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DOMESTIC MONOPOLY AS A DOMESTIC DISTORTION UNDER FREE TRADE CONDITIONS

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ABSTRACT

Trade theorists have recognized for at least thirty years that domestic monopoly may cause a "domestic price distortion" with the result that a country's foreign trade is not optimized under *laisser-faire* conditions. Surprisingly, no one appears to have investigated the question as to how the monopolistic distortion could persist under conditions of free trade. Within the framework of conventional trade theory the case of a domestic monopoly is an empty box, as the alleged distortion disappears without intervention when free trade exists. The distortion can, however, be resurrected by assuming either a less than perfectly elastic supply of imports or imperfect substitutability between domestic and imported products. The distortion is likely to be important during periods of underutilized capacity when import-competing producers refuse to cut domestic prices to the level of short-run marginal cost. The theoretical argument has several important implications for trade policy in the post-Tokyo-Round era.

CONTENTS

1. *THE PROBLEM*

Trade theorists have recognized for at least thirty years that the existence of domestic monopoly power may cause a so-called "marginal divergence" or "domestic price distortion" with the result that a country's foreign trade is not optimized under *laisser-faire* conditions.[1] Domestic monopoly, along with external economies or diseconomies of domestic production, is classified as the cause of a "production distortion", meaning that a country's domestic marginal rate of transformation (DRT) differs from the foreign marginal rate of transformation (FRT) prevailing in the world market. For the case of a pure production distortion it is assumed that the domestic social marginal rate of substitution (DRS) equals FRT, which means that under free trade there is no distortion of consumption. Furthermore, it is assumed that the country in question is a price taker in foreign markets (small-country assumption), which means that the country has no foreign monopoly or monopsony power. In accordance with Bhagwati's classification (1971, p. 73), the case of a pure domestic production distortion can then be characterized by the formula $DRT \neq FRT = DRS$.

As is well known, the principal contribution of the domestic distortions literature has been to demonstrate that interference with free trade generally is not the optimal way of correcting for distortions that are domestic in origin. As regards the problem of domestic monopoly,

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[1] Authors who have explicitly treated monopoly as a domestic distortion of trade, are, among others, Haberler (1950), Harrod (1951), Meade (1955), Giersch (1956), Johnson (1965), Bhagwati (1968), Caves and Jones (1973), and Chacholiades (1978).

Johnson (1965), Bhagwati (1968), Chacholiades (1978) and numerous other authors have shown with the aid of simple general equilibrium graphs that the optimal policy is to make DRT = FRT by subsidizing domestic production of the monopolized commodity, provided the domestic monopoly itself is accepted as given.[1] Surprisingly, no one appears to have investigated the question as to whether and how the monopolistic distortion of domestic production could persist under conditions of free trade.[2]

In section (2) of this paper it will be demonstrated with simple partial equilibrium graphs that the exposure of a domestic monopoly to free trade must eliminate the production distortion (DRT = FRT), if we make the assumptions that are conventionally employed for this type of analysis. Within the framework of conventional trade theory the case of a domestic monopoly can thus be shown to be an empty box, as the alleged distortion disappears without any intervention when free trade exists. Disregarding convention, however, there is a kernel of truth in the argument that monopoly power of domestic producers in domestic markets may distort a country's trade (and domestic production) even under conditions of free trade with the rest of the world. How the argument could be salvaged will be demonstrated in sections (3) and (4) of this paper. As it turns out, only relatively minor, but essential, modifications of conventional assumptions

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[1] See, for example, the detailed exposition in Chacholiades (1978), pp. 507-511.

[2] Bhagwati, (1968, p. 16) suggested in a footnote that free trade "may eliminate" the domestic monopoly; Caves and Jones (1973, pp. 207-210) demonstrate how domestic monopoly power disappears when exposed to free trade, but later (pp. 258-260) they discuss domestic monopoly as a distortion that might justify government intervention under free trade conditions.

are required to reinstate domestic monopoly as a distortion that will persist under free trade conditions. In sections (5) and (6), finally, it will be argued that this type of distortion is not just a theoretical oddity which might as well be forgotten, but rather that domestic monopoly behaviour lies at the heart of poorly understood problems of current international trade relations.

2. *AN EMPTY BOX UNDER CONVENTIONAL ASSUMPTIONS*

A partial equilibrium presentation of a domestic production distortion (DRT ≠ FRT) is easy for the case of external economies or diseconomies of production.[1] For the case of domestic monopoly, however, partial analysis under conventional assumptions cannot establish a domestic distortion because the monopolist becomes a price taker when he is exposed to free trade at given world market prices. Figure 1 shows the familiar diagram for a monopolist who has been assumed to produce a tradeable good under conditions of rising marginal cost. Line CC' represents the monopolist's marginal cost curve. Private marginal cost is assumed to be identical to social marginal cost. DD' represents the domestic demand curve, and RR' is the corresponding marginal revenue curve. In an autarky situation, a profit-maximizing monopolist would produce quantity OA which would be sold at price OP_1.[2] If we assume free trade we can distinguish three

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[1] Cf. the masterly exposition of the basic ideas of the domestic distortions approach by Corden (1974), chapter 2.

[2] In each case it is assumed that the price received by the domestic producer is higher than (or at least equal to) his unit cost and that the monopolist is unable to discriminate by charging more than one price.

principal cases depending on the level of the world market price.

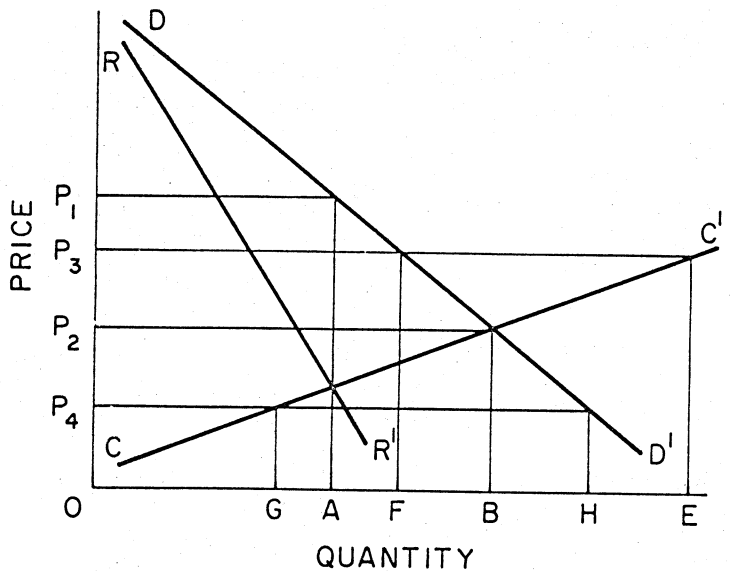

FIGURE 1

A limiting case arises for the world market price being equal to OP_2. A domestic monopolist who takes the world market price as given (his marginal revenue equals the given price) in this case would maximize his profit by producing quantity OB. This is the quantity that domestic consumers are willing to buy at price OP_2; neither imports nor exports occur. If the world market price is higher than OP_2, the domestic monopolist becomes an exporter. In the case of the world market price being equal to OP_3, for example, the domestic producer maximizes profits with output OE, of which FE is exported. If the world market price lies below OP_2 the former monopolist will produce less than the quantity demanded by domestic consumers at that price. Given a world market price OP_4, for example, the domestic producer will supply quantity OG, and GH will be imported.

The crucial point is that in each of these cases (OP_2, OP_3, OP_4) the profit-maximizing rate of output is such that the marginal opportunity cost of domestic production becomes equal to the world market price. This implies that with free trade the domestic marginal rate of transformation for any pair of tradeable goods becomes equal to the foreign rate of transformation, i.e. DRT = FRT = DRS, even if domestic production is monopolized.[1] Under conventional assumptions domestic monopoly thus cannot cause a "domestic distortion", and there is no basis for government intervention of any kind.[2]

3. *MULTIPLE DISTORTIONS UNDER PARTIAL MONOPOLY ASSUMPTIONS*

In view of the straightforward result of the previous section, it seems amazing that the case of domestic monopoly should have been retained in the domestic distortions literature from the first printing of Meade's *Trade and Welfare* (1955, p. 226) to the latest editions of prominent textbooks such as Chacholiades (1978, pp. 507-511). One reason for the

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[1] For any two traded goods, X and Y, the equality of DRT and FRT holds because profit-maximizing behaviour of domestic producers under free trade results in an equilibrium where marginal cost equals the world market price for each commodity, and thus

$$\frac{\text{domestic marginal cost of X}}{\text{domestic marginal cost of Y}} = \frac{\text{world market price of X}}{\text{world market price of Y}}$$

As consumers are paying world market prices it also follows that DRT = DRS.

[2] It should be recalled that I earlier assumed private marginal cost of domestic production to be identical to social marginal cost. Domestic monopoly affecting non-traded inputs, such as labour, would create what Chacholiades (1978, pp. 507 and 518-20) has called a "factor-generated production externality". Such a distortion could be represented by a social marginal cost curve lying below CC' in Figure 1. This case will be taken up in section (5) below.

durability of the idea must have been that it is just so easy with general equilibrium analysis to assume that a distortion exists without being forced by the model to explain how it could exist under free trade. A more profound reason could have been that trade theorists have generally been at least vaguely aware that the opening of free trade does not necessarily do away with the monopoly power of domestic producers. In terms of our model this means that, in spite of free trade, domestic monopolists do not necessarily become price takers, and that implies they find it profitable to charge prices exceeding the marginal cost of domestic production.

There are basically two explanations why domestic producers retain some monopoly power even if international trade is not restricted by government intervention or private agreement: One concerns the situation where perfect substitutes for domestic goods can be imported freely, but the supply of such imports is not perfectly elastic. The other explanation depends on imports being imperfect substitutes for import-competing domestic products. The first situation can be analysed with a model of partial monopoly, customarily referred to as the "dominant firm" model in textbooks of micro-economic theory.[1] As it turns out, that approach leads to relatively unwieldy conclusions involving several types of distortions. For

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[1] Customarily also, the model is hidden in the chapter on oligopoly under "types of price leadership", although it can be employed more usefully for other aspects of partial monopoly. The dominant firm model has, of course, been used in international trade theory for the analysis of the "equivalence" of tariffs and quotas or other forms of trade restriction; for the most recent contribution along those lines see Koo (1979).

this reason, the partial monopoly model should be regarded as merely an intermediate step towards a simple presentation of domestic monopoly causing a "pure" domestic production distortion. The simpler model, making use of the assumption that imports are imperfect substitutes of domestic goods, will be presented in section (4).

Figure 2 represents the case of a partial monopoly in the domestic market. The DD' and CC' curves are the same as in Figure 1. What is different in Figure 2 is the assumption that under free trade the quantity imported

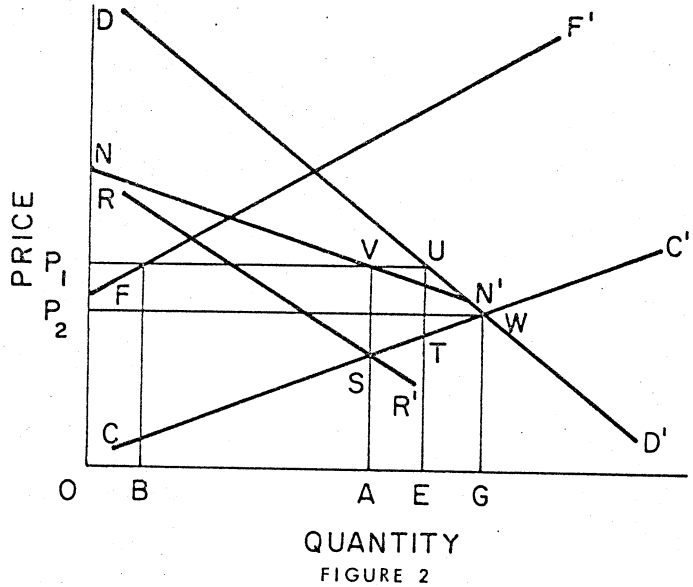

FIGURE 2

is a rising function of the domestic producer's price. This means we have abandoned the "small country assumption" that unlimited quantities of the good in question can be imported or exported at a constant price. The supply of imports is represented by the line FF', which, of course, corresponds to the supply curve of the "competitive fringe" in the dominant firm model. For the sake of simplicity, let us assume initially that there are no export opportunities for the domestic product.

In the situation depicted by Figure 2, the domestic producer (or group of producers) faces a net demand curve NN'D', which has been derived in the usual way. The corresponding marginal revenue curve is RR'. The profit-maximizing rate of output for the domestic producer(s) thus is OA, and the profit maximizing price equals OP_1. At that price, importers supply quantity OB which equals AE by construction. Domestic production plus imports thus equal the total quantity demanded at price OP_1. This is the equilibrium that would prevail under free trade without government intervention. Now let us look at potential distortions.

It can be shown that in the case of Figure 2 all imports are "wasteful" in the sense that the same quantity of the commodity could be acquired at a lower social opportunity cost if imports were replaced by domestic output. The total social cost of importing quantity AE is given by area AEUV in Figure 2. The total social cost of producing the same quantity domestically is given by area AETS. The social cost of importing exceeds the cost of home production by area STUV, thus imports are wasteful. It should be recognized, however, that we have used the average cost of imports (OP_1) to determine the social cost of imports *in toto*. If we wish to ascertain whether all imports are wasteful, or whether some are beneficial, we have to compare the marginal social cost of importing to the marginal social cost of domestic production. The latter is, of course, given by CC'. The marginal social cost of importing would be given by a line through point F that is twice as steep as FF', expressing the fact that the country has monopsony power in the import market. But it is clear from

the diagram that in this case the marginal social cost of importing must lie above CC' for all relevant rates of output as OF > OP_2. Thus all imports are wasteful in the situation of Figure 2. Furthermore, the choice of this case permits us, for the time being, to ignore the potential distortion arising from a country's monopsony power in the import market.

Area STUV in Figure 2 may be regarded as a measure of the waste resulting from the domestic production distortion that is caused by monopoly behaviour of domestic producers. A further distortion arises because monopoly pricing reduces domestic consumption below the competitive rate, OG. Area TWU is a measure of the waste resulting from the consumption distortion, if one disregards the usual reservations concerning measures for consumers' surplus. The total waste caused by domestic monopoly thus is measured by area SWUV.

This waste would be avoided if domestic producers could be induced to produce at output rate OG. One way of doing this would be for the government to impose a price ceiling at level OP_2. The optimal intervention usually suggested in the domestic distortions literature is a subsidy for the production of the monopolized good. In the case of Figure 2, the rate of subsidization would have to be large enough for CC' to be lowered to the level of the negative marginal revenue that corresponds to output rate OG. It is clear from the diagram that import restrictions in this case would make matters worse. If the government simply prohibited wasteful imports, the domestic producer(s) would reduce output to the rate that maximizes profits under autarky conditions (output rate OA in Figure 1).

True enough, the intervention would remove the production distortion by removing the imports, but the waste caused by the monopolistic consumption distortion would become larger than the total waste that exists without intervention.

Figure 3 shows another case of partial monopoly. In this case not all imports are wasteful, and we have to be concerned also with the distortion of the import supply. From the previous graph, the meaning of curves DD', CC', NN'D', and RR' is already familiar. Without intervention,

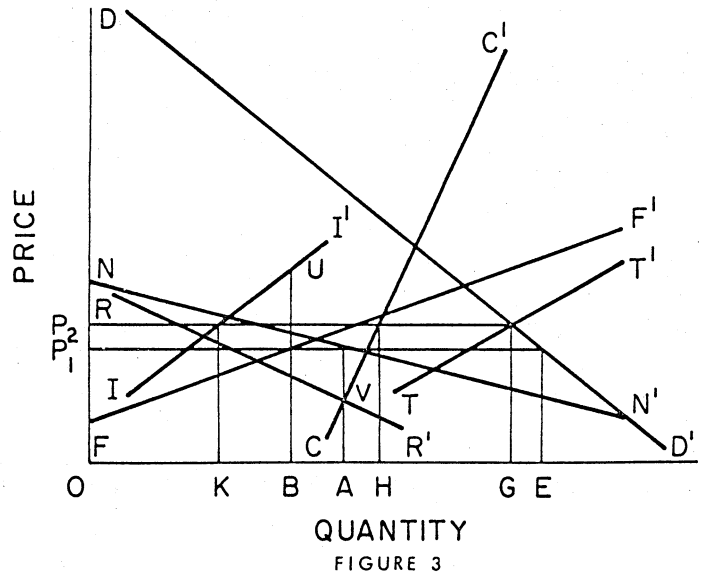

FIGURE 3

the domestic producer(s) would maximize profits by producing quantity OA and selling it at price OP_1. At this price the rate of imports is OB, which equals AE, and the total quantity consumed is OE.

To demonstrate that the *laisser-faire* equilibrium in Figure 3 is not a social optimum, we have to introduce the marginal social cost of imports. It is represented by line II' which, as we recall from the theory of monopsony, must be twice as steep as the linear import supply curve FF'.

Now it is obvious that in the *laisser-faire* situation the social cost of the last unit imported, BU, considerably exceeds the social cost of the last unit produced domestically, AV. This means that FRT ≠ DRT for any pair of goods, unless the marginal distortions just happen to be the same for both goods. As the price that consumers pay (OP_1) deviates from both the marginal social cost of imports and the marginal social cost of domestic output, we may also conclude that under *laisser-faire* conditions the DRS would neither equal FRT nor DRT.

To find the optimum solution, we have to construct another curve, the TT' line, which represents the horizontal sum of the II' and the CC' curves. The concept of the TT' line is analogous to the marginal cost curve of a firm that produces a commodity with two plants. In this case, the economy can procure a good from two sources: foreign and domestic. The intersection of TT' and DD' determines the socially optimal rate of consumption, because at this intersection the marginal social cost from any source equals the marginal social value of the commodity in question. As can be seen in Figure 3, the optimum rate of consumption, OG, is smaller than the *laisser-faire* rate of consumption, OE. Correspondingly the optimum price OP_2, is higher than the *laisser-faire* price, OP_1. This result does not, of course, hold in all cases, as it depends on the relative positions of the II' and CC' curves whether the optimum price is higher or lower than (or the same as) the *laisser-faire* price. In other words, two distortions work in opposite directions: without intervention the country tends to overconsume the good in question because monopsonistic leverage

in the import market is disregarded by individual importers, and at the same time the good is underconsumed because domestic producers are exploiting their monopolistic power.

Once the optimum consumption and price have been determined, we can easily find the optimum rates of domestic production and importation in the diagram. The optimum rate of domestic production is OH, as for this rate of output the marginal social cost of production (CC') equals the marginal social value of the good (price OP_2). The optimum rate of importation is OK, because for this rate the marginal social cost of importing (II') equals the marginal social value of the good. The marginal social cost of importing is also equal to the marginal social cost of domestic production since they both equal the price of the good. In consequence, we can say that the optimum satisfies the condition FRT = DRT = DRS for any pair of traded goods.

Compared to the *laisser-faire* situation, the optimum requires that imports be reduced from OB to OK, and that domestic production be expanded from OA to OH. How could such a rearrangement in sales be achieved? As is well known from the literature, the optimum policy on the import front in this case is a tariff that shifts the cost of imports (as seen by private importers) from FF' to II'. On the domestic front, the optimum policy that is usually recommended is a production subsidy. In order to persuade a profit-maximizing domestic monopolist to expand his output and sales to OH, he would have to be offered a subsidy that reduces his private marginal cost (CC' minus subsidy) to such a level that

it intersects the relevant marginal revenue curve for output rate OH.[1] Alternatively, a price ceiling fixed at level OP_2 could be used to guide a profit-maximizing domestic monopolist (or an oligopolistic group of producers) into expanding output to OH.

Finally, it should be pointed out that yet another complication could be introduced by assuming that there are export opportunities for the domestic producer(s) that were eliminated from discussion at the beginning of this section. Of course, it would not make sense to assume that unlimited quantities of the good in question could be exported at a given world market price, because that would take us back to a case considered previously (the case of price OP_3 in Figure 1). In the present context, we have to assume that the domestic producers face a falling demand curve for sales to foreign markets, i.e. they possess market power also in export markets.

Such market power would not present an additional distortion in a *laisser-faire* situation, provided the domestic producers act as profit-maximizing monopolists and exploit foreign buyers as well as they can. However, when the government intervenes in the domestic market to persuade the monopolist to expand domestic sales to the competitive level, it is still in the national interest to preserve the monopolistic exploitation of export markets. In the case of a domestic production subsidy, the

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[1] The "relevant marginal revenue curve" is obtained by first constructing the net demand curve that corresponds to II'. Thus RR' no longer is the relevant curve when an optimum tariff has been imposed on imports.

government would have to introduce an equivalent export tax because the monopolist should determine his export price on the basis of the true (unsubsidized) marginal social cost of production. In the case of a price ceiling, such a ceiling should not apply for export markets. The government could again employ an export tax, or the monopolist should be allowed to segregate foreign sales from domestic sales, provided a segregation of markets is feasible.[1]

4. *A PURE PRODUCTION DISTORTION UNDER ASSUMPTIONS OF LIMITED SUBSTITUTABILITY*

As was pointed out previously, assuming an upward sloping supply of imports is one of two ways by which partial domestic monopoly can be shown to result in domestic distortions under free trade and *laisser-faire* conditions. The other approach makes use of the assumption that imports are imperfect substitutes of import-competing domestic goods. It is the purpose of this section not only to develop the alternate approach but to present the case of a "pure" production distortion caused by (partial) domestic monopoly. In order to get rid of the monopsonistic distortion on the import side that was discussed in the previous section, I am assuming that any quantity of the good in question can be imported at given prices. In order to avoid unnecessary complications of the argument by consumption distortions, I am also making the assumption that domestic demand is completely inelastic for the relevant price range. Before the plausibility and consistency of these assumptions is considered further, let us first look at their graphical presentation.

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[1] If the government imposes the optimal domestic price and the monopolist is free to exploit foreign buyers, an export tax is *not* required to attain the social optimum. Just, Schmitz, and Zilberman (1979, pp. 710-713) reach a different conclusion because they assume that the monopoly can raise the domestic price in accordance with its rising marginal cost of production.

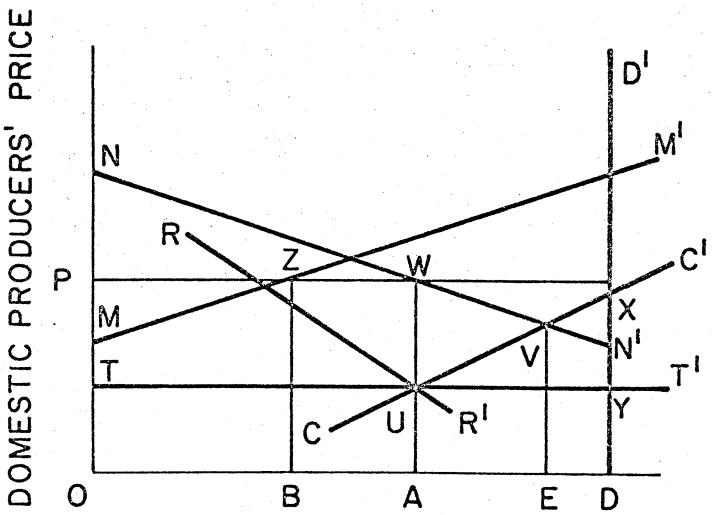

FIGURE 4

Figure 4 shows a vertical demand curve, DD', and the familiar CC' curve which represents the marginal private and social cost of domestic production as in the previous graphs. The new concept in Figure 4 is the MM' curve. It represents the quantity of the domestic product that is replaced by imported substitutes as a function of the domestic producers' price. The new curve might thus be called the "sales-lost-to-imports curve". In cases where substitution takes place on a one-to-one basis (e.g., one imported car replacing one domestic car), the MM' curve also shows the quantity of imports as a function of the price of the domestic product, and the new curve can, therefore, conveniently be referred to as the "import sales curve". The MM' line evidently is not a supply curve. The supply of imports in the context of this model is perfectly elastic, since I have assumed that import prices are given.[1] The MM' curve would shift if import prices changed, whereas changes in the price of the domestic product cause a movement along the curve. The slope

[1] Import prices would normally differ from the domestic producers' price. As we have assumed that imports are imperfect substitutes, the "law of one price" does not hold. Indeed, prices may differ for different types of imports that belong to the same group of competing products, and the prices of imported substitutes could be higher or lower than the price of the domestic product.

of the import sales curve reflects the assumption that the quantity of imports is larger the higher the (relative) price of the domestic substitute.

The profit-maximizing rate of output for the domestic producer (or groups of producers) can be determined in the usual manner: We first construct the net demand for the domestic product by deducting MM' from DD'. Having found the net demand curve NN'D, we can derive the domestic producers' marginal revenue curve, RR'. The intersection of RR' and CC' determines the profit-maximizing rate of output, OA, and the corresponding price, OP. The import sales curve indicates that for this domestic price the rate of import sales is OB, which equals AD by construction.

Now we are ready to look at the domestic production distortion caused by partial domestic monopoly. As in the previous section, we find the marginal distortion by comparing the social cost of importing "the last unit" to the social cost of producing this unit domestically. At output rate OA, the marginal social cost of domestic production in Figure 4 is AU. The marginal social cost of importing at import rate OB is BZ for the following reason: In the absence of trade intervention and other distortions, the import sales curve has the convenient property that it is also the marginal social cost curve of importing. For any domestic price, the cost of using the marginal unit of imports is just equal to the price of the domestic product, because at the margin buyers are indifferent between foreign and domestic supplies. The cost of using the marginal unit of the imported product (rather than the domestic product) includes the price quoted by the foreign supplier and the cost of non-price differences.

As will be explained in more detail later, the cost of non-price differences includes items such as differential transport costs and differential storage costs (if dependence on imports requires holding larger inventories as an assurance against a greater risk of interruption of supply).

If the marginal social cost of importing equals BZ and the marginal social cost of domestic production equals AU, the marginal distortion caused by domestic monopoly equals UW, because BZ equals AW. The distance UW thus represents the value of resources that the economy could save by producing one more unit at home rather than importing a substitute.

The total quantity of "wasteful" imports and the total value of the waste of resources that is caused by domestic monopoly can also be represented conveniently in Figure 4. It should be recalled that the line NN' is a mirror image of the import sales curve MM'. The line NN' thus also represents the marginal social cost of importing. (Of course, in this case the origin is point D rather than point O.) The line NN' intersects the CC' curve at point V. This means that the distance AE represents wasteful imports, whereas ED are beneficial imports. The distance AE represents wasteful imports because for that quantity of imports the NN' curve lies above the CC' curve, i.e. equivalent goods could be acquired at a lower social opportunity cost if domestic production were expanded from OA to OE. The total value of resources wasted on imports is represented by area UVW. The remaining imports are socially beneficial because for quantity ED the marginal social cost of domestic production (CC') lies above the marginal social cost of importing (NN'). The total social benefit of importing quantity ED is represented by area VN'X.

It is now apparent that under the cost and demand conditions assumed for Figure 4 (given CC', DD', and MM'), the optimum rate of domestic output is OE, and the optimum rate of importation is ED. Under our specific elasticity assumptions (imperfect substitutes can be imported at given prices and DD' is completely inelastic) domestic monopoly results in a "pure" production distortion. This is as close as we can hope to get to the case of a monopoly-generated pure production distortion that has existed in the trade literature for thirty years. The partial equilibrium presentation is, of course, still not fully equivalent to the imaginary case that has been analysed with general equilibrium analysis, since I had to assume imperfect substitutes and a vertical demand curve in order to generate a monopolistic production distortion without simultaneously generating other distortions. These assumptions, however, were not primarily motivated by a desire to duplicate the general equilibrium case. As a comparison of Figure 4 with Figure 3 can show, my assumptions bring about considerable simplifications of the analysis without making it less acceptable.[1] The simplifications will prove their value when the model is applied to practical problems in the final section.

How the optimum rate of domestic production could be achieved by government intervention, is a secondary issue in this context. Assuming

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[1] If import prices were not given we would need another curve, lying above MM' in Figure 4, to represent the marginal-social cost of importing. If the domestic demand curve, DD', were not vertical it would be necessary first to determine the socially optimal quantity of consumption, as was done with the aid of the TT' curve in Figure 3. The procedure followed in Figure 4 is, of course, analogous to the problem of finding the cost-minimizing allocation of a given quantity of output that can be produced with two plants.

that the domestic monopoly cannot be removed, the trade literature has generally recommended a production subsidy that would lower the monopolist's private marginal cost to such an extent that the intersection of RR' and of the adjusted CC' curve would occur for output rate OE in Figure 4. A price ceiling fixed at level EV would be another possibility of forcing a profit maximizing monopolist to expand domestic output to OE (and of reducing imports to ED). Alternatively, an import tariff could be used to raise MM' (and NN') to such an extent that the intersection of the new RR' and the CC' curve would occur for output rate OE. Because of DD' being vertical, the tariff would not cause the consumption distortion that the trade literature has used to rank subsidies above tariffs in the hierarchy of potential interventions. Each of the named interventions would have vastly different implications for the domestic distribution of income. Beyond that, however, there is not much point in comparing the alternatives at this level of abstraction.

The use of Figure 4 can easily be extended to cover the case in which the CC' curve represents merely the short-run marginal cost of domestic production. Let us assume the import-competing good could be produced with constant returns to scale. In that case, the monopolist's (and society's) long-run marginal and average cost curve can be represented by a horizontal line such as TT' in Figure 4. Without government intervention, a domestic monopolist would still maximize profits at output rate OA. But the CC' curve now indicates the short-run marginal cost for various rates of output produced with a plant that was designed to minimize total cost

at output rate OA. Forcing the monopolist to expand output from OA to OE in this case would not be enough, as under long-run considerations the socially optimal rate of output is OD. Or in other words, in this case all imports are wasteful as TT' has been assumed to lie below the NN' curve for all relevant rates of output. In order to achieve the optimum rate of domestic production, the government might again use price controls that eventually drive down the domestic price to the level of TT'.[1]

Finally, it should be pointed out that our model of limited substitutability does not necessarily depend on the assumption that imports are physically different from domestic goods. Empirical studies have shown that in the case of standardized commodities, such as primary steel products, the prices of domestic goods may exceed the delivered prices of corresponding imports by substantial margins and for extended periods of time without imports taking over more than relatively modest shares of domestic markets.[2] This evidence suggests that commercial buyers regard imports as being different from domestic goods even in the case of standardized commodities.

Important commercial reasons as to why buyers are willing to pay higher prices for domestic goods can be linked to differences in transaction costs that favour domestic sources. Buyers find it easier to communicate with sellers of the same nationality; familiarity with the written rules of business conduct establishes a greater measure of trust; it is

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[1] For a further discussion see Scherer (1980), pp. 476-478.

[2] Cf., for example, Kravis and Lipsey (1971), Stegemann (1977), and Isard (1977).

easier to control quality and to enforce contracts in the domestic environment; the risk of interruption of supply tends to be higher in the case of offshore procurement, and, as a consequence, inventory costs tend to be higher for imported supplies than for corresponding domestic goods.[1]

Various costs of changing sources of supply might also explain why not all buyers readily substitute imports for domestic goods when the delivered prices of imports are lower.[2] The costs of changing traditional (domestic) suppliers can be substantial as the use of a new source of supply might require changes in transport arrangements, of unloading facilities, of quality control procedures, and even adjustments in the production process or design of products. Changes in the production process might be necessary because even standardized products differ in properties that cannot easily be standardized within narrow limits. While such differences may not cause differences in operating cost, the changeover from one source to another can be costly because output is foregone during downtime and experimental runs, and because equipment must be modified.

The price advantage of imports has to be large enough to allow

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[1] One reason why relying on imported supplies is regarded as more risky, is the threat of government intervention in trade. For "sensitive" goods such as textiles or steel, the threat of import restriction can be assumed to be a rising function of the share of imports in the domestic market. Limited substitutability could thus be the consequence of "self-restraint" on the part of importers as well as exporters. While this reason may be important in the real world, it has not been mentioned in the text, as the model at this point is developed under the assumptions of free trade and *laisser faire*.

[2] For a detailed analysis of the cost of changing from one market offer to another, see Scitovsky (1971), chapter 17.

amortizing the cost of change within a reasonable period of time. If the price advantage of imports is expected to be temporary or cyclical, the flow of expected savings may be of too short a duration to repay the initial cost of change. Furthermore, a temporary gain from lower import prices would have to pay not only for the initial change, but also for the cost of changing back to domestic suppliers.[1] Buyers will tend to wait to see whether a fall in import prices (relative to the prices of domestic substitutes) is likely to last. They will wait to make changes at a time when the cost of changing suppliers is relatively low, e.g. at times of slack demand and high inventories or at times when facilities have to be replaced, repaired, or modified also for other reasons. All of this implies that the MM' and NN' curves may be assumed to be less elastic in the short run than in the long run.

It is important to recognize that the factors which differentiate imported substitutes from domestic goods do not work uniformly for all potential buyers. If the effects (costs) of differentiation and change would apply uniformly, all buyers would be prepared to pay the same given premium for domestic goods. This would imply that the NN' curve would become perfectly elastic at a domestic price corresponding to the level of the given import price plus premium.[2] There are good reasons why the

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[1] The cost of change works, of course, both ways: Once a buyer has switched to imports, he is willing to pay higher import prices, unless the price difference is large enough to justify changing back to domestic sources of supply.

[2] The MM' curve would, of course, become a horizontal line at the same domestic price.

premium that buyers are willing to pay for the non-price advantages of domestic goods will vary among buyers: Differential transaction costs may be less important for larger buyers than for smaller ones; for some users subtle differences in quality matter less than for others; some buyers already have the right loading facilties to take advantage of low-price imports, whereas others have to make modifications; the differences between the delivered prices of imports and domestic goods vary among potential users because the domestic market is spatially differentiated, etc.

There is no point in drawing up a complete list of reasons as to why the import sales curve (MM') may be assumed to be upward sloping rather than horizontal. What matters is that an upward sloping MM' curve permits us to construct a model of partial domestic monopoly in which wasteful imports are consistent with the assumption of given import prices. If the domestic producer (or group of colluding producers) views the domestic demand for its product (NN') to be less than perfectly elastic, the profit maximizing price exceeds the marginal cost of domestic production. If at that price imported substitutes take over a share of the domestic market,[1] at least some of those imports are wasteful in the sense that equivalent goods could be acquired at a lower social opportunity cost if they were produced at home.

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[1] Under the assumptions of Figure 4, some imports would occur with any position of MM', because DD' was assumed to be vertical. If DD' were negatively sloped, MM' could lie completely above the profit maximizing domestic price, i.e. no imports would occur.

Assuming that the domestic market is differentiated may conflict with the earlier assumption that the domestic producer (or group of producers) is unable to differentiate prices. A spatially differentiated domestic market, for example, might permit domestic producers to charge lower prices to customers located near the source of imports, such as a seaport, while charging higher prices for sales that are more secure. If domestic producers could practice perfect price discrimination, it would be in their interest to expand output from OA to OE in Figure 4. By doing so they would eliminate the socially wasteful imports, AE. It appears, however, that perfect price discrimination is difficult in any real-world circumstances, and it is impossible for a group of imperfectly colluding oligopolists.[1]

International price discrimination (dumping) might be another way in which profit maximizing behaviour of private producers alleviates the domestic production distortion demonstrated in Figure 4. As will be recalled, I assumed earlier, in the interest of simplification, that export opportunities do not exist. Exports would not exist, because exporting would not be profitable, if the mill-net prices that domestic producers

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[1] Convincing evidence for this point has been provided in a recent study commissioned and published by the American Iron and Steel Institute (Putnam, Hayes, and Bartlett, 1977, pp. iv-v and 42-43), and the following quotation (p. iv) is too good to be missed: "Competitive conditions in the U.S. make it difficult for domestic producers to selectively match foreign discounts; instead to prevent the sale of one imported ton they would have to offer discounts to many customers who would demand the same price. Therefore, U.S. producers would lose more money by matching import prices than by allowing their market share to be eroded."

could obtain for exports were less than their marginal cost (distance AU in Figure 4). Exporting would not be profitable either with export prices exceeding the marginal cost of production, but lying below the domestic price, if dumping could not be practiced, as the domestic producers' profit is higher for quantity OA sold at price OP than for a larger quantity sold at a uniform lower price. The problem of dumping and the domestic distortion would disappear if it were possible to export unlimited quantities at a price larger than OP. In this case, the domestic producers would sell exclusively at the higher export price. Their total rate of output would be determined by the intersection of the given export price (horizontal export demand) with the CC' curve. While the higher price in the domestic market would result in larger imports, there would no longer exist a distortion, since the marginal social cost of production would equal the marginal social cost of importing. This case is equivalent to the case of price OP_3 in Figure 1 of section 2 above, except that under the circumstances assumed for Figure 4 imports and exports would occur simultaneously. One should think that this case would not be very important in practice, because market conditions would have to be unusual for a given export price to exceed the profit-maximizing price in the domestic market and for imports to occur at the same time.

Now let assume that dumping is possible (neither legal restraints nor re-imports prevent it), that export prices exceed AU in Figure 4 but are lower than the domestic price, OP, that domestic producers are price takers in export markets, and that the CC' curve in Figure 4 represents the marginal social cost of domestic production.

Under these conditions exporting (dumping) is profitable for domestic producers, and it reduces the waste that is caused by monopolistic pricing in the home market. For export prices larger than AU but lower than EV, exporting would not affect the volume of imports that can be called wasteful (distance AE), but the area representing the total waste would become smaller than the triangle UVW, because the export price would now determine the marginal social cost of domestic production (and the opportunity cost of consuming domestic output rather than imports). For export prices higher than EV but lower than OP, exporting would reduce the volume of wasteful imports to less than AE, as the horizontal export demand would intersect the CC' curve between points V and X and the NN' curve between points W and V. In this case, the area of waste would be reduced to a smaller triangle corresponding to the smaller volume of wasteful imports. In any case, dumping results in a gain for domestic producers and the exporting country that is represented by the area lying between the CC' curve and the horizontal export demand curve for the relevant volume of exports. If a monopolistic price distortion in the domestic market is taken as given, it is thus in the interest of the exporting country to tolerate dumping by domestic producers. Whether or not dumping is in the interest of the "receiving" countries will be discussed in section (6) below.[1]

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[1] It should be noted that in the case of the horizontal TT' line in Figure 4 representing the marginal social cost of production, dumping is also in the interest of the exporting country, but dumping cannot reduce the volume of imports that is wasteful and that might be eliminated by domestic intervention.

5. *SHORT-RUN DISTORTIONS POSING THE POLICY PROBLEMS*

It is easy to summarize the heuristic content of the previous sections: (i) The domestic distortion of production which the trade literature had assumed to be caused by monopoly has been shown to disappear in a partial equilibrium presentation making the assumptions conventionally employed in trade models. (ii) The distortion can, however, be resurrected by assuming either a less than perfectly elastic supply of imports or imperfect substitutability between domestic and imported products. (iii) These assumptions generally imply that several distortions occur simultaneously. (iv) In a simplified partial-equilibrium diagram, one can depict the area of waste of national resources that is caused under free trade conditions by monopolistic restriction of the domestic production of import-competing goods. (v) The magnitude of this area of waste can, in principle, be estimated in the same way by which Harberger (1954) and others have estimated the monopoly-related "deadweight loss" of consumers' surplus.[1]

The policy implications of the argument are less evident. It should be recalled that the domestic distortions literature has had a very special aim which developed as a reaction to various "tariff arguments" that had been advanced to qualify the doctrine of free trade some twenty

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[1] In practice, however, it might be next to impossible to separate the "pure" production distortion from other monopoly distortions. In particular, we do not know to what extent the elasticity of the NN' curve is determined by import substitution. This problem is unavoidable if one wishes to infer the elasticity from observed marginal price distortions as Cowling and Mueller (1978) have done.

or thirty years ago. The aim was to show that in the presence of given domestic distortions it is preferable to employ domestic remedies, such as production subsidies, rather than intervene with free trade.[1] This argument has been applied uniformly to various categories of distortions which include the case of domestic monopoly. It seems fair to say that practical policy formulation has not been given high priority in the domestic distortions literature. Could it be that the case of domestic monopoly is simply a minor item, even a curiosity, in a trade theorist's taxonomy of domestic distortions?

Most economists would agree that the answer is "yes" if one looks at monopoly as a long-run problem. There must be few industries in any country of the world that could retain significant monopoly power in the long run under free trade conditions. "Spontaneous" coordination of conduct among oligopolists tends to break down when national markets are open to international competition,[2] and if collusion can persist because it is being organized, there is no reason why it should be taken as given. In other words: the additional distortions that domestic monopoly (collusive oligopoly) would cause in an open economy should be an additional argument for vigorous enforcement of antitrust remedies, and it would seem artificial to present the policy problem as a matter of choosing between trade intervention and domestic measures such as production subsidies.

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[1] For a brief history of the domestic distortions theory see Corden (1974), pp. 2-5 and 40-41.

[2] For a case study and general considerations, see Stegemann (1977), chapters 2, 3, and 5.

As often is the case, however, the long-run view fails to detect the current and recurring problems of the real world. It is my conviction that monopolistic pricing of domestic producers causes considerable production distortions in the short run, particularly in cyclical markets. I am planning to show in this section how short-run monopoly distortions arise in very ordinary circumstances. Furthermore, I am planning to indicate how the existence of monopoly-related domestic price distortions causes international conflicts of national policies that increasingly threaten to destroy the foundations of the GATT system.

Monopolistic pricing is defined as pricing above marginal cost. There are two principal monopoly-related reasons why during periods of relatively weak demand the prices of import-competing domestic goods and services tend to exceed the marginal social opportunity cost: (i) domestic producers charge prices exceeding their marginal private short-run opportunity cost because the domestic market is not perfectly competitive, and (ii) the producers' marginal private opportunity cost is distorted because input prices in the short run exceed the marginal social opportunity cost of the inputs in question. Both types of distortions will occur almost invariably when import-competing sectors of the economy reduce capacity utilization below normal levels. The short-run distortions are especially important for cyclical industries and for industries that are highly concentrated and/or highly unionized. The distortions also tend to be larger the larger the difference between short-run marginal cost and long-run marginal cost ("full cost").

While the evidence supporting hypotheses of full-cost pricing or administered pricing may still be subject to dispute, few observers would disagree that marginal-cost pricing is the exception rather than the rule, at least for short-run adjustment.[1] There is no need for a detailed review of the reasons that explain why producers refrain from reducing prices in the domestic market to the level of short-run marginal cost at times of excess capacity. Domestic producers as a group find it profitable to hold prices above marginal cost if the import sales curve is not perfectly elastic. As mentioned previously, it is plausible to assume that the residual demand for the domestic product is less elastic in the short run than in the long run, though the curve may shift down when prices are falling in the world market.

Domestic producers who depend on "spontaneous" coordination of conduct at times of excess capacity may, in fact, hold their prices at higher levels than a monopolist would choose because, for fear of starting a price war, they adhere to some full-cost pricing formula or some "fair pricing" formula that rules out price discrimination on an *ad hoc* basis. Even if attempts of domestic producers at holding the "price umbrella" eventually break down under the combined pressure of domestic excess capacity and import competition, domestic prices rarely approach the level of short-run marginal cost, and the process of price adjustment typically begins only after imports have taken over a larger share of the domestic

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[1] For surveys of the literature on full-cost and administered pricing, see Blair (1972), chapters 16 and 17; and Scherer (1980), pp. 184-190 and 349-357. Recent evidence on short-run rigidity of prices was presented by Sahling (1977) and Coutts, *et al.* (1978)

market than they possessed during the preceding period of normal capacity utilization.

Other things being equal, producers will be more inclined to refrain from cutting domestic prices at times of excess capacity if they must anticipate that government "jawboning" will make it difficult for them to raise prices when market conditions improve. There is little evidence of public policy having been used to encourage domestic price cutting by private producers during periods of excess capacity. Indeed, prominent micro policies such as rate regulation, anti-discrimination laws, and windfall-profit taxes are in tune with the public's opinion that full-cost prices are "fair" prices. Monopoly appears to be a matter of public concern only to the extent that it results in "excessive" profits. The monopolistic distortions discussed here are, of course, equally consistent with normal or sub-normal profits over the business cycle.

The second type (or component) of short-run distortions generally has to be added to the first because at times of weak-demand the marginal private cost of producing import-competing goods tends to exceed the marginal social cost. Wages, for example, are a private opportunity cost in the short run to the extent that labour can be laid off. The social opportunity cost of labour in the short run is, however, much less than the wages paid if alternative employment is not readily available or if laid-off workers are reluctant to accept alternative job offers. Wage rates tend to be rigid in the downward direction because of monopolistic power

of labour unions and/or because of government policies such as minimum wage laws or unemployment benefits. In other words: monopoly power and considerations of social equity cause the marginal private cost of labour to exceed its marginal social cost. Prices of intermediate inputs also tend to be distorted in the short run because producers of these inputs charge more than their marginal cost and because their own inputs are priced above short-run marginal social cost.[1]

Labour market distortions tend to reinforce monopolistic distortions in the output markets because import-competing producers can expect more protection if a downturn in demand causes relatively severe layoffs and even plant closures that might be avoided with a less rigid wage structure. The expectation of protection is increased if imports can be called "unfair" in the sense that foreign suppliers are charging less than full cost, are dumping, or are being subsidized. The expectation that measures of "contingency protection" might be used against "unfairly priced" imports tends to reduce the elasticity of the import sales curve (and of the net demand curve for the domestic product), as domestic buyers are more reluctant to purchase imports for fear of being cut off by government intervention or for fear of being involved in costly anti-dumping procedures, etc. When the import sales curve becomes less elastic, the domestic production distortion may become larger. But it should be apparent from the foregoing argument that the existence of domestic distor-

[1] The introduction of distorted input prices is stretching the limits of partial-equilibrium analysis, because it is hard to see why other sectors of the economy would not simultaneously be affected by similar distortions. In the interest of simplicity, I am sticking to my assumption that other sectors are undistorted.

tions does not depend on the existence or threat of government intervention.

We can now use a modified version of Figure 4 to analyse more systematically the effects of short-run changes in market conditions on monopoly-related production distortions, to discuss potential forms of optimal intervention, and also to analyse the rationale of frequently observed measures of "contingency protection", such as antidumping policies. Figure 5 presents two short-run situations for an import-competing industry: a "boom" period and a "slump" period. The boom situation is depicted with broken line curves. GG' is the domestic boom demand, which again has been assumed to be vertical. MM' is the import sales curve that applies for the boom period, and NN' is the corresponding net demand for the domestic product.

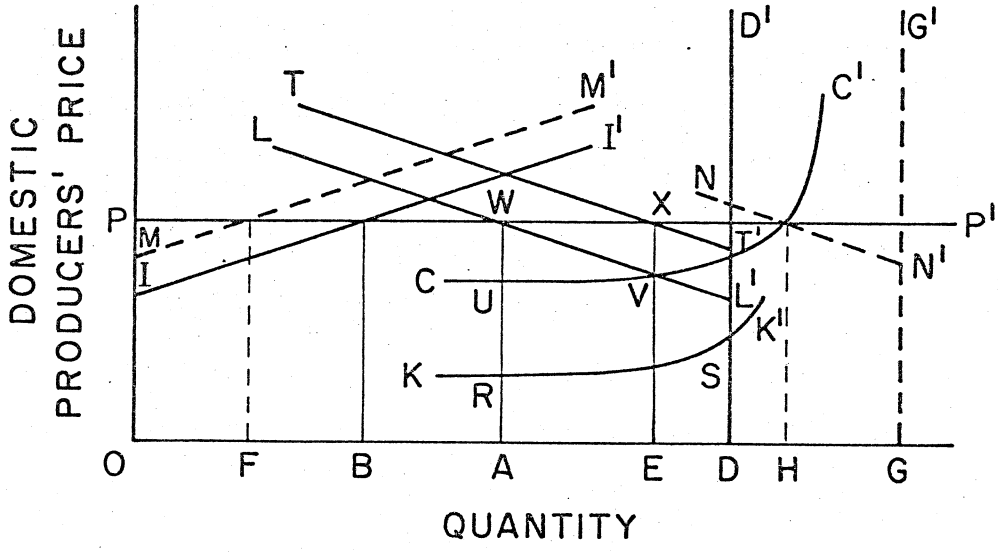

FIGURE 5

To simplify the presentation, it has been assumed that the domestic producers are quoting an "administered" price, OP, which does not change over the business cycle. In other words: producers are assumed not be maximize profits by varying price in the short run.[1] With the domestic price given by PP', the boom situation in Figure 5 is optimal in the sense that the marginal social cost of domestic production equals the marginal social cost of importing. In the absence of other distortions, the marginal social cost of domestic production is represented by the CC' curve and the marginal social cost of importing by the NN' curve, as was explained previously. With the domestic producers' price at OP, the boom rate of importation is OF, which equals HG by construction. The boom rate of domestic production thus is OH. For this rate of output, CC' intersects NN', which implies that in the depicted boom situation there exists no monopolistic distortion of production.

In the slump, several things change. (i) Domestic demand shifts from GG' to DD'. (ii) The import sales curve shifts from MM' to II' because foreign prices are assumed to be lower in the slump than they are in the boom situation. The net demand curve for the domestic product thus

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[1] In the present context, it does not matter why domestic producers set their price(s) at this particular level, how and whether the industry manages to achieve complete adherence to this price, or in what circumstances they might decide to change their price(s). The essential requirement is that the domestic producers' prices exceed the marginal social opportunity cost at some point in the cycle. Furthermore, it should be noted that price PP' in Figure 5 is lower than the short-run profit-maximizing price would be both in the boom and in the slump. The monopolistic distortion shown in Figure 5 thus is smaller than it would be under the assumption of short-run profit maxmization.

shifts from NN' to LL'. It seems plausible to assume that import prices fall in the slump because foreign markets of the product in question are depressed at the same time and foreign suppliers are trying to export "surplus" production, possibly at "dumped" prices. (iii) In the slump it is necessary also to consider the possibility of marginal private cost exceeding the marginal social cost of domestic production because input prices are distorted. For that reason, Figure 5 contains a second cost curve, KK', lying below CC'. The CC' curve is the relevant domestic cost curve so long as the prices of variable inputs are equal to their marginal social opportunity cost, whereas the KK' curve applies if input prices exceed the marginal opportunity cost of using these inputs for import-competing production.[1]

While each of the three kinds of changes could individually introduce a domestic production distortion so long as domestic suppliers charge prices that exceed short-run marginal cost in the slump, I have decided to discuss the three elements together because I believe that typically it is a combination of these elements that prompts governments to intervene with measures of "contingency protection".

The distortion of domestic production that occurs in the slump situation of Figure 5 is, in principle, identical to the distortion that was presented in Figure 4 of the previous section. If the domestic

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[1] The CC' curve is defined as the horizontal sum of the short-run marginal cost curves of all domestic facilities that might be used to make the product in question. As the present argument is consistent with market sharing behaviour by an oligopolistic group, the CC' curve might be more complex and might in itself imply a production distortion. See Patinkin (1947).

producers charge price OP in Figure 5, the slump rate of importation is OB which equals AD by construction. The quantity demanded from domestic suppliers thus is OA. Assuming CC' is the relevant cost curve, the marginal social cost of domestic production at output rate OA equals AU. The marginal social cost of importing equals AW. The marginal distortion thus equals UW. As in the previous diagram, there is a triangle of waste, UVW, in Figure 5. The distance AE represents wasteful imports, whereas ED are beneficial imports. If the KK' curve represents the relevant marginal social cost of domestic production, the marginal distortion is increased from UW to RW; the total waste is measured by the area RSL'W; and all imports are wasteful because in Figure 5 the LL' curve lies completely above the KK' curve for all relevant rates of output.[1]

6. *SOME POLICY CONCLUSIONS*

Given the length of this paper, it is possible only to sketch a few principles concerning the use of government intervention to correct for the distortions of domestic production in an open economy that are

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[1] Incidentally, wasteful imports would also occur during a boom period if domestic demand were larger than GG'. Given the administered price PP', domestic producers would not find it profitable to increase output beyond OH. To fill the gap, imports would grow beyond HG in Figure 5. The additional imports would be wasteful to the extent that the marginal cost of importing would exceed the marginal social cost of domestic production. (NN' would shift upward and to the right with a domestic demand larger than GG'.) Such a situation may not be uncommon considering how frequently it is observed that domestic producers at times of boom demand "allocate" their shipments among traditional customers. For the same reasons, domestic price control or jawboning during boom periods may cause a waste of national resources without causing visible shortages.

caused by the monopoly-related short-run rigidity of domestic prices.

(i) The most important implication of the analysis is the conclusion that wasteful imports may occur in circumstances that are not at all uncommon. Policy makers and practical men may thus be right if they argue that "excessive" import competition for sensitive sectors or regions of the economy is a matter of national welfare (efficient allocation of national resources) rather than only a matter of income distribution among various national groups. While the argument of the previous section cannot be used to vindicate all of the numerous measures of contingency protection that are being taken around the world, it is no longer good enough for economists to accuse policy makers of being weak in their knees or brains, when governments during periods of low capacity utilization intervene to expand domestic production at the expense of imports.

(ii) While my analysis is fully consistent with the general conclusion of the literature that in the case of domestic distortions domestic interventions ought to be preferred to trade interventions, the circumstances of short-run price distortions may be such that domestic measures cannot solve the problem. As Corden (1974, pp. 48-50) and others have pointed out, domestic subsidies are not at all easy to administer, even if their effects on income distribution are acceptable. The difficulties of administering subsidies are compounded in the case of cyclical price distortions. Furthermore, it should be realized that even "purely domestic" measures such as production subsidies may provoke retaliation by other countries. We will return to this aspect, that largely has been

overlooked in the domestic distortions literature, in points (vi) and (vii) below.

(iii) Although in certain circumstances import restrictions may be the only policy available to correct short-run distortions, it can be shown that common forms of contingency protection such as antidumping measures are clearly worse than ordinary tariffs and, indeed, might reduce rather than increase national welfare.[1] In the slump situation depicted by Figure 5, the wasteful imports (AE) could be eliminated by imposing a per-unit tariff of magnitude VX that shifts the marginal private cost of importing from LL' to TT'. With the tariff, imports would be reduced from AD to ED; domestic production would be expanded to the optimal rate, OE.

Let us assume the same reduction of imports and expansion of domestic production could be achieved by a policy that threatens to impose antidumping duties if imports were found to enter the market at less than "fair" value. In this case the shift of the marginal private cost of importing from LL' to TT' implies a shift of the marginal social cost of importing, because foreign suppliers would stop dumping and no duty would in fact be collected. If antidumping measures shift the marginal social cost of imports to TT', OE no longer is the optimal rate of domestic production as the marginal social cost of importing, EX, in this case exceeds the marginal social cost of domestic production, EV.

Furthermore, the antidumping measures would create an excess

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[1] For a detailed discussion of the effects of antidumping measures, see Stegemann (1978), section 4, and Stegemann (1980), section 2.

burden (unnecessary social cost) of importing which in Figure 5 is given by the rhomboid VL'T'X. In the case of an ordinary tariff, the rhomboid represents the tariff revenue collected by the government on the optimal volume of imports, whereas in the case of antidumping policy the rhomboid represents an additional social cost of importing quantity ED. The rhomboid could conceivably be larger than the triangle of waste caused by the original distortion (triangle UVW in Figure 5). Antidumping measures might thus decrease national welfare. In any event, they cannot correct the domestic distortion unless all imports are wasteful (case of KK' in Figure 5) and all imports are in fact eliminated. Similar arguments can be made for countervailing duties and bilateral quotas ("voluntary" export restraint) as these measures also tend to increase the social cost of the remaining imports.

(iv) It is implied in the previous point that for the importing country's welfare it does not matter whether foreign suppliers sell at "fair" prices or whether they are dumping. From the importing country's point of view, the only relevant consideration is whether or not prices of <u>domestic</u> goods are distorted. Dumping by foreign suppliers tends to accentuate domestic problems because the import sales curve tends to shift down during periods of universal excess capacity as I have assumed for Figure 5. But it does not follow that the dumped imports are necessarily undesirable imports that ought to be eliminated by government intervention when domestic producers can claim "injury" as provided for by antidumping laws. If the authorities of the importing country would correct the domestic price distortion (by imposing a price ceiling, a subsidy, or an ordinary tariff), the decision to buy or not to buy dumped imports could be left to domestic

buyers. It would seem reasonable to assume that professional buyers are generally capable of evaluating the additional risks and costs that they may incur by depending on suppliers who are likely to offer unusually low prices only temporarily. In practically all circumstances, the argument that cyclical dumping might dangerously augment the monopoly power of foreign suppliers is simply a myth that has been exploited to obtain protection against particularly aggressive import competition.[1]

(v) As was demonstrated at the end of section (4) above, the distortion that is caused by monopolistic pricing in the domestic market can be reduced by domestic producers dumping additional output in foreign markets. A government that is unable or unwilling to remove domestic price distortions should thus not be opposed to domestic producers selling abroad at lower prices. If domestic input prices are distorted, as indicated by the KK' curve in Figure 5, dumping that is in the private interest of domestic producers does not go far enough. If in this case a government is unable or unwilling to remove price distortions in the domestic market, it can still increase national welfare by subsidizing exportation of the good in question.[2]

(vi) If all countries used domestic interventions to eliminate domestic price distortions, there would be no grounds for complaints

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[1] For a discussion of the reasons why policy makers may prefer antidumping measures to other forms of intervention, see Stegemann (1978), section 5.

[2] For a detailed discussion of optimal intervention at the "import margin" and the "export margin", see Stegemann (1979), section 4.

between countries. All remaining imports would benefit any importing country, no matter whether exports were sold at "fair" prices or not. The allocation of resources would also be internationally efficient in the sense that world output of any traded commodity would be produced at the lowest possible total cost. International conflicts arise because not all countries are able or willing to remove domestic price distortions.

We know, of course, from daily experience that countries do not generally employ domestic forms of intervention to eliminate short-run price distortions. Far from forcing cyclical industries or declining sectors to cut prices to the level of short-run marginal cost at times of idle capacity, countries frequently discourage "ruinous" price competition, facilitate temporary layoffs, maintain marketing boards, and even encourage the formation of "crisis cartels" to prevent the collapse of domestic oligopoly peace under the pressure of foreign competion. Tolerating short-run price distortions is the politically easiest way of avoiding drastic shifts in income distribution. Given such domestic policies, it is only consistent for countries to employ international measures of intervention that reduce the adverse effects of domestic distortions for national welfare and at the same time help preserve an accepted domestic distribution of income.

While the domestic distortions literature has correctly concluded that from an individual country's point of view it is advantageous to remove domestic price distortions, the literature has overlooked a class of international conflicts that arise in a "mixed" world economy.

The world economy is mixed in the sense that some governments can and will intervene more readily to remove domestic price distortions than others. If an import-competing industry in one country, for example, is state controlled the government finds it much easier to hold prices close to short-run marginal cost than the government of a country where the corresponding industry traditionally has been in the domain of private enterprise. International conflicts arise because an individual country's "purely domestic" intervention may reduce the welfare of other countries that are unable or unwilling to eliminate their own domestic price distortions and for this reason may react by restricting international trade. This is a familiar scenario for antidumping and countervailing duty actions that are authorized by Article VI of the GATT.

(vii) Indeed, we may conclude that the GATT system did not anticipate (and has not yet absorbed) the principles of the domestic distortions approach of the theory of commercial policy. The GATT provisions on dumping (especially paragraph 1(b) of Article VI) and state trading (Article XVII) suggest that the authors of the General Agreement did not regard short-run marginal cost pricing as the ideal form of market conduct. Other provisions allow the conclusion that the GATT presupposes a system of free enterprise which is assumed to result in the optimal allocation of resources.[1] Domestic interventions such as subsidies or price control would be regarded as sins against the spirit of the GATT that must be contained in order to allow the "natural" forces of the market to determine the pattern of international trade.

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[1] See especially sections 3 and 7 of Article VI, and also Articles XVI and XVII. See also Dam (1970), p. 318.

What has developed in practice is a system of market sharing. Written international rules, general notions of "fair" trade, and the efforts of national lobbies have combined to devise national laws and policies that effectively restrain aggressive international competition. The rules are frequently written in such a way as to paint as villains those countries that are more successful in removing domestic short-run price distortions. A system of market sharing may be the lesser evil as the alternative is a situation of international conflict resulting in a multiplicity of short-run interventions and retaliatory measures that may all be in the short-run interest of individual countries but could severely damage the international division of labour in the long run. The domestic distortions approach cannot yet determine the optimal mechanism of international coordination if some countries employ optimal domestic interventions and others are constrained to reacting with trade restrictions.[1] But this approach enables us to understand the nature of the conflict and to analyse policy decisions that can be discussed only superficially and emotionally by distinguishing between "fair" and "unfair" trade.

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[1] Johnson (1953) has discussed the problem of retaliation in the context of optimal tariff measures.

REFERENCES

Bhagwati, Jagdish (1968), *The Theory and Practice of Commercial Policy: Departures from Unified Exchange Rates*, Princeton: International Finance Section.

_____ (1971), "The Generalized Theory of Distortions and Welfare", in J. Bhagwati, *et al.* (eds.), *Trade, Balance of Payments and Growth*, Amsterdam: North-Holland.

Blair, John M. (1972), *Economic Concentration: Structure, Behaviour and Public Policy*, New York: Harcourt Brace Jovanovich.

Caves, R. E., and R. W. Jones (1973), *World Trade and Payments*, Boston, Mass: Little, Brown and Company.

Chacholiades, Miltiades (1978), *International Trade Theory and Policy*, New York: McGraw-Hill.

Corden, W. M. (1974), *Trade Policy and Economic Welfare*, Oxford: Clarendon Press.

Coutts, Kenneth, Wynne Godley and William Nordhaus (1978), *Industrial Pricing in the United Kingdom*, Cambridge: Cambridge University Press.

Cowling, Keith and Dennis C. Mueller (1978), "The Social Costs of Monopoly Power", *Economic Journal*, Vol. 88, 724-748.

Dam, Kenneth W. (1970), *The GATT: Law and International Organization*, Chicago: University of Chicago Press.

GATT, General Agreement on Tariffs and Trade, reprinted in Dam (1970), pp. 391-468.

Giersch, Herbert (1956), "Das Handelsoptimum: Ein Beitrag zur Theorie der Wirtschaftspolitik", *Weltwirtschaftliches Archiv*, Vol. 76; published in English as "The Trade Optimum: a Contribution to the Theory of Economic Policy", *International Economic Papers*, No. 7 (1957), pp. 157-184.

Haberler, Gottfried (1950) "Some Problems in the Pure Theory of International Trade", *Economic Journal*, Vol. 60, pp. 223-240.

Harrod, R. F. (1951), *International Economics*, 2nd ed., London and Cambridge.

Isard, Peter (1977), "How Far Can we Push the 'Law of One Price'"? *American Economic Review*, Vol. 67, No. 5, pp. 942-948.

Johnson, H. G. (1953), "Optimal Tariffs and Retaliation", *Review of Economic Studies*, Vol. 21, pp. 142-153.

Johnson, H. G. (1965), "Optimal Trade Intervention in the Presence of Domestic Distortions", R. E. Caves, P. B. Kenen, and H. G. Johnson (eds.), *Trade, Growth and the Balance of Payments*, Amsterdam: North Holland, pp. 3-34.

Just, Richard E, Andrew Schmitz, and David Zilberman (1979), "Price Controls and Optimal Export Policies under Alternative Market Structures", *American Economic Review*, Vol. 69, No. 4, pp. 706-714.

Koo, Anthony Y. C. (1979), "On the Equivalance of Reference Price with Tariffs and Quotas", *American Economic Review*, Vol. 69, No. 5, pp. 964-967.

Kravis, Irving B. and Robert E. Lipsey (1971), *Price Competitiveness in World Trade*, New York: NBER.

Meade, J. E. (1955), *Trade and Welfare*, New York: Oxford University Press.

Patinkin, Donald (1947), "Multiple-Plant Firms, Cartels, and Imperfect Competition", *Quarterly Journal of Economics*, Vol. 61, pp. 173-205.

Putnam, Hayes and Bartlett (1977), *Economics of International Steel Trade: Policy Implications for the United States*, a Study prepared for the American Iron and Steel Institute, Newton, Mass.

Sahling, Leonard (1977), "Price Behaviour in U. S. Manufacturing: An Empirical Analysis of the Speed of Adjustment", *American Economic Review*, Vol. 67, No. 5, pp. 911-925.

Scherer, F. M. (1980), *Industrial Market Structure and Economic Performance*, 2nd ed., Chicago: Rand McNally.

Scitovsky, Tibor (1971), *Welfare and Competition*, Homewood, Illinois: Richard D. Irwin.

Stegemann, Klaus (1977), *Price Competition and Output Adjustment in the European Steel Market*, Tubingen: J. C. B. Mohr.

_____ (1978), "The Rationale of Antidumping Protection for the Steel Industry", Discussion Paper No. 321, Institute for Economic Research, Queen's University, Kingston, Ontario; also *Proceedings of the Eighth Annual Meeting of the Illinois Economic Association (1978)*, pp. 77-90.

_____ (1979), "State Trading and Domestic Distortions in a Mixed World Economy", Discussion Paper No. 357, Institute for Economic Research, Queen's University, Kingston, Ontario.

_____ (1980), "The Efficiency Rationale of Contingency Protection", Discussion Paper No. 387, Institute for Economic Research, Queen's University, Kingston, Ontario.