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Warren F. Schwartz
University of Virginia

Eugene W. Harper Jr.
University of Virginia School of Law

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THE REGULATION OF SUBSIDIES AFFECTING INTERNATIONAL TRADE

Warren F. Schwartz* and Eugene W. Harper, Jr.**

I. INTRODUCTION

THE writing of this paper began as a search for a standard. We were aware that implementation of the General Agreement on Tariffs and Trade (GATT)¹ provisions looking to the eventual elimination of "subsidies"² that "distort" international trade had fallen on hard times. In the case of export subsidies for manufactured goods, where hope was initially entertained that obligations banning the use of such subsidies might be assumed by all members, an extended series of negotiations ultimately produced a renunciation of subsidies, which has been accepted by only seventeen developed countries.³ The developing countries continue to utilize and defend the propriety of export subsidies.⁴ Little progress has been made with respect to other measures, such as production subsidies and the price supports for agriculture, that were to be removed by agreement within the framework of general trade negotiations.⁵ Finally, only

* Professor of Law, University of Virginia; A.B. 1952, Brooklyn College; LL.B. 1954, Columbia University.—Ed.

** Student, University of Virginia School of Law; A.B. 1966, Fordham University.—Ed.

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1. 61 Stat. pt. 5, at A3 (1947), T.I.A.S. No. 1700, 55 U.N.T.S. 194. The acronym GATT is used to describe both the multilateral trade agreement, originally promulgated in 1947 and subsequently amended in several material respects, and the organization that implements the agreement. The text of the basic agreement and various annexes containing protocols, explanatory notes, and tables giving the official citation in the United Nations Treaties Series and effective date of the multitude of agreements comprising the GATT framework are collected in IV GATT, BASIC INSTRUMENTS AND SELECTED DOCUMENTS (1969) [hereinafter BISD]. Three recent works deal generally with the history and present activities of GATT: G. CURZON, MULTILATERAL COMMERCIAL DIPLOMACY, THE GENERAL AGREEMENT ON TARIFFS AND TRADE AND ITS IMPACT ON NATIONAL COMMERCIAL POLICIES AND TECHNIQUE (1965); K. DAM, THE GATT; LAW AND INTERNATIONAL ECONOMIC ORGANIZATION (1970); J. JACKSON, WORLD TRADE AND THE LAW OF GATT (1969).

2. See GATT, arts. VI and XVI. We will treat the term subsidy at this point to mean simply a payment by a government to some private person or firm. We deal with the complexities involved in defining and using the term in note 37 *infra* and accompanying text.

3. Declaration of November 19, 1960, Giving Effect to the Provisions of Article XVI:4, 9th Supp. BISD 32 (1961). See J. JACKSON, *supra* note 1, at 374 n.24.

4. See Note by the Secretariat, Incentives for Industrial Exports from Developing Countries, GATT Doc. Com. TD/72 (March 17, 1970); Rom, GATT: *Export Subsidies and Developing Countries*, 2 J. WORLD TRADE L. 544 (1968).

5. See K. DAM, *supra* note 1, at 147, 257-72, esp. 266; J. JACKSON, *supra* note 1, at 717; Malmgren & Schlechty, *Rationalizing World Agricultural Trade*, 4 J. WORLD TRADE L. 515 (1970).

limited agreement could be reached in principle about the types of national government support that ought to be eliminated as indirect subsidies.⁶

This development has been viewed as part of the over-all decline in the role of GATT, which has been widely noted and deplored.⁷ Essentially two types of proposals have been advanced to restore the general effectiveness of GATT as an instrument of international trade regulation.⁸ One holds that GATT must be reformulated in order to establish norms that will be regarded in some degree as obligatory by participants in the domestic political processes that largely shape international trade policy. The competing view asserts that such an effort would be counterproductive, because the attempt to extend the orbit of "illegality" to practices that nations wish to employ will only serve to worsen the atmosphere in which negotia-

6. The GATT panel on subsidies concluded that "it was neither necessary nor feasible to seek an agreed interpretation of what constituted a subsidy. It would probably be impossible to arrive at a definition which would at the same time include all measures that fall within the intended meaning of the term in Article XVI without including others not so intended." Report of the Panel on Subsidies, 10th Supp. BISD 201, 208 (1962). An earlier report had, however, listed a group of measures which "the governments prepared to accept the declaration [cited in note 3 *supra* had] . . . agreed that, for the purpose of that declaration . . . [were] to be considered as subsidies in the sense of Article XVI:4." Report of the Panel on Subsidies, 9th Supp. BISD 185, 187 (1961). The remaining countries "were not able to subscribe . . . to a precise interpretation of the term 'subsidies', but had no objection to the . . . interpretation being accepted by the . . . parties to [the] declaration." *Id.* The measures were

- (a) Currency retention schemes or any similar practices which involve a bonus on exports or re-exports;
- (b) The provision by governments of direct subsidies to exporters;
- (c) The remission, calculated in relation to exports, of direct taxes or social welfare charges on industrial or commercial enterprises;
- (d) The exemption, in respect of exported goods, of charges or taxes, other than charges in connexion with importation or indirect taxes levied at one or several stages on the same goods if sold for internal consumption; or the payment, in respect of exported goods, of amounts exceeding those effectively levied at one or several stages on these goods in the form of indirect taxes or of charges in connexion with importation or in both forms;
- (e) In respect of deliveries by governments or governmental agencies of imported raw materials for export business on different terms than for domestic business, the charging of prices below world prices;
- (f) In respect of government export credit guarantees, the charging of premiums at rates which are manifestly inadequate to cover the long-term operating costs and losses of the credit insurance institutions;
- (g) The grant by governments (or special institutions controlled by governments) of export credits at rates below those which they have to pay in order to obtain the funds so employed;
- (h) The government bearing all or part of the costs incurred by exporters in obtaining credit.

Id. at 186-87.

7. See K. DAM, *supra* note 1, at 8; J. JACKSON, *supra* note 1, at 1-3; Hudec, *GATT or GABB? The Future Design of the General Agreement on Tariffs and Trade*, 80 YALE L.J. 1299 (1971).

8. See Hudec, *supra* note 7 (review of the proposals that have been advanced to improve the functioning of GATT).

tions are conducted. The real need, it is urged, is for a better procedural framework in which to strive for agreement.

We thought that an examination of the issues underlying the unresolved subsidy question,⁹ with a view to seeing if it was possible to formulate a rule that both gives effect to the essential considerations and is susceptible to objective application, might illuminate the basic controversy about how best to structure the regulation of international trade. And so we began our search for a standard.

We believe that we have succeeded in isolating the essential factor that explains the failure of existing regulation to deal effectively with the problems of subsidies. A subsidy is treated in the GATT framework as a "distortion" of international trade,¹⁰ that is, as creating a disparity between the actual costs incurred in producing a particular good and those which must be borne by the firm undertaking its production.¹¹ In fact, however, much (perhaps all) government support can be defended as being a "correction" rather than a "distortion" of the market process. The need for correction is said to derive from the existence of "externalities,"¹² that is, costs or benefits that are borne or reaped by nonparties to a transaction¹³ and are

9. The point has frequently been made that because of the substantial reduction in conventional trade barriers, *i.e.*, tariffs and quantitative restrictions, the relative importance of measures such as subsidies has greatly increased. *See, e.g.*, R. BALDWIN, *NONTARIFF DISTORTIONS OF INTERNATIONAL TRADE* 110 (1970); PRESIDENT'S COMMISSION ON INTERNATIONAL TRADE AND INVESTMENT POLICY, *REPORT: UNITED STATES INTERNATIONAL ECONOMIC POLICY IN AN INTERDEPENDENT WORLD* 89 (1971); Report of the Panel on Subsidies, 10th Supp. BISD 201, 202, para. 5 (1962).

10. *See* W. BROWN, *THE UNITED STATES AND THE RESTORATION OF WORLD TRADE, AN ANALYSIS AND APPRAISAL OF THE ITO CHARTER AND THE GENERAL AGREEMENT ON TARIFFS AND TRADE* 214-15 (1950); K. DAM, *supra* note 1, at 132.

11. Curiously, there is no distinction drawn among subsidies on the basis of the policy objectives they are designed to implement. The subsidy as an instrument of policy has received considerable attention in the economic literature. The conceptual development can be traced through a reading of the following articles: Haberler, *Some Problems in the Pure Theory of International Trade*, 60 *ECON. J.* 223 (1950); Bhagwati & Ramaswami, *Domestic Distortions, Tariffs and the Theory of Optimum Subsidy*, 71 *J. POL. ECON.* 44 (1963), both reprinted in *AM. ECON. ASSN., READINGS IN INTERNATIONAL ECONOMICS* 213, 230 (R. Caves & H. Johnson ed. 1968); Johnson, *Optimal Trade Intervention in the Presence of Domestic Distortions*, in *TRADE, GROWTH, AND THE BALANCE OF PAYMENTS* 3 (1965); J. BHAGWATI, *THE THEORY AND PRACTICE OF COMMERCIAL POLICY: DEPARTURES FROM UNIFIED EXCHANGE RATES* (Princeton Essays in Intl. Fin. No. 8, 1968).

12. *See* Mishan, *The Postwar Literature on Externalities: An Interpretative Essay*, 9 *J. ECON. LIT.* 1 (1971), which is a concise discussion of a great deal of the important writing on this subject. *See also* Buchanan & Stubblebine, *Externality*, 29 *ECONOMICA* 371 (1962), reprinted in *READINGS IN MICROECONOMICS* 477 (W. Breit & H. Hochman ed. 1968).

13. Whether one will be a party to a transaction depends on the costs of organizing and effectuating a bargain or series of bargains. If the costs of the transaction exceed the benefit that could be derived, the person will not participate. *See* G. TULLOCK, *PRIVATE WANTS, PUBLIC MEANS* 47 (1970); Demsetz, *The Private Production of Public Goods*, 13 *J. LAW & ECON.* 293 (1970).

not therefore taken into account in the market process.¹⁴

As a result, the issue is not that of identifying and remedying "distortions" but rather of determining if a particular measure on balance "corrects" or "distorts" the market process, that is, whether it increases or decreases the efficiency with which resources are allocated. Resolution of this question turns upon theoretical and empirical judgments about how well the domestic political system performs the tasks of deciding what intervention should be undertaken and implementing the program that is adopted.

Our inquiry then is into the contribution that an international regulatory system can make to improve the process of assessing and compensating for externalities. There are three ways this contribution may be made. First, domestic measures might be tested by some international standard of over-all efficiency enhancement. Secondly, the domestic political process could be altered by international agreement—for example, one requiring a two-thirds majority in the national legislature before a particular type of measure could become effective. Finally, power to take account of certain externalities could be lodged in an international body.

We will begin by examining the basic contours of the present GATT regulation of subsidies. We will then consider the theory of comparative advantage underlying the GATT regime and introduce the complications of externalities and the governmental process designed to take account of them. Finally, we will make some tentative suggestions for changes in rules and institutions that might serve to improve the present state of affairs.

II. THE GATT PROVISIONS

Three notions seem to explain the GATT regulation of subsidies. First, if the government pays a share of a firm's costs, the firm may be able to capture sales (either in the domestic or in the foreign market) from more efficient rivals who do not receive government support. As explained below, if this capture takes place, a misallocation of resources and a consequent decrease in world production may result. The second notion is that some of the reasons which lead governments to subsidize must be accepted in fashioning international regulation. This concept has not been systematically implemented in the regulatory scheme. The final idea is that a government may

14. Air pollution is the classic example of an external cost or, as it is often termed, negative externality. See Kirgis, *Effective Pollution Control in Industrialized Countries: International Economic Disincentives, Policy Responses, and the GATT*, 70 MICH. L. REV. 859 (1972).

subsidize export sales in order to enable a domestic firm to compete unfairly by underselling its rivals in foreign markets. The objective of this tactic presumably is to reap monopoly profits when competition is diminished sufficiently for the subsidized firm to secure "market power."

The GATT pattern of regulation reflects unresolved tensions among these often conflicting notions. Section A of article XVI of GATT requires notification of "any subsidy, including any form of income or price support, which operates directly or indirectly to increase exports of any product from, or to reduce imports of any product into, [a] territory." This section reflects the first notion described above, the objection to a subsidy as causing a misallocation of resources by enabling a firm to capture sales from a more efficient rival. The section does not, however, come to grips with the second basic notion—the justification for certain subsidies. Instead, apparently because no standard for separating good from bad reasons could be devised, the remedial system imposes no substantive prohibition whatever. If, however, "serious prejudice to the interests of any other contracting party is caused or threatened by . . . [the] subsidization," the subsidizing party is called upon to "discuss with the other . . . party or parties concerned, or with the CONTRACTING PARTIES, the possibility of limiting the subsidization."¹⁵ Thus the section articulating the fundamental objection to subsidies as a cause of the misallocation of the world's resources does nothing more than call for notification and, only if serious prejudice to another country may result, consultation with the interested parties or responsible GATT officials.

Section B of article XVI deals principally with subsidies on exports. Export subsidies are viewed more harshly under section B than are subsidies in general under section A. There appear to be two reasons for the different attitude. First, as is more fully explained below,¹⁶ it is more difficult to justify export subsidies than production or consumption subsidies on grounds of efficiency. Most of the "externalities" that subsidies are designed to correct apply equally to goods sold domestically and to those traded internationally. This distinction is often drawn in the literature;¹⁷ however, we are not aware of any evidence indicating what significance, if any, it had in the framing of the GATT provision. The second respect in which export

15. GATT, art. XVI, sec. A, para. 1.

16. See pt. III. B. *infra*.

17. See J. BHAGWATI, *supra* note 11, at 11; Johnson, *supra* note 11, at 6.

subsidies vary from subsidies in general undoubtedly did influence the adoption of a more severe treatment for some types of export subsidies. This reason is based on the third notion discussed above—that export subsidies enable a firm to sell at a lower price in the foreign market in order to eliminate competition and then reap monopoly profits.¹⁸

As in section A, the provisions of section B reflect an awareness that the regulation must take into account certain national policies underlying the grant of export subsidies. The result is a two-part solution that provides different treatment for subsidies on primary and nonprimary products.¹⁹ With respect to export subsidies on primary products, which are commonly used throughout the world, the parties are called upon only to “seek to avoid . . . [their] use.”²⁰ Thus this provision goes beyond section A in actually condemning the export subsidies through the “seek to avoid” formulation, but stops short, in apparent recognition of their widespread use, of a comprehensive prohibition.²¹

The portion of section B dealing with export subsidies on nonprimary products goes farthest in prohibiting use of the device. The parties are called upon at “the earliest practicable date” to stop using

18. The most influential articulation of the notion that subsidies may be a form of government-supported price discrimination can be found in J. VINER, *DUMPING: A PROBLEM IN INTERNATIONAL TRADE* 90, 163 (1923). See also W. BROWN, *supra* note 10, at 117.

19. A primary product is defined as “any product of farm, forest or fishery, or any mineral, in its natural form or which has undergone such processing as is customarily required to prepare it for marketing in substantial volume in international trade.” GATT, ad art. XVI, sec. B, note 2.

20. GATT, art. XVI, sec. B, para. 3. Although all of the other parts of section B deal only with subsidies on exports, paragraph 3 anomalously provides that if “any form of subsidy which operates to increase the export of any primary product” is granted, it “shall not be applied in a manner which results in that contracting party having more than an equitable share of world export trade in that product” (emphasis added). The fundamental meaning of the phrase “equitable share” has never been articulated. For a review of the decisions interpreting the term, see J. JACKSON, *supra* note 1, at 393-95, and authorities cited therein.

One possible meaning of economic significance would be that share of the market that a country would have in the absence of any subsidies or other government intervention. Such an interpretation would restrict the use of subsidies to instances in which it was necessary to offset interventionist measures by other countries. Application of this standard would require complex evaluations based on “second-best theory.” That is, it would be necessary to decide what would happen if there were no intervention and then to determine if the particular measure, in light of the fact that there is existing intervention, represents a movement toward or away from the outcome that would have been reached without government intervention. See Lipsey & Lancaster, *The General Theory of the Second Best*, 24 *REV. OF ECON. STUDIES* 11 (1956). We will not deal with the question of “second-best” justification for subsidies.

21. The failure to prohibit these subsidies may also reflect a recognition that they may sometimes be a second-best solution in the face of import restrictions on primary products that countries often impose.

subsidies that result "in the sale of [a] product for export at a price lower than the comparable price charged for the like product to buyers in the domestic market."²² In 1961, seventeen countries declared their willingness to cease the use of such subsidies.²³ The strength of this provision apparently results from three factors. There is first the relative skepticism about the justification for export subsidies noted above—although again no evidence of the influence of this idea can be adduced. Second, export subsidies for nonprimary products are much less commonly employed. Finally, and perhaps most significantly, the prohibition is limited to instances in which a lower price is being charged in export sales—cases presumably in which subsidization is being practiced as a species of "unfair competition"—the third basic notion behind the GATT subsidy provisions.

Article VI, the second principal GATT provision dealing with subsidies, authorizes individual importing countries to neutralize the effect of a subsidy by levying a "countervailing duty" in "an amount equal to the estimated bounty or subsidy . . . granted, directly or indirectly, on the manufacture, production or export of [the] product."²⁴ The countervailing duty cannot be levied, however, unless the "effect of the . . . subsidization . . . is . . . to cause or threaten material injury to an established domestic industry, or is such as to retard materially the establishment of a domestic industry."²⁵ Thus

22. GATT, art. XVI, sec. B, para. 4.

23. See note 3 *supra* and accompanying text.

24. GATT, art. VI, para. 3.

25. GATT, art. VI, para. 6(a). Article VI is included within part II of GATT, which applies "to the fullest extent not inconsistent with existing legislation." Protocol of Provisional Application of the General Agreement on Tariffs and Trade, Oct. 30, 1947, para. 1(b), IV BISD 77 (1969). The American countervailing duty statute (now 19 U.S.C. 1303 (1970)) predates GATT and need not by reason of the Protocol of Provisional Application conform to article VI. Countervailing duties have been levied very infrequently under American law, apparently in large part because of the unwillingness of the Executive to invoke the statute. The text of the American law varies materially from the GATT provision since it does not forbid the levying of both countervailing and dumping duties, does not except failure to collect or remission of tax on exports, and has no injury requirement. It also extends to privately financed subsidization but has never been so applied. The variation, however, has in practice been much less. Both countervailing and dumping duties are not levied, and remission of no more than a tax previously levied (despite early judicial authority indicating the contrary—see *Nicholas & Co. v. United States*, 249 U.S. 34 (1918); *Downs v. United States*, 187 U.S. 496 (1903)) has not been regarded as a subsidy. It is impossible to say whether a species of "injury" requirement has in fact been applied. The Treasury Department exercises considerable discretion in deciding whether to impose a countervailing duty. See *United States v. Hammond Lead Prods., Inc.*, 440 F.2d 1024, 1031 (C.C.P.A.), *cert. denied*, 40 U.S.L.W. 3288 (U.S. Dec. 20, 1971). It seems reasonable to suppose that the impact on a domestic industry is a factor bearing on the exercise of discretion. However, no explanation of the Treasury's exercise of discretion in a particular case is

the provision does not distinguish between export subsidies and subsidies in general, primary and nonprimary products, or the various reasons why the government may have intervened. The only limitation on the general authorization is that the requisite injury or threat of injury to a domestic industry be demonstrated. This provision appears then to represent the most unambiguous application of the "unfair competition" rationale for regulating subsidies.

We shall not treat at length the question of "unfair competition" through government subsidization of export sales. This special case need not be dealt with in resolving the basic issue of how the "distorting" and "efficiency-enhancing" aspects of government subsidization are to be reconciled. If a subsidy may lead to the misallocation of resources in all instances in which it has the effect described by section A of article XVI—that is, when it operates to increase exports or decrease imports—there is reason enough to ban its use regardless of whether it also leads to the subsidized firm's gaining market power. If what is needed is some threshold requirement of substantiality in the impact of the subsidy, this can be stated in straightforward terms without the extraneous notion, introduced by the "injury" concept, of damage to the competitive vitality of a domestic industry.

We do say in passing that recent writing about the problem of price discrimination casts very great doubt on the validity of the idea that selling below cost ("predatory pricing") in a market is an effective way to gain and enjoy market power. This basic notion, which underlies the regulation both of "dumping" (in which the firm itself finances the "predatory pricing") and of subsidies (as government-financed "predatory pricing"), has been disputed on both empirical and theoretical grounds.²⁶ The point simply is that

publicly available. As to the application of the American law, see generally Butler, *Countervailing Duties and Export Subsidization, A Re-Emerging Issue in International Trade*, 9 VA. J. INTL. L. 82 (1968); Feller, *Mutiny Against the Bounty: An Examination of Subsidies, Border Tax Adjustments, and the Resurgence of the Countervailing Duty Law*, 1 LAW & POL. IN INTL. BUS. 17 (1969); U.S. Treasury Dept., *Countervailing Duties*, in PAPERS SUBMITTED TO THE COMMISSION ON INTERNATIONAL TRADE AND INVESTMENT POLICY 409 (1971) (summarizing general enforcement policy).

26. Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548, 587 (1969), and authorities cited therein. There is a secondary justification offered for prohibiting international price discrimination. The idea basically is that a firm selling at a lower price in one market must be obtaining the financing to do so from some source—for example, monopoly profits in the home market or government support—and that this source is somehow "unreliable." If the likelihood that this support will continue is for some reason exceptionally difficult to appraise, then conceivably domestic rivals will make costly mistakes in responding to the foreign competition that the government might be able to prevent (at a cost lower than the social cost of the mistakes) by appropriate intervention. The whole question is complicated by the fact that charging different prices may not reflect any "artificial" support at home but rather factors such

in order for the tactic to be feasible, the gains from monopoly pricing after all rivals have been driven out and before the high price causes re-entry and renewed competition must exceed the losses incurred in selling below cost during the "predatory" stage. The empirical evidence indicates that this will rarely if ever be the case.²⁷

In any event, government-financed "predatory pricing" is a different question from the one with which we wish to deal. Our interest is in examining the reasons why the great range of subsidies, which are not used in a "predatory" fashion, are granted, in order to decide how they ought to be regulated in a well-conceived system of international trade regulation. To do this we must first develop more fully the theory of comparative advantage upon which GATT is fundamentally grounded.

III. THE THEORY OF COMPARATIVE ADVANTAGE AND SUBSIDIES

A. *The Traditional Analysis*

The theory of comparative advantage²⁸ represents an adaptation to international trade of the basic notion that the value of domestic output will be maximized if resources are allocated through private market transactions.²⁹ This theory assumes that most factors of production move freely in the domestic market to locations where the highest value is placed upon them. In the international market, however, there is insufficient mobility of certain factors of production for a completely efficient allocation of resources.³⁰ Many factors do

as decreasing average costs or the desire to enter a market by initially charging "promotional" prices. In any event, the recent developments on these questions have not been brought to bear in a systematic re-evaluation of the international regulation of what is conceived to be privately or publicly financed dumping. See K. DAM, *supra* note 1, at 170-72 (suggesting need for re-evaluation); Anthony, *The American Response to Dumping from Capitalist and Socialist Economies—Substantive Premises, and Restructured Procedures After the 1967 GATT Code*, 54 CORNELL L. REV. 159, 163-77 (1968) (reviewing economic justification of present dumping laws).

27. See Elzinga, *The Antimerger Law: Pyrrhic Victories?*, 12 J. LAW & ECON. 43 (1969); McGee, *Predatory Price Cutting: The Standard Oil (N.J.) Case*, 1 J. LAW & ECON. 137 (1958).

28. For three general treatments of the theory (in roughly ascending order of difficulty), see P. SAMUELSON, *ECONOMICS* ch. 34 (8th ed. 1970); C. KINDLEBERGER, *INTERNATIONAL ECONOMICS* chs. 1-3 (4th ed. 1968); H. HELLER, *INTERNATIONAL TRADE, THEORY AND EMPIRICAL EVIDENCE* chs. 1-5, esp. ch. 2 (1968).

29. This statement, to be strictly true, must assume perfect competition and an acceptable initial distribution of wealth.

30. See, e.g., H. HELLER, *supra* note 28, at 3. The question of how freely factors do in fact move is an empirical matter. The theoretical work begins, however, with an assumption of complete immobility which may, of course, be relaxed in varying degrees when dealing with particular questions. See *id.* at 3-4, 6; C. KINDLEBERGER, *supra* note 28, at 4-6.

not freely cross national boundaries and, therefore, a given country may be deficient in the resources necessary to engage efficiently in certain industries. Consequently, if all countries were to attempt to satisfy their domestic demands solely with domestically produced goods, total world production would be less than could be achieved through trade. For all countries will gain economically if each country first specializes in the production of those goods in which it has the greatest efficiency relative to alternative uses of domestic resources and then trades with other countries that similarly allocate their resources.³¹

The objection to subsidies within this framework is that they distort the resource-allocating function of the market and thereby reduce the benefits derived from specialization reflecting comparative advantage coupled with trade. When, for example, a government makes a payment to the producer of a certain good, the subsidy reduces the cost of production, or private cost, as it appears to the producer without reducing the real or social cost³² of such production, that is, the output that must be forgone in order to make the subsidized goods. As a result of the subsidy, resources will be employed in producing the subsidized goods rather than other goods of greater real value. The domestic loss, then, is the drop in the value of total domestic output that occurs when resources are not put to their most productive use.

Subsidies, moreover, not only force domestic resources from their most productive use but also divert otherwise efficiently allocated resources from competing foreign industries by denying to those industries the sales captured by the subsidized product. Thus, neither the domestic nor foreign country specializes in accordance with comparative advantage and total world output is reduced.

B. Externalities, Subsidies, and Welfare

The preceding simplified analysis does not take account of externalities.³³ Since resources are allocated in private market transac-

31. We have stressed the gains from specialization in production, which are most significant for our analysis. If two countries have different preferences for goods ("Community Indifference Curves"), they could both be made better off through trade even if it is assumed that they are identical from the viewpoint of production. There are thus gains to be derived from specialization in consumption as well as production. See H. HELLER, *supra* note 28, ch. 4.

32. We use the term social cost to mean what is often called "real" or "opportunity" cost. For an explanation of this concept, see Coase, *The Problem of Social Cost*, 3 J. LAW & ECON. 1 (1960).

33. See notes 12-14 *supra* and accompanying text.

tions by people responding to prices that they are offered for performing various tasks, the failure of an externality to affect the price (by either increasing or decreasing it) leads to a misallocation of resources. This misallocation occurs because market choices are made among alternative uses of resources not on the basis of the social value of those uses but on the basis of a price that varies from the social value by the amount of the externalities arising from those uses.

It will be recalled that the traditional analysis found subsidies objectionable not because they lowered private costs but rather because they made private costs appear lower than social costs. But externalities may exist that cause social costs in fact to be lower than private costs. For if the value that society places on the production of a good is not, for some reason, fully reflected in market transactions, its social value is higher and the costs to society of forgone production are correspondingly lower. Under these conditions, a subsidy in the amount that nonparty beneficiaries would pay if there were a functioning market for the externality can theoretically be justified as increasing efficiency. This kind of subsidy would, moreover, add to, rather than reduce, the gains from trade coupled with specialization, which are predicted by the theory of comparative advantage.³⁴

We shall try to illuminate these points by considering three types of subsidies that have significant impact on international trade. Before examining these measures, however, it is necessary to clarify certain threshold verbal and conceptual ambiguities in the meaning of the term "subsidy,"³⁵ which we have so far confined to the case of a direct payment.

As we have indicated, the international regulation of subsidies is thought to be required because their effect on private costs results in the misallocation of resources. The difficulty is that the simplified model under which subsidies are viewed as "distortions" takes no account whatever of a public sector. If nothing else is happening in the public sector and firm *A* receives a hundred dollar payment, it can fairly be said to be subsidized in that amount. When, however, account is taken of the fact that there is a government that is both

34. See note 11 *supra*.

35. See E. ROLPH, *THE THEORY OF FISCAL ECONOMICS* (1954); Hubbell, *Concealed Subsidies in the Federal Budget*, 10 *NATL. TAX J.* 214 (1957); Kaysen, *On Defining a Subsidy*, in *PUBLIC POLICY I* (Harvard Grad. School of Pub. Adm. Y.B. 1953); Robinson, *What Is a Government Subsidy?*, 20 *NATL. TAX J.* 86 (1967); *Subsidies and Subsidy-Effect Programs of the U.S. Government* (Materials prepared for the Joint Economic Comm., 89th Cong., 1st Sess. (Comm. Print 1965)).

taxing and spending, the issue becomes much more complex.³⁶ Every activity is potentially subject to the burden of taxation and the benefit of government expenditure. The choice among activities in the private sector is inevitably influenced by the net impact of burden and benefit created by the public sector. The issue in assessing the impact on resource allocation of a particular form of government intervention then becomes not simply whether an amount is paid to or received by a firm but, more generally, whether the measure in some way alters the relative profitability of various activities. For example, if it is assumed that everyone is engaged either in farming or manufacturing and a statute is passed granting farmers ten dollars per unit of output and manufacturers one dollar per unit of output, the effect is to increase the allocation of resources to farming. But the same effect would result from differential tax rates favoring farmers.

We will use the term "subsidy," therefore, to extend to all government revenue and expenditure measures that have the effect of altering returns to various activities and thereby influencing the allocation of resources.³⁷ In using the term, we do not imply any

36. The notion that there is no "neutral" place to begin an evaluation of government intervention since existing government structure must be assumed is analyzed in C. SHOUP, *PUBLIC FINANCE* 7-19 (1969).

37. Our analysis would in theory extend beyond taxing and spending to include, for example, quantitative restrictions or qualitative requirements that have resource-allocation effects. Our definition of subsidies is broader than others that have been employed. Most significantly, we include measures having allocational effects that may have been designed principally to redistribute income according to some prevailing notion of "equity." We include these both because the precise objective of a given measure is often unclear and because redistribution by government is frequently justified on grounds of efficiency as well. That is, redistributive taxation and transfer of wealth can be viewed as a way for the relatively affluent to purchase the direct or indirect benefits which result when others in the society enjoy a decent living standard. (Compare the limited definition of the term, excluding provisions principally designed for income redistribution, adopted for purposes of evaluating the American tax laws by Aaron, *Inventory of Existing Tax Incentives—Federal*, in TAX INSTITUTE OF AMERICA, *TAX INCENTIVES* 39, 40-41 (1971); Surrey, *Tax Incentives as a Device for Implementing Government Policy: A Comparison with Direct Government Expenditures*, 83 HARV. L. REV. 705, 706-13 (1970)).

We have also excluded from consideration the subject of border tax adjustments, that is, the rebate of value-added taxes on exports and the corresponding imposition of an equivalent tax on imports. There are several reasons for this exclusion. First, the issue of the resource-allocation effect of these measures is largely an empirical one, and turns on the question of who bears the incidence of the tax. Second, if the border tax adjustment leads to an over-all increase in the price of imports and a decrease in the price of exports, it is equivalent to a partial devaluation and correctible under the present monetary system through adjustments of the exchange rate. Finally, to the extent that the border tax adjustment is a reflection of the prevailing notion of tax "equity"—that is, that "consumption" should be the basis for distributing the tax burden—adequate treatment would involve the range of issues subsumed under the

judgment about the desirability of the particular measure in question.

It is now necessary, as the final preliminary matter before considering the various examples of subsidies affecting international trade, to explain more fully the criterion of efficiency-enhancement that we will apply in analyzing the effects of subsidies in these areas. Modern welfare economics proceeds on the assumption that it is impossible (noneconomic value judgments aside) to make interpersonal comparisons of the amount of satisfaction ("utility") that people realize from the occurrence of various events.³⁸ The basic yardstick is therefore individual preference—which, however, need not in any psychological sense be selfish. Utility can be assigned, for example, to alleviation of the suffering of other people.

Since interpersonal comparisons cannot be made, the controlling standard in evaluating a given event must take into consideration all preferences held by individuals in the group under consideration. The standard that is generally applied is that of Pareto optimality: A change in price or output in an economy is a move *toward* Pareto optimality only when someone is made better off and no one is made worse off. Pareto optimality is theoretically reached when it is not possible to make someone better off without making someone else worse off, that is, when the possibilities of improvement through voluntary exchange have been exhausted.³⁹ In order to know whether a given change represents a move toward Pareto optimality, it is necessary to know when individuals are in fact better off—to know their preferences. As has been noted above, we will be dealing principally with situations in which all of the relevant preferences are not revealed in private transactions so that the government, in order to approximate Pareto optimality, attempts to assess and give effect to the additional preferences.

We will now consider how three government measures, often

question of fiscal harmonization. See FISCAL HARMONIZATION IN COMMON MARKETS, VOLUME 1: THEORY (C. Shoup ed. 1967).

For a detailed discussion of the subject of border tax adjustments, see, e.g., C. FULDA & W. SCHWARTZ, CASES AND MATERIALS ON THE REGULATION OF INTERNATIONAL TRADE AND INVESTMENT 469-79, and authorities cited in 474 n.1 (1970); J. GASTON & W. SMITH, BORDER TAXES AND INTERNATIONAL ECONOMIC COMPETITION (1970).

38. See J. BUCHANAN & G. TULLOCK, THE CALCULUS OF CONSENT 171 (Univ. of Mich. Press ed. 1965); E. MISHAN, WELFARE ECONOMICS: TEN INTRODUCTORY ESSAYS 14 (1969).

39. V. PARETO, MANUEL D'ECONOMIE POLITIQUE (1909). For a succinct review of the literature following Pareto's original formulation, see Bator, *The Simple Analytics of Welfare Maximization*, 47 AM. ECON. REV. 22, 57-58 (1957), reprinted in READINGS, *supra* note 12, at 385, 410.

asserted to have substantial impact on international trade, may serve to produce a more efficient resource allocation, that is, resource allocation more consonant with the actual production possibilities and consumer preferences than that yielded by wholly private transactions. We will then consider the process by which the government intervention is framed and implemented in order to appraise its effectiveness in achieving the desired improvement.

1. *Research and Development*

Much research and development is conducted at government expense.⁴⁰ It appears, moreover, that in technologically sophisticated countries like the United States there may be a significant correlation between the level of research and development in an industry and the propensity to export.⁴¹

Presumably if one country subsidizes research and development, firms benefiting from the government expenditure will be able to prevail over rivals in other countries that might otherwise be more efficient but receive no government support and must therefore bear the cost of introducing new products and methods of production.⁴² This is a specific instance of the conventional objection to subsidies.

The complicating factor, however, in assessing the impact on efficiency of subsidies of this kind is that the government's support of research and development may be designed to account for certain externalities. The basic reason for the subsidy may be that the full value of the benefits created by privately conducted research, especially in the case of basic research, may not be captured by the firm

40. See C. FREEMAN & A. YOUNG, *THE RESEARCH AND DEVELOPMENT EFFORT IN WESTERN EUROPE, NORTH AMERICA AND THE SOVIET UNION*, esp. Table 4, at 72 (1965); E. MANSFIELD, *THE ECONOMICS OF TECHNOLOGICAL CHANGE* ch. VI (1968). It has been estimated that the provision of American tax law permitting research and development outlays to be treated as expenses rather than capital investments (INT. REV. CODE OF 1954, § 174) constitutes an annual subsidy of 500 million dollars. Surrey, *supra* note 37, at 709. It may be helpful to emphasize that subsidization of research and development may, but need not, be efficiency enhancing. J. SERVAN-SCHREIBER, *THE AMERICAN CHALLENGE* 112-22 (1968), compared American support for research and development on the SST favorably with the British and French effort on the Concorde.

41. See O'Brien, *Trade Patterns and Technology*, 5 J. WORLD TRADE L. 657 (1971).

42. This assertion, of course, assumes that the results of the research and development efforts are enjoyed only by a limited group of firms in the country. See, in this regard, *France v. Commission of the European Communities*, No. 47/69 (Eur. Ct. J. June 25, 1970), which held invalid under article 92 of the Treaty Establishing the European Economic Community, done at Rome March 25, 1957, 298 U.N.T.S. 3 [hereinafter EEC Treaty], that part of a French textile tax on imports used to subsidize research. France argued that all firms in the industry benefited from the research, but the Court concluded that French firms benefited far more than did non-French firms.

that undertakes it.⁴³ Some of the knowledge gained will be communicated without payment in exchange to employees, suppliers, customers, and others with whom the firm deals.

These benefits, commonly referred to as "spillover effects," occur for essentially two reasons. First, there are limits on the protection afforded by law to knowledge acquired through innovation. Second, the costs of devising and implementing transactions to capture the value of some of the benefits derived from the innovation (for example, the knowledge gained by a firm supplying inputs) may exceed the amount that could be realized. As a result of these various factors, the amount obtained through private transactions may be less than the social value of the innovation. Thus government support of research and development can in principle supply an additional return equal to the value that is not captured in private transactions. If it performs this function, the result is to enhance efficiency by bringing to bear as incentive the true value placed by society on the invention rather than the lesser value manifested in the private transaction.

If the combination of public and private action yields a more efficient use of domestic resources because the incentive taken into account more accurately reflects the social value of the innovation, then the world as a whole can share in the benefits of that use through international trade. If this objective has actually been accomplished, the proper response is obviously not an international ban or nullification of the domestic measure. Indeed, the right thing for other countries to do may well be to try to improve efficiency by similarly effective use of the public sector.

2. *Agricultural Subsidies*

Subsidy programs that increase the income of persons engaged in farming are a commonplace.⁴⁴ Criticism that these programs lead to inefficiency in the allocation of the world's agricultural resources is a standard component in analyses of international trade regulation by persons committed to the desirability of a free-trade regime.⁴⁵

43. See E. MANSFIELD, *supra* note 40, at 186; ARROW, *Economic Welfare and the Allocation of Resources to Invention*, in NATIONAL BUREAU OF ECONOMIC RESEARCH, *THE RATE AND DIRECTION OF INCENTIVE ACTIVITY* 609 (1962). Volume 26 of PUBLIC FINANCE (1971) consists entirely of articles from various countries on the question of public support of research and development.

44. See C. FULDA & W. SCHWARTZ, *supra* note 37, at 268-306; authorities cited in note 5 *supra*.

45. See, e.g., R. BALDWIN, *supra* note 9, at 113, 117-18, 125-27; Malmgren & Schlechty, *supra* note 5; PRESIDENT'S REPORT, *supra* note 9, at 141.

We believe, however, that these criticisms are valid only if certain assumptions are made about the objectives that the government measures are designed to accomplish. Stated within the framework of our analysis, if the government action is designed to give effect to externalities and succeeds in doing so, it is efficiency enhancing.

There are two principal externalities to which agricultural subsidies may be responsive. First, for reasons of social preference, it may be thought desirable to keep a certain portion of the population engaged in agriculture—even if purely private competition would result in a smaller number of persons remaining in farming.⁴⁶ Second, it may be thought desirable to maintain a level of domestic production so that the country would be self-sufficient to some degree in the event that foreign supplier countries, for political or military reasons, chose not to sell to it.⁴⁷

These reasons can be deplored as misguided by those who disagree with them, but there is no way in principle to reject them as less legitimate than others in defining what the particular "demand" is within a country. It is moreover by no means unreasonable to believe that such demand exists. For it has often been pointed out that income maintenance, which leaves an individual free to choose his occupation,⁴⁸ or government payment of the retraining and relocation costs involved in a change of occupation,⁴⁹ provide less costly ways to ameliorate the condition of those who can no longer engage in agricultural production in a truly competitive market. But the persistence of programs that have the effect of keeping people in farming and domestic production at a certain level suggests that there is at least some significant preference for this result quite apart from the desire simply to increase the income of persons presently engaged in farming.

46. See J. BHAGWATI, *supra* note 11, at 35; G. CURZON, *supra* note 1, at 206.

47. See J. BHAGWATI, *supra* note 11, at 33. See also SENATE COMM. ON FINANCE, THE SUGAR ACT AMENDMENT OF 1965, S. REP. NO. 909, 89th Cong., 1st Sess. 2 (1965), which asserts that "it has been the policy of the U.S. Government—for defense and strategic reasons—to promote within the United States the ability to produce a substantial portion of our sugar requirements." The oil import quota has a similar policy objective. See Dam, *Implementation of Import Quotas: The Case of Oil*, 14 J. LAW & ECON. 1, 3 (1971); Schwartz & Kindred, *American Regulation of Oil Imports: Law, Policy and International Responsibility*, 5 J. WORLD L. 267 (1971).

48. Such a proposal as part of a program to eliminate gradually the present subsidization of domestic sugar production is offered in Johnson, *The Sugar Program: Costs and Benefits*, in NATIONAL ADVISORY COMMISSION ON FOOD AND FIBER, FOREIGN TRADE AND AGRICULTURAL POLICY 3 (1967).

49. For the suggestion that by reason of "imperfections" in the capital market for investment in human capital, such as for retraining and relocation, subsidization of expenditures of this kind may be appropriate, see Johnson, *supra* note 11, at 28.

This type of "demand" will not be revealed in private transactions. Although it is theoretically possible for all nonfarmers interested in supporting farming as an occupation (or in maintaining a particular level of domestic production) to offer a sum of money to induce the desired activity, such a process would obviously be wholly impracticable. But, once again, the fact that the demand is not manifested in the market does not mean that it does not exist.

3. *Subsidies to Infant Export Industries*

The various reasons for subsidies so far discussed would not justify a measure limited to exports. There is no reason to believe that the spillover effects of research and development are encountered to any larger degree in industries that export. Nor does it matter, if the objective is to have more people engaged in farming, whether the product of their efforts is sold at home or abroad. Export subsidies, however, can be justified only on the basis of externalities that arise in international trade but not in domestic production or consumption.

We believe, again in principle, that justification of this kind may exist. For example, there are good reasons for granting export subsidies to infant or "pioneer" export industries.⁵⁰ The pioneer firm, in order to succeed in selling a particular type of product in a new foreign market, must incur expenses to learn about market conditions and develop an acceptance of its product. The benefits of these expenses may "spill over" in several ways. Suppliers, customers, employees, and others with whom the firm deals may obtain knowledge about the foreign market without having to pay for it and may put that knowledge to use to further their own economic interests. Firms subsequently attempting to sell in the foreign market may benefit (again without payment) from the enhanced reputation of goods emanating from the particular country, which was created by the pioneer firm.⁵¹ Again, a subsidy reflecting these benefits may yield a more efficient result than private market transactions.

50. See J. BHAGWATI, *supra* note 11, at 13; Rom, *supra* note 4 (which deals with subsidies in less-developed countries faced with overvalued currencies).

51. Another reason for subsidizing the exports of pioneer firms has been advanced in the economic literature. Private firms breaking into a new foreign market may systematically overestimate the risks involved—especially those such as imposition of quotas and tariffs—and at the same time underestimate the capacity of their governments to protect them abroad against losses in foreign markets. Thus private exporters might need temporary export subsidies to induce them to achieve an optimum level of exports because of this asymmetry between the estimation of risks in the domestic and foreign markets.

IV. THE EFFICIENCY OF GOVERNMENT INTERVENTION

We have so far assumed that the government subsidy perfectly reflects social preferences, and that the information about those preferences which is necessary to formulate the correct subsidies has somehow been assembled without cost. Neither of these assumptions, of course, accords with the reality of how decisions are made in the political process. The choice is not between a market system that does not take account of externalities and a political process that perfectly records and corrects the externalities. In fact, both alternatives are imperfect.

As we have indicated, the principle reason why government intervention may be necessary is that it is too costly in private transactions to take account of certain consequences of the particular conduct in question. Government action can reduce the costs of ascertaining and reacting to these consequences in two ways. First, by having representation of a large group (the general population) by a much smaller one (the elected representatives) and adopting decision-making rules requiring less than unanimity, the costs of reaching agreement approximating the relevant preferences are reduced.⁵² These are savings that can be achieved through any form of group organization. Beyond this advantage, however, the government also has the power of compulsion. This unique aspect of government is

There is not, in this case, simply an asymmetry of information between these markets. If that were the case a subsidy would not be justified because the acquisition of information expends real resources, and foreign sales should yield enough returns to cover these costs so that the transaction will be privately and socially desirable. But when the private evaluation of risk exceeds the social evaluation there is an externality, and the export activity might not be optimal without the subsidy. The externality may arise because the government is unwilling or unable to transmit its store of information about foreign conditions, which it is continually replenishing in order to conduct international affairs, to private firms that could use that information to appraise risks accurately. It may be so costly (and possibly for security reasons impossible) to transmit this information that it is more efficient for the government simply to pay a subsidy to counteract the private bias against international involvement. See J. BHAGWATI, *supra* note 11, at 13. A similar rationale has been suggested for the role of fixed exchange rates in reducing the incidence of fluctuations in the relative values of various currencies. See A. LANYI, *THE CASE FOR FLOATING EXCHANGE RATES RECONSIDERED* (Princeton Essays in Intl. Fin. No. 72, 1969); Willett & Tower, *The Welfare Economics of International Adjustment*, 26 J. FINANCE 287 (1971).

52. For a discussion of how representative government expresses the preferences of a population, see Haeefele, *A Utility Theory of Representative Government*, 61 AM. ECON. REV. 350 (1971). See J. BUCHANAN & G. TULLOCK, *supra* note 38, at 63-84, for a discussion of the choice of an appropriate decision-making rule. A rational individual would choose a decision-making rule which over a range of issues minimizes the sum of the costs involved in (1) arriving at a result (where unanimity would be most costly) and (2) accepting decisions adverse to his position (where unanimity would be least costly).

the only means of inducing people in certain circumstances to "reveal" their true preferences—that is, to indicate the value they place on the external benefits in question. For if payment from all beneficiaries cannot be compelled and there is no way to exclude nonpayers from participating in benefits, all potential beneficiaries will conceal their preferences in an effort to take a "free ride" on those who do pay.⁵³ The externalities we have considered, *e.g.*, the spillover benefits derived from research and development and from the efforts of "pioneer" export firms, are specific instances of this phenomenon.

Obviously, however, a system that does not require unanimity may yield measures which, because of the differences in the intensity with which various preferences are held, do not represent an *over-all* increase in welfare.⁵⁴ Moreover, whatever system is devised will itself be costly, for real resources must be employed in operating the political system. Finally, a governmental political solution inevitably requires a second stage of implementation that also involves costs and risks of error in measuring the relevant variables. Thus the ultimate question is whether the government solution, in light of (1) the anticipated departure from optimality resulting from the less than unanimous decision and the difficulties of measurement encountered upon implementation and (2) the costs of decision-making and implementation, is superior to the private solution that presumably fails to take the externality into account.

We will not try to deal exhaustively either with the process of

53. Various voluntary arrangements can be devised that also deal with the "free ride" problem. See J. BUCHANAN & G. TULLOCK, *supra* note 38, at 43-62, for a discussion of the choice among the three alternatives: not taking into account the externality, devising a private arrangement to do so, and intervening with the coercive power of government. For a discussion of private arrangements responsive to "free ride" problems encountered in international trade, see Schwartz & Wellman, *The Rule of Reason in EEC Antitrust: Efficiency Enhancement Through Integration by Agreement Among Competitors*, 12 VA. J. INTL. L. 192 (1972).

54. To say, for example, that a majority rule produces outcomes that improve over-all welfare assumes that the intensity with which voters prefer any given outcome is equal. This, of course, is rarely the case. A majority vote rule would produce more favorable outcomes in the welfare terms we have used as our yardstick if side payments were allowed, that is, if the winning majority could compensate the losing minority or if an intense minority could be transformed into a majority by "buying" the votes of those with weak preferences. Buying votes is generally forbidden, but logrolling is a less perfect way to accomplish the same thing. Since votes are taken over a period of time on many different issues, about which voters hold preferences of varying intensity, each voter can place a value on each of his votes and engage in trade with other voters. By trading their votes, the voters can increase the total welfare they receive from all measures passed, over what it would be if they had simply voted yes or no on each measure. See J. BUCHANAN & G. TULLOCK, *supra* note 38, at 131-45.

political decision-making or implementation with respect to subsidies. We do, however, note certain inefficiencies that are likely to be encountered. The political process, unlike a functioning market, does not permit an individual to make a series of discrete choices among alternatives as they exist at the time the particular decision is made.⁵⁵ Instead, preferences must be expressed infrequently by voting for candidates who are chosen on the basis of their positions on a wide range of issues.⁵⁶ As a result, only a very rough approximation of the preferences that account for the selection of a particular candidate can be made. The representatives must seek to give effect to these preferences in the legislative process. Moreover, a measure that is passed cannot, with any exactitude, quantify the preferences to which it is responsive, for it must operate prospectively and in a far greater variety of circumstances than the legislature can be expected to anticipate or deal with in any detail. Implementation must then be entrusted to another set of officials who are to quantify the relevant preferences and devise appropriate means to give effect to them.⁵⁷

Throughout this process, it is to be expected that the preferences of beneficiary groups consisting of small numbers of people with readily identifiable interests will be more effectively expressed than those of large groups with uncertain and dispersed interests.⁵⁸ In the case of legislation regarding subsidies, it is to be anticipated that as a result of these factors producers will fare much better than taxpayers. If this situation occurs, subsidies in excess of the external benefits created by the activity may be provided.⁵⁹

In sum, then, just as we could not say in principle that a subsidy inevitably leads to a *worse* allocation of resources because of the possi-

55. See Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MANAGEMENT SCIENCE 3, 10 (1971).

56. J. BUCHANAN & G. TULLOCK, *supra* note 38, at 134-35, view as implicit logrolling the phenomenon of candidates arriving at positions on the range of issues in which their constituents are interested in order to gain the total votes required for election.

57. See, e.g., J. BHAGWATI, *supra* note 11, at 55, concerning inefficient methods of implementing programs designed to increase import substitution and export promotion; Dam, *supra* note 47, on the inefficiencies of implementing the oil import quota system, which was designed to promote national security by attaining a particular level of domestic production.

58. See J. BUCHANAN & G. TULLOCK, *supra* note 38, at 283-95; Stigler, *supra* note 55, at 12.

59. This does not necessarily mean that the amount of tax falling on the beneficiaries of a favorable externality will be excessive. Rather, nonbeneficiaries, as well as beneficiaries, might be taxed, and an amount in excess of the external benefits might be realized by the producer group.

bility that it might accurately give effect to externalities, neither can we say that a subsidy inevitably leads to a *better* allocation of resources because of the possibility that it might be based on an overvaluation of the externalities of such magnitude that the result would be a greater divergence from optimality than if there were no government intervention.

V. INTERNATIONAL SOLUTIONS

A. *Framing an International Standard*

We have now concluded our examination of how subsidization may be undertaken for the purpose of enhancing efficiency. The next inquiry is into the contribution a standard for permissible subsidies that is administered by an international body can make in improving this process. After we examine this question we shall consider the possibility of conferring upon an international institution legislative power to take account of externalities.

When we speak of a standard, of course, we do not necessarily mean a rule that can be applied with binding effect by an international tribunal. There is simply little likelihood that rules of this kind will be accepted by the national governments. All we mean by a standard is a set of norms that is obligatory in the limited sense that it is taken seriously in the domestic political process. The functional role of the international body is to legitimize and give specific content to the standard by deciding whether a particular domestic measure conforms to it.⁶⁰

There are only a few ways in which a standard could conceivably contribute to dealing with the question of subsidies. First, it could implement the notion that particular preferences, which are in fact held by the people of a country, should not be given weight by legislators in deciding whether to institute subsidies. Thus, for example, the desire to have a certain portion of the population engage in agriculture could be said to be "less important" than "efficient" agricultural production (by which is meant, of course, "efficient" in terms of all production possibilities and preferences exclusive of wanting people to engage in agriculture). However, we know of no objective basis for adopting such a standard.

The second basic notion that could be embodied in an international standard is that the domestic measure is inefficient in terms

60. See J. JACKSON, *supra* note 1, at 776-80; Hudec, *The GATT Legal System: A Diplomat's Jurisprudence*, 4 J. WORLD TRADE L. 615 (1970); Hudec, *supra* note 7.

of the preferences actually held in the country. This judgment could be made on three bases.

First, it could be asserted that the structure of the domestic political process is calculated to lead to oversubsidization.⁶¹ There are empirical and theoretical grounds for believing that oversubsidization is likely to result under existing systems and certain changes have been suggested that would reduce the incidence of oversubsidization. For example, it could be required that there be a greater majority in the legislature or that the burden of a subsidy be placed not on all taxpayers but rather on the purported beneficiaries, a class better able to assess the benefit and oppose the measure if they feel it unjustified.⁶²

We realize that it appears idle to expect that an international norm, even if embodied in the mildest of recommendations, would be permitted to influence the domestic political structure. Nevertheless, this seems to be the most fruitful area for further exploration. The various domestic systems may well be oversubsidizing. It is quite likely they could be changed in ways that would lead to greater international efficiency. If an international consensus on the changes that should be introduced could be reached, it is conceivable that significant influence could be brought to bear to restructure the domestic process accordingly.⁶³

The second respect in which it might be said that a domestic measure is inefficient is that there are better ways to accomplish its objectives. If, for example, the purpose of the measure is to increase the level of research and development in an industry rather than the output of the industry, a subsidy geared to output would be inefficient.⁶⁴ The basic difficulty in approaching a question of this kind is that it is unlikely that one of the consequences of a domestic measure will be plainly identified as *the* objective of the legislation. The international body would then be required to construe the domestic legislation and decide what its objective really was. This

61. It could, of course, theoretically lead to undersubsidization as well.

62. J. BUCHANAN & G. TULLOCK, *supra* note 38, at 292.

63. The political system has sometimes as a matter of national choice been structured in such a way as to counteract the tendency in the legislative process toward oversubsidization. The executive, often granted considerable latitude in trade matters, may be viewed as representing the interests of domestic consumer and foreign producer, interests that are not taken sufficiently into account by the legislature. See Schwartz & Kindred, *supra* note 47, at 294.

64. If, however, it were very costly to monitor research and development, and output would serve as a reasonable proxy more easily measured, the subsidy geared to output might be more efficient.

is not the type of decision that national governments are likely to empower an international body to make. Nor is it one that the international body, by reason of its unfamiliarity with the domestic political process, is well equipped to make even if authorized to do so. Indeed the question may be impossible to answer. People vote for legislators for a variety of reasons—including their support of certain measures. And the reasons a particular individual may prefer a certain measure are also extremely varied. To conclude, after the fact, on the basis of evidence of what preferences were held when the measure was under consideration, that a particular objective was the only one embraced by people supporting the legislation, may be little more than an exercise in conjecture—particularly when the question of what was the objective never really had to be faced by anyone when the measure was under consideration. Additionally, if such a conclusion were drawn it would mean that the legislature, in terms of its own purposes, had done a poor job. National representatives to international bodies would be unlikely to portray the national legislature in this fashion. Justification on externality grounds is likely to be offered in virtually every case. The international body would then find it necessary, if the measure is to be judged inefficient, to take a position on the intent of the legislation that is at odds with the one advanced by the representatives of the government concerned.

The final respect in which the domestic process could be said to be inefficient is that implementation has been faulty. We have talked, for example, about subsidies for infant export industries. Justification for these subsidies is found in the externalities that accompany the introduction of new goods of a certain type originating in a particular country. But any effort to devise and implement a scheme of subsidies that reflects, with substantial accuracy, the externalities actually created will encounter great difficulties. The program may easily degenerate into an indiscriminate grant of subsidies, involving the risk of political corruption and adding an element of uncertainty that makes intelligent decision-making about resource allocation extremely difficult.⁶⁵ It may be, moreover, that alternative measures, such as the government's providing information about foreign markets to domestic producers and about domestic products to foreign buyers, are better calculated to deal with the basic problem. We do not believe, however, that an international body could be empowered

65. See J. BHAGWATI, *supra* note 11, at 53.

to make a judgment of this kind. What really must be said after all is that a domestic measure has been badly, if not corruptly, administered.

Thus we are not very sanguine that a useful international standard can be devised. The key element in any process of constructive change is a willingness by the various countries concerned to appraise the effectiveness of the domestic political process in passing legislation granting subsidies.

B. *An International Political Institution*

The final possibility that we wish to consider is that of lodging power in an international body to deal authoritatively with a sector of activity marked by externalities. Two types of institutions should be distinguished. In the first, power is exercised by the international body on the basis of an agreed upon standard or the votes of individuals. In the second, it is assumed that each country through its political process aggregates individual preferences and then votes in an international legislature.

The first type of institution would necessarily involve consideration of the fundamental question of how individuals, if they wish to maximize their welfare, should group themselves and structure the organization governing them. We cannot, of course, deal with this hard question. We will, however, offer some general observations which suggest the difficulties that will inevitably be encountered if the problem of externalities is approached by seeking to establish an inclusive political unit.

The basic reason for establishing a larger political unit is that external benefits or costs spill over beyond the borders of the existing political entity and are not, therefore, taken into account in the decision-making process of the smaller entity. Thus, if the countries in a particular region have close relationships, expenditures for research and development or education in one country will have an important impact on the others.⁶⁶ A decision based upon all of the

66. See, e.g., *France v. Commission of the European Communities*, No. 47/69 (Eur. Ct. J. June 25, 1970), in which subsidies to the French textile industry for research and development, financed by a tax imposed on all textile products both domestic and imported, were held to be incompatible with article 92, paragraph 3(c) of the EEC Treaty governing the grant of "state aids" by member states. One French argument was that since research and development expenditures created spillover benefits for textile manufacturers located in other member states, their imports to France might properly be taxed without, in the language of article 92, paragraph 3(c), "adversely affect[ing] trading conditions to such an extent as would be contrary to the common interest." This argument, though it was accepted in principle, was rejected by the Court

effects in all of the countries will, in these circumstances, increase over-all welfare in the region.⁶⁷

There are, however, formidable difficulties in devising an appropriate political system to give effect to these externalities. The basic dilemma is that as the size of the group embraced by the political unit increases, conflicting forces dictate that greater or lesser majorities be required to authorize government action. As the group grows larger, particularly if heterogeneity increases, a particular individual faces a greater risk of an outcome departing from his preference being imposed by whatever majority is designated as sufficient. He therefore will want a rule approaching unanimity to diminish this risk. But, on the other hand, the larger and more heterogeneous the group, the more costly is the process of reaching agreement. For this reason a rule requiring much less than unanimity may be desirable.⁶⁸

partly because of the difficulty of determining the correct amount and duration of the subsidy and partly because of an inequality in the benefits between France and the rest of the EEC, which was not appropriately reflected by the method of financing.

67. Article 92, paragraph 3(b) of the EEC Treaty, which provides that a subsidy "intended to promote the execution of an important project of common European interest" may be deemed to be "compatible with the Common Market," represents an acceptance of this basic idea.

68. J. BUCHANAN & G. TULLOCK, *supra* note 38, at 63-84, analyze the issues confronted in choosing a decision-making rule. The basic objective of each individual is to minimize the sum of the costs of reaching agreement and being subject to a measure not in conformity with his preferences. The rule an individual chooses depends on his prediction of the likelihood that various desirable and undesirable measures will be passed under different decision-making rules. *See* note 52 *supra*. It would appear that the same considerations would obtain when a national representative, assumed to be speaking for the aggregated individual preferences in his country, is choosing an appropriate decision-making rule for an international body.

Article 92 of the EEC Treaty appears to be an attempt to resolve certain conflicts inherent in dealing internationally with problems of externalities through collective decision-making. It isolates first a class of subsidies (for consumers in general, victims of natural disasters, and regions affected by the division of Germany) as "compatible" with Common Market principles of nondistortion in competition, apparently because it was recognized that government intervention might be required and that the individual countries would wish to formulate their own policies. Article 92 then isolates a class of subsidies (for depressed regions, projects of European-wide interest, and development programs) that "may be deemed to be compatible with the Common Market." Finally, it specifies that certain subsidies proposed by the Commission (a group of nine members appointed to act according to their perception of European, rather than national, interests) and approved by a "qualified majority vote" of the Council (that is, a weighted vote giving the national representatives of France, Germany, and Italy four votes, Belgium and The Netherlands two, and Luxembourg one) also "may be deemed to be compatible with the Common Market." Article 93 invests in the Commission power to determine whether those subsidy programs that "may be" acceptable under Article 92 are in fact compatible with the Common Market, subject to review by the Court of Justice. However, the Council, by unanimous vote, may approve any subsidy.

Article 92 therefore recognizes certain subsidies without further inquiry. In conjunction with Article 93, it sets up a system through which another class of subsidies

For an individual to be made better off by becoming a member of a more inclusive political entity, the gains from taking account of additional external effects must be greater than the diminution in welfare that he suffers by having power conferred on the larger entity. We speculate that this advantage will exist only if activities in the countries involved are closely related and the population of the affected countries have substantially homogeneous views on the relevant issues.⁶⁹

The second type of international institution would be one empowered to deal authoritatively with externalities on the basis of a voting process participated in by countries on the assumption that individual preferences have been aggregated in the domestic political process. It is very difficult to predict the contribution such an institution could make. Each country is presumably most familiar with the external costs that it suffers and the external benefits it realizes as a result of the actions of other countries. Each is also presumably generally aware that its own actions have similar effects on other countries. If agreement taking these factors into account can improve the welfare of the countries involved, it will occur. All that the pos-

specifically identified by their objectives may be justified by the Commission and the Court of Justice, which presumably represent the informed opinion of the supranational interest. A third class of unspecified subsidies may be approved in the same manner only if they are certified by a weighted vote of the Council. This weighting is apparently designed to assign voting power in proportion to the potential harm that a particular country will suffer if the preferences effectuated by the subsidy clash with those held in the country. Finally, any subsidy may be approved if all countries agree to permit it.

69. Article 92 is an obvious example of the kind of cooperation we are describing—that is, collective action in a wide range of situations among nations with relative homogeneous fundamental interests. It is, however, only an enabling provision permitting individual countries to act. More significant in this connection is the effort embodied in the European Social Fund, EEC Treaty, articles 123-28, in which contribution is required from all countries because each presumably benefits from subsidies that reduce the private costs of relocation and retraining of employees located throughout the EEC.

A similar conformity of interest may exist among a large number of countries with respect to a limited class of activity. One illustration of this situation is the International Coffee Agreement, *opened for signature* March 18-31, 1968, [1968] 19 U.S.T. 6393, T.I.A.S. No. 6584. Here, countries with a wide and varied range of fundamental interests have agreed to cooperate in one narrow area by limiting the amount of coffee exported from predominantly developing countries and imported into predominantly developed countries. The stated objective is to assist diversification by restricting production and maintaining price. The Agreement contains an elaborate set of voting rules in which votes are weighted to reflect the magnitude of producer and consumer interests. On important issues a two-thirds majority of both importing and exporting blocs is required. The Agreement in effect requires all consuming countries to share in the aid-granting and (presumably) all producing countries to restrict output. *See* C. FULDA & W. SCHWARTZ, *supra* note 37, at 496-537.

sibility of some species of international compulsion can contribute is to induce revelation of preferences that would otherwise be concealed by potential "free riders." For example, each of the countries wishing to alleviate suffering in the developing countries by widening opportunities in their domestic markets for products originating in the developing countries might wait for the others to act, particularly if the domestic displacement accompanying increased imports were of great concern.⁷⁰

An international legislature competent to deal with these questions could compel action and consequently induce all the countries to reveal their true preferences. The question, however, is whether, in light of the relatively small number of countries playing a major role in questions of this kind and the great heterogeneity of opinion among those having vital interests, any country could confidently predict that it would be made better off over time by subjecting these questions to authoritative resolution by an international body in which unanimity is not required. It may well be that the present system of multilateral bargaining is a better method. In that system, the revelation of preferences is induced by the expectation of gain from concessions obtainable only if all interested countries combine to provide benefits in return, but no country is compelled to accept an outcome that it does not want.⁷¹

VI. CONCLUSION

We have completed our search for a standard and appear not to have found one. Our conclusion, simply, is that the problem is at bottom one of devising an appropriate social organization to guide individual preference and capacity so that over-all welfare is increased. We believe, however, that there is an advantage in acknowledging that this is what is involved. Invocation of a "free trade" ideal as providing a self-evident answer to questions of this kind serves to obfuscate the difficult issues that must be faced. We realize, of course,

70. Efforts, through the United Nations Conference on Trade and Development (UNCTAD), to achieve agreement on over-all trade preferences for developing countries have in fact been made. The developed countries, while willing to adhere in principle to such an arrangement, have not been prepared to subject themselves to an authoritative international regime. See UNCTAD, Report of the Special Committee on Preferences, Supp. 6A, U.N. Doc. TD/B/AC.5/36/Rev. 1, at 5-6, 40-41 (1970); Comment, *Generalized Tariff Preferences for Developing Countries: The UNCTAD Agreed Conclusions*, 10 COLUM. J. TRANSNATL. L. 111 (1971).

71. For descriptions of multilateral bargaining under GATT, see K. DAM, *supra* note 1, at 61-79; J. JACKSON, *supra* note 1, at 217-23; Norwood, *The Kennedy Round: A Try at Linear Trade Negotiations*, 12 J. LAW & ECON. 297 (1969).

that it is possible that a person disapproving of a preference held in a particular country might wish to cast his objection in apparently neutral "free trade" terms. If by this is meant some preference for increased international involvement, then we have no quarrel with it. Indeed we share it.⁷² If the suggestion is, however, that a particular result is better because it is more consonant with a "free trade" ideal deducible from the theory of comparative advantage, we are unable to square such a claim with our analysis.

72. We believe that there are favorable externalities that arise from trade. These include the benefits of a more diverse selection of goods, which are reaped even by those who purchase domestic products; the incentive to domestic innovation benefiting consumers, which is promoted by increased (foreign) competition; and the possible reduction in the incidence of conflict among nations, which learn more about each other through trade. These consequences may not be fully taken into account in either the market or the domestic political process essentially because the benefits are widely dispersed and difficult to quantify. There may, however, be some groups with a vested interest in increasing international trade who can exercise substantial influence on domestic policies. See A. LANYI, *supra* note 51; Willett & Tower, *supra* note 51, at 290 (suggesting that central bankers may be such a group).