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Subsidies, Countervailing Duties, and the WTO: Towards an Open Subsidy Club

by Jürgen Stehn

CONTENTS

- Subsidies have become one of the most important instruments for industrial policy purposes in recent years, especially for the purpose of promoting high-technology industries. However, the multilateral rules for the granting of subsidies and the imposition of countervailing duties are still rather weak and imprecise and subsequently leave broad space to national discretion.
- In order to mitigate the international frictions that are arising from subsidization of domestic firms and industries, an "open subsidy club" should be introduced. The establishment of such a club should include at least three reform steps:
  - To overcome the problems associated with the current material injury test, a multilateral notification system should be introduced. It should provide that all plans to grant new subsidies or to alter existing subsidies are to be notified to and approved by the WTO Committee on Subsidies and Countervailing Measures (CSCM). Given that a signatory grants a subsidy in violation of multilateral rules, the CSCM should be empowered to require a repayment of the subsidy. If a rule-violating country does not react to a CSCM ruling, it should be excluded from all newly established open subsidy clubs.
  - All subsidies should be ranked according to their potential competition (trade) distortion effects. It can be realistically assumed that the competition effects of subsidies are the higher, the closer the respective subsidy base is to the end of the value-added chain of a firm. For each subsidy category, qualitative thresholds that limit the provision of subsidies to a certain fraction of the respective subsidy base should be set.
  - One of the main reasons for the relatively vague and imprecise regulations on subsidies and countervailing duties is that governments are simply not willing to give up two important instruments of industrial policy. It is thus rather optimistic to believe that the strict thresholds proposed above will become reality in the near future. However, to facilitate further liberalization steps, one could think about establishing an open subsidy club that provides a compromise between the economic need for stricter rules and the desire of governments to keep a "free hand" for the funding of domestic industries. The rules of this open club could provide that a country is free to exceed the thresholds proposed above, if, and only if, a national subsidy program offers firms located in third countries an open access on a conditional most favored nation basis. Countries joining the open subsidy club would be free to double the thresholds proposed above.

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Contents

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I. Introduction

Subsidies have become one of the most important instruments for industrial policy purposes in recent years, especially for the purpose of promoting high-technology industries. While multilateral trade negotiations have been remarkably successful in phasing out or at least reducing trade barriers that have a direct impact on cross-border trade flows (tariffs, nontariff barriers), national governments are still relatively free to use national economic policy instruments for the promotion of specific firms or industries that exert a more or less indirect impact on international trade. Above all, the multilateral rules for the granting of subsidies, on the one hand, and the imposition of countervailing duties, on the other hand, are still rather weak and imprecise and subsequently leave broad space for national discretion.

The failure of effective multilateral rules has led to some major trade disputes, especially in view of the promotion of high-technology industries that are deemed to be "strategic" for the further development of national economies. The current debate mainly focuses on the pros and cons of subsidies to basic and applied research and development, because the share of public funding in private R&D expenditures is quite high in some industrial countries. It varies between 11 and 33 percent in leading OECD countries, with the remarkable exception of Japan where public subsidies cover only 1.5 percent of private R&D outlays. However, R&D subsidies are not the only instrument for the promotion of high-technology industries, because R&D subsidies often go along with investment and production subsidies, as the Airbus case demonstrates.[1] Hence, to prevent major disputes arising from the funding of high-technology industries, effective multilateral rules are to be formulated not only with respect to R&D subsidies but also with regard to other kinds of government assistance.

The objective of this paper is to analyze and evaluate the current multilateral regulations for the granting of subsidies and the imposition of countervailing duties as well as to formulate new rules for a more effective multilateral supervision of national subsidy programs. The first two sections briefly analyze the evolution and current state of multilateral rules on subsidies and countervailing duties. Then, the main advantages and disadvantages of the current agreements will be discussed. The final section provides detailed reform proposals that basically aim at establishing an open subsidy club.

II. Subsidies, Countervailing Duties, and the GATT: A Brief Sketch of the History

Although there is a logical complementarity between rules for the granting of subsidies and rules for the imposition of countervailing duties (CVDs), the drafters of the GATT regarded the regulation of subsidies and the implementation of appropriate remedies as distinct areas for multilateral negotiations. As a consequence, subsidies and CVDs are treated separately in different articles of the GATT. What is more, restrictions that Article XVI puts on the use of subsidies are neither the economic nor the legal inverse of the provisions of Article VI which deals with the implementation of CVDs.

Article XVI draws two basic distinctions, one between domestic and export subsidies and another between primary (agriculture) and nonprimary export subsidies. Whereas domestic subsidies are regarded as an important instrument of national economic policy that leads only to minor trade effects, the drafting nations judged export subsidies as particularly pernicious, because they are likely to lead to "beggar-thy-neighbor" policies and subsequently to major

frictions in international relations. Thus, Article XVI prohibits all subsidies that reduce the price of nonprimary exports, but gives the green light for domestic subsidies. The second distinction — that between primary and nonprimary export subsidies — was based on political reality, not on economic principles. In view of the fact that all major industrial countries were running huge farm subsidy programs and were unwilling to undertake significant reforms in agriculture policies, export subsidies on primary products are generally compatible with Article XVI, unless these subsidies lead to "more than an equitable share of world export trade in [the subsidized] product ..." (GATT, Article XVI B (3)).

The GATT Article VI provisions on countervailing duties have their origin in the United States' proposals for a — never to be — International Trade Organization (ITO) charter.[2] The negotiating parties agreed to include rules on the imposition of countervailing duties along with those on anti-dumping measures in the early drafts that ultimately became GATT Article VI. The only controversy in the early discussions concerned the pros and cons of an injury test in countervailing duty law (Brown 1950). Although the United States had no such test in its own law, it strived with success to include one in the 1945 ITO Charter. Ironically, the GATT Protocol of Provisional Application, which was needed to put GATT Part II (including Article VI) into force, allowed the United States to continue to enforce its countervailing duty law even though it was inconsistent with GATT.

Article VI authorizes GATT signatories to countervail against export as well as domestic subsidies and contains only a very lax definition of what constitutes a subsidy, which leaves broad space for a wide range of countervailing measures. The GATT refers to a "bounty or subsidy bestowed, directly or indirectly, upon the manufacture, production or export of any merchandise" (GATT, Article VI (3)). GATT's failure to link the regulation of countervailing duties to those of subsidies in Article XVI leads to the paradoxon that an importing country is free to countervail even if the subsidy given by an exporting country does not violate Article XVI. This passive approach to countervailing duties can be explained to some extent by the low number of countervailing duty cases in the early years of the GATT. Until 1958, only the United States had implemented separate anti-dumping and countervailing duty laws, and only Belgium and the United States made noticeable use of countervailing duties (Contracting Parties 1958). Moreover, the United States did not actually countervail against a *domestic* subsidy abroad until as late as 1973 (Barcelo 1991).

The rare use of countervailing duties as countermeasures against foreign subsidies might also be the reason why CVDs did not receive any serious GATT attention until the beginning of the Tokyo Round negotiations (1974–1979). In 1974, the new United States Trade Act brought about a dramatic change, because it heavily encouraged the use of countervailing duties. While there have been no outstanding United States' countervailing duty orders in the period 1959–1967, there were 30 outstanding orders by the end of 1974; and the trend increased even more dramatically thereafter (Marks and Malmgren 1984).

As a result, most of the United States' trading partners strived for the inclusion of an injury test in the United States law during the Tokyo Round subsidy-countervailing-duties negotiation. The United States for its part aimed at stricter rules for the use of subsidies (Lowenfeld 1980). The Subsidies and Countervailing Duty Code of 1979 (Subsidies Code) tried to achieve both objectives. The so-called "Track I" of the code contains rules for the imposition of countervailing duties, whereas "Track II" regulates the use of subsidies.

With respect to subsidies, the Code recognizes that on the one hand "subsidies are used by governments to promote important objectives of national policies", but also takes into account that on the other hand "subsidies may have harmful effects on trade and production." It is thus the objective of the Subsidy Code "to ensure that the use of subsidies does not adversely affect or prejudice the interest of any signatory of this agreement." The Code provides that signatories shall seek to avoid that subsidies cause "material injury" or "adverse effects" to

the domestic industry of other signatories. To lay a common ground for the determination of material injury, the Code lists two sets of factors that should be taken into account in an injury test: (i) the existence of material injury should be measured in terms of declining sales, falling profits, a low capacity utilization, and falling employment; (ii) the causation between subsidized imports and material injury should be determined either in terms of an absolute increase of imports or in a rising market share of foreign producers. The heading "adverse effects" subsumes (i) effects of the subsidized imports on the domestic market of the importing signatory, (ii) the displacement, or impediment of imports of like products into the market of the subsidizing country, and (iii) the displacement of exports of another signatory on third countries' markets. The Pre-Tokyo Round distinctions between export and domestic subsidies and primary and nonprimary subsidies as well as the definition of subsidies stayed unchanged during the negotiations.

The main innovation of the Tokyo Round Subsidies Code was the introduction of a detailed dispute settlement mechanism. The Code provides that a country may request consultations with another signatory if it has reason to believe that the other signatory is granting an export subsidy or any other subsidy that causes material injury or adverse effects. The stated objectives of these consultations are to clarify the facts and to come to a "mutually acceptable solution." If no solution is reached in a specified number of days, both parties may present the matter to the "Committee", a forum consisting of all members of the Code. The Committee again reviews the facts and brings in its authority ("good offices") to encourage the parties to settle the case on a bilateral basis. If no settlement can be reached, the involved signatories may request the establishment of a "panel."

A panel consists of three to five members coming from "neutral" third countries. It examines the rights and obligations of the parties under the Code and the General Agreement. The objective of the process is, again, to generate a mutually satisfactory solution rather than a formal finding of who has violated or has not violated the provisions of the Code or the GATT. If no agreement is reached, the panel can submit a legal finding to the Committee, which may, but is not obliged to, make recommendations and may, if its recommendations are not followed, authorize appropriate countermeasures. Neither the panel nor the Committee has any formal power to enforce its decisions. Their only power is the power of persuasion and of appeal to an agreed upon international standard (Finger 1987).

In case no mutually satisfactory solution can be found, Track I of the Tokyo Round Subsidies Code allows the complainant to impose countervailing duties on the subsidized imports. Since the Subsidies Code, like the former provisions, does not draw a direct link between the rules for the granting of subsidies and the regulations for the imposition of CVDs, any kind of subsidy can be countervailed, be it a domestic ("legal" according to Track II), or an export ("illegal" according to Track II) subsidy. The complainant only has to show that the domestic industry is "injured" and that the foreign subsidies are the cause of the injury. Moreover, Track I contains no definition of the term "subsidy" so that any complaining country is free to act according to its own understanding of what constitutes a national subsidy.

III. The Traffic Lights of Uruguay

In the course of the Uruguay Round negotiations, the GATT signatories have made a new attempt to restrict the use of subsidies for industrial policy purposes.[3] The Agreement on Subsidies and Countervailing Duties finally fulfilled one of the main Tokyo Round objectives by improving the definition of the term "subsidy" and simultaneously introduced a so-called "traffic lights" approach that divides subsidies into three

categories, according to their assumed competition distortion effects.

Subsidies in terms of the agreement are:

(1) financial contributions granted by governments or any other public bodies, including subnational government entities, if these contributions involve:
   (i) the direct transfer of funds through grants, loans, equity infusion, or potential transfers like loan guarantees;
   (ii) foregone government revenue due to tax credits or other fiscal incentives;
   (iii) the provision of goods and services other than general infrastructure;
   (iv) government payments to a funding mechanism that carries out one or more of the functions illustrated in (i) to (iii) above.

(2) any form of income or price support.

Moreover, the Agreement on Subsidies and Countervailing Duties distinguishes between "specific" and "nonspecific" subsidies. A subsidy fund is characterized as specific if the access to the fund is — formally or in fact — limited to certain specific enterprises, industries, groups of enterprises and industries, or to enterprises in a specific geographic region. Conversely, nonspecific subsidies are those that are in effect generally available to and broadly distributed among all enterprises or industries in a country.

The most important innovation of the Uruguay Round negotiations is the introduction of a "traffic lights" approach that divides subsidies into three categories: (1) prohibited; (2) actionable; (3) nonactionable. For the first time in the history of the GATT, this approach draws a direct link between the rules for the granting of subsidies and the regulations for the imposition of countervailing duties by providing that prohibited and actionable subsidies can be countervailed under certain conditions, whereas — as a general rule — no countermeasures can be taken against nonactionable subsidies.

1. Prohibited Subsidies

Prohibited subsidies include nonprimary export subsidies and subsidies that can be roughly characterized as import substitution subsidies.[4] These subsidies are actionable in any case, regardless of whether they are specific or not. With a view to import substitution subsidies, which have not been prohibited in former agreements, no grandfather rights are provided for in the Agreement, so that all existing subsidies at the date of entry into force have to be brought into conformity with the new rules within three years. A member that feels confronted with a prohibited subsidy may seek remedy by first consulting with the allegedly offending party. If no "mutually acceptable solution" is found within thirty days, the matter may be submitted to the Dispute Settlement Body (DSB) for panel referral. In assessing the nature of the subsidy, the panel may request assistance by a Permanent Group of Experts, established by the Agreement, whose determination is binding on the panel. If the subsidy is found to fall in the prohibited category, the remedy provided for is its immediate withdrawal. If the alleged country fails to withdraw the subsidy, the DSB may authorize countermeasures by the foreign government *without* a proof of material injury.

2. Actionable Subsidies

Actionable subsidies are "specific" subsidies that cause "adverse effects to the interests of other members" (Subsidy Agreement, Article 5) by nullifying or impairing the benefits under the GATT, injuring their domestic industry ("material injury") or causing them serious prejudice. International control over the use of actionable subsidies is imposed via a two-track approach in the Subsidies Agreement. The first track is based on countervailing duty measures, the second on agreement discipline.

The countervailing duty track may be used to take countermeasures against actionable subsidies that are nullifying or imparing the benefits that the GATT treaty offers to other members, or that are injuring the domestic industry of an-

other member. The nullification case is not used very often in practical trade policies and is thus not very well known by most observers. The GATT signatories have recognized that subsidies may offset the gains from a reduction of trade barriers that is agreed upon in other parts of the GATT, and have thus authorized concerned parties to impose countervailing duties on the subsidies without a proof of material injury.

Much more important for practical trade policies is the material injury case. If a country feels that its industries are injured by actionable subsidies granted abroad, it is free to initiate a dispute settlement procedure as described above. In order to impose a countervailing duty, a member country needs to prove the existence of an actionable subsidy, injury to the domestic industry, and direct causality between the subsidy and the injury.

The injury test is based on the examination of the volume of the subsidized imports, their effects on prices in the domestic market for like products, and the impact of these imports on the domestic producers of import-competing products. In making its assessment, the investigating authority considers a number of factors, including the extent of the increase in subsidized imports, the size of price undercutting and price "depression", and "all relevant economic factors and indices having a bearing on the state of the industry" (Subsidy Agreement, Article 5.4). In order to restrict the number of injury cases, producers accounting for less than 25 percent of total production in an industry have no standing to initiate a countervailing duty investigation. Moreover, investigations must be terminated if the amount of the subsidy is de minimis, i.e., less than 1 percent on an ad valorem basis, or if the volume of subsidized imports or the injury is negligible.

The second track of international control over subsidies is based on agreement discipline proceedings. A member can initiate discipline proceedings if it believes that it has been seriously prejudiced by another member's subsidies. Serious prejudice will be presumed if:

– the subsidy displaces or impedes imports of a like product into the market of the subsidizing signatory;
– the subsidy displaces or impedes exports of another signatory to a third-country market;
– the subsidy leads to prices that undercut the prices of like products in the same market;
– imports of the subsidized product result in price depression or lost sales in the same market;
– the subsidy increases the world market share of the subsidizing signatory in a specific product category as compared to the previous three years;
– the total ad valorem subsidization exceeds 5 percent of the product value of all goods produced in a certain industry of the subsidizing country. In determining the ad valorem subsidization level, the amount of received subsidies is calculated for each firm. The subsidies received by a firm in a certain year are divided by the recipient firm's sales of the product in this period. It is unclear, however, how the firm-specific subsidization rates are to be aggregated to determine whether a country's ad valorem rate exceeds 5 percent;
– the subsidy is intended to cover operation losses of a specific industry or operation losses of a firm;
– the subsidy is provided in form of debt forgiveness or of grants for debt repayment.

A serious prejudice challenge follows the regulations of the dispute settlement procedure described above. If the Committee concludes that a member's subsidy has prejudiced another party, the subsidizing member is required either to remove the adverse effects or to compensate the affected member. If no such steps are taken within six months, the Committee authorizes the affected member to take countermeasures. Thus, the second track of international control over the use of subsidies is just another — maybe somewhat more complicated — way to get the "green light" for imposing countervailing duties on foreign exports.

3. Nonactionable Subsidies

The nonactionable subsidies include four types of government assistance: all "nonspecific" subsidies, and three kinds of "specific" subsidies,

namely R&D subsidies, regional subsidies, and environmental subsidies. R&D subsidies are nonactionable as long as public funds cover not more than 75 percent of the costs of basic industrial research and not more than 50 percent of pre-competitive development research. Regional subsidies cannot be countervailed if the recipient region is a clearly designated, contiguous geographic area with a definable economic and administrative identity that proves to be disadvantaged on explicit, verifiable, neutral, and objective criteria. Evironmental subsidies are nonactionable if they are granted as assistance to adapt to new environmental standards, given this assistance does not exceed 20 percent of the costs of the necessary adaption and is given on a one-time-only basis.

While prohibited and actionable subsidies can be challenged under the WTO dispute settlement mechanism and can subsequently be subject to countervailing duties, nonactionable subsidies, if duly notified, are immune from both tracks. However, if — at the end of the day — a nonactionable subsidy proves to cause "serious adverse effects to the domestic industry" of a member, "such as to cause damage which is difficult to repair", any concerned member is free to initiate a dispute settlement procedure and can, if no mutually satisfactory solution is found, be authorized to take countermeasures.

IV. An Evaluation of Current Rules

The current international regulation of subsidies and countervailing duties is a mixture of what can be called two schools of thought on the role of subsidies. One school (the "injury-only" school) mainly aims at redressing the harm that results from subsidized imports; the other school (the "antidistortion" school) principally focuses on the inefficiency of public transfers to private enterprises (Hufbauer 1983).

The injury-only school takes the view that subsidies are mainly used to remedy existing market imperfections resulting from spillover effects of private transactions. In this view, subsidies — as a general rule — only have minor effects on international trade. Exchange rate movements will help to offset gross differences in public funding between countries, leaving only minor frictions in those areas where subsidies are designed to directly change international trade flows. If there is no measurable harm to other countries, any subsidy will distort only the domestic economy, while the trading partners will enjoy whatever benefits flow from low prices of subsidized goods. In brief, the injury-only school believes that a country should retaliate against foreign subsidies only when the subsidies have an offensive trade impact and that the remedy should be designed to redress the impact as accurately as possible.

The main message of the antidistortion school is that subsidies in general are bad for at least three reasons (Hufbauer 1983: 336):

(i) As used in practice, subsidies generally reduce world economic efficiency because they are diminishing the gains from international trade for all countries concerned;

(ii) what is more, the public funding of industries may enable a country to create "national champions" at its trading partners' expense or to "weather out" painful adjustments in old industries;

(iii) because other countries will retaliate against the creation of national champions and the weathering-out of adjustment costs abroad, public subsidy programs will lead to a spiral of wasteful distortions or overinvestment in new technologies.

The antidistortion school concedes that some subsidies are designed to offset market imperfections, but believes that this justification for public funding is vastly exaggerated because any serious effort to distinguish between efficient and distortive subsidies would result in an impenetrable thicket of regulations. Most members of the antidistortion school believe that even a weak trade impact warrants the imposition of counter-

measures which aim at offsetting, as nearly as possible, the initial distortion.

In the current regulations of subsidies and countervailing duties, the antidistortion school is mainly reflected in the specificity test that tries to separate efficient from inefficient subsidies by analyzing the subsidies' characteristics and their distortive potential. The philosophy behind this test is that the internalization of external effects in the domestic market requires a subsidization of all economic activities resulting in external effects rather than the public funding of a small group of specific firms or industries. The introduction of a red light category can also be regarded as an outcome of the antidistortion school, because the subsidies that are falling in this group — export subsidies and import substitution subsidies — are obviously not designed to correct for market imperfections and are thus prohibited and can be countervailed without a proof of material injury.

The injury-only school has left its trace in the provision on "adverse effects", especially in those provisions defining material injury and serious prejudice, and in the definition of the yellow light and green light categories. All subsidies that fall in the yellow light category can be countervailed if they cause material injury to another country or seriously prejudice other members of the Agreement. Even green light subsidies can be countervailed if they prove to result in adverse effects at the end of the day. The adverse effects test aims at determining the degree of anticompetitive effects and gives the basis for calculating appropriate remedies. The only pertinent adverse effects are those affecting international trade. Subsidies whose economic effects remain confined within national borders are of no consequence to the multilateral system and thus do not fall under its regulatory competence.

The history of the GATT/WTO regulations on subsidies and countervailing duties shows that the mixture of two schools of thinking — the antidistortion and the injury-only school —, which is inherent in the relevant articles of the treaty, worked rather well as long as subsidies and their counterpart CVDs were only minor instruments of international trade policies. However, the more recent experience with a steadily growing number of dispute settlement cases and frictions resulting from the use of subsidies for industrial policy purposes reveals that there are four major problems that have to be solved in establishing an effective international framework for the use of subsidies:

(i) What constitutes a subsidy?
(ii) What constitutes a competition (trade) distorting subsidy?
(iii) How to design efficient countermeasures against members that violate agreed upon rules?
(iv) How can be ensured that countermeasures are not abused for protectionist purposes?

As it stands now, only the first problem has been resolved in a rather convincing way. Much progress has been made during the Uruguay Round negotiations by introducing a comprehensive list of government assistance constituting a subsidy in the sense of Article XVI GATT. This list also includes indirect transfers, such as forgone government revenue. In addition, the provisions on "serious prejudice" even allow concerned members to initiate a dispute settlement procedure if governments cover operating losses of state-owned enterprises over a longer period of time.

However, the other major problems in creating a workable international framework for subsidies and countervailing duties have not yet been resolved in an efficient way. The differentiation between distortive and undistortive subsidies relies on three concepts: (i) the traffic lights approach, (ii) the specificity test, and (iii) the adverse effects test. Although the term "traffic lights" suggests that there is a clear distinction between three groups of properly defined subsidies, the differentiation of the categories is rather blurred. All subsidies, be they prohibited (red light), actionable (yellow light), or nonactionable (green light), can be countervailed under specific circumstances. Prohibited subsidies can be countervailed without a proof of material injury, countermeasures against actionable subsidies can be taken if these subsidies cause adverse effects (especially material injury) to other members, and nonactionable subsidies can be coun-

tervailed if a concerned member can successfully prove that its domestic industry has suffered serious adverse effects from other members' green light programs. Thus, the current grouping of subsidies is almost meaningless, because the ultimate countermeasure against any subsidy is always the same, namely the imposition of countervailing duties.

Like the traffic lights approach, the provisions on specificity do not provide unequivocal guidelines for the distinctions between distortive and nondistortive subsidies. According to the Subsidies Agreement, the following factors should be considered in determining whether a subsidy program is specific or not:

- "the use by a certain number of enterprises;
- the predominant use by certain enterprises;
- the grant of disproportionally large amounts of subsidy to certain enterprises; and
- the manner in which discretion is exercised by administering authorities" (Subsidy Agreement, Art. 2.1.(c)).

Besides being obviously rather vague and ambiguous and thus giving rise to disputes in interpretation, these guidelines do not take sufficient account of the economic effects resulting from firm-specific or industry-specific subsidies. From an economic point of view, the main objective of specificity rules is a very simple one, namely to limit the competitive distortions resulting from subsidies that are directed mainly at a single industry or enterprise. It can be realistically assumed that the extent of competition distortions depends on the share of production, investment, or research and development costs that is covered by the public funding. Hence, any efficient specificity rule should be defined in terms of the respective subsidy base rather than in terms of the number of enterprises and industries that have access to the relevant subsidy funds.

Apart from export and import substitution subsidies, countermeasures can be taken against all subsidies that cause (serious) adverse effects, i.e., that cause material injury or serious prejudice. One of the main problems of the current Agreement on Subsidies and Countervailing Duties is that the concept of material injury has proved to be rather ineffective on at least three grounds:[5]

(i) The accurate calculation of material injury is almost impossible and, therefore, leaves broad space for the abuse of material injury provisions for protectionist purposes.
(ii) Many kinds of subsidies, especially investment subsidies and R&D subsidies, do not cause measurable competition distortion effects for several years. By the time the effects become obvious, the relevant subsidies have often been phased out and it may become almost impossible to prove in the course of a dispute settlement procedure that the subsidies caused material injury. For example, it has often been stressed that the strength of American aircraft companies is a result of past defense subsidy programs. However, it is almost impossible to prove that there is a link between these past subsidies and the economic success of American companies today, not to speak of the calculation of material injury to producers abroad.
(iii) The current subsidy regulations cannot prevent governments from granting subsidies that distort international competition, because a proof of material injury is an indispensable step in a dispute settlement procedure. Hence, countermeasures can only mitigate the competition distortions when they have occurred.

In order to remedy some of the shortcomings of the material injury approach, the negotiators of the Uruguay Round agreed upon a new provision in scope of the serious prejudice procedure. It provides that serious prejudice will be presumed if a country's total ad valorem subsidization of a product exceeds 5 percent of the total value of all like products produced in the country under consideration. This provision is the first attempt to establish objective, quantitative criteria for the determination of competition distorting subsidies. However, it can be realistically assumed that this new provision will not considerably improve the effectiveness of the Subsidy and Countervailing Duty Agreement due to at least two reasons: (i) almost all subsidies are granted as a percentage of specific cost categories, above all research and development,

production, or investment costs, whereas the new threshold is defined in terms of product value. As a result, the subsidy base and the base for calculating the ad valorem subsidization differ to a considerable extent, especially in those firms and industries where the value added generated in the production process is quite high. Thus, a 20 or 30 percent subsidization of investment or even production costs of a firm might in general not constitute a serious prejudice to foreign competitors according to the new provisions. Moreover, the negotiators have agreed upon a specific provision for firms in a "start-up position." In this case, serious prejudice only exists if the ad valorem subsidization of a country exceeds 15 percent of the total product value.

The main problem with regard to efficient countermeasures against members violating agreed upon rules is that the process that the Agreement on Subsidies and Countervailing Duties provides for implementing its rules is not a process of "enforcement" as one would think of enforcement in the context of a legal code. There is no multilateral police force. The international track is a process mainly intended to develop and promote a "mutually satisfactory solution." Its basic parts are "consultations," "conciliation," "dispute settlement," and — if no agreement is reached — "authorized countermeasures." It is important to note that the Subsidies and Countervailing Duties Agreement provides no multilateral countermeasures. The only "enforcement" mechanism is countervailing duties imposed by concerned third countries that are able to prove that their industries are suffering material injury or serious prejudice as a result of foreign subsidies. Thus, in practical trade policy, industries and enterprises suffering from subsidies abroad are the real supervisors of the WTO subsidy regulations. This "decentralized" supervision system that is being based on countervailing duties as the one-and-only real enforcement mechanism has proved to be rather ineffective on several grounds:

(i) As Spencer (1988) has demonstrated, the appropriate amount of a CVD is difficult to determine and depends on the kind of foreign subsidy involved. A subsidy that is based on the purchase of new capital equipment can have very different implications from those of a subsidy to pay off past debts. The former gives incentives to the subsidized firm to expand output whereas the latter does not. Therefore, a higher CVD is required in this case to offset harmful effects on domestic competitors. However, there is no such provision in the current rules for countervailing duties.

(ii) The countervailing duty approach poses the danger of retaliation, especially in high-technology industries, where the time lag between subsidies and the resulting competition distortion effects is usually quite long. Under these conditions, the imposition of a countervailing duty by a trading partner might be judged as arbitrary and unfair by the offended country.

(iii) Any countervailing duty remedy is powerless to offset the benefits gained by subsidized firms in third markets where no countervailing duty relief is granted.

(iv) Countervailing duties may be abused for protectionist purposes and — due to their price effects — may further distort international competition.

The danger of abuse of unfair trade remedies is a general problem of the WTO approach, as the longstanding and ongoing debate on the pros and cons of antidumping measures illustrates. With a view to the regulations on the imposition of countervailing duties, the threat of protectionism is extremely high because the Agreement on Subsidies and Countervailing Duties — as a general rule — authorizes countermeasures if subsidies cause material injury to the domestic industry of other member countries. The focus on the effects of import competition on specific competitors (the "domestic industry") that is inherent in the injury concept are not in line with the objective of preserving the "normal competitive process" which is outlined in the Subsidies Agreement. "Injury to domestic industry" cannot be equated to distortion of competition. It is inherent in the process of competition that some firms prosper while others do not. Domestic competitors may suffer injury because of import competition, although there is no distortion of the "normal" competitive process. What is more,

the provision of a subsidy, specific to a firm or an industry, on the one hand, and the existence of injury to the domestic industry, on the other hand, does not necessarily mean that the former has caused the latter. However, it is very difficult, if at all possible, to determine whether there is a causation between subsidized imports and any measure of "injury." The rather rough measures that are used in practice to determine "injury" and the causation between subsidies and injury thus leave broad scope for the abuse of countervailing measures for protectionist purposes.

V. Reforming Current Rules: Towards an Open Subsidy Club

In view of the various shortcomings discussed above, the WTO Agreement on Subsidies and Countervailing Duties should be reformed by (1) initiating a once-for-all stocktaking of all subsidy programs currently in force in member states, (2) introducing a notification system aiming at an assessment of all *planned* subsidies *prior* to their implementation, (3) making a clear distinction between subsidies that are efficient and those that are not efficient with respect to internalization of nonpecuniary externalities, (4) categorizing different kinds of subsidies according to their effects on international competition, and (5) establishing an open subsidy club for the public funding of certain kinds of economic activity.

1. Stocktaking

A once-for-all stocktaking should not only aim at working out a comprehensive list of all subsidy programs carried out in the member states but also at paving the path to successful negotiations on the reduction of subsidies prior to the introduction of a new framework for the granting of subsidies and the imposition of countermeasures. The procedure could follow the lines that have been suggested by Baldwin (1987). Each country would undertake a comprehensive evaluation of all subsidy programs of other countries that are causing material injury to its industries, are seriously prejudizing its rights under the GATT, or are nullifying or impairing its benefits resulting from other GATT rules. Each country would then request other members to reduce or offset specific distorting subsidies. The negotiations could follow the old item-by-item negotiation technique that proved to be very successful in the early GATT negotiations on the reduction of tariffs. The objective would be to phase out particular subsidies gradually, to bind their levels for a certain period of time, or to introduce a degressive element in the subsidization programs. The incentives for other countries to engage in such negotiations would be the threat of countermeasures that will be introduced under the new agreement on subsidies (see below). Each country would list those subsidy programs against which it is willing to initiate countermeasures under the new rules. Countries that believe that their subsidies do not violate existing WTO rules could announce that they would request the formation of WTO panels of experts to make decisions on their contention. Such a procedure prior to the implementation of new rules for the use of subsidies and countermeasures might at least help to improve the knowledge about current subsidy programs in major industrial countries and might contribute to a better understanding of international frictions resulting from government support to industries (Ostry 1995).

2. Prior Notification

In order to overcome the problems associated with the current material injury test and the imposition of countervailing duties, a multilateral notification system should be introduced. In this respect, the aid supervision system of the European Union could serve as a reference system (Stehn 1993). A multilateral subsidy super-

vision should provide that all plans to grant new or to alter existing subsidies are to be notified to and approved by the WTO Committee on Subsidies and Countervailing Measures (CSCM).[6] The CSCM should be entitled to examine the notified plans and to decide whether they are compatible with the WTO Subsidies Agreement. In the course of the investigation, the CSCM should take into account written comments by third signatories that might be affected by the notified subsidy. After the CSCM has made its decision, any signatory concerned should have the opportunity to initiate a panel procedure against the CSCM ruling in accordance with the WTO Dispute Settlement Mechanism.

Given that a signatory grants a subsidy in violation of a final CSCM or WTO panel ruling, the CSCM should be empowered to require a repayment of the subsidy to the CSCM or, if such an extreme approach proves to be not agreeable, to the respective national government. The recent Vulkan case in Germany elucidates that this may be a very effective instrument to bring national subsidy programs in line with international rules. The potential threat of a repayment may give an incentive to recipient firms and industries to ask their respective national governments to present an approval of the CSCM before granting the subsidy, and may, therefore, lead to some sort of a self-restraint. If a rule-violating government is not willing to urge the recipient firm or industry to repay the received subsidy within an appropriate time period (e.g., two months after the final decision), the respective country should be excluded from all newly established open subsidy clubs (see below) as long as it does not react to the CSCM or WTO ruling. Only if the exclusion from open subsidy clubs does not lead to a reaction of the rule-violating country, third parties would be entitled — as a last resort — to impose countervailing duties on the exports of the offended country. The most important advantage of this notification system is that it works without any injury or adverse effects test and thus allows for a quick and timely response to violations of rules.

One could also think about countervailing subsidies (CVS), i.e., offsetting subsidies or government assistance that meet foreign subsidies head on, instead of countervailing duties as a last-resort countermeasure. Countervailing subsidies have the obvious advantage that countries would be less eager to abuse this countermeasure for protectionist purposes, because it binds scarce financial resources. Moreover, the CVS approach has neither the high-price island effect nor the third-country market effect of CVDs. However, despite their obvious advantages over countervailing duties, CVSs pose the risk of an international subsidy race in which each country strives to overbid the other (Tyson 1992: 285). Nevertheless, with a view to the fact that any countervailing measure can and certainly will be abused for protectionist or industrial policy purposes, the turning of the scale might go in favor of countervailing subsidies, because financial restraints may restrict the abuse of this countermeasure.

3. Efficient and Nonefficient Subsidies

Any multilateral subsidy scheme has to take into account that some public subsidies are granted to improve the efficiency of national economies by internalizing nonpecuniary externalities. There is no doubt that the funding of universities, public research institutes, and public infrastructure in a broad sense belongs to this group of subsidies. These activities should, therefore, be excluded from a multilateral notification system.

There are, however, some marginal cases where the distinction between efficient and nonefficient subsidies is not as clear-cut as with respect to public infrastructure or universities. The first and most important marginal case is subsidies to basic research and development in private enterprises. As empirical research indicates, basic research and development, especially with a view to high-technology R&D, can be expected to generate considerable spillover effects giving rise to an almost free dissemination of basic knowledge, because basic knowledge is hardly codifiable and thus cannot be patented.[7] Leaving aside the possibility of cross-

border externalities for the moment, these characteristics of basic research do justify a public funding of basic R&D on efficiency grounds. One could even go so far as to say that not giving a sufficient public stimulus to basic R&D at home means offering foreign competitors an artificial competitive advantage leading to an economic welfare loss at home. From this perspective, national governments must be free to subsidize basic R&D activities and, as a consequence, these subsidies must be excluded from a multilateral subsidy supervision system.

There are, however, two caveats to this general position. First, from an economic welfare viewpoint, it is of no importance whether domestic or foreign enterprises are doing basic research as long as the free dissemination of research results is guaranteed. Thus, there is no justification for excluding foreign firms from domestic R&D programs. A fair participation of foreign firms in domestic funds, however, might only be possible under the supervision of a multilateral agency. Second, there are complaints, especially with a view to the alleged collusion behavior of Japanese firms, that some countries are hindering the free dissemination of basic R&D findings. Since basic knowledge is a prerequisite for successful applied research — so the argumentation goes — this collusion behavior will give the participating firms a competitive edge on future product markets.

There is an obvious contradiction between the empirical finding that basic R&D generates spillover effects and that cross-border externalities are not much weaker than spillovers within a country and the proposition that some countries are hiding away basic research findings from competitors abroad. However, the general finding of an observable cross-border dissemination of basic knowledge does not mean that a formation of successful research cartels is impossible at all. If cartels are in a position to bind their researchers to the cartel on cultural, moral, or contractual grounds, it may be possible to hinder the free dissemination of basic knowledge, at least for some time. Hence, there are some good reasons to include subsidies to basic R&D in a multilateral notification system.

The second marginal case is subsidies for the protection of the environment. There is no doubt that environmental pollution causes negative external effects; in the case of air and water pollution these external effects often even spill over external borders. Thus, governmental action is needed to internalize these spillovers. However, this does not mean that subsidies for environmental protection purposes are to be categorized as efficient. Most current environmental subsidies are granted to facilitate the adaption of enterprises to new environmental standards that have been set by legal rules. In other words, governments are striving for lowering the costs that enterprises have to bear due to the setting of new environmental standards. This is by no means an efficient policy, even from a purely domestic perspective. A first-best policy would be to define prices for environmental resources by taxing the source of environmental pollution. Such a system is not easy to handle in practical policy, but this is no reason to exempt environmental subsidies from a multilateral supervision system on efficiency grounds.

The third marginal case is subsidies to promote the development of backward regions (regional subsidies). According to the "new" growth theory, the accumulation of physical capital at one point in space can generate spillovers spreading over an entire geographic area, thus setting in force a self-sustaining growth process. Hence, it may be efficient for national governments to promote the capital accumulation in backward regions by, for example, subsidizing the investment costs of private enterprises. However, the empirical foundation of the "new" growth theory still seems to be too weak to justify the "green light" for regional subsidies.

4. Subsidies and International Competition

All subsidies that are categorized as nonefficient should be ranked according to their potential competition (trade) distortion effects. It can be realistically assumed that the competition effects of subsidies are the higher, the closer the respective subsidy base is to the end of the value-

added chain of a firm. For example, an export subsidy, i.e., a subsidy for the sale of a product, might exert stronger competition effects than a subsidy to basic R&D. Hence, all nonefficient subsidies should be grouped in one of the following seven categories: (1) subsidies to basic R&D; (2) subsidies to applied R&D; (3) subsidies for the adaption to new environmental standards; (4) investment subsidies (including regional subsidies); (5) production subsidies; (6) sales subsidies (export subsidies, import substitution subsidies); and as a special case (7) subsidies for promoting the general operation of firms or industries (subsidies covering the losses of firms, debt forgiveness, etc.).

For each category, quantitative thresholds that limit the provision of subsidies to a certain fraction of the respective subsidy base should be set. The thresholds should roughly reflect the potential competition distortion effects of the different kinds of subsidies. One proposal would be to set thresholds of 30 percent for subsidies to basic R&D, 15 percent for subsidies to applied R&D, 10 percent for environmental subsidies, 10 and 5 percent for investment subsidies in backward and "normal" regions respectively, 5 percent for production subsidies, and 0 percent for sale subsidies and subsidies promoting the general operation of firms. In order to prevent specific firms from gaining disproportionally from certain kinds of subsidies and to facilitate the calculation of the actual subsidization rates, the thresholds should be defined on a firm-specific basis.

5. Open Subsidy Club

One of the main reasons for the relatively vague and imprecise regulations on subsidies and countervailing duties in the current WTO agreement is that governments are simply not willing to give up two important instruments of industrial policy. Above all, the "safe harbour provision" (Schott 1996) for R&D subsidies, which was agreed upon in the Uruguay Round negotiations, indicates that governments do not really intend to confine the leeway to promote economic activities that they judge to be "strategic" for the further development of their economies. It is thus rather optimistic to believe that the relatively strict thresholds proposed above will become reality in the near future. However, in view of the undisputed progress that has been made during the Uruguay Round negotiations with respect to the definition of subsidies and the linkage between rules for subsidies, on the one hand, and regulations for the imposition of countervailing duties, on the other, it may be realistic to assume that governments are ready to take further steps towards a more efficient supervision system in order to mitigate the international frictions arising from the subsidization of domestic firms and industries.

To facilitate such steps, one could think about establishing an "open subsidy club" for certain kinds of government assistance that would provide some sort of a compromise between the economic need for stricter and more objective multilateral rules on subsidies and the desire of governments to keep a "free hand" for the funding of domestic firms and industries. The rules of an open subsidy club could provide that a country is free to exceed the thresholds proposed above if, and only if, a national subsidy program offers open access on a conditional most-favored-nation basis for firms located in third countries. The reciprocal character of a conditional most-favored-nation provision, i.e., a provision offering free access for all countries that are ready to open up their subsidy funds on a reciprocal basis, would give additional incentives for establishing an open subsidy club. Countries joining an open subsidy club would be free to double the thresholds proposed above. As a consequence, sales subsidies as well as subsidies promoting the general operation of firms would still be prohibited.

For practical purposes, an open subsidy club approach may require the implementation of the following additional rules:

(i) A subsidy program should only be regarded as open if at least two foreign firms are actually participating in the program.
(ii) The objectives of the open fund are formulated by the respective national government and must be met by both domestic and foreign firms.

(iii) Open access to national funds should not be linked to a cooperation with a domestic firm.

The main advantages of a notification/open subsidy club scheme are that such an approach

- allows for dispute settlement prior to the implementation of subsidy programs,
- works without any material injury or adverse effects test,
- lowers the importance of national countermeasures and subsequently the threat of rules for protectionist purposes being abused,
- provides measurable and objective criteria for the differentiation between distortive and nondistortive subsidies,
- gives incentives for the opening-up of national subsidy funds, and thus, in the end,
- contributes to mitigating the international frictions that arise from the subsidization of domestic firms and industries.

Endnotes

1 It has been calculated that almost 1/3 of all subsidies to Airbus industries can be characterized as production subsidies (Klodt and Bletschacher 1992: 64–66).

2 See Barcelo (1991) for an excellent analysis of pre-GATT subsidy and antisubsidy law.

3 See also Horlick and Clarke (1994) and Zampetti (1995) for an analysis of the Uruguay Round regulations.

4 "... subsidies contingent, whether solely or as one of several other conditions, upon the use of domestic over imported goods" (WTO Subsidies Agreement, Article 3.1.).

5 See Tyson (1992) for a detailed evaluation of the concept of material injury.

6 Currently, only "green light subsidies" have to be notified to the CSCM.

7 See Paqué (1995) for an overview and discussion of empirical studies on the spillover effects of basic and supplied R&D.

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