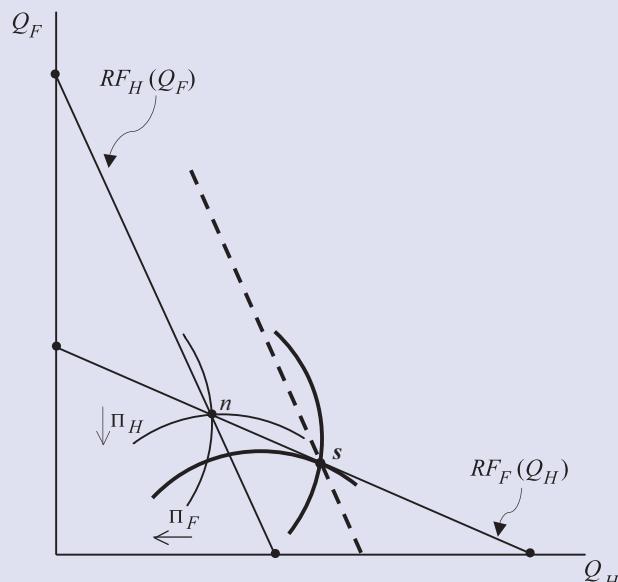
Figure 1 is a graphical representation of the model when firms compete in the Cournot manner. Cournot competition is best understood as firms choosing their production level by taking into consideration how much their rival produces. For instance, without government

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

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

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

**Figure 1**  
**Output subsidy and reaction functions in Cournot model**



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

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

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

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

### *iii) Arguments used by governments to justify subsidies<sup>147</sup>*

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

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

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

## **(b) The economics of countervailing duties**

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

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

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

### *i) Perfect markets*

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

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

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

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

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

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

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

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

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

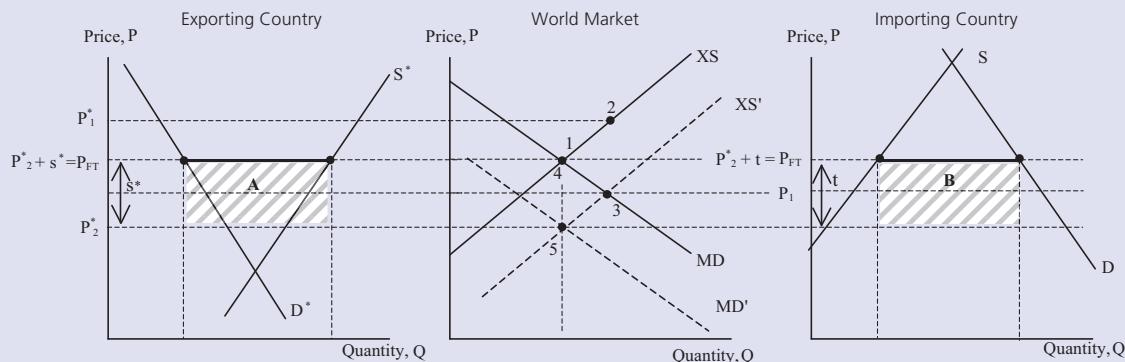
Introducing a countervailing tariff (denoted by  $t$ ) shifts the import demand to the left and drives a second wedge between the prices in the two markets, illustrated by the move from point 3 to points 4 and 5. The tariff has the effect of raising the price in the importing country. However, since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

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

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

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

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



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

### *ii) Imperfect competition in product markets*

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

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

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

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

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

The structure in Dixit (1984; 1988) allows for simultaneous selection of export subsidies and possibly offsetting tariffs. As argued by Brander (1995), using the term “countervailing” to describe simultaneously selected duties may be misleading. In practice, subsidies are applied first and they may possibly be countervailed later with a tariff. Collie (1991) considers this sequence of interventions in a model otherwise similar to Dixit (1988) to analyze the effects of retaliation on the profit-shifting argument for export subsidies. He models trade policy as a multi-stage game. First, the foreign country sets its export subsidy. Second, the domestic country responds by selecting an optimal tariff. He finds that when the home country uses a tariff and a production subsidy, its optimal response to an export subsidy is to increase its tariff and reduce its subsidy.

As for the foreign country, knowing the likely response of the home country, its optimal response will generally be a positive subsidy.<sup>150</sup> In this case, retaliation does not negate the profit-shifting argument for export subsidies. When the home country, however, can only use a tariff but no production subsidy, the optimal response is a less than fully countervailing tariff while the optimal foreign policy would be an export tax. Collie (1991) considers this second case to be more realistic than the first and therefore concludes that in practice the possibility of retaliation with a countervailing tariff is sufficient to eliminate the foreign country's incentive to use an export subsidy. This result supports earlier analysis by Grossman (1986b) and Bhagwati (1988).

Collie (1994) extends Collie (1991) by allowing the timing of trade policy interventions to be explained by the model. As in Collie (1991), the domestic country uses an import tariff to extract profits from the foreign firm and uses a production subsidy to correct domestic distortions due to imperfect competition. At the same time, the foreign government uses an export subsidy to shift profits from the domestic firm. Different scenarios are considered, each of which corresponds to a game. In these games, the domestic and foreign governments can either choose their trade policy simultaneously or sequentially.

Collie shows that the home government will always prefer to set its trade policy before the foreign government. This results in the home government committing not to use countervailing

duties. Consequently, this leads the foreign firm to use a larger export subsidy because using a countervailing duty is no longer a credible threat. Consequently, both countries are better off. The domestic market benefits from the foreign export at a lower price and the foreign firm benefits from a lower tariff regime. The conclusion is that imperfect competition does not provide an economic rationale for countervailing duties.

Qiu (1995) also examines whether and how retaliation by a domestic country can efficiently reduce the profitability of export subsidization in a two-firm model. His analysis differs from that of Collie (1991) in that he assumes that there can be no CVD if there is no subsidy and that there can be a delay between the imposition of the subsidy and retaliation. Qiu identifies a number of factors that lessen the efficacy of CVDs. He demonstrates that free trade is almost always the optimal trade policy in the face of likely retaliation but that a foreign country may find subsidizing exports attractive when retaliation by the domestic country is extremely slow. This is because when considering whether to subsidize exports, the foreign country compares the benefit from profit-shifting before retaliation begins with the loss once retaliation gets under way. Qiu also shows that the GATT/WTO constraint (i.e. a countervailing duty cannot exceed the amount of the subsidy) lessens the punishment and gives more room for export subsidization. Finally, Qiu argues that some voluntary export restriction agreements, under which both the domestic and foreign firm benefit, can arise to avoid the imposition of a CVD.

Along the same lines, Hartigan (1996a) shows how retaliatory restrictions under GATT/WTO rules might lead to the behaviour that the rules seek to deter. The rules require that the country harmed by a subsidy establishes that injury has occurred to the pertinent industry, requiring that the subsidy be currently in existence. They also mandate that the CVD should not exceed the level of subsidy. Hartigan argues that the GATT/WTO provisions fail to take into account that a subsidy, even if it is in place for a relatively short period, may have detrimental effects on an industry after it is eliminated.<sup>151</sup> Using a simple two-firm model, he shows that the home country, if it abides by the GATT/WTO rules when imposing a CVD, is unable to restore the competitive balance in the industry due to the costs incurred by consumers having switched to different products. In his view,

the requirement that injury be established by the home government creates an advantage for the foreign government.

Building on earlier work by Wright (1998), Piracha (2004) explores how different levels of information have an effect on strategic trade policy. He considers a scenario where the costs of the home firm are private information signalled to the home government by the amount of output they produce. The set-up is a two-stage game, where the home government sets its export subsidy in the first stage, while the foreign government imposes a countervailing tariff in the second stage.

Piracha finds that the best strategy for the domestic government is to use an export tax since it implies a lower tariff by the foreign government. Having understood this behaviour, the home firm will act strategically by misrepresenting itself in order to get the lowest export tax possible. It will do this by producing at an inefficiently low level. Piracha argues that these inefficiencies can be so distorting that the home government ends up giving subsidies in order to reduce the distortion, even when a subsidy is clearly not the best policy. As far as the foreign government is concerned, it uses the same level of tariff whether the home firm signals its costs or not.

### *iii) Imperfect labour markets*

Public support for protection is often based on the perception that competition from imports may lead to costly industry adjustments and cause persistent unemployment. Indeed, there are theoretical arguments in favour of using countervailing duties as a means of facing up to these adjustment costs and the redistribution of resources that results from subsidized imports. This argument assumes that workers' earnings encompass more than the competitive wage.<sup>152</sup> For example, strong labour unions may take advantage of monopoly power to raise wages above the competitive level. Alternatively, employers may raise wages above the competitive level to increase employees' productivity or efficiency.

If workers earn additional income, a foreign subsidy may no longer have an unambiguously beneficial effect. As demonstrated by Sykes (1989), part of the reduction in domestic producer surplus (the sum of profits earned by suppliers) resulting from the foreign subsidy is not compensated by an increase

in consumer surplus (the difference between the willingness to pay and the actual price the consumer pays). If the foreign subsidy has a negative impact on welfare, a CVD that would eliminate it will have a positive effect on welfare but a CVD could enhance welfare even further if the subsidy has a positive effect on welfare.

In theory, trade policy (i.e. the use of CVDs) is only a second-best solution to the type of labour market failure discussed above. Economic principles would suggest that the best form of intervention would be to directly address the source of the market distortion. However, it may not be politically acceptable to intervene in the labour market. In this case, there would be a second-best argument for using trade policy, such as CVDs.<sup>153</sup> Moreover, as detailed by Sykes (1989), there are a number of other objections to the use of CVDs to address labour market failures. Sykes notes that if information problems prevent the use of first-best policies, they may also prevent the use of countervailing duties. More fundamentally, a general safeguard, which is not dependent upon subsidization, may be preferable, even if it is not an ideal response.<sup>154</sup>

However, if subsidies are applied for a limited period and industry adjustment costs are most severe immediately after subsidised imports are introduced, different and possibly greater forms of protection may be needed than for other types of import competition. In particular, it would not require protection measures that facilitate industry adjustment. Long-term adjustment would not be needed because of the temporary nature of subsidies and short-term adjustment would not be advisable because of the high costs associated with this. In other words, if subsidies are applied for a particularly short period, specific contingent measures may be warranted. Sykes (1989), however, argues that there is no empirical evidence suggesting that subsidy programmes are generally temporary. Moreover, other sources of import competition, such as exchange rate fluctuations, may be even more temporary.

Conventional economic wisdom suggests that the hardship of economic upheaval is usually better alleviated with tools other than restrictive trade policies (Sykes, 1989). Retraining programmes, public employment agencies, social security and other measures directly targeted at affected workers introduce less distortions than trade restrictions. However, the taxes levied to finance alternative

redistribution policies can also introduce severe distortions. In any case, assuming that there is a case for using trade restrictions to correct the distribution of income, it is again questionable whether CVDs would necessarily be the best protectionist option.

#### *iv) The economic rationale for CVDs*

Having examined the welfare effects of subsidies and CVDs, two related questions need to be considered: why do governments use countervailing duties and what role do CVDs play in trade agreements?

With regard to the first question, the presumption is that governments do not use CVDs solely to improve national or global welfare. Examination of the welfare effects of subsidies and CVDs suggests that in the absence of market failures, CVDs would normally reduce overall national welfare. The question then is why do governments use them. A first answer could be that market imperfections are everywhere. In other words, the cases where CVDs increase welfare would be more frequent than economists tend to believe. Another possible explanation is that governments use CVDs to help producers compete with subsidized imports. The welfare analysis outlined above has shown that the principal beneficiaries of CVDs are indeed those producers. If, as suggested in the political economy literature, governments do not necessarily maximize national welfare but rather pursue policies that benefit certain constituencies, they may indeed use countervailing duties to help producers who have been harmed or are likely to be harmed by foreign subsidies.

In the light of this observation, the related question of the role of CVDs in trade agreements is now considered. If the rationale of a trade agreement is to eliminate beggar-thy-neighbour policies, i.e. policies that have a negative impact on trading partners, countervailing duties can be seen as instruments that allow importing countries to neutralize the negative impact from subsidies (Horn and Mavroidis, 2005).<sup>155</sup>

As shown above, the government of an importing country can use CVDs to restore the price that existed before the subsidy, thereby leaving domestic consumers and producers unaffected by the subsidy. In the process, it collects tariff revenue which makes it better off than before the subsidy. In this

particular case, the negative impact of the subsidy does not necessarily correspond to a reduction in overall economic welfare. If the presumption is that the subsidy does not lead typically to a loss of overall economic welfare but only to a loss of producer surplus (the sum of profits earned by suppliers), the countervailing duty should be seen as an attempt to protect domestic producers from the harmful effects of foreign subsidies rather than to promote global efficiency.

As pointed out by Grossman and Mavroidis (2003a), this interpretation finds support in a number of provisions of the SCM Agreement. If countervailing duties are intended to neutralize subsidies that inflict a welfare loss on trading partners, they should only be applied when a subsidy can be shown to have this negative effect. As discussed below, the SCM Agreement confines the use of CVDs to situations where the importing country can provide evidence that an industry has been injured by subsidized imports.

Sykes (1989) discusses the argument that CVDs may be part of a larger multilateral system aimed at discouraging trade-distorting subsidies and at facilitating trade concessions. He observes that a system of constraining subsidies can only be effective if it is properly enforced. He suggests that countervailing duties may be part of the enforcement mechanism.<sup>156</sup> While Sykes is aware that, in a narrow sense, CVDs are often detrimental to national economic welfare, his view is that there might be systemic gains from the use of countervailing duties by all countries. The threat of CVDs may allow governments to resist political pressures for wasteful subsidization at home. The use of countervailing duties by all countries may also deter subsidies that would injure each nation's exporters in their overseas markets.

If countervailing duty laws and the SCM Agreement aim to discourage wasteful subsidies, an interesting question is whether they are effective in achieving this objective.<sup>157</sup> Sykes (1989) notes that CVDs are unlikely to be very useful as a means of enforcing international constraints on subsidies unless the duties are imposed multilaterally. This is because CVDs imposed by a single country are likely to deter subsidization by other governments only haphazardly and not necessarily when such deterrence is most likely to improve the welfare of the country that imposes the duty.

As shown in Section D, CVDs have not been used frequently and they have only been used by a small number of nations. Part of the reason for this is the injury test, which restricts the number of countries that can countervail to those with an industry competing with imports (Sykes, 2003a). In any case, uncoordinated and unilateral countervailing measures may only divert subsidies towards markets where no countervailing action may be taken. Also, countervailing duties will only be employed against subsidy programmes if and when those become known to trading partners. If detection takes time, the beneficiaries of the subsidy may derive considerable benefit before the countervailing duty is applied. Finally, an effective dispute settlement mechanism may be sufficient to make countries limit the use of subsidies.

Sykes (1989) also discusses the argument that countervailing duty laws might serve to prevent governments from using subsidies to circumvent new tariff rates and thereby facilitate tariff concessions that would not otherwise be made. Sykes notes that this claim is weak because it is difficult to evaluate given that no counterfactual scenario is observable.

### (c) WTO discipline and practice on CVDs

Subsidies were already common in the mercantilist era of the 17<sup>th</sup> and 18<sup>th</sup> centuries but the earliest attempt to control them dates back to 1862. This involved the inclusion in trade treaties of clauses stating that signatory governments would not grant various kinds of subsidies (Viner, 1923). While the first countervailing duty law was a provision in the US Tariff Act of 1890 that applied to certain types of sugar, the first general countervailing duty law covering all subsidized imports was enacted by Belgium in 1892. The United States introduced its first general countervailing duty law in 1897 and was followed by India in 1899, Switzerland in 1902, Serbia in 1904, Spain in 1906, France and Japan in 1910, Portugal in 1921, British South Africa in 1914 and New Zealand in 1921. The United States has been a pioneer in the use of countervailing duty law and has made much greater use than other countries of countervailing duties (CVDs).<sup>158</sup> Article VI of the 1947 GATT Agreement, which allowed for countervailing duty laws subject to certain restrictions, was derived from a United States' proposal based on the Anti-dumping Act of 1921.

Article VI disciplined the use of CVDs under the GATT.<sup>159</sup> In the Uruguay Round, it was complemented with more detailed provisions that form part of the Subsidies and Countervailing Measures (SCM) Agreement<sup>160</sup> or were included in the Agreement on Agriculture.<sup>161</sup> The rules require there to be both subsidized imports and injury to a domestic industry and a causal link between the two. Additionally, all the required procedures under the SCM Agreement must be followed.

There are significant commonalities between the disciplines on countervailing and those on anti-dumping measures. In many cases, the wording of the agreements is the same. The requirements regarding the determination of injury and causality, for example, are identical to those discussed in the context of anti-dumping. The requirements regarding the determination of the existence of a subsidy have already been analysed in the *World Trade Report 2006*. There are also a number of commonalities with the provisions regulating safeguards. In this sub-section, the focus is on disciplines and practices that are specific to CVDs and refer the reader to the sub-sections on anti-dumping (AD) and safeguards wherever the disciplines are identical to those specified by these agreements.

Insofar as subsidies are “measures by Members affecting trade in services”, in the sense of Article I:1 of the General Agreement on Trade in Services (GATS), they are covered by this Agreement. This implies that, regardless of the existence of specific commitments in the sub-sectors concerned, the most-favoured-nation (MFN) principle of non-discrimination in Article II:1 must be respected. In addition, whenever a sector is made subject to commitments, Article XVII ensures, in the absence of scheduled limitations, that foreign services and service suppliers are granted national treatment – i.e. the principle of giving others the same treatment as one’s own nationals. Under Article XV of the GATS, WTO members are also committed to negotiating any additional disciplines that may be necessary to prevent subsidies from having trade-distorting effects;<sup>162</sup> these negotiations shall also address “the appropriateness of countervailing procedures”. However, in over ten years, very limited progress has been made under this mandate. The issue of countervailing procedures has rarely been raised. This sub-section focuses, therefore, on GATT/SCM disciplines.

The sub-section is in four parts followed by a conclusion. The first part discusses the initiation of a countervailing duty procedure, the second focuses on the existence and amount of the subsidy, building on the discussion in WTO (2006), the third examines the determination of injury to domestic industry and of a causal link between subsidization and injury, while the fourth considers the application of a countervailing duty.

### *i) Initiation: the two tracks*

Under the GATT and the SCM Agreement, there are two different tracks, sometimes referred to as the multilateral track and the unilateral track, that a WTO member may pursue if it believes that its interests are being harmed by subsidies provided by another member. Under the multilateral track, a WTO member may challenge another member's subsidy by bringing a dispute to the WTO dispute settlement system. The challenge may be based on an allegation that the subsidy is prohibited, or that it is causing one of three types of adverse effects (one of which is injury to domestic industry caused by subsidized imports). If the complainant wins the case, the defendant is asked to withdraw the subsidy or, in the case of an adverse effects case, to remove those adverse effects. If this does not happen, authorization for imposition of countermeasures will be given to the complaining member.<sup>163</sup>

Under the unilateral track, a WTO member can launch a countervailing investigation to determine whether subsidized imports are causing injury to its domestic industry (for obvious reasons, the unilateral track is unavailable where the adverse effect relates to the member's exports to other markets). If after an investigation, the member determines that subsidized imports are causing injury to domestic industry, it may impose a CVD in accordance with the provisions of the SCM. While the provisions of Part II or Part III (the sections of the SCM Agreement dealing respectively with prohibited and actionable subsidies) can be invoked in parallel with those of Part V (the section that deals with countervailing measures), only one form of relief will be available in the end.<sup>164</sup>

The unilateral track is similar to the approach taken in the AD Agreement. Procedural rules for the initiation of countervailing investigations are very similar to those for anti-dumping actions. Initiation of the unilateral track can be conducted by or on

behalf of the domestic industry, or by the authority itself based on sufficient evidence of a subsidy, injury to domestic industry and causal link between the two. As in the case of AD, an application shall be considered to be made by or on behalf of the domestic industry if: (i) it is supported by domestic producers whose collective output constitutes more than 50 per cent of the total production of the "like" product produced by the portion of the domestic industry expressing their opinion (either oppose or support) to the application; and (ii) producers who expressed supporting opinion must account for at least 25 per cent of total production of the like product produced by the domestic industry.<sup>165</sup>

An application shall be rejected if: (i) the evidence of either subsidy or injury to domestic industry is not sufficient; (ii) the amount of subsidy is *de minimis* (i.e. the minimal amounts of domestic support that are allowed even though they distort trade); or (iii) the volume of subsidized imports, actual or potential, or the injury is negligible.<sup>166</sup> There is a minor difference between *de minimis* thresholds in the AD and the SCM agreements. Whereas a margin of dumping of 2 per cent or less is considered as *de minimis* in the AD Agreement, a subsidy would be considered *de minimis* only if it represents less than 1 per cent of the value of the goods.<sup>167</sup> Article 27.10 of the SCM Agreement explicitly requires the termination of a countervailing investigation when the investigating authorities determine that the volume of the subsidized imports from a developing country member represents less than 4 per cent of the total imports of the like product in the importing member. The exception to this is if the imports from this group of exporting members collectively account for more than 9 per cent of the total imports of the like product in the importing member. Other than this, there is no explanation of how the import volume or injury to domestic industry can be considered as "negligible" under the SCM Agreement.

The existence of the two tracks is specific to subsidies. There is no substitute track in the case of safeguards, and dumping is a private practice that cannot be challenged through the dispute settlement mechanism. So far, and despite the broader scope of the multilateral track which unlike the unilateral track can be used against both subsidized imports and subsidized competition on export markets, the unilateral track has been used far more often than the multilateral track. From the point of view of the industry or government which believes that its

interests are being harmed by subsidized imports, the unilateral track has several advantages.

First, countervailing investigations are initiated by industries while governments typically have considerable discretion in deciding whether to file a complaint to the WTO. Second, it takes much less time to obtain relief under the unilateral track. Provisional CVDs can already be imposed 60 days after the date of initiation of the investigation while it may well take two to three years to obtain any relief under the multilateral track. Third, the national government has control over the unilateral track, and firms may feel more comfortable dealing with their national administration and domestic laws compared with getting involved in a government-to-government dispute settlement process. Fourth, the remedy is different. While the countervailing duty “neutralizes” the effect of the subsidy, relief under the multilateral approach would take the form of the withdrawal of the subsidy or the elimination of the adverse effects. Only if the subsidizing member does not take the appropriate steps, and in the absence of agreement on compensation, may the WTO’s Dispute Settlement Body grant authorization to the complaining member to take countermeasures.

From a systemic point of view, the two tracks could thus be seen as complementary in the sense that the multilateral track has a broader scope but that where the two tracks are available, the unilateral track more effectively enforces the subsidies disciplines than the multilateral track. In this case, countervailing duties would be needed to achieve deeper commitments. Sykes (2003a), however, questions the effectiveness of CVDs in deterring wasteful subsidization, and argues that if this is the case, there would be an argument in favour of dropping the unilateral track and keeping only the multilateral track. However, he ends up by rejecting this argument and argues in favour of keeping the unilateral track on the ground that WTO law does not properly distinguish truly harmful subsidies. In his view, “the role of countervailing duties may be primarily to defuse political pressure for action against ‘unfair’ practices while doing little violence to the ability of sovereign governments to act as they wish.” (Sykes, 2003a, 25). Another argument in favour of the unilateral track is that, as discussed above, CVDs can be used to neutralize the effect of subsidies, while this may be more difficult under the multilateral track.

### *ii) The trigger*

A subsidy shall be subject to the provisions of Part V of the SCM Agreement, which disciplines the use of countervailing measures if it satisfies the definition of a subsidy provided in Article 1 of the Agreement and if it is specific in accordance with the provisions of Article 2. Article 1.1 defines a subsidy in terms of “a financial contribution by a government or any other public body within the territory of a Member”, where a “financial contribution” is defined by an exhaustive list of measures that qualify as such. These include direct transfer of funds, potential transfers of funds and liabilities, revenue foregone as a result of tax exemptions, the provision of goods and services by a government, other than general infrastructure, or the purchase of goods by a government. Finally, a subsidy would also be deemed to exist if a government entrusted or directed a private entity to carry out these functions or made payments to a funding mechanism. Various aspects of the list of financial contributions contained in Article 1.1(a) of the SCM Agreement have been subject to dispute.<sup>168</sup>

A subsidy is only deemed to exist if in addition to constituting a financial contribution, a measure also confers a benefit as specified in Article 1(b).<sup>169</sup> The SCM Agreement does not provide an explicit definition of the term “benefit”, which the adjudicating bodies are left to interpret on a case-by-case basis. As discussed in the *World Trade Report 2006*, a number of cases have dealt with the question of how to establish that a benefit has been conferred.<sup>170</sup> In *Canada – Aircraft*, the Appellate Body confirmed the panel’s findings rejecting an interpretation of benefit based on whether there was a “net cost” to the government and focusing rather on the recipient of the subsidy.<sup>171</sup> The Appellate Body in *Canada – Aircraft* also held that a determination of whether a benefit exists for the recipient of a subsidy implies a comparison with market conditions.<sup>172</sup>

A number of cases also considered the issue of the “pass-through” of benefit, either in situations involving the privatization of assets previously acquired by a state-owned enterprise with a financial contribution by the government or in situations where a subsidy bestowed on an upstream producer (which use those inputs to produce inputs for other industries) could benefit the downstream producers (which use those inputs to produce goods at a later stage of the production process). These cases, which raised a number of interesting economic issues, were reviewed by economists.<sup>173</sup>

With regard to privatization, in *US – Countervailing Measures on Certain Products from the European Communities*, the Appellate Body modified the position it had taken in *US – Lead and Bismuth II* and ruled that a change in ownership at fair-market prices provides a rebuttable presumption that a subsidy no longer exists, meaning that there may be circumstances in which an investigatory authority can find otherwise.<sup>174</sup> To reach this conclusion, the Appellate Body used the distinction between the exchange value of goods and services and their scarcity value.<sup>175</sup> The Appellate Body noted that it could imagine circumstances in which the market price of the assets would not reflect “the exchange value of the continuing benefit”.<sup>176</sup> When this is the case, an investigating authority could legitimately find that a benefit of past non-recurring financial contributions to a state-owned enterprise continues to exist after privatization. Grossman and Mavroidis (2007b) criticize this finding. In their view, the price at which a change in ownership takes place has no bearing on the subsequent competitive conditions, which, in their view, is the standard according to which the existence of a benefit should be evaluated.<sup>177</sup> The sales price at which a privatization takes place, therefore, is not relevant to the determination of the continued existence of benefit from a subsidy. The amounts paid become sunk costs which have no bearing on subsequent profit-maximizing behaviour. This issue is returned to below during the discussion on sunset reviews.

As regards specificity, a subsidy is to be considered specific if access to it is explicitly limited to certain enterprises or industries. Conversely, if eligibility of enterprises is based on objective criteria and neutral conditions, which are economic in nature and horizontal in application, such as size, and if eligibility of the subsidy is automatic, specificity does not exist.<sup>178</sup> Article 2 of the SCM Agreement acknowledges, however, that a subsidy programme may appear non-specific according to these principles, but may turn out to be specific in the way it is implemented. Article 2.1(c) illustrates some of the factors to be examined in this regard. Articles 2.2 and 2.3 specify respectively that subsidies which are limited to certain enterprises located within a designated geographical region are specific and that export subsidies and subsidies dependent on the use of domestic over imported goods are deemed to be specific. Further information is provided on pp 196-199 of the *World Trade Report 2006*, where the discussion of the definition of subsidies and

specificity is more detailed and refers to relevant case law.

Under the unilateral track, the amount of the subsidy needs to be calculated at different stages of the procedure. The amount should be indicated, if possible, in the application.<sup>179</sup> It needs to be determined as part of the investigation and it serves to determine the level of the countervailing duty. Article 14 of the SCM Agreement guides the calculation of the amount of a subsidy in terms of the benefit to the recipient. The guidelines set out certain benchmarks – for example, usual investment practice, comparable commercial loan, adequate remuneration – for determining whether a benefit has been conferred via a subsidy.

A benefit is considered to be conferred only when advantages in comparison to these benchmarks can be found – for example, government provision of goods or services at less than adequate remuneration or government provision of a loan at a more favourable interest rate than a comparable commercial loan. While Articles 14(b) and (c) specify clearly how to calculate benefit in the case of a loan and a loan guarantee, there is no similar guideline in Article 14(a) and (d) about government provision of equity capital and government provision of goods or services or purchase of goods.<sup>180</sup> Interpretation by WTO adjudication of Article 14 is discussed below.

In *EC – Countervailing Measures on DRAMS Chips*, the panel stressed that although the investigating authority is entitled to considerable leeway in adopting a reasonable methodology for calculating benefit, a basic reasonableness test must be passed.<sup>181</sup> In both *US – Softwood Lumber III* and *US – Softwood Lumber IV*, a dispute was raised concerning the interpretation of Article 14(d), which says:

*“The provision of goods or services or purchase of goods by a government shall not be considered as conferring a benefit unless the provision is made for less than adequate remuneration, or the purchase is made for more than adequate remuneration. The adequate remuneration shall be determined in relation to prevailing market conditions for the good or service in question in the country of provision or purchase (including price, quality, availability, marketability, transportation and other conditions of purchase or sale).”*

The Appellate Body on *US – Softwood Lumber IV* reversed the panel's interpretation of Article 14(d) and concluded that an investigating authority may use a benchmark other than private prices of the goods in question in the country of provision, when it has been established that those private prices are distorted, because of the predominant role of the government in the market as a provider of the same or similar goods. Additionally, the alternative benchmark chosen must relate or refer to, or be connected with, the prevailing market conditions in that country and must reflect price, quality, availability, marketability, transportation and other conditions of purchase or sales, as required by Article 14(d).<sup>182</sup> Importantly, the Appellate Body further hinted that while different factors can result in one country having a comparative advantage over another with respect to the production of certain goods, any comparative advantage would be reflected in the market conditions prevailing in the country of provision and, therefore, would have to be taken into account and reflected in the adjustments made to any method used for the determination of adequacy of remuneration, if it is to relate or refer to, or be connected with, prevailing market conditions in the market of provision.<sup>183</sup>

Horn and Mavroidis (2005) comment on some of the issues discussed in the panel report on *US – Preliminary Determination with Respect to Certain Softwood Lumber from Canada* that are of particular interest from an economic perspective. They see this case as an illustration of some of the conceptual difficulties in defining what a subsidy is. The discussion focuses on two main issues: (a) whether Canadian provincial government can be said to provide goods; (b) how to define the no subsidy benchmark, against which the actual situation is to be compared. With regard to the second question, they identify several conceptual problems with the no-subsidy benchmark imposed by the SCM Agreement.

First, it does not take into consideration whether differences between the benchmark and actual government policy reflect the pursuit of legitimate government policies. Second, the interpretation of the private sector benchmark as referring to prices in existence in the importing country ignores the possibility that the benchmark may be significantly affected by any subsidization. Third, using foreign prices as a benchmark is not without problems as those could differ from the prices in the allegedly subsidizing country for various reasons other than beggar-thy-neighbour behaviour.

### *iii) Determination of injury and causation*

The definition and the guidelines for the determination of injury to domestic industry and causation in the countervailing duty context are the same as in the anti-dumping context. Injury is defined in both footnote 45 of the SCM Agreement and footnote 9 of the AD Agreement as material injury to a domestic industry, threat of material injury to a domestic industry or material retardation (i.e. significant hold-up) of the establishment of an industry. The wording of the guidelines for the determination of injury under Article 15 of the SCM Agreement is almost identical to that under Article 3 of the AD Agreement.

Injury determination is required to be based on positive evidence and to involve an objective examination of: (a) the volume of the subsidized imports and the effect of the subsidized imports on prices in the domestic market for "like" products; and (b) the consequent impact of these imports on the domestic producers of such products. The factors to take into account when considering the volume and the price effect are also the same as provided for under the AD Agreement. However, there is no reference to the rate of subsidization while the AD Agreement refers to the margin of dumping and there is an additional factor regarding whether there has been an increased burden on government support programmes in the case of agriculture.<sup>184</sup> The definitions of like product and domestic industry in the two contexts are the same.<sup>185</sup> Due to this substantial similarity between the SCM Agreement and the AD Agreement, WTO panels and the Appellate Body have often cross-referenced their interpretation concerning these similar provisions. This results in substantial consistency in the rulings in SCM and AD Agreement disputes.<sup>186</sup>

As for determination of a threat of material injury to domestic industry, a non-exhaustive list of factors to be considered is provided under Article 15.7 of the SCM Agreement, which is similar to the list provided under Article 3.7 of the AD Agreement. However, a new factor is introduced into the list, i.e. "the nature of the subsidy or subsidies in question and the trade effects likely to arise therefrom" must be considered to determine the existence of a threat of material injury.

Grossman and Mavroidis (2003a), following up on their conclusion that the requisite injury test is not

consistent with the promotion of global economic efficiency (see above), propose to replace it with an alternative injury test that would better serve this objective. In their view, “the SCM Agreement would better serve the objective of promoting efficiency in trade relations if Members were limited in their application of countervailing measures to circumstances in which they demonstrated that foreign subsidies have been damaging to aggregate economic welfare” (Grossman and Mavroidis, 2003a, 198).

The establishment of the causal link between subsidized imports and injury to the domestic industry is a prerequisite for the imposition of a CVD. Like Article 3 of the AD Agreement, Article 15 of the SCM Agreement requires that the causation determination be based on an examination of all relevant evidence before the authorities. The non-attribution investigation (i.e. whether the injury is due to factors other than subsidized imports) must also be conducted in both contexts, and all known factors other than the subsidized imports must be examined. A non-exhaustive list of such other factors is provided in Article 15.5 of the SCM Agreement, which is similar to Article 3.5 of the AD Agreement.<sup>187</sup> As in the case of anti-dumping investigations, national authorities are free to choose a methodology that they consider appropriate to analyze causation. As in the case of anti-dumping, economic inference and econometrics are rarely used for this purpose, even though possible approaches have been discussed in the literature on countervailing measures (Benitah, 1999; Knoll, 1989; Diamond, 1989; Sykes, 1997).

Regarding the panel report on *US – Preliminary Determination with Respect to Certain Softwood Lumber from Canada*, Horn and Mavroidis (2005) reflect on the link between benefits to Canadian lumber producers and injury to United States’ competitors. They show that because of the market structure of the industry and of the complicated nature of the contractual terms under which standing timber is turned into logs, an economically satisfactory injury analysis would be extremely complex. It would need to take into account the interaction between the contested measures and other government measures, such as export restrictions on logs. Also, a “pass-through” analysis should be required both in the case of vertical integration (i.e. one firm engaged in different types of production within the production process) and of arm’s-length relationships in order to establish causation.<sup>188</sup>

#### *iv) Application of countervailing measures*

Article VI.3 of the GATT requires that no CVD shall be levied on any imported product in excess of an amount equal to the estimated bounty or subsidy determined to have been granted directly or indirectly for the manufacture, production or export of such product. A similar requirement is also found in Article 19.4 of the SCM Agreement, which specifies that the amount of the subsidy should be calculated in terms of subsidization per unit of the subsidized and exported product. Accordingly, the amount of subsidy must be calculated for the purpose of imposing CVDs, as discussed in subsection (i) above. Like anti-dumping duties, CVDs are not most-favoured nation (MFN), i.e. they are to be levied, in the appropriate amounts in each case, on a non-discriminatory basis on imports of the relevant product from all sources found to be subsidized and causing injury to domestic industry.

Like an anti-dumping duty, which should remain in force only as long as and to the extent necessary to counteract dumping that is causing injury to domestic industry, a CVD should remain in force only as long as and to the extent necessary to counteract subsidization that is causing injury. The authorities should review the need for continuing to impose CVDs on their own initiative or upon request by any interested party.<sup>189</sup> Identical to Article 11.3 of the AD Agreement, Article 21.3 of the SCM Agreement imposes a time limit on maintaining CVDs. These duties must be terminated within five years of being imposed unless the authorities determine in a review that the expiry of the duty would be likely to lead to continuation or recurrence of subsidization and injury to domestic industry.

The lack of indication in the text of Article 21.3 of the SCM Agreement regarding whether the *de minimis* threshold and the evidentiary standards for self-initiation in the original investigation are applicable in sunset reviews or not was interpreted by the Appellate Body as having its meaning.<sup>190</sup> While an investigating authority may only initiate a CVD investigation if it has sufficient evidence of subsidization, injury and a causal link between the two, no such requirements exist to self-initiate a five-year or sunset review of a CVD in Article 21.3.<sup>191</sup> Similarly, the *de minimis* threshold (see sub-section *i* above), which makes a subsidization not countervailable in the original investigation,

does not have the same effect in the sunset review context.<sup>192</sup> Additionally, similar to jurisprudence in the AD Agreement context, the panel in *US – Carbon Steel* held that the determination of likelihood of recurrence or continuation of subsidization or injury to domestic industry must be based on a sufficient factual basis and that investigating authorities are required to consider relevant factual evidence already in their possession.<sup>193</sup>

*US – Countervailing Measures on Certain EC Products* specifically dealt with privatization in a sunset review. In this case, the Appellate Body ruled that before deciding to continue to impose countervailing duties in regard to pre-privatization, non-recurring subsidies, the investigating authority in a sunset review is obliged to determine whether the benefit from the prior subsidization to the state-owned producers continues to accrue to the privatized producer. In the Appellate Body's view, the same standards should apply for showing continuing existence of benefits from financial contributions in sunset reviews as in original investigations or administrative reviews.<sup>194</sup> The Appellate Body was also called upon to rule on the legality of the methods used by the United States Department of Commerce (DoC) in assessing the impact of a change of ownership on the continued existence of a benefit from a subsidy. The Appellate Body found that the two methods used by the DoC were inconsistent with the SCM Agreement.<sup>195</sup>

## (d) Conclusions

The first part of this sub-section focused on the economic rationale for using countervailing duties. In the perfect markets case, countervailing duties typically have a negative effect on overall welfare in the country imposing them. There are two main caveats to this proposition. First, in theory, CVDs can improve the importing country's terms-of-trade (i.e. the price of its exports relative to its imports). If the terms-of-trade gain from the duty is larger than the efficiency loss, there may be an overall welfare argument for the government to impose countervailing duties. Second, CVDs may deter subsidization altogether and thereby confer benefits to producers in the importing country who compete with subsidized goods in their export markets.

In an imperfect market, there are further explanations for the use of CVDs in terms of overall welfare. If wages are fixed, for example, a subsidy can harm the

importing country, which provides a second-best<sup>196</sup> argument for imposing countervailing duties. Also, with imperfect competition in the product markets, CVDs can be used for "rent extraction" (capturing monopolistic profits) which may provide a further argument for governments to use these duties. If governments do not use countervailing duties primarily to improve national welfare, then why do they use them? As explained above, the presumption is that CVDs are used by governments to help domestic producers competing with subsidized imports.

The first part of the sub-section also examined the role of countervailing duties in trade agreements. Under perfect market conditions, CVDs are detrimental to the national economic welfare of the importing country, but the economic literature sees two main roles for CVDs. The first is to neutralize subsidies and the second is to discourage them. If the rationale of a trade agreement is to reciprocally eliminate beggar-thy-neighbour policies, CVDs can be seen as instruments that allow importing countries to neutralize negative effects from subsidies bestowed by large countries.

As discussed, the government of an importing country can impose countervailing duties so as to restore the price that existed before the subsidy, thereby leaving domestic consumers and producers unaffected by the subsidy. The second explanation which has been offered is that governments use CVDs to discourage subsidies that harm the interests of importing countries, and in particular of producers competing with subsidized imports. CVDs are seen as part of a larger multilateral system aimed at discouraging trade-distorting subsidies and at facilitating trade concessions. While CVDs are often detrimental to national economic welfare, there might nevertheless be systemic gains from the use of countervailing duties by all countries.

The second part of the sub-section examined WTO discipline and practice on countervailing duties from an economic perspective. Because of the significant commonalities between the disciplines on countervailing and those on anti-dumping, the discussion focused on features that are specific to CVDs. At the initiation level, the existence of two tracks – unilateral and multilateral – is specific to subsidies. A comparison between the two tracks suggests that there are good reasons – the quicker timeframe, for example – for industries and governments seeking relief from subsidized imports

to prefer the unilateral track. In other words, the multilateral track appears to offer a considerably weaker defence mechanism against subsidized imports than CVDs. Given, however, that CVDs cannot be used against subsidized competition in export markets, while serious prejudice cases can be brought under the multilateral track, the two tracks could be seen as complementary. If this is the case, CVDs may well play a role in achieving deeper commitments. Along the same lines, it could be argued that CVDs can be used to neutralize the effect of subsidies, while this may be more difficult and less immediate under the multilateral track. With regard to the determination of the existence and amount of the subsidy, economists have emphasized the conceptual difficulties in defining what a subsidy is. With regard to injury to domestic industry, some economists have noted that the requisite injury test is not consistent with the promotion of economic efficiency. They have proposed to replace it with an alternative injury test that would consider overall economic welfare. Other economists have shown that in certain circumstances, an economically satisfactory injury analysis could be extremely complex.

#### 4. OTHER SELECTED MEASURES OF CONTINGENCY PROTECTION

Previous sub-sections have discussed three measures of contingency protection (safeguards, anti-dumping measures and countervailing duties) that allow WTO members to temporarily suspend their tariff commitments. There are, however, several other ways in which governments may react to the emergence of economic difficulties. Section B.2 has reviewed these possible measures and categorised them as measures that suspend commitments, weak tariff bindings and no disciplines. How do governments choose which instrument to use among those available? To help answer this question, this sub-section analyzes three additional measures of flexibility: renegotiations, tariff increases compatible with existing bindings and export taxes.

Renegotiations are examples of flexibility measures defined in terms of procedural disciplines rather than circumstances for their use. Furthermore, they are a permanent form of exception to WTO commitments rather than a temporary suspension of these commitments. Tariff increases within existing bindings – i.e. maximum agreed limits – are examples of flexibilities provided by the nature

of the commitments: that is, tariff bound rates are ceilings rather than target levels for tariffs.<sup>197</sup> Export taxes are examples of flexibility measures that apply to exports rather than imports. In the WTO system, they are examples of flexibility measures that are provided by the incompleteness of members' commitments.

##### (a) Renegotiation of commitments

Commitments under the WTO can be renegotiated. Article XXVIII of the GATT and Article XXI of the General Agreement on Trade in Services (GATS) define conditions under which WTO members are allowed to withdraw concessions (bound tariff reductions or specific commitments), if compensation is offered to other members affected by the withdrawal. Unlike other contingent measures discussed in this Report, which are temporary, renegotiations are permanent measures. In other words, renegotiations alter the commitments of members indefinitely (or, more precisely, until they are renegotiated at a later stage).

As originally envisaged by the drafters of the GATT, contingent measures and renegotiations are two forms of flexibility that serve different purposes (Hoekman and Kostecki, 2001). While the goal of contingent measures is to provide temporary protection, renegotiation is intended to be a means through which WTO members seek a permanent rebalancing of concessions within the WTO. This sub-section reviews first the main features of the rules governing renegotiation and their economic rationale. In particular, the sub-section addresses the question of whether, and under what circumstances, it makes economic sense to renegotiate commitments in response to changes in economic and political conditions. It then considers why members may use renegotiation as a form of contingent protection.

##### i) *Renegotiation: a brief review of practices and legal aspects*

GATT Article XXVIII and GATS Article XXI allow WTO members to withdraw previous commitments. While several texts provide an in-depth analysis of the legal aspects of renegotiation and its practice (Hoda, 2001; Hoekman and Kostecki, 2001; Dam, 1970; Jackson, 1997), this sub-section highlights some key features of these articles, which forms the basis for the subsequent economic analysis.

It focuses on four aspects which are particularly relevant from an economic point of view.

1. Timing of renegotiation: GATT Article XXVIII allows WTO members to modify or withdraw a concession on the first day of each three-year period starting from 1 January 1958 or any other period specified by the contracting parties.<sup>198</sup> However, there are exceptions to this rule which may allow contracting parties to renegotiate within the three-year period. These concern: (i) “special circumstances”; and (ii) “reserved rights”.<sup>199</sup> GATS Article XXI entitles a renegotiation at any time after a period of three years from the date that the initial commitment entered into force.<sup>200</sup>

2. Compensation: the key feature of the renegotiation process is that compensation may be offered to “affected members”,<sup>201</sup> in the GATS context, or to WTO members holding special rights. These comprise: (i) members with which the concession was initially negotiated (i.e. members that have initial negotiating rights (INRs));<sup>202</sup> (ii) members having a principal supplying interest (PSI);<sup>203</sup> and (iii) members with substantial interest (SI),<sup>204</sup> in the GATT context. It is worth noting that in the GATT context while INR and PSI right-holders are entitled to negotiate, SI members have only the right to consultation. Compensation aims at maintaining a balance between the situation before the renegotiation and the new trade pattern that emerges over time.

3. Withdrawal of equivalent concessions: in the GATT context, as long as relevant members (INR, PSI and the member seeking to withdraw or modify its concessions) enter into a renegotiation, concessions may be modified or withdrawn even when an agreement cannot be reached. The WTO members with SI are allowed to withdraw equivalent concessions if they are dissatisfied with the renegotiation agreement among relevant members.<sup>205</sup> Unlike retaliation in other areas, which can be targeted at specific members, a withdrawal of concessions would have to take place on a most-favoured-nation (MFN) – non-discriminatory – basis. All members with INR, PSI and SI are authorized to withdraw equivalent concessions if no agreement is reached after the renegotiation. In the GATS context, no modification or withdrawal is allowed before an arbitration procedure has been conducted at the request of any affected member to settle the failure of the renegotiation. Affected members who participated in the mentioned arbitration are allowed

to retaliate if the findings of the arbitration are not followed by the member seeking the modification or withdrawal of its concession.<sup>206</sup>

4. Renegotiation and developing countries: when developing countries need to modify or withdraw concessions, Article XXXVI.8 of the GATT needs to be taken into account. This article provides that developed contracting parties do not expect reciprocity for renegotiation of commitments of less-developed members.<sup>207</sup> This means that the amount of compensation to be paid by a developing country would in principle be smaller than that by a developed country. Similarly, Article XVIII.7 of the GATT 1994 is a provision on renegotiation of concessions that is open only to developing countries. This provision has the specific purpose of promoting the establishment of an industry in a developing country. It can be invoked at any time and requires no authorization, but has very rarely been used.

### *ii) The economics of renegotiation*

Data on renegotiations show some distinctive patterns (see also Section D). First, renegotiations were a major instrument used by GATT contracting parties in the pre-WTO period (1948-1995), but much less so in the post-WTO period (1995-2007). Second, the data show a substantial variability by sector and by country. Namely, industrialized countries shifted away from renegotiation of commitments. While some of this variability across time, sector and country may be explained by procedural aspects, the economic reasons have not been systematically analyzed and represent an important avenue for future research. In the remainder of this section, some speculative explanations are provided.

The first question concerns the economic rationale for allowing countries to modify their trade policy commitments in a trade agreement. In short, renegotiations are valuable as they introduce an additional element of flexibility in the WTO system. This sub-section concludes with a discussion of the reasons why countries may use renegotiations of commitments as a form of contingent protection.

#### Rationale for renegotiation

As with other types of trade remedies in the GATT/WTO system, the possibility of renegotiation permits WTO members to make deeper and more

robust commitments to an open trading regime.<sup>208</sup> As explained in Section B.1, the GATT/WTO is necessarily an incomplete contract. Since countries cannot foresee everything that will happen in the future, it is likely that they will become dissatisfied with certain situations. Accordingly, the possibility of renegotiation is an appealing means of allowing countries to achieve better results than those that would be attainable under existing commitments.

A first interpretation of the role of renegotiations under GATT Article XXVIII can be provided in light of the traditional approach to trade agreements discussed in Section B.1. According to this approach, trade agreements allow governments to escape a terms-of-trade driven “prisoners’ dilemma” (i.e. the escalation of a trade war). The possibility of renegotiations in the GATT/WTO system suggests that trade cooperation may be interpreted as a game with multiple stages. Members agree on an initial set of tariffs with the understanding that, as new and unexpected events unfold, governments may choose to alter the initial agreement knowing that any renegotiation will follow Article XXVIII. In particular, Bagwell and Staiger (1999; 2002) emphasize that, as Article XXVIII permits tariffs to be renegotiated subject to “substantially equivalent” concessions being withdrawn by the party to which a proposal is being made (see points 2 and 3 above), renegotiations will preserve the world price implied by the initial agreement. In other words, renegotiation of commitments under Article XXVIII allows signatories to preserve the essence of the agreement over time as new and unexpected events unfold.

There is another related type of argument that can be used to rationalize the presence of renegotiations in the GATT/WTO system – the mechanism allows an efficient “breach” of the contract. This argument also rests on the contractual incompleteness of the GATT/WTO. Schwartz and Sykes (2002) argue that the phrase “substantially equivalent” in the context of GATT Article XXVIII means that an adversely affected country is permitted to re-impose protection up to a point that its welfare is restored to the original level. Thus, the GATT/WTO system provides for a type of compensation scheme. Since a country will only propose a renegotiation if it yields a welfare gain, and since the compensation scheme ensures that other countries are made no worse off by the new arrangement, the renegotiation yields an efficient outcome. This form of “efficient breach”, which increases overall welfare, provides a reason

for including the possibility of renegotiation in trade agreements (Schwartz and Sykes, 2002).

### *Renegotiation as contingent protection*

Why do countries use renegotiation as contingent protection? As discussed above, the renegotiation of commitments plays a role similar to safeguards, exceptions, etc. in that it introduces flexibility into the WTO system. While serving similar purposes, these different instruments are imperfectly interchangeable.

As discussed more extensively in Section C.5, WTO members can and do choose between different contingent measures. In the presence of a wide choice of policy tools, governments select the measure (or the policy mix) which maximizes the chance of fulfilling their objective. Whether pursuing pure economic efficiency or political economy objectives, the costs and benefits of using the available policy measures is determined by the legal framework that regulates these policies as well as the specific economic problems facing the government.

Unfortunately, economic research in this area is missing or very scant and the following analysis can only be speculative. Notwithstanding these limitations, three arguments may help to explain the use of renegotiations as a tool of contingent protection. First, while generally imposing a time constraint (this is the case for Article XXVIII of the GATT but not for Article XXI of the General Agreement on Trade in Services – see point 1 above), the legal text does not specify the circumstances under which concessions can be suspended. Moreover, Article XXVIII of the GATT and Article XXI of the GATS allow a WTO member to change commitments with respect to another specific member, provided that the general level of reciprocal concessions is unchanged. This indicates that renegotiation has a broader applicability than other measures, such as safeguards, general exceptions and waivers, that have more narrowly defined conditions.

A second argument focuses on the “reputation” costs of different measures that alter commitments under the WTO (Hauser and Roitinger, 2002). As argued by Hauser and Roitinger, a measure that alters market access in a particular sector may imply two types of costs for the implementing government: a compensatory market access cost in other sectors

and a reputation cost (i.e. a loss of credibility with respect to trading partners). Under Article XXVIII of the GATT and Article XXI of the GATS, when a member renegotiates its commitments, other members affected by the measure can ask for compensation (see point 2 above). If the parties reach no agreement, each affected member can suspend substantially equivalent concessions (point 3 above). In this context, explicit renegotiation implies a clear compensation cost, which excludes reputation losses, as a change of commitment is accompanied either by a compensatory concession or a withdrawal of commitment by the trading partner.

At the other extreme, contingent measures, such as anti-dumping and countervailing duties, do not imply any compensation cost but may well cause a loss in reputation to the WTO member that applies them if used extensively. When reputation considerations are of particular interest to a country, seeking renegotiation of concessions may provide a better form of flexibility than, for instance, anti-dumping and countervailing duties.

A final consideration relates to the different use of renegotiation across countries. As briefly discussed (see also Section D), industrialized countries which extensively used renegotiation under Article XXVIII of the GATT in the early years of the multilateral trading system slowly moved away from it. However, the use of contingent measures, such as anti-dumping actions, has grown substantially over the years in the industrialized world. This is not the case for most developing countries, whose use of renegotiations has been more constant.

Three points may help to explain this pattern. First, developing countries may, in principle, face a smaller compensation requirement relative to developed countries when they modify or withdraw concessions (see point 4 above). This implies that for this group of countries it may be relatively easier to enact renegotiations than to implement contingent measures. Second, developing economies are expected to have a larger credibility gain from participation in the GATT/WTO system. If this is the case, they may be more sensitive to the reputation loss associated with contingent measures that do not involve compensation. Finally, and perhaps more importantly, as discussed in other parts of the Report, anti-dumping measures require an institutional infrastructure that only some WTO members possess. Therefore, in addition to the legal

and reputational aspects discussed above, members may be prompted by institutional factors (in this case, the lack of an institutional infrastructure for anti-dumping measures) to revert to renegotiations as a form of contingent protection.

## (b) Incompleteness of tariff bindings

The concept of tariff binding – i.e. committing not to increase a duty beyond an agreed level – is at the heart of the multilateral trading system. In the WTO, like in the GATT previously, market access commitments take the form of tariff bindings. GATT, Article II.1.(a) stipulates that “each contracting party shall accord to the commerce of the other contracting parties treatment no less favourable than that provided for in the appropriate Part of the appropriate Schedule annexed to this Agreement.” The treatment provided for in the schedule of concessions is the so-called “bound tariff”. As is evident from Article II.1.(a), tariff bindings do not take the form of single rigid set values for the tariff. They are expressed as “ceiling values” for tariffs. In other words, when WTO members bind the tariff for a given tariff line, they commit to set the tariff for a particular line anywhere between zero and the ceiling indicated by the bound tariff.

While the main objective of the WTO, as stated in the preamble to the Marrakesh Agreement, is the reduction of tariffs, members seem to have recognized the importance of binding tariffs even when the binding does not entail any immediate reduction. GATT Article XXVIII *bis.2.(a)* states that tariff negotiations may be directed towards the reduction of duties or the binding of duties at existing levels. Successive tariff negotiations have thus aimed both to reduce tariffs and to progressively extend the coverage of bindings.

Today, virtually all tariffs on agricultural products are bound and many countries have bound all or almost all their tariffs on non-agricultural products. However, tariffs have not always been bound at the level of existing applied rates or below. In the Uruguay Round, WTO members agreed that there should be a substantial increase in the number of bindings. More precisely, credit was granted to developing countries for binding tariffs at ceiling levels sometimes far above the level of their applied tariffs.<sup>209</sup> As a result, members who committed to ceiling levels ended up with a binding overhang or,

as it is known in the WTO, with “water” in their tariffs, i.e. a wedge between their bound and applied tariffs. Since the Uruguay Round, more water has been added as members unilaterally reduced their applied tariffs without binding the reductions. This binding overhang introduces a form of flexibility in WTO commitments.

In this sub-section, two issues are considered in relation to the presence of the binding overhang. First, the economics of tariff bindings and the binding overhang is discussed. Second, how much flexibility is available as a result of incomplete coverage and binding overhang is examined.

### *i) The economics of bindings*

In the trade policy debate, it is often argued that the binding of tariffs, even at or above the level of the corresponding applied rate, increases the stability of tariffs and reduces the uncertainty confronting exporters regarding trade policy. There is, however, relatively little theoretical work on this topic. A small number of quite recent theoretical contributions examine the economic rationale for weak tariff bindings, i.e. bindings that specify the maximum level at which a government commits to set its applied tariff (strong bindings would specify the precise level at which a government commits to set its applied tariff). The implications of random tariff regimes, however, remain mainly unexplored. Economists have given little attention so far to quantifying the benefits of tariff bindings or other commitments in the context of underlying protection processes that vary over time (Francois and Martin, 2004).

Bagwell and Staiger (2005) examine the reasons why governments do not negotiate precise tariff levels and instead set tariff bindings that define upper bounds above which they agree not to set their applied tariffs. They also examine why governments sometimes set their tariffs at levels significantly below their bindings. Using a two-country, two-goods trade model in which governments are subject to political pressures from import-competing producers, they model the negotiation by the two governments concerning their tariff commitments and their choice of applied tariffs.

Bagwell and Staiger first consider a case where the binding can be externally enforced and show that in this setting, governments prefer negotiating commitments that take the form of weak bindings

(with a maximum rather than a precise tariff level). They next show that, if commitments take the form of weak bindings, they will be set at levels that are higher than those governments would choose for strong – or precise – bindings. They also show that, if commitments take the form of weak bindings, governments facing less political pressure than expected will set their applied tariffs significantly below the bound level. Finally, assuming that commitments cannot be externally enforced, they find that the above results hold for values of the discount rate (the discounted present value of bindings) not exceeding a certain threshold.

In a recent paper, Horn et al. (2008) propose a related economic rationale for weak bindings. In their explanation, the optimal trade agreement includes rigid weak bindings because of the presence of contracting costs, and not because governments are subject to political pressure. Weak bindings are appealing because they combine rigidity and discretion in the sense that the ceiling does not depend on the state of the world, while the government has discretion to set its tariff below the ceiling. Maggi and Rodriguez-Clare (2007) propose a different explanation where governments choose weak bindings because they allow the government to extract payments from lobbies even after a trade agreement is signed.

The study by Francois and Martin (2004) is to our knowledge the only paper that looks at the effect of binding tariffs on the cost of protection.<sup>210</sup> Relying on a general equilibrium model under uncertainty they show that the expected cost of protection relative to a free trade benchmark decreases both with the level and the variability of protection. Therefore, a simple way to estimate the relative reduction in the cost of protection associated with the introduction of a binding involves estimating the mean (as a measure of the level) and the standard deviation (as a measure of variability) of protection before and after the new binding. To illustrate whether the introduction of tariff bindings has a significant impact on the cost of protection through its effect on the variability of the trade policy, they apply their approach to examine the effects of the introduction of bindings on wheat in seven OECD countries after the Uruguay Round. The authors chose this case because they had access to annual *ad valorem* equivalents of trade barriers for agricultural products for the period 1979-1993 in those countries, and because Uruguay Round tariff bindings on wheat were typically set at

levels substantially higher than the average rates of protection applied prior to the Round.<sup>211</sup> Their results show relatively large estimated reductions in the cost of protection resulting from the binding despite the level at which it was set. In the case of the EU, roughly one half of the gain is derived from the reduction in variability alone, with the other half derived from the reduction in the average rate of protection.

In recent work, researchers have estimated the cost of “water” in the tariffs instead of considering the benefit of bindings. This change of tack has been partly triggered by concern about a possible protectionist backlash in reaction to the economic crisis. Bouët and Laborde (2008) have used a computable general equilibrium model to estimate the welfare cost of raising applied tariffs to their bound level. In a scenario where applied tariffs of major economies are raised fully to the bound tariff rates, world trade would decrease by 7.7 per cent.<sup>212</sup> This increase in duties would reduce world welfare by USD 448 billion.<sup>213</sup>

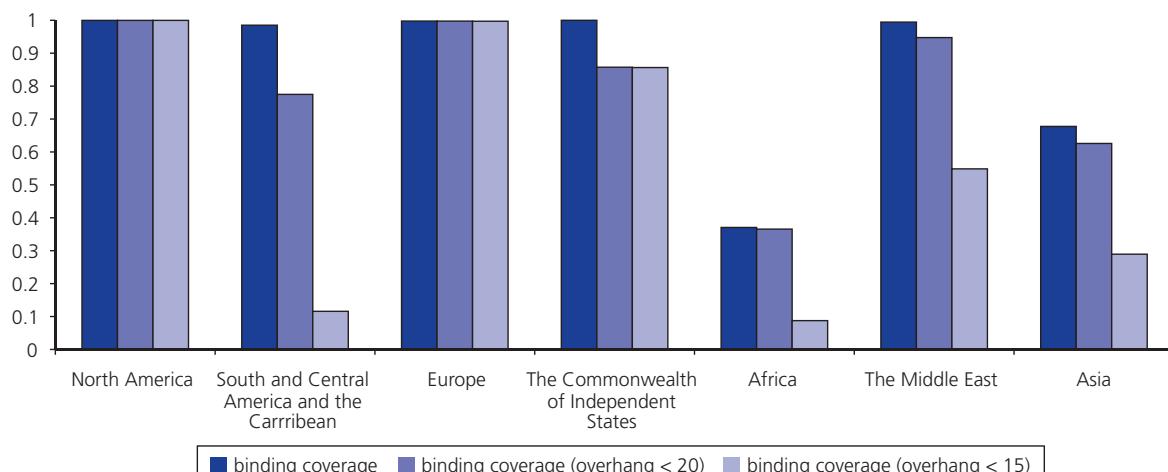
Achard et al. (2008) focus on the cost of “water” in manufacturing products. They first identify the products with high trade flows and the highest level of water. Their analysis shows that water and its costs are concentrated in certain products. The products that top their list in terms of water and trade

flows are concentrated in automotive, electrical and electronic products. They then estimate the costs associated with raising these tariffs to their bound level. This is done by calculating the cost of current imports if the higher bound rate was applied instead of the current applied rate. Their results suggest that for several countries, the import bill would increase substantially.

### *ii) Flexibility in the schedules of commitments*

Both the coverage of tariff bindings and the “water” between bound and applied tariffs differ considerably between countries.<sup>214</sup> Chart 1 shows the average ratios of binding coverage, by region. Because these averages do not take into account the additional flexibility afforded by the water, corrected ratios, which take the water into account, are also shown. To factor in the role of the water, a binding coverage was recalculated at or above a level 15 excluding 6-digit subheadings bound(20) percentage points higher than the level of the applied rate. The results show that in most of the developing world, 70 to 90 per cent of the tariffs could be raised by 15 percentage points without violating WTO commitments. They also show that most bound tariffs could not be raised by more than 20 percentage points without violation. Whether water exceeding 15 percentage points provides sufficient flexibility to governments to use tariffs for contingent protection is an open question.

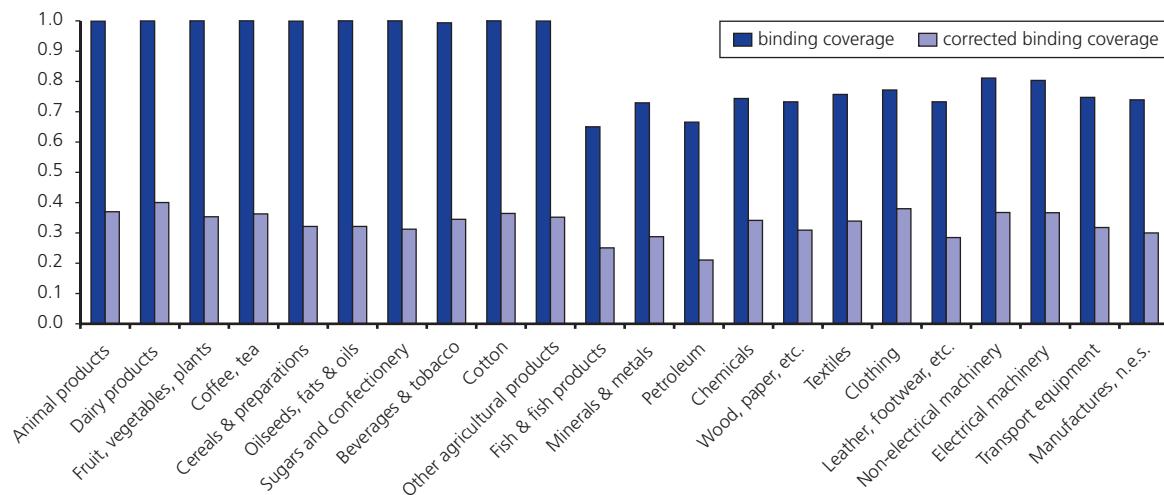
**Chart 1**  
**Binding coverage including and excluding subheadings with an overhang exceeding 20 resp. 15 percentage points, by region**



Note: Binding coverage is the number of fully bound ad valorem 6-digit subheadings divided by the total number of 6-digit subheadings, excluding non ad valorem and partially bound lines. Binding coverage (overhang <20 respectively 15) is calculated as the number of fully bound ad valorem 6-digit subheadings with no binding overhang or with a binding overhang not exceeding 20 (15) percentage points, divided by the same denominator as binding coverage. Region averages are weighted with the weight of each country equal to its share in the region's total imports.

Source: WTO Secretariat.

**Chart 2**  
**Binding coverage including and excluding subheadings with an overhang exceeding 15 percentage points, by product category**



Note: Binding coverage by country and sector used to calculate the "uncorrected" average by product category is from the World Tariff Profiles.\* The corrected binding coverage is calculated as the number of fully bound ad valorem 6 digit subheadings with no binding overhang or with a binding overhang not exceeding 15 percentage points, divided by the number of *ad valorem*, non partially bound 6-digit subheadings per product category. Category averages are simple averages across countries.

\* Binding coverage is calculated at the tariff line level and non *ad valorem* bindings are taken into account.

Source: WTO Secretariat.

Chart 2 shows ratios of unweighted average coverage and ratios of "corrected" coverage, by categories of products. The corrected figures show that, when water is taken into account, flexibility is relatively evenly distributed across product categories even if a few exhibit somewhat smaller coverage ratios.

The data show that the margin of manoeuvre available to certain governments to raise their tariffs is considerable. An important question is what does it take for governments to use available flexibility and actually raise their tariffs in order to afford protection to an industry. The answer to this question will clearly differ between countries. It seems clear, however, that in most countries raising tariffs takes time and effort.

In most democracies, tariff changes can be proposed by members of the legislature, by the executive, or in some cases even by citizens. Customs tariff laws are subsequently typically formulated by the ministry of finance or the ministry of commerce, but other relevant ministries are often involved or at least consulted. In many cases, a government agency advises the government on trade policy and coordinates tariff policy across ministries. Draft custom tariff laws must then be approved by the legislature which most of the time has the ultimate authority to legislate on customs matters. For countries that are members of a customs union,

changing a tariff also requires the consent of other members. In any case, governments will need to convince a majority of the legislature to support the change in tariff.

So far the discussion of the flexibility available under specific binding commitments has focused on tariffs. Other specific WTO commitments, however, may exhibit similar characteristics. Unfortunately, very little is known about the gap between commitments and applied measures in other areas. One area related to tariffs where commitments may allow for a certain amount of flexibility is the so-called "other duties and charges" (ODCs).

GATT Article II:1(b) stipulates that the products described in the schedules of commitments "shall be exempt from other duties or charges of any kind imposed in excess of those imposed at the time a concession was granted". In the Uruguay Round, WTO members agreed to include any other duty or charge existing on 15 April 1994 in their schedules and to eliminate all those that had not been notified. ODCs include all taxes levied on imports in addition to the customs duties which are not in conformity with Article VIII (Fees and Formalities) of GATT 1994.<sup>215</sup> Summary statistics on ODCs provided in the schedules of commitments show that 60 WTO members have bound ODCs. Of

those 60 countries, 15 have all their ODCs bound below 15 per cent. This leaves 45 countries with the possibility of raising their ODCs up to the sometimes very high level of their bound ODCs. Several countries have bound ODCs for all or almost all their tariff lines, at an average level exceeding 80 per cent, with maximum values above 200 per cent. In the absence of information on applied ODCs, it is difficult to assess the amount of flexibility available to members with bound ODCs. The high values of these bindings, however, suggest that this flexibility might be considerable.

In the area of services, WTO members have negotiated specific market access and national treatment commitments as part of the Uruguay Round and subsequent negotiations on basic telecommunications and financial services, or as part of their accession negotiations. The scope of these commitments is discussed in trade literature, and ample evidence of its incompleteness is provided. On average, across all

schedules of commitments, a typical WTO member has undertaken commitments on some 50 sub-sectors, thus covering about one-third of the total (Adlung and Roy, 2005). While the coverage of the commitments is relatively well documented, there is little evidence of the degree to which members' commitments under the GATS match regulatory practices "on the ground" in member countries. It has been argued that the majority of commitments negotiated and scheduled in the Uruguay Round were in fact "standstill" bindings, committing the country concerned only to maintain the current level of access. This assertion, however, has not been substantiated. Box 11 summarizes the results of one of the very few studies that addresses the issue of "water" in specific commitments. It covers a wide range of countries but is restricted to the banking sector. Note that the banking sector was covered in the 1997 negotiations on financial services, which resulted in more liberalization than the pre-1995 negotiations.

#### **Box 11 "Water" in banking sector commitments**

Barth et al. (2008) use country-by-country data on banking regulation matched with new data on financial services commitments in the General Agreement on Trade in Services (GATS) to assess the degree to which the level of access guaranteed by commitments under mode 3 ("commercial presence" – i.e. a foreign company setting up subsidiaries or branches to provide services in another country) matches that provided on the ground.

The GATS commitments data consist of information on specific entry of firms, permissible activities, and operations requirements applying to the banking sector. The "reported practices" data consist of a comparable set of cross-country information based on the World Bank's 2003 survey of banking supervisory authorities (Barth et al., 2006). The authors construct an index that allows them to gauge the overall degree of a country's openness to the entry of foreign banks, as reflected in each set of data. They then compare country-by-country values for the GATS commitments and the reported practices

index values. More specifically, for the 65 countries for which both variants of the market openness index can be calculated, they calculate the "degree of discrepancy" between the two variants, i.e. the difference between the value of the two variants. A negative (positive) value of the degree of discrepancy indicates that reported practices are in fact less (more) restrictive than a country's WTO commitments would indicate.

The results show a negative value of the degree of discrepancy for 19 of the 65 countries and a zero value in four cases. For all the other countries in their sample, the discrepancy is positive. In other words, about one-third of the countries in the sample exhibit "water" – or room for manoeuvre – in their commitments. Apart from Hungary and Malta, all the other countries with water in their commitments are developing countries. Table A reproduces the results for all countries with zero or negative discrepancies – i.e. with less restrictive practices than their commitments would indicate.

**Table****Degree of discrimination against foreign-owned banks relative to domestic banks:  
reported practices compared with WTO commitments**

	Degree of discrimination under WTO commitments	Degree of discrimination in reported practices	Degree of discrepancy
Aruba	5.0	5.0	0.0
Lesotho	0.0	0.0	0.0
Lithuania	5.0	5.0	0.0
Luxembourg	0.0	0.0	0.0
Bahrain	25.0	23.8	-1.3
Kenya	20.0	17.5	-2.5
Moldova	10.0	7.5	-2.5
Hungary	8.3	5.0	-3.3
Ghana	20.0	13.8	-6.3
Malta	15.0	8.8	-6.3
Albania	15.0	7.5	-7.5
India	46.6	31.3	-15.4
Trinidad and Tobago	60.0	34.6	-25.5
Tunisia	50.0	21.3	-28.8
El Salvador	53.3	21.3	-32.1
Rwanda	60.0	25.0	-35.0
Namibia	60.0	23.8	-36.3
Guatemala	60.0	21.3	-38.8
Belize	60.0	20.0	-40.0
Gambia	60.0	20.0	-40.0
Botswana	60.0	13.3	-46.7
Fiji	60.0	10.0	-50.0
Guinea	60.0	10.0	-50.0

Source: Barth et al. (2008).

Note: Aruba, which is part of the Kingdom of the Netherlands has a separate schedule of specific commitments on financial services that are different from those of the Netherlands.

### (c) Lack of bindings on export taxes

The discussion has so far focused on contingent measures that apply to imports. However, in some circumstances export restrictions may be preferred to import restrictions or they may be the only instrument available to address unforeseen difficulties. Therefore, flexibility measures to restrict exports may be needed in a trade agreement to allow governments to be able to address these situations that may not be foreseen at the time that the agreement is signed. Like contingent measures to raise import barriers, in a trade agreement flexibility measures that restrict exports can be useful as they act as a safety valve that allows parties to agree to more extensive commitments.<sup>216</sup>

The important role of export restrictions as a form of contingent measure has clearly emerged in the context of the recent food crises. In the attempt to control for inflationary pressures and to prevent situations of severe food shortages to poor people arising from the sharp increase in food prices in

the first half of 2008,<sup>217</sup> many countries introduced measures to restrict exports. For example, India and China banned exports of rice, Argentina, Russia and Kazakhstan restricted exports of wheat.

In GATT/WTO, there are two different forms of flexibilities to restrict exports: general exceptions to prohibition of export quotas and bans and lack of binding commitments for export taxes. Export quotas and bans can be justified under Article XX (General Exceptions) and Article XXI (Security Exceptions) of the GATT. For example, they can be applied for policy objectives such as protection of national treasures of artistic, historic or archaeological value and conservation of exhaustible natural resources as well as for reasons of international safety. In addition, Article XI:2 of the GATT explicitly allows temporary export bans and restrictions to prevent and relieve critical shortage of foodstuffs or other products. In contrast, export taxes are allowed, but unlike tariffs, they have, in general, not been bound – or given a ceiling – in the commitments of WTO members. This lack of

binding is a form of flexibility that is due to the incompleteness of the WTO agreements.<sup>218</sup>

The focus of this sub-section is on the use of export taxes as a form of contingent measure. First, it looks at the circumstances under which it may make economic sense to use export taxes. Then, a brief overview is provided of the legal context in which export taxes may be used.

### *i) The economics of export taxes as a contingency measure*

Governments justify the use of export taxes on several grounds. An analysis of WTO Trade Policy Reviews conducted from 1995 to 2008 shows that governments use export taxes primarily to insulate a country from sudden price rises, to improve government revenue, to develop infant industry and to protect the environment. The use of export taxes in these four cases is discussed below.<sup>219</sup>

As a preliminary remark, it is worth keeping in mind that economic theory argues that export taxes are unlikely to be a first-best policy. However, the use of export taxes can be supported on the basis of second-best arguments. Developing more efficient stock markets and financial markets, introducing a flexible exchange-rate regime, extending the tax base and improving the tax administration system could all contribute to solving the problems listed above at a smaller economic cost. Under certain circumstances, a second-best argument for using export taxes, however, can be made.

#### To control inflationary pressures

An increase in the international price of a commodity that is also consumed domestically may create inflationary pressures at home. Import tariffs do not address the problem as their principle effect is to increase domestic prices. Many countries have used export taxes to keep inflation under control.

The rationale for using export taxes to reduce the effects of higher prices from abroad is the following: by making exporting less attractive, export taxes divert part of the production from the foreign to the domestic market. This, in turn, increases domestic supply of the taxed commodity, thus creating a downward pressure on its domestic price that may partially offset the inflationary pressures coming from higher prices abroad. In addition, when

export taxes are applied to commodities used in the production processes of other firms, the lower costs for the processing industry may result in lower prices for processed goods.

There are, however, limits to the use of export taxes as an instrument to control inflation. First, when export taxes are applied to “intermediate” goods, consumers may not benefit from lower prices. The extent to which lower production costs, due to lower costs of the intermediate commodity, are translated into lower prices for processed goods depends on the market structure. If markets are dominated by a small number of firms that are able to control market prices, consumers might not benefit from lower prices for the processed commodity.<sup>220</sup>

Second, export taxes may have long-term inflationary consequences on the economy. Because of their effect on domestic prices, export taxes may reduce the incentive of firms to invest in the production of the commodity on which they are applied.<sup>221</sup> As a consequence, the long-term supply of the good might fall, thus resulting in higher domestic prices.

Finally, there is a problem of policy coordination. Recent evidence related to the food crisis shows, for example, that while export bans have helped to contain domestic price rises in countries where they have been adopted, they have contributed to a worsened food crisis. According to Dollive (2008), restraints that Argentina, China and Ukraine imposed on the export of maize and wheat from 2006 to 2008 contributed significantly to the increase in world prices for these crops. In the case of soybeans, Deese and Reeder (2007) conclude that a liberalization of the soybeans sector could significantly lower the world price of raw soybeans (-14 per cent) and the same is true for processed forms.

#### To increase government revenue

Export taxes are a source of tax revenue for the government. To maintain a steady tax revenue during periods of recessions, export taxes can be used as contingent measures. For example, export tax revenue is a large source of tax revenue for the Argentinean government. Following devaluation of the peso in 2002, the rates and scope of export taxes were both increased. The recession and currency devaluation had severely affected government revenue collection and created strong inflationary

pressures. Therefore, export taxes were introduced on a large number of new products, with the stated objective to “attenuate the effects of exchange-rate fluctuations on domestic prices and counter the erosion of tax revenues” (Argentina Trade Policy Review 2007, page 30). The impact on tax revenue was significant; export duties accounted for over 15 per cent of total tax revenue on average between 2002 and 2004, while the average from 1990 to 2005 is less than 7 per cent.

The advantage of using export taxes rather than tariffs to increase government revenue during periods of recession and currency devaluation is that export taxes are a tax on the windfall gains of exporters.<sup>222</sup> Tariffs, in contrast, are a tax on consumers. However, an efficient application of export taxes requires high administrative costs. To reduce domestic instability regarding tax revenue, countries need to use a system of variable tax rates – that is, high rates when export prices are high (e.g. following devaluation) and low rates when they are below a threshold level. The causes that have prompted the implementation of a tax can often peter out quickly. A change in economic conditions requires a quick policy reversal. However, many countries, especially developing countries, lack such political and institutional flexibility.

### To support industry

Export taxes on intermediate goods act as an indirect subsidy to manufacturing or processing industries as they reduce the domestic price of intermediate products. Therefore, export taxes can be used by governments as an instrument for developing infant industry or for supporting a declining processing industry. The objections raised in Section B.2 for the use of import restrictions for these purposes also hold for the use of export taxes: economic intervention can be justified only in the presence of some form of market failure. Other important issues concern their redistributive effects and their distorting effects when international markets are imperfectly competitive. First, export taxes on raw commodities redistribute income from primary commodity suppliers to processors. This might increase income inequality within a country and severely affect the poorest sections of the population. Second, when markets have imperfect competition, a one-to-one “pass-through” of benefits from farmers to processors cannot be expected. Therefore, export taxes may be ineffective

in developing infant industry and introduce further distortions.

### To protect the environment

Export taxes and bans have frequently been applied to live fishery products, wildlife, and hides and skins of certain endangered species, or to prevent exports of dangerous materials.<sup>223</sup> To understand why and when export taxes are used by governments for the purposes of environmental protection and sustainable development, it is important to understand the causes of environmental problems. These include different sources of market failures and government policy failures. Market failure comes about when property rights are not well defined. If anyone, without restrictions, can fish from the sea, collect wood from the forests or hunt wild animals, the likely result is the over-exploitation of these resources.<sup>224</sup> Government policy failures relate to the failure to introduce adequate environmental taxes to address environmental problems. If appropriately designed, these policies would be the best way for producers and consumers to assume the full cost, inclusive of the environmental damage, of their activity.<sup>225</sup>

When markets and governments fail and no management schemes are in place, the demand from the world market may accelerate the depletion of resources. The use of export taxes may act in these circumstances as a second-best policy. There are, however, some risks associated with this policy. Suppose that a government introduces export taxes on logs to address the problem of deforestation. First, low log prices in the home country may encourage inefficient logging practices, thus increasing wastage. Second, low prices of inputs may discourage firms from investing in the introduction of sustainable development technologies in the processing industry.

#### *ii) Legal context*

GATT Article XI, on the General Elimination of Quantitative Restrictions, prohibits WTO members from instituting or maintaining “prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measure” (XI:1) with respect to both imports and exports. This explicitly defines export taxes and import duties as a means by which members may legally restrict exports and imports, but prohibits quotas.<sup>226</sup>

While Article II:1 (b) of the GATT 1994 prohibits import duties on products bound in WTO members' schedules of commitments "in excess of those set forth and provided therein", no provisions require specifically a binding obligation regarding export duties.<sup>227</sup> Consequently, while precise conditions need to be satisfied to allow a temporary suspension of commitments, there are no limitations regarding the timeframe for an increase in export taxes, nor the circumstances and procedure to increase export taxes defined in the WTO agreements. Potentially, this may allow governments significant scope to use export taxes as a protectionist measure rather than a contingent measure.

A limitation to the use of export taxes is imposed by the general MFN principle that applies "to customs duties and charges of any kind imposed on or in connection with importation or exportation" (GATT Article I paragraph 1). In addition, an issue may exist as to whether prohibitive export taxes should be considered consistent with the prohibition of bans and quotas. In this case, general exceptions under Article XX and Article XXI of the GATT would apply, whereby export restrictions could be justified, for example, for environmental and sustainable development or safety reasons.

Another interesting issue relates to the use of export taxes on domestic materials to ensure essential inputs to a domestic processing industry. The possibility to use quantitative export restrictions in this case is foreseen in Article XX(i) of the GATT.<sup>228</sup> The article relates to the adoption of a policy to reduce domestic prices below world prices and to the objective of the government to stabilize the economy. However, it requires that "such restrictions shall not operate to increase the exports or the protection afforded to such domestic industry". In other words, quantitative export restrictions on domestic materials cannot be used as an implicit export subsidy to the processing industry.

For some WTO members, the use of export taxes may be limited by their commitments. In the Marrakesh Agreement establishing the WTO, members have not included commitments on export taxes in their schedules of commitments, but the possibility for members to agree to legally binding commitments on export taxes exist. Several countries that have recently joined the WTO, including China, Mongolia, Saudi Arabia, Ukraine and Vietnam, have negotiated commitment schedules for export duties during the negotiations for their accession.

The extent to which export taxes are liberalized in their commitments varies across countries. For example, China's WTO Accession Protocol includes a commitment to eliminate all taxes applied to exports, with the exception of 84 listed tariff lines.

Commitments on export taxes negotiated in accession protocols are an "integral part" of the WTO Agreement (see the Panel Report on *China-Auto Parts*, para. 7.740). Therefore, they are enforceable under the Dispute Settlement Understanding. Furthermore, to the extent that escape clauses on the commitments on export taxes are not included in the accession protocols, some of the contingent measures built into the WTO Agreement apply. For example, the Council for Trade in Goods approved on 9 July 2007 a request by Mongolia for a five-year waiver on its accession commitment on cashmere. In its accession protocol, Mongolia committed to phase-out export duties on raw cashmere within ten years (Mongolia acceded in 1997). The request for an extension of this phase-out period by another five years has been made on the grounds that the local cashmere industry was facing serious difficulties, that the industry is very important for the Mongolian economy and on the basis of environmental concerns. With regard to environmental issues, the Mongolian government claimed that the increase in exports of raw cashmere has encouraged the growth of goat herds that has surpassed the sustainability of the country's pasture lands.<sup>229</sup>

Limitations to the use of export taxes exist in some regional trade agreements and national regulations. Recognizing that export taxes distort trade, many regional trade agreements have prohibited them. For example, export taxes are prohibited among the member countries of the European Union, the North American Free Trade Agreement (NAFTA), the Caribbean Community (CARICOM), the Southern Common Market (MERCOSUR) and the Australia New Zealand Closer Economic Agreement (ANZCERTA). Some bilateral trade agreements also prohibit export taxes. Examples include Canada-Chile, Canada-Costa Rica, Japan-Singapore and EU-Mexico.

National legal issues can explain the extensive use of export taxes in some countries rather than others.<sup>230</sup> For example, unlike import tariffs, in Argentina the revenue from export taxes accrues to the Federal Government and does not have to be redistributed to the provinces. According to Nogués

(2008), this in part explains the intensive use of this instrument by Argentina. In contrast, export taxes are prohibited by the Constitution of the United States (Article I, Sections 9 and 10). According to Irwin (2009), the ban on export taxes was the outcome of a compromise reached to reconcile the positions of the Northern and the Southern states (especially South Carolina) at the Constitutional Convention. The South demanded a ban on export taxes to protect the interests of the southern staple-exporting states (large exporters of tobacco, indigo and rice), who feared that export taxes may have been easily used by the Congress as a means of raising government revenue at the expense of large-scale exports of a few states.

To sum up, in the WTO export taxes are disciplined but, unlike tariffs, they are generally not bound at specified levels. Therefore, although they are subject to the general MFN principle of non-discrimination, export taxes provide governments with a large margin of flexibility. Potentially, WTO members may heavily restrict trade by imposing export taxes, without having to comply with specified procedural requirements, without having to demonstrate the existence of specified circumstances and without the limitation imposed by sunset reviews. Differences across countries regarding how they use export taxes as a contingent measure arise from their specific commitments under the WTO, commitments within regional trade agreements or requirements in national legislations.

## 5. CHOOSING AMONG DIFFERENT MEASURES

In Sections B and C, a multitude of circumstances have been discussed in which governments may wish to resort to contingent measures, be it for economic efficiency or political economy reasons, and the effects of the various measures have been described. The most common contingent measure is a tariff. This may come in the form of an anti-dumping or countervailing duty, a safeguard or a renegotiated tariff above and beyond bound rates.

Unless governments specifically wish to use quotas or tariff rate quotas, which are allowed only in the context of safeguard measures and which have different economic implications than a tariff under certain conditions (as discussed in Section C.1.b.(v)), what determines a government's decision to implement a tariff hike in one guise or another?

In Section D below, it will become apparent that some instruments, notably anti-dumping measures, are used far more frequently than others, such as safeguards, and that this trend has accelerated over time. Of course, the specific economic issue at hand might offer an explanation. In this case, there is a possibility that foreign governments and firms are more engaged in "unfair" practices than they used to be.

Comparing anti-dumping and safeguard petitions in the United States, Hansen and Prusa (1995) show that with industry seeking to maximize profits,<sup>231</sup> anti-dumping/countervailing petitions must either be easier to win, be associated with lower costs or provide protection that results in greater profits. Hence, one of the main reasons for the popularity of anti-dumping measures over other measures may be differences in the applicable rules, both at the international and domestic level.

Not all of the textual differences in the relevant WTO agreements may influence, in practice, the selection of contingent measure. For example, while the standard for determining injury to domestic industry is higher for safeguards ("serious" injury as opposed to "material" injury for anti-dumping/ countervailing measures), the jurisprudence to date does not seem to have "worked out" a hard and fast distinction between the two concepts that would be sufficiently precise to tilt the balance in favour of the measure subject to the nominally lower standard. Differences in the legal framework that shape the requirements for, and consequences of, different contingent measures are probably at the heart of selection decisions, but broader political considerations, such as a potential loss of reputation when applying unilateral policies alleging "unfair" conduct on the part of trading partners, may also play a role. In making the comparison between measures, the discussion below mainly draws on the description in previous sub-sections of the conditions under which different contingent measures are available under WTO rules.

### (a) No compensation for anti-dumping and countervailing duties

The general obligation regarding tariff renegotiations as well as use of safeguards is to compensate trading partners while there is no compensation requirement when anti-dumping/countervailing measures are used (owing to the "unfair" character

of dumped/subsidized imports). This has often been cited as a possible reason for the popularity of anti-dumping/countervailing measures compared with renegotiations and safeguards. While the compensation requirement is firm in the case of tariff renegotiations, it is waived for the first three years if safeguard measures are taken in response to “absolute” (or so it is claimed) increases in imports (Article 8.3 of the Agreement on Safeguards).

Bown (2002b) observes that in cases where compensation is due, governments have an incentive to use anti-dumping measures, even if no dumping of goods has taken place. In the worst-case scenario, the country imposing the anti-dumping duty may lose a WTO dispute. If it does not bring the measure into conformity with WTO rules, it would be obliged to provide compensation (or face retaliation by the complaining member), which may not be different from the compensation it would be required to give in any event under the Agreement on Safeguards or in renegotiations. Consequently, it will prefer to use an anti-dumping measure if a small chance exists that it can win a dispute.<sup>232</sup> In fact, even if it is sure to lose a dispute, it can make use of anti-dumping actions “for free” while the case is examined by the Dispute Settlement Body.<sup>233</sup>

### **(b) Extending anti-dumping and countervailing duties**

Once tariffs are re-negotiated under GATT Article XXVIII and compensation is provided, the higher levels become the new permanent bindings. Hence, the duration of the measure in this case is of no concern (although the ability to reach certain objectives, such as industrial adjustment, may be undermined if protective measures cannot be restricted to a certain timeframe, as discussed in Section C.1.a above). Anti-dumping/countervailing duty rules allow for the extension of these measures (potentially *ad infinitum*) if the sunset review finds that a continuation or recurrence of dumping or subsidization and injury to domestic industry is likely.

In contrast to safeguards, some of the statutory time limits, such as a span of five years for the initial anti-dumping/countervailing measure versus four years for safeguards, are more lenient and no “minimum” time breaks exist that would prevent a seamless re-imposition of measures, as in the area of safeguards. Cadot et al. (2007), using a version

of the database put together by Bown (2007), find that anti-dumping measures last an average of almost six years across countries (compared with about two years for safeguards). Exactly one half of anti-dumping measures exceed the initial five-year limit. For some countries, the average length has been almost nine years. Seemingly, the “likelihood” standard does not constitute a major hurdle for the frequent extension of anti-dumping measures beyond five years.

### **(c) Discrimination under anti-dumping and countervailing measures**

Another principal difference of anti-dumping/countervailing measures as opposed to all other forms of contingent measures discussed in this Report is that the measures are country- and producer-specific. The difference in the scope of protection would seem to favour MFN-based measures, such as safeguards, as they afford protection against imports from all sources and avert the potential for trade diversion. However, anti-dumping/countervailing action can be made non-discriminatory if petitions against all major trading partners are filed simultaneously. By the same token, this flexibility allows countries imposing anti-dumping/countervailing duties to take into account the retaliatory capacity of affected countries.

The possibility to discriminate under anti-dumping/countervailing duties may lead to them being used against small trading partners and reduce the incentive for governments to implement MFN-based forms of protection. However, in reality, the primary targets of anti-dumping measures are large trading partners, such as China, the European Union, Japan, the Republic of Korea and the United States.<sup>234</sup> Moreover, safeguard measures may be fashioned more or less in a discriminatory way, notably via quota modulation under SGA Article 5.2.b. This allows WTO members imposing safeguards to afford smaller quotas to countries whose imports have increased disproportionately. Yet, the conditions attached to quota modulation are strict and its application is limited to four years.

While discrimination and the resulting reduction in retaliatory threats may be in the interest of countries applying contingent measures, it has been suggested that a general preference for country-specific as opposed to MFN-based contingent measures might exist. As mentioned in Section C.1.b.(v), an “across-

the-board” application of trade remedies might have an impact on many countries whose exports do not contribute (much) to the injury suffered by the domestic industry. This unnecessarily increases the risk of retaliation owing to the larger number of affected countries, including in reaction to trade deflection.

Another argument relates to the global “dynamic” effects of MFN-based versus country-based measures discussed in Section C.1.a. The paper by Crowley (2006) assumes that a foreign country experiences a technological advantage and the “home” country puts in place a (time-limited) safeguard measure to allow the domestic industry to close the technology gap. According to the author, a country-specific measure applied only against the technological leader accelerates the adoption of new technology in both the domestic country and other foreign countries that are lagging behind. A “multi-country” safeguard would create an additional advantage for the domestic industry, but would slow down technological progress in other foreign markets. It follows, therefore, that countries with a low risk of becoming subject to contingent measures might prefer such measures to be country-specific in order to minimize the risk of incurring the higher costs that MFN-based measures would entail.<sup>235</sup>

#### **(d) Relationship with trading partners**

When taking contingent measures, governments may wish to limit the damage done to trading partners, whose cooperation may be needed regarding different matters. One way to appease exporting nations (short of offering appropriate compensation) is to let them share in the scarcity premia (rents) associated with the increase in protection (Bown and Crowley, 2005). Formerly, the prime tool to manage trade in this manner was an agreement on voluntary export restraints (VERs). Owing to their lack of transparency and discriminatory character, VERs have subsequently been banned under the Subsidies and Countervailing Measures Agreement. However, under the Anti-dumping Agreement, voluntary price undertakings are allowed. Under this system, exporting firms agree to increase their prices to a level that eliminates the margin of dumping – i.e. the difference between the export price and the normal price in the exporter’s domestic market. This flexibility to achieve outcomes similar to VERs may be another reason for the attractiveness of anti-dumping measures.

Hauser and Roitinger (2002) raise the concern of “reputation costs”, a more subtle concept of a loss of credibility in international cooperation, that may vary among different measures. Anti-dumping and countervailing measures may be considered particularly “hostile” because they are put in place unilaterally and involve an explicit accusation of unfair practices. Especially if used extensively, they may carry some “political” cost. However, as noted in the previous paragraph, price undertakings instead of anti-dumping duties may to some extent communicate a “cooperative” spirit and subdue the associated political costs.

#### **(e) Domestic institutional considerations**

Governments have some leeway in implementing WTO rules within their own domestic institutional framework. Those involved in the decision-making process regarding contingent measures may differ between presidential and parliamentary systems and the process may involve several bodies. In the United States, for example, safeguard petitions are examined and decided by the International Trade Commission (ITC) but the President makes the final decision concerning whether to provide relief, the type of relief and how long it will last (WTO document G/SG/N/1/USA/1). Conversely, the competence to investigate anti-dumping/ countervailing petitions is shared between the ITC, which deals with injury to domestic industry, and the Department of Commerce, which deals with dumping and subsidization. A favourable decision requires the approval of both institutions, and imposing the duty in such cases is automatic and mandatory (Hansen and Prusa, 1995). The discretionary authority of the President increases the uncertainty of a positive outcome on safeguards compared with anti-dumping/countervailing duties, especially since the President is held to take the “national economic interest” into account, i.e. he has broader considerations that also include consumer welfare (Baldwin, 1985).

It may be assumed that similar reasons play a role in explaining the popularity of anti-dumping measures in other countries as well. From an institutional point of view, the opposite would normally be expected. Especially in developing countries, the resource intensity of anti-dumping measures may be of particular concern – for instance, in relation to the processing and verification of foreign firm data, including through investigations in the territory of

other WTO members. However, Section D shows that some developing countries have become heavy users of anti-dumping measures. This is puzzling in light of the substantial amount of “water”, i.e. the gap between bound and applied duties, that exists in the tariff lines of many developing countries. This “water” would allow the countries to make WTO-consistent tariff hikes without appealing to contingent trade rules.<sup>236</sup> On the other hand, as mentioned in Section C.4, institutional processes, e.g. the need for legislative approval of changes in applied tariff schedules as opposed to contingent measures being driven by the executive branch of government, may explain this heavy use of anti-dumping measures.

All in all, it seems that none of the points raised above can individually or conclusively explain the popularity of anti-dumping measures over the other contingent measures discussed in this Report. However, the combination of elements – namely, the lack of a compensation requirement, the possibility to continue measures after sunset reviews, the ability to discriminate among trading partners, the option to manage trade through price undertakings and, possibly, the existence of effective institutional arrangements – provide a flavour of the flexibility with which anti-dumping policies can be handled. Collectively, these reasons may tilt the cost-benefit considerations of policy-makers in their favour.

## 6. CONCLUSIONS

One of the main objectives of this Report has been to analyze whether WTO rules provide governments with sufficient flexibility to address unanticipated difficulties, on the one hand, and to prevent the protectionist abuse of contingent measures on the other hand. In other words, do WTO rules contribute to beneficial and stable trade cooperation? In reviewing key WTO disciplines concerning the various measures discussed in this Report, a number of elements have emerged that support the notion that the costs of flexibility can be contained. This appears to be the case in relation to the main reasons for signing a trade agreement, the avoidance of terms-of-trade conflicts and the possibility of retaining credibility vis-à-vis domestic stakeholders.

In regard to terms-of-trade considerations, the basic idea of “compensation”, which is attached to the use of safeguards and the possibility of renegotiating commitments, is in keeping with the idea of preserving the originally “agreed” terms-of-trade. By the same token, anti-dumping and countervailing duties can be seen as a “compensating” response to an “unfair” manipulation of the terms-of-trade. As far as credibility is concerned, the available contingent measures appear to be sufficiently disciplined to ensure that commitments are not undermined by excessive flexibility. Credibility is therefore fundamentally preserved. The limited timeframe for safeguards, anti-dumping measures and countervailing duties as well as the need to provide evidence of injury to domestic industry and what has caused it are key requirements in this regard. At the same time, some requirements have proven to be challenging while others have turned out to be less of an obstacle to the implementation of certain measures. Clearly, in practice, the debate on how to achieve the optimal balance between flexibility and the preservation of commitments will continue.

## Endnotes

- <sup>1</sup> Of course, formally the “trigger” also necessarily involves in each and every case some modality of injury. See below.
- <sup>2</sup> Measures may, under certain conditions, also be taken in response to a determination of a threat of material or serious injury respectively, or as in the case of anti-dumping and countervailing measures, a determination of material retardation of the establishment of an industry. These differences are not discussed in depth in this Report.
- <sup>3</sup> Moral hazard occurs when the behaviour of a party changes as a result of being more insulated from risk, such as in the case of the risk-spreading that underlies insurance or the presence of a safeguard mechanism in trade policy.
- <sup>4</sup> In a seminal paper, Grossman and Helpman (1994) explain the process by which special interest groups go about influencing trade policies. The authors assume that lobbies make implicit offers of political contributions as a function of specific sets of trade policies adopted by the government. The government takes into account these offers as well as the welfare of voters at large. In its considerations, the government trades off some reductions in the welfare of the latter against larger interest group contributions and sets policy such that its own objectives, including re-election, are maximized. Baldwin (1989) also notes that governments’ broader social concerns, the preservation of the status-quo or the desire to promote various national and international goals can explain the use of trade protection. Supposedly, governments are again driven by re-election perspectives. Hansen (1990), Moore (1992), Liebman (2004) and others, on the basis of empirical analyses, claim that, at least to some extent, political considerations, such as the location of the requesting industry in the voting district of a key political decision-maker, can explain the probability of the United States International Trade Commission’s (ITC) granting of contingent protection. See also Section D.3.b.
- <sup>5</sup> On the role of retaliation in trade agreements, see *World Trade Report 2007* (WTO, 2007).
- <sup>6</sup> It may be assumed that investment in R&D has external benefits accruing to consumers, which the domestic industry does not take into account in its investment decision (market failure). It, therefore, under-invests in its attempt to catch up.
- <sup>7</sup> In fact, under protection, domestic firms are also encouraged to innovate quickly, since the earlier a successful discovery is made, the longer the higher profits from protection can be enjoyed.
- <sup>8</sup> Sykes (2006b) and Sykes (1991) summarize the reasons why declining industries often represent the best organized lobbies. First, producer groups anticipate that politicians may find it easier to justify to their constituencies protection for an industry that faces difficulties and might cause hardship to dislocated workers. Second, as mentioned before, in an industry that faces difficulties, the return to lobbying for protection increases relative to the return from productive activity. Finally, price increases in declining industries due to protection can be assumed not to lead to the entry of new competitors unlike in prospering industries, where the additional gains would be competed away by new entrants. As mentioned in section B.1, the latter point provides an additional argument why governments are willing to include safeguards in a trade agreement. While firms in the declining domestic import-competing sector can enjoy the rents from protection, firms in the growing foreign export sector may be relatively less alarmed since, with reduced profit margins, the rate of entry by competitors is slowed down. The latter observation is owed to an anonymous referee.
- <sup>9</sup> See Section A for a historical overview of the evolution of GATT/WTO rules on safeguards.
- <sup>10</sup> The transitional special textiles and clothing safeguard clause expired at the end of 2008 and the transitional product-specific safeguard mechanism is due to expire at the end of 2013. See WTO documents WT/L/432: 9-10, and WT/ACC/CHN/49: 46-48. For an analysis of the specific features of the transitional product-specific safeguard mechanism of China, see Bown and Crowley (2007a) and Bown (2009).
- <sup>11</sup> In fact, the Preamble of the SGA explicitly recognizes the importance of structural adjustment.
- <sup>12</sup> Panel Report on *US – Steel Safeguards*, para. 10.98. This issue was not reviewed by the Appellate Body. For a critical discussion of macroeconomic events as a source of “unforeseen developments”, see also Messerlin and Fridh (2006). Stevenson (2004) provides an overview of the findings with regard to unforeseen developments in a range of definitive safeguard decisions between 1995 and 2002.
- <sup>13</sup> See, for example, Panel Report on *Argentina – Footwear*, paras. 8.141 and 8.152; and Appellate Body Report on *Argentina – Footwear*, para. 144.
- <sup>14</sup> Some rise in imports must be expected when new obligations are incurred under a trade agreement.
- <sup>15</sup> The Appellate Body stated even more explicitly that it was not sufficient to examine “simply trends in imports during the past five years – or, for that matter, during any other period of several years” (Appellate Body Report on *Argentina – Footwear*, para. 130). This also precludes a simple comparison of import levels at the end points of the investigation period, as Argentina had done.
- <sup>16</sup> It should also be noted that the SGA is silent on the duration of the investigation period and its breakdown, and the choice, therefore, is left to the discretion of investigation authorities. See Panel Report on *US – Line Pipe*, para. 7.196.
- <sup>17</sup> This also implies that there are no statutory percentages of the industry that need to support the application such as the ones found in the Agreement on Anti-dumping (AD) or the Agreement on Subsidies and Countervailing Measures (SCM).
- <sup>18</sup> See Panel Report on *Korea – Dairy*, para. 7.55-7.58 and 7.68-7.69; and Panel Report on *Argentina – Footwear*, para. 8.123, and Appellate Body Report, paras. 136 and 139.
- <sup>19</sup> See Panel Report on *Argentina – Footwear*, paras. 5.232-5.235, 5.261-5.262, 8.127-8.128 and 8.209-8.211, and Appellate Body Report, para 136. Assessment of capacity utilization was also found to be flawed in *Argentina – Preserved Peaches* (Panel Report, paras. 7.98-7.99).
- <sup>20</sup> Neither does the SGA contain the warning found in the respective legal texts on anti-dumping and countervailing measures that “not one or several of these factors can necessarily give decisive guidance”.
- <sup>21</sup> Of course, this consideration is moot if in reality petitioners discuss their draft complaint with the authorities prior to filing and, through such contacts, get a clear idea as to their chances of success, even under a “diffuse test”. In jurisdictions with a long history of trade remedy practice, the factual patterns sought by the authorities to rule affirmative on injury may be well-known, and petitioners may not tend to file cases with facts that deviate too much from those that the authorities view as a paradigm. These observations are owed to an anonymous referee.

<sup>22</sup> Appellate Body Report on *US – Wheat Gluten*, para. 69; Appellate Body Report on *US – Lamb*, para. 179.

<sup>23</sup> See, for instance, Appellate Body Report on *Argentina – Footwear*, paras. 144-145.

<sup>24</sup> Panel Report on *Argentina – Footwear*, para. 8.164; see also paras. 8.244 – 8.246.

<sup>25</sup> Panel Report on *US – Wheat Gluten*, paras. 8.97-8.101.

<sup>26</sup> Panel Report on *US – Wheat Gluten*, paras. 8.92-8.96.

<sup>27</sup> Panel Report on *US – Steel Safeguards*, paras. 10.310 and 10.312.

<sup>28</sup> Panel Report on *Argentina – Footwear*, paras. 8.250-8.252.

<sup>29</sup> Panel Report on *Argentina – Footwear*, paras. 8.251-8.254.

Similarly, in *US – Steel Safeguards*, the panel held that “relative price trends as between imports and domestic products will often be a good indicator of [causal link] given that price changes have an immediate effect on profitability [... and ] profitability is a useful measure of the state of the domestic industry” (Panel Report on *US – Steel Safeguards*, para. 10.320).

<sup>30</sup> Panel Report on *Argentina – Footwear*, paras. 8.254-8.263 and footnote 557.

<sup>31</sup> Panel Report on *US – Steel Safeguards*, paras. 8.377-8.381.

<sup>32</sup> Panel Report on *US – Steel Safeguards*, paras. 10.429-10.430 and 10.517-10.521.

<sup>33</sup> Panel Report on *US – Lamb*, paras. 7.234-7.238; Appellate Body Report, paras. 168 and 180; Appellate Body Report on *US – Wheat Gluten*, paras. 69-70; Appellate Body Report on *US – Line Pipe*, para. 215. This is generally known as the first step of the two-step approach for the non-attribution analysis established by the Appellate Body in the *US – Wheat Gluten* case.

<sup>34</sup> Appellate Body Report on *US – Wheat Gluten*, para.69; Appellate Body Report on *US – Line Pipe*, para. 217; Appellate Body Report on *US – Lamb*, para. 175. This is generally known as the second step of the two-step approach for the non-attribution analysis established by the Appellate Body in the *US – Wheat Gluten* case.

<sup>35</sup> See Appellate Body Report on *US – Lamb*, paras. 178 – 180; see also Appellate Body Report on *US – Hot Rolled Steel*, paras. 223-228, where similar issues under ADA Article 3.5 are examined.

<sup>36</sup> Appellate Body Report on *US – Line Pipe*, para. 260.

<sup>37</sup> Appellate Body Report on *US – Wheat Gluten*, paras. 85-92.

<sup>38</sup> This is in line with Section 201 of the United States’ Trade Act of 1974 (the US-implementing legislation on safeguards), which stipulates that imports must be a “substantial cause of serious injury”, meaning a cause which is important and not less important than any other cause (Hansen and Prusa, 1995). As pointed out by Irwin (2003) and Ledet (2003), in this respect, it goes beyond the requirements of the WTO SGA.

<sup>39</sup> Appellate Body Report on *US – Wheat Gluten*, paras. 67-79.; Panel Report, paras. 8.139 and 8.152.

<sup>40</sup> Appellate Body Report on *US – Lamb*, paras. 184-188.

<sup>41</sup> For example, in *US – Line Pipe*, the failure to demonstrate how the injurious effects of other factors, such as a decline in the oil and gas industry as a key customer of line pipe, were separated from those caused by increased imports was inconsistent with the requirements contained in SGA Article 4.2.b. See Appellate Body Report on *US – Line Pipe*, para. 220. In *US – Steel Safeguards* it was argued that injury to the domestic industry was caused, *inter alia*, by an increase in the costs of goods sold. The ITC’s counter-argument that import competition had suppressed prices and prevented domestic firms from recovering these costs (and, therefore, were the more important cause of injury) did not amount to a reasoned and adequate explanation,

according to the panel. At the same time it acknowledged that a proper analysis of the relationship between the costs of goods sold and the operating margins of the domestic producers could probably have supported the ITC’s case. At a minimum, the general lack of coincidence during the investigation period (with the exception of a brief window in 1999-2000) between changes in the costs of goods sold and operating margins should have been explained if indeed these costs played a significant role for the situation of the domestic industry. See Panel Report on *US – Steel Safeguards*, paras. 7.1269-7.1277 and 10.439-10.440.

<sup>42</sup> Put simply, at a given price imports satisfy excess demand, i.e. the difference between domestic supply and domestic demand.

<sup>43</sup> Miranda (2009), while acknowledging the tenets of economic theory about the endogeneity of imports and certain domestic factors, argues that a causal link between increased imports and injury factors can be seen to exist if the “double causation” standard is fulfilled, i.e. if “unforeseen developments” lead to an “import surge” which in turn leads to “serious injury”.

<sup>44</sup> In fact, a lack of coincidence between certain factors and injury indicators, such as the costs of goods sold and operating margins, as observed for most of the investigation period in the *US – Steel Safeguards* case, might only indicate that other factors happen simultaneously that are responsible for part of the injury. Grossman and Mavroidis, *US – Steel Safeguards*, in Horn and Mavroidis (2007) eds., *WTO Case Law – Legal and Economic Analysis*, pp. 68-69.

<sup>45</sup> See also the debate between Sykes (2004; 2006a) and Lee (2006a; 2006b).

<sup>46</sup> A third type of economic tool that has been used in trade remedy investigations is simulation models that portray the condition of the domestic industry and can isolate the effects of an exogenous shock holding everything else constant. The US ITC occasionally has applied such techniques. For instance, in the *US – Steel Safeguards* dispute, the United States put forward the results of an economic model (similar to the one described in United States Trade Representative, 2002) in order to illustrate the effect of the safeguard measures in question on supply and demand and to show that these tariffs were not applied beyond the extent necessary (Panel Report on *US – Steel Safeguards*, para. 7.1566, footnote 3619). The complaining parties noted, *inter alia*, that such a model should also have been used in the causation and non-attribution analysis (Panel Report on *US – Steel Safeguards*, paras. 7.1649 ff). However, while simulation models can illustrate the state of the domestic industry in response to an exogenous shock or policy change, they are less suitable to decompose the relative contribution to injury of several simultaneous factors.

<sup>47</sup> For further ground-breaking papers on the role of political motives in the choice of trade policy instruments, see Cassing and Hillman (1985) and Falvey and Lloyd (1991).

<sup>48</sup> Choi (1996) develops a similar mechanism for declining industries based on the political support argument proposed by Magee (1989).

<sup>49</sup> As was said before, such factors might be productivity declines in the domestic industry owing to a lack of technological upgrading. These factors might then need to be addressed through instruments other than tariffs if the state of serious injury of the industry is to be fully remedied. This observation also seems to be in line with a safeguard-applying member’s obligation to provide evidence, at certain intervals, that the industry is indeed adjusting and to progressively liberalize the safeguard measure during the period of application (SGA Articles 7.2 and 7.4). However, the panel in *Korea – Dairy* emphasized that there was no obligation to establish

- a specific adjustment plan *before* a measure could be adopted. See Panel Report on *Korea – Dairy*, para. 7.108.  
<sup>50</sup> See, for instance, Panel Report on *Argentina – Footwear (EC)*, para. 8.289.
- <sup>51</sup> On the US economic model, see Panel Report on *US – Steel Safeguards*, paras. 7.1563-7.1576; on issues of judicial economy, see Panel Report on *US – Steel Safeguards*, paras. 10.700-10.715, particularly para. 10.706.
- <sup>52</sup> Of course, quotas allocated on the basis of historical market shares are inherently discriminatory against new market entrants.
- <sup>53</sup> Quota modulation is explicitly excluded in the case of mere threat of serious injury. This is the only provision in the Agreement on Safeguards that establishes a difference in legal effects between serious injury and a threat of serious injury. See Appellate Body Report on *US – Line Pipe*, para. 173.
- <sup>54</sup> For an overview and empirical assessment of possible discriminatory impacts of safeguards, see Bown and McCulloch (2003).
- <sup>55</sup> It is an open question whether developing countries originally excluded from the application of a safeguard measure (on the basis of having a market share of less than 3 per cent) and whose import volumes grow subsequently on account of trade diversion can become subject to such measures at a later time.
- <sup>56</sup> See, for instance, Pauwelyn (2004).
- <sup>57</sup> See, for instance, Appellate Body Report on *Argentina – Footwear*, paras. 107-114; Appellate Body Report on *US – Wheat Gluten*, paras. 95-96; Appellate Body Report on *US – Line Pipe*, paras. 181 and 187; and Appellate Body Report on *US – Steel Safeguards*, paras. 439-444.
- <sup>58</sup> Notifications under both SGA Article 8.1. and Article 8.2 are to be made to the Council for Trade in Goods, pursuant to SGA Article 12.5.
- <sup>59</sup> The fact that VERs imply compensation through the rents created for the exporting country, thereby maintaining some broad “reciprocity”, and are negotiated rather than imposed unilaterally may make them attractive from an economic point of view. However, being negotiated outside the multilateral framework, VERs were considered little transparent and highly discriminatory and, ultimately, were prohibited explicitly under the SGA. Others have added that VERs were not strictly “voluntary” and existed as a consequence of pressure from external sources, which made exporters “agree” to the lesser of two evils (Low, 1993).
- <sup>60</sup> The extension is not available if modulated quotas are applied (SGA Article 5.2.b).
- <sup>61</sup> Bagwell and Staiger (2005) have argued that a “dynamic use constraint” of that nature is an important tool, like the need to provide compensation or the threat of retaliation, to prevent the abuse of a safeguard mechanism in a trade agreement.
- <sup>62</sup> Viner lists ten motives for dumping. They are: (i) to dispose of a casual overstock; (ii) unintentional; (iii) to maintain connections to a market in which prices are, on remaining considerations, unacceptable; (iv) to develop trade connections and buyers’ goodwill in a new market; (v) to eliminate competition in the market dumped on; (vi) to forestall the development of competition in the market dumped on; (vii) to retaliate against dumping in the reverse direction; (viii) to maintain full production from existing plant facilities without cutting domestic prices; (ix) to maintain the economies of larger-scale production without cutting domestic prices; and (x) on purely mercantilist grounds. In Viner’s analysis, the motives (i) to (ii) lead to sporadic dumping; motives (iii) to (vii) lead to intermittent dumping while motives (viii) to (x) lead to continuous dumping.
- <sup>63</sup> In imperfectly competitive markets, firms are said to engage in Cournot competition when they compete on the basis of their level of output (Cournot, 1838). They choose the profit-maximizing output level independently of one another, i. e. they take their rivals’ level of output as given.
- <sup>64</sup> This is equivalent to the exporting firm having to absorb the cost of transport.
- <sup>65</sup> See Avinash Dixit’s analysis of the Brander-Krugman model in <http://web.mit.edu/krugman/www/dixit.html>.
- <sup>66</sup> The 1916 Act prohibits dumping if it is “done with the intent of destroying or injuring an industry in the United States, or of preventing the establishment of an industry in the United States, or of restraining or monopolizing any part of trade and commerce in such articles in the United States.”
- <sup>67</sup> Shin uses the two-screen approach (Joskow-Klevorik) standard in anti-trust to examine whether United States’ anti-dumping filings would satisfy the first screen (i.e. structural preconditions for predation) and found that only 39 of 169 cases passed the first screen.
- <sup>68</sup> The two papers by Hartigan assume Bertrand competition (Bertrand, 1883). In imperfectly competitive markets, firms are said to engage in Bertrand competition when they compete through their choice of the price at which they will sell their output.
- <sup>69</sup> It should be noted that Viner also included the cyclical motive for dumping among his explanations.
- <sup>70</sup> Opportunity cost refers to the cost associated with the use of resources in their next-best alternative.
- <sup>71</sup> The importing country’s welfare is increased in the second period even if an anti-dumping duty is imposed on imports. This is because under conditions of imperfect competition, and assuming that the domestic and foreign firm competes on quantity, a tariff improves domestic welfare (see Brander and Spencer, 1984 and Eaton and Grossman, 1986).
- <sup>72</sup> Fischer was considering a more general question than Reitzes. He wants to know how the strategic interaction between firms is affected when protectionist policy is enforced with an endogenous probability. He is interested in policies like anti-dumping, countervailing duties, import quotas, voluntary export restraints, etc. which to a large part are triggered by the actions of the exporting firm but which are also affected by how the firms in the importing country behave.
- <sup>73</sup> An upstream industry is any industry that produces inputs for other industries that are closer to the product market. Downstream industry refers to an industry which produces goods at a later stage of a production process, sequence or line.
- <sup>74</sup> An opposite outcome occurred in the *US – Steel Safeguard* case where the entry of imported slab was restricted (Durling and Prusa, 2003). This did not hurt mini-mills since their technology does not use traditional slabs but it did hurt traditional mills who import slab. As a result, several important United States’ steel firms testified against the safeguard action.
- <sup>75</sup> This result is derived from a situation in which policymakers maximize the sum of consumer surplus, producer surplus and tariff revenue. They also show that if products are sufficiently differentiated, anti-dumping policy may have a pro-competitive effect by splitting-up existing cartels. But this outcome is only possible when authorities are assumed to only maximize the sum of domestic producer surplus and tariff revenues, and ignore consumer welfare.
- <sup>76</sup> Article 2.6 of the AD Agreement.
- <sup>77</sup> See WTO document G/ADP/6.

- 78 Article 2.3 of the AD Agreement.
- 79 Article 2.4 of the AD Agreement.
- 80 Article 2.2 of the AD Agreement.
- 81 Article 2.5 of the AD Agreement. However, comparison may be made with the price in the country of origin, if, for example, the products are merely transhipped through the country of export, or such products are not produced in the country of export, or there is no comparable price for them in the country of export.
- 82 Article 2.4.2 of the AD Agreement.
- 83 Article 4.1 of the AD Agreement.
- 84 See Panel Report on *EC – Bed Linen*, para. 6.72.
- 85 See Panel Report on *Mexico – Steel Pipes and Tubes*, para. 7.322.
- 86 Article 5.4 of the AD Agreement.
- 87 See Appellate Body Report on *US – Hot Rolled Steel*, para. 190.
- 88 See Appellate Body Report on *US – Hot Rolled Steel*, para. 204.
- 89 Footnote 9 of the AD Agreement.
- 90 Appellate Body Report on *US – Hot Rolled Steel*, para. 192.
- 91 Appellate Body Report on *Thailand – H-Beams*, para. 107.
- 92 Appellate Body Report on *Mexico – AD Measures on Rice*, para. 204.
- 93 Appellate Body Report on *US – Hot Rolled Steel*, para. 193.
- 94 The Appellate Body in *EC – Bed Linen Article 21.5* held that imports from sources not found to have been dumping are not to be included in the volume effect examination (see para. 115).
- 95 Appellate Body Report on *EC – Tube or Pipe Fittings*, footnote 114.
- 96 Panel Report on *Egypt – Steel Rebar*, para. 7.73.
- 97 Panel Report on *Thailand – H-Beams*, para. 7.168.
- 98 Panel Report on *Guatemala – Cement II*, para. 8.266.
- 99 Panel Report on *EC – Tube or Pipe Fittings*, para. 7.277.
- 100 The dumping margin is said to be *de minimis* if it is less than 2 per cent of the export price (Article 5.8 of the Anti-dumping Agreement).
- 101 The volume of dumped imports is said to be negligible if the volume of dumped imports from a particular country is found to account for less than 3 per cent of imports of the like product in the importing member, unless the countries which individually account for less than 3 per cent of the imports collectively account for more than 7 per cent of imports of the like product in the importing member.
- 102 Panel Report on *EC – Tube or Pipe Fittings*, para. 7.241. The panel added that “cumulation must be suitable or fitting in the particular circumstances of a given case in light of the particular conditions of competition extant in the marketplace.”.
- 103 See Panel Report on *EC – Tube or Pipe Fittings*, para. 7.243. This follows the approach of the Appellate Body on *US – Hot Rolled Steel*, paras. 192-193 of its report.
- 104 Appellate Body Report on *Thailand – H-Beams*, para. 125. Specifically, the Appellate Body upheld the panel’s finding that all the factors listed under Article 3.4 must be evaluated and that the injury determination of the Thai investigating authority was inconsistent with Article 3.4 because, *inter alia*, three listed factors were not considered. See also Panel Report on *EC-Bed Linen*, para. 6.159; Panel Report on *Mexico – Corn Syrup*, para. 7.128; Panel Report on *Guatemala – Cement II*, para. 8.283.
- 105 Article 3.4 of the AD Agreement. See Appellate Body Report on *US – Hot Rolled Steel*, paras. 194-195.
- 106 Panel Report on *EC – Tube or Pipe Fittings*, para. 7.314; Panel Report on *Thailand – H Beam*, para. 7.236; Panel Report on *Korea – Certain Paper*, para. 7.272 and Panel Report on *Egypt – Steel Rebar*, para. 7.44.
- 107 Panel Report on *Thailand – H-Beam*, paras. 7.248-7.251, 7.255-7.256.
- 108 Panel Report on *Egypt – Steel Rebar*, paras. 7.42-7.45.
- 109 Panel Report on *EC – Tube or Pipe Fittings*, para. 7.316.
- 110 Panel Report on *EC – Tube or Pipe Fittings*, paras. 7.310-7.311. In this case, Brazil challenged EC’s injury determination which failed to examine independently the factor of “growth”. The EC argued that although no separate record was made of its evaluation of “growth”, its consideration of this factor is implicit in its analysis of other factors, including sales, output, profits, market share, productivity and capacity utilization. The panel observed that the record of EC’s investigation showed that during the evaluation of other listed factors, the EC had touched upon “the performance and relative diminution or expansion of the domestic industry” which indicated that the “growth” factor was implicitly examined. In the panel’s view, such an implicit examination is sufficient to meet the Article 3.4 requirement and it is not required to make a separate record of the evaluation of each Article 3.4 factor in every anti-dumping investigation.
- 111 Appellate Body Report on *EC – Tube or Pipe Fittings*, paras. 157, 159, 166. The Appellate Body also noted that “whether a panel conducting an assessment of an anti-dumping measure is able to find in the record sufficient and credible evidence to satisfy itself that a factor has been evaluated, even though a separate record of the evaluation of that factor has not been made, will depend on the particular facts of each case.”. The Appellate Body observed that the panel conclusion on the factor “growth” was reasonable under the particular fact of the case (para. 161).
- 112 Panel Report on *EC – Tube or Pipe Fittings*, para. 7.329.
- 113 Panel Report on *US – Softwood Lumber VI*, paras. 7.67-7.68.
- 114 Panel Report on *Mexico – Corn Syrup*, paras. 7.126, 7.131-7.132.
- 115 Panel Report on *US – Softwood Lumber VI*, para. 7.105.
- 116 The Appellate Body on *US – Hot Rolled Steel* held that the non-attribution language applies solely to the situation where dumped imports and other known factors are causing injury to the domestic industry at the same time (Appellate Body Report on *US – Hot Rolled Steel*, para. 223).
- 117 Panel Report on *Thailand – H-Beams*, paras. 7.231, 7.274-7.275. See also Panel Report on *Egypt – Steel Rebar*, para. 7.115.
- 118 Panel Report on *Thailand – H-Beams*, para. 7.273. See also Panel Report on *EC – Tube or Pipe Fittings*, para. 7.359.
- 119 Appellate Body Report on *EC – Tube or Pipe Fittings*, para. 178.
- 120 Appellate Body Report on *US – Hot Rolled Steel*, para. 230.
- 121 See also the discussion on safeguards in the previous section.
- 122 Appellate Body Report on *US – Hot Rolled Steel*, paras. 223, 226, 228. See also Appellate Body Report on *EC – Tube or Pipe Fittings*, para. 188.
- 123 Appellate Body Report on *US – Hot Rolled Steel*, para. 224; Appellate Body Report on *EC – Tube or Pipe Fittings*, para. 189.

- <sup>124</sup> Appellate Body Report on *EC – Tube or Pipe Fittings*, paras. 191-192.
- <sup>125</sup> Article 7.1 of the AD Agreement.
- <sup>126</sup> Articles 9 and 10 of the AD Agreement.
- <sup>127</sup> Article 9.1 of the AD Agreement.
- <sup>128</sup> This is a bit of a simplification, in the sense that there is limited retroactivity of definitive measures. See Article 10 of the AD Agreement.
- <sup>129</sup> The five-year period counts either (i) from the date of the original imposition; or (ii) from the date of the most recent administrative/changed circumstances review under Article 11.2, if the review at hand covered both dumping and injury, or (iii) from the date of the most recent sunset review.
- <sup>130</sup> Noting that during the review process, anti-dumping duties still remain in place and that a review should normally be completed within 12 months, see last sentence of Article 11.3 and Article 11.4 of the AD Agreement.
- <sup>131</sup> Panel Report on *US – Corrosion-Resistant Steel Sunset Review*, paras. 7.271, 7.279.
- <sup>132</sup> Appellate Body Report on *US – Corrosion Resistant Steel Sunset Review*, paras. 111, 114. The Appellate Body on *US – Oil Country Tubular Sunset Review* adopted a similar approach, adding that the positive evidence requirement is not necessarily violated even when there are inferences drawn from projections into the future due to the prospective nature of a sunset review (Appellate Body Report on *US – Oil Country Tubular Sunset Review*, paras. 179-180, and 341).
- <sup>133</sup> Panel Report on *US – Corrosion-Resistant Steel Sunset Review*, para. 7.166.
- <sup>134</sup> Relevant cases are *US – Corrosion Resistant Steel*, *US – Oil Country Tubular Goods Sunset Review* and *United States – Anti-dumping Measures on Oil Country Tubular Sunset Review*. At issue in these cases was the Sunset Policy Bulletin (SPB), a document used by the United States Department of Commerce in making its sunset review determinations. The panels in these cases concluded that the SPB is inconsistent with Article 11.3 of the ADA because it establishes an irrebuttable presumption that termination of the anti-dumping duty would be likely to lead to continuation or recurrence of dumping, and therefore is inconsistent with the obligation to determine the likelihood of continuation or recurrence of dumping based on a sufficient factual basis, taking into consideration the circumstances of the case at issue. The Appellate Body reversed these findings, ruling that the panels in each case failed to make an objective assessment of the matter, including an objective assessment of the facts of the case, as required by Article 11 of the DSU. Essentially, the Appellate Body found that the panels did not adequately assess the evidence in order to come to their conclusion that the SPB establishes an irrebuttable presumption regarding likelihood of continuation or recurrence of dumping.
- <sup>135</sup> Panel Report on *US – Corrosion-Resistant Steel Sunset Review*, paras. 7.26, 7.27, 7.67, 7.68, 7.70.
- <sup>136</sup> Panel Report on *US – Corrosion-Resistant Steel Sunset Review*, para. 7.166.
- <sup>137</sup> Appellate Body Report on *US – Corrosion Resistant Steel Sunset Review*, paras. 127-128.
- <sup>138</sup> Panel Report on *US – Oil Country Tubular Goods Sunset Review*, paras. 7.273, 7.274.
- <sup>139</sup> Appellate Body Report on *US – Oil Country Tubular Goods Sunset Review*, paras. 278, 281, 284.
- <sup>140</sup> Appellate Body Report on *US – Anti-Dumping Measures on Oil Country Tubular Goods*, para 123.
- <sup>141</sup> Appellate Body Report on *US – Anti-Dumping Measures on Oil Country Tubular Goods*, para 123.
- <sup>142</sup> As evidenced by the reactions of governments to the current economic crisis, subsidies could in principle be used to respond to adverse shocks. In this Report, however, the focus is on the use of tariffs for contingent protection purposes and subsidies will only be discussed in relation with countervailing duties.
- <sup>143</sup> A more general discussion of the economics of subsidies can be found in WTO (2006).
- <sup>144</sup> A perfect market is a market where all actors are acting rationally and with full information, where there are no transaction costs, where the number of participants is sufficiently large that no individual participant can influence the price, and where external effects are excluded.
- <sup>145</sup> See the graphical presentation in Baylis (2007).
- <sup>146</sup> Industries characterized by increasing returns to scale will typically also be characterized by imperfect competition, as discussed below.
- <sup>147</sup> See WTO (2006) for an in-depth discussion of some stated objectives of governments for using subsidies.
- <sup>148</sup> Sykes (1989) discusses the multi-country case in detail.
- <sup>149</sup> Sykes (1989) argues that United States' anti-trust law cannot be employed to deal with foreign government-financed predation.
- <sup>150</sup> The optimal response is a positive subsidy if demand is non-linear but no subsidy in the linear case.
- <sup>151</sup> Hartigan (1996a) uses the word "hysteresis", i.e. the persistence of effects after the cause of the effects has been removed. On this particular point, see United States' Arguments in WT/DS212 *US – CVDs on certain EC products*.
- <sup>152</sup> More precisely, the assumption is that the marginal worker earns a premium over the returns available in the next best alternative wage rate and exceeds the market clearing wage. Under this assumption, the measure of producer surplus used in the first part of this sub-section is inaccurate.
- <sup>153</sup> If the source of the distortion is efficiency wages, correcting it would undermine the incentive system that rests on such wages.
- <sup>154</sup> Sykes (1989) discussed US contingent protection. He argued in favour of using the "escape clause" which had several advantages, in his view, compared with the countervailing duty law. It applied to all imports, imposed only temporary restrictions, used serious unemployment as evidence of serious injury, tailored the magnitude of protection to the circumstances at hand, etc.
- <sup>155</sup> Along the same lines, Bagwell and Staiger (2002) have shown that exporting governments may decide to establish international regulations on the use of subsidies in order to avoid destructive subsidy wars.
- <sup>156</sup> Baylis (2007) argues that CVDs could be thought of as a form of litigation law, where penalties are intended to induce parties to take care in their actions and decrease the probability of injury, but the litigation mechanism is subject to abuse by those filing the claims.
- <sup>157</sup> As mentioned above, the strategic trade literature has explored games where countervailing duties can deter the use of subsidies. There may also be some systemic arguments explaining the use of countervailing duties as part of a mechanism to enforce subsidies disciplines or as a means to achieve deeper tariff cuts in negotiations (see sub-section B.1).
- <sup>158</sup> A 1994 study of the US Congressional Budget Office examines the reasons for the greater use of countervailing duties by the US (Congressional Budget Office, 1994).
- <sup>159</sup> In the Tokyo Round, a subsidies code was negotiated where most of the substantive and procedural restrictions on the use of countervailing duties that were later included in the SCM Agreement can be found. The Code, however, was accepted by only a limited number of GATT signatories. See Sykes (2003a).

- <sup>160</sup> The Appellate Body on *Brazil – Dessicated Coconut* stated that countervailing duties may only be imposed in accordance with GATT Article VI and the SCM Agreement. [Appellate Body Report on *Brazil – Dessicated Coconut*, para. 15].
- <sup>161</sup> WTO disciplines on subsidies are inscribed under Article III.8, VI and XVI of GATT, the SCM Agreement and the Agreement on Agriculture.
- <sup>162</sup> GATS core disciplines, in particular its MFN and national treatment obligations, do not discipline the use of export subsidies. Such subsidies may therefore appear to be natural candidates for the additional disciplines referred to in Article XV:1.
- <sup>163</sup> SCM Agreement Article 4 for prohibited subsidies and Article 7 for other subsidies.
- <sup>164</sup> SCM Agreement Article 10, footnote 35.
- <sup>165</sup> SCM Agreement Article 11.
- <sup>166</sup> SCM Agreement Article 11.9.
- <sup>167</sup> For developing countries, the *de minimis* threshold is 2 per cent (SCM Agreement, Article 27.10).
- <sup>168</sup> See, in particular, the panel report on *US – Export Restraints*. See also the discussion in WTO (2006).
- <sup>169</sup> For a discussion on establishing “benefit” in the case of non-recurring subsidies, see Grossman and Mavroidis (2003a).
- <sup>170</sup> See WTO (2006, 197).
- <sup>171</sup> Appellate Body Report on *Canada – Aircraft*, para. 154.
- <sup>172</sup> Appellate Body Report on *Canada – Aircraft*, para. 157.
- <sup>173</sup> See WTO (2006, 197) and the discussion in Grossman and Mavroidis (2003a) and Horn and Mavroidis (2005).
- <sup>174</sup> See Appellate Body Report on *US – Countervailing Measures on Certain EC Products*, para 127.
- <sup>175</sup> Appellate Body Report on *US – Certain Products*, para 122.
- <sup>176</sup> This, according to the Appellate Body, might be the case if for example the government intervenes in the market to induce outcomes that it considers to be socially or politically desirable. See Appellate Body Report on *US – Countervailing Measures on Certain EC Products*, paras 122-123.
- <sup>177</sup> Note that this standard has no textual basis in the SCM Agreement or in the case law.
- <sup>178</sup> Prohibited subsidies (see Article 3 of the SCM Agreement) are deemed specific according to Article 2.3 of the SCM Agreement.
- <sup>179</sup> Article 11.2 of the SCM Agreement.
- <sup>180</sup> The amount of benefit in case of a loan (or loan guarantee) by a government shall be the difference between the amount that the firm receiving the loan (or the loan guarantee) pays on the government loan (or the loan guaranteed by the government) and the amount the firm would pay on a comparable commercial loan which the firm could actually obtain on the market (or a comparable commercial loan absent the government guarantee).
- <sup>181</sup> Id. paras. 7.212-7.215.
- <sup>182</sup> Appellate Body Report on *US – Softwood Lumber IV*, paras. 100-103.
- <sup>183</sup> Appellate Body Report on *US – Softwood Lumber IV*, para.109. The Appellate Body reversed the panel’s finding on Article 14(d); however refused to complete the examination of whether the method used by the United States’ Department of Commerce (DOC) is consistent with Article 14(d) because the relevant facts are not undisputed (para.128).
- <sup>184</sup> ASCM Article 15.2, 15.4 and 15.6.
- <sup>185</sup> ASCM footnote 46 and Article 16.

- <sup>186</sup> Such a consistent interpretation is in line with the Ministerial Declaration On Dispute Settlement Pursuant to the Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994 or Part V of the SCM Agreement which recognized the need for a consistent resolution of disputes arising from anti-dumping and countervailing duty measures.
- <sup>187</sup> In *EC – Countervailing Measure on DRAMS Chips*, the panel referred to the jurisprudence concerning Article 3.5 of the AD Agreement and concluded that Article 15.5 contains a similar requirement to separate and distinguish the injury caused by factors other than subsidized imports. (para. 7.404).
- <sup>188</sup> See also Horn and Mavroidis (2007b).
- <sup>189</sup> SCM Agreement, Article 21.1 and 2.
- <sup>190</sup> For a detailed discussion, see Grossman and Mavroidis (2007a) and Meagher (2003).
- <sup>191</sup> Appellate Body Report on *US – Carbon Steel*, para. 118.
- <sup>192</sup> Appellate Body Report on *US – Carbon Steel*, paras. 87-89.
- <sup>193</sup> Panel report on *US – Carbon Steel*, paras. 8.92 – 8.95. and 8.117-8.119.
- <sup>194</sup> See the discussion on the existence of benefits above.
- <sup>195</sup> See Grossman and Mavroidis (2007b) for a discussion of the Appellate Body ruling on this issue. In an effort to implement the rulings and recommendations of the Dispute Settlement Body following these disputes, the DOC introduced a new method for determining whether a previously bestowed subsidy continued to benefit private firm. The panel on *US – Countervailing Measures on Certain EC Products Article 21.5* recognized the consistency of the DOC’s application of this new method for revising the assessment on the continued existence of benefit following the privatization of a French company. Specifically, the panel found that the non-recurring benefit was passed through beyond the privatization as one of the analyzed sale segments was found to be not for fair market value even when the arm’s length analysis was found to lack adequate and reasoned explanation. The panel reasoned that the conclusion on arm’s length is not dispositive with regard to the continued existence of benefit and the arm’s length test in an analysis of privatization conditions is “an ancillary examination that provides the context for, and otherwise informs, the decision on fair market value” (panel report, paras. 7. 157-7.158, 7.172).
- <sup>196</sup> The argument is second-best because it applies in a situation where a unique first-best optimum cannot be attained because of pre-existing market imperfections. In this case, whether the second-best measure is welfare-improving will depend on the specific circumstances at hand.
- <sup>197</sup> As discussed in Section B, economists call these type of commitments “weak” bindings.
- <sup>198</sup> Article XXVIII.1 and the Ad note 1 to paragraph 1 of Article XXVIII.
- <sup>199</sup> Article XXVIII.4 and 5.
- <sup>200</sup> GATS Article XXI.1(a).
- <sup>201</sup> Article XXI.2(a) which refers to any member whose benefit may be affected by the proposed modification of withdrawal of commitment.
- <sup>202</sup> Further clarifications are in the Uruguay Round Understanding on the Interpretation of Article XXVIII of GATT 1994 (Understanding XXVIII).
- <sup>203</sup> There are two different criteria for determining the PSI status. The traditional one is an “import” criterion according to which PSI status is given to the member having the larger import share in the market of the member seeking to modify or withdraw its concession over a reasonable period of time prior to the renegotiation. An “export” criterion

- was introduced in the Uruguay Round Understanding on GATT Article XXVIII as a means of better representing the interests of small exporters. According to this criterion, a member gains PSI status if the concession in question affects trade which constitutes a major part of the total exports of the member concerned. See the Ad notes 4 and 5 to GATT Article XXVIII.1. Further details can be found in the Understanding XXVIII.
- <sup>204</sup> The member with substantial interest is also determined by the contracting parties. The expression "substantial interest" is intended to be construed to cover only members which have significant share in the market of the member seeking to modify or withdraw its concession. The practice has been to recognize it for members having 10 per cent or more of the import market share. See the Ad note 7 to GATT Article XXVIII.1. The Understanding XXVIII provides further details.
- <sup>205</sup> GATT Article XXVIII.3(b).
- <sup>206</sup> GATS, Article XXI.3 and 4.
- <sup>207</sup> See GATT Article XXXVI.8 and relevant Ad note.
- <sup>208</sup> On the rationales for flexibilities in trade agreements, see Section B.
- <sup>209</sup> GATT Document MTN.GNG/MA/W/13 describes the chairman of the negotiating group on market access guidelines on credit for tariff bindings.
- <sup>210</sup> Stahl and Turunen-Red (1995) show that the uncertain future can create an incentive for trade agreements: since payoffs of all players are subject to political changes, trade agreements that limit policy variations can provide long-run gains.
- <sup>211</sup> The case of wheat is rather specific because the variability of *ad valorem* equivalents of non *ad valorem* rates is typically much higher given the variability of the prices used in their computation than that of *ad valorem* tariff rates.
- <sup>212</sup> For unbound lines, the authors apply the existing average binding overhang to compute new tariffs.
- <sup>213</sup> Note that the authors also consider less extreme scenarios which are of less interest from the perspective of this Report.
- <sup>214</sup> See WTO et al. (2008) for detailed country tariff profiles.
- <sup>215</sup> Art VIII stipulates that such taxes should be limited in amount to the approximate cost of services rendered and shall not represent an indirect protection to domestic products or a taxation of imports or exports for fiscal purposes.
- <sup>216</sup> The role of flexibilities in a trade agreement is discussed in Section B.1.
- <sup>217</sup> Between early 2003 and mid-2008 internationally traded food prices increased by 138 per cent (World Bank, 2009). This trend was then reverted by the abrupt slowdown of the global economy subsequent to the financial crisis.
- <sup>218</sup> See Appendix B.1 on the economic justifications for contract incompleteness.
- <sup>219</sup> Other objectives include: to improve terms-of-trade, to operate quality control on exports, to favour export diversification, to respond to tariff escalation, protect environment, etc. For a review on the economics and the empirical evidence of use of export taxes, see Piermartini (2004).
- <sup>220</sup> For example, empirical evidence on the effects of the introduction of export taxes on palm oil by the Indonesian Government in 1994 suggest that market intermediaries rather than final consumers appropriate most of the benefits of the tax. One suggested explanation is the palm oil market structure in Indonesia, where the five biggest refiners represent over 60 per cent of the industry and control the leading brand-name in the cooking oil (Marks et al. 1998 and Larson, 1996).
- <sup>221</sup> In the case of Indonesia, for example, Larson (1996) finds that export taxes on palm oil contributed to increased uncertainty regarding the profit margins of the palm oil refining industry and reduced the scope for effective risk management, thereby hindering investments. In addition, the tax on palm oil put downward pressure on the price of coconut oil and many coconut factories closed down.
- <sup>222</sup> The reason is that a devaluation increases the price of exported goods denominated in domestic currency.
- <sup>223</sup> See evidence in Section D.1.
- <sup>224</sup> This phenomenon is known as the "tragedy of the commons".
- <sup>225</sup> See the discussion on environmental policy in the *World Trade Report* (WTO, 2006).
- <sup>226</sup> Accordingly, economists in general argue in favour of price-based measure as opposed to quantitative measures to restrict trade. The main reason is that the former are transparent and simple to administer. In contrast, bans are not credible long-term and often lead to smuggling, and quotas introduce a strong discretionary element in the trading system. Quota allocation arrangements may encourage the formation of powerful cartels and, in general, rent-seeking activities.
- <sup>227</sup> For a brief overview on recent legal issues related to export taxes, see Kazeki (2005) and Crosby (2008).
- <sup>228</sup> Article XX(j) that refers to the application of a policy "essential to the acquisition or distribution of products in general or in local supply" may also be relevant in this case.
- <sup>229</sup> See [http://www.wto.org/english/news\\_e/news07\\_e/good\\_counc\\_9july07\\_e.htm](http://www.wto.org/english/news_e/news07_e/good_counc_9july07_e.htm)
- <sup>230</sup> For evidence on the intensity of the use of export taxes across countries, see Section D.
- <sup>231</sup> In other words, an industry seeking import relief lobbies for the option that maximizes expected profits in light of the lobbying costs involved and the associated subjective probability of success. See Moore and Suranovic (1992).
- <sup>232</sup> This argument seems to be more theoretical than of a practical relevance, since an anti-dumping duty-imposing country would not win a dispute absent any sort of supporting evidence.
- <sup>233</sup> The average duration of a dispute so far has been about two years from the date of request for consultations until the date of circulation of an Appellate Body report. If averages for the reasonable period of time during which implementation must occur as well as the time for a compliance panel and Appellate Body compliance report are added the total process starting from the request for consultations can take over three and a half years. See *World Trade Report 2007* (WTO, 2007).
- <sup>234</sup> There is probably good reason for the predominance of major economies – the need for an affirmative injury determination means petitioners would be very reluctant to exclude large traders.
- <sup>235</sup> These arguments bring to the fore the more general discussion of the economic rationale for MFN. While MFN is not an efficiency principle, it has other advantages, notably when further dynamic and political economy considerations come into play. In relation to technology adoption, Choi (1995) notes that if any competitive advantage obtained by one country could be taxed away *ex post* by discriminatory trade measures, companies would invest less than they would if they were guaranteed equal treatment independent of their origin. Horn and Mavroidis (2001) and others also have shown that MFN reduces the risk of trade policy capture by special interest groups and, hence, diminishes the risk of political abuse, the absence of which is taken for granted by Crowley (2006). See *World Trade Report 2007* (WTO, 2007) for an extensive discussion of MFN.

<sup>236</sup> In fact, one may compare the information on anti-dumping duties contained in Bown (2007) to the gap that may exist between bound and applied rates in these tariff lines, notably in developing countries. Such a comparison shows that a number of countries have indeed imposed anti-dumping duties, despite the “water” in the respective tariff. In some cases, the “water” has even been larger than the reported anti-dumping duty.

