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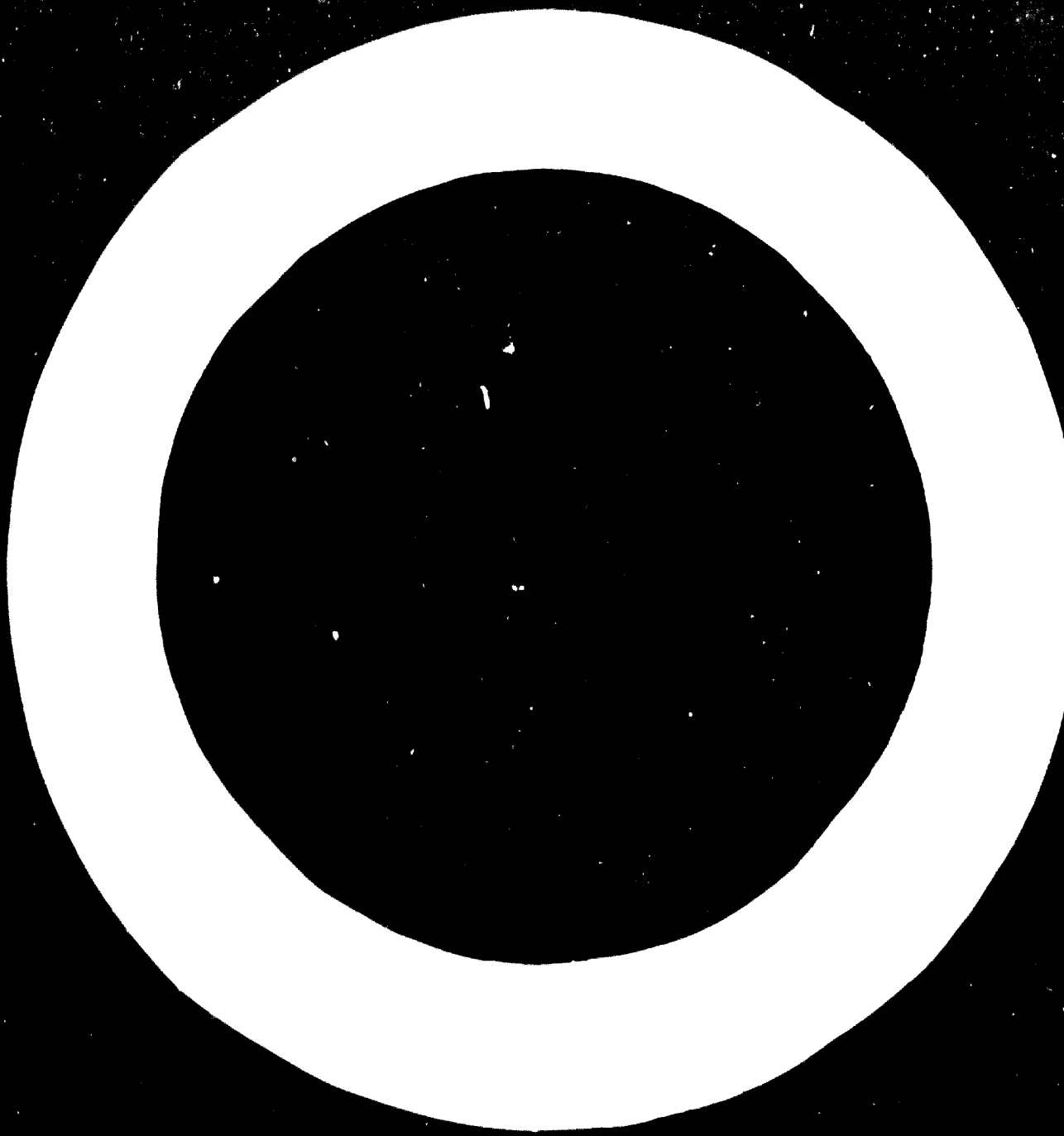
ISSUE PAPER No. 6

TARIFFS AND OTHER FORMS OF PROTECTION<sup>1/</sup>

Issues for Discussion

<sup>1/</sup> This Issue Paper was prepared for the Seminar by Mr. El Maggar, Director of the Research Division, UNCTAD. It has been reproduced as a document without formal editing.

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## II. FORMS OF PROTECTION

1. Tariffs have long been used as a means to promote industrial development in the country imposing them. By raising the price of the imported product relative to home-produced substitutes, tariffs improve the competitiveness of the latter. Protection is not of course the only function of tariffs. In countries at an early stage of economic development, tariffs usually represent an important source of revenue. Moreover, tariffs are sometimes resorted to as a means to correct external imbalance or to improve terms of trade. For the purpose of the present note we are interested only in the protective function of tariffs.
2. Under certain conditions tariffs may not prove sufficiently effective as an instrument of protection. Accordingly, they are supplemented - or replaced - by quantitative restrictions. In this case the flow of imports is not left to the interaction of domestic and foreign prices, but is quantitatively determined by administrative decision.
3. Under both tariffs and quantitative restrictions the incentive is provided to home producers through an increase in the level of domestic prices. However, government policy may not favour an excessive increase in the price of certain products. In such cases protection may be partly secured through the payment of subsidies to home producers.
4. In a large number of developing countries foreign exchange is subject to strict control. Although the basic aim of such control is to defend the balance of payments position, it is frequently used as a protective device.
5. Tariffs, QR's, subsidies and foreign exchange control represent the major forms of protection in the developing world. To be sure, other barriers to the inflow of imports do exist (e.g., border taxes, fiscal charges), but they are not principally designed to protect the home industry. In most cases these barriers involve a flat rate of duty which falls upon all types of imports irrespective of whether the product in question is or is not locally produced. Due to limitations of time and space, the present note is confined to tariffs and quantitative restrictions.

## II. TARIFFS AS AN INSTRUMENT OF PROTECTION

6. In a developing economy industrialisation is hardly conceivable without the shelter of protective tariffs. This view is as old as Von List and John

Stuart Mill. Both sanctioned derogation from the principle of free trade in the case of "infant industries".

7. In a developing economy resources would not move spontaneously from traditional investment such as land and building to manufacturing. There is a scarcity of entrepreneurs who would take such a risk. Moreover, it is not certain that the rate of return in manufacturing activity could be sufficiently high to attract capital and other resources from the traditional occupations. Tariff protection is therefore needed to enhance profitability in new industries, reduce the risk of competing imports and overcome the inertia of resources which otherwise would prefer to stick to traditional occupations.

8. In many of the developing countries which have now attained a reasonable level of industrialization, tariff protection has been successfully used in the early stages of import substitution. Brazil, Argentina, Chile, Mexico, India, UAR, Israel and many others were able to attain self-sufficiency in a wide range of manufactured consumer goods. Moreover, the level of protection needed to develop this type of goods was not excessively high.

9. The problems of sheltered industrialization began to make themselves felt when these countries moved to a higher stage of import substitution, i.e. from consumers to intermediate and capital goods. In most cases, even for a country as big as Brazil, the size of the home market was not sufficiently large to sustain an industry at an efficient scale of operation. As a consequence many branches of the intermediate and capital goods industries became vexed with the problem of excess capacity. This in turn gave rise to high unit cost. Under these circumstances the industry could only become viable through the application of excessively high tariff rates.

10. This problem is not of course true of all branches of the intermediate and capital goods industries. Some of these countries did succeed in establishing certain industries in this category at a reasonable level of efficiency. But in many cases the situation is characterized by excess capacity, high unit cost and high tariffs. Since the output of these industries is used as input by many sectors including the export sector, the adverse effect was felt throughout the economy.

11. This is not to argue that developing countries should stop short of producing intermediate or capital goods. The answer to the above-mentioned problem is twofold:

- (a) Developing countries should be selective in the choice of industries to which tariff protection would be accorded.
- (b) The possibilities of regional integration, or at least of cooperation at the regional level, should be seriously explored in order to overcome the limitations of the size of the national market.

12. The degree of protection accorded to certain industries should be measured by the rate of effective, rather than nominal, tariff. The nominal tariff rate is the one specified in the tariff schedule of any country. The effective rate, on the other hand, relates the amount of import duties to value added. To illustrate, assume that the price of product A in the exporting country is equal to \$100 and that the rate of nominal tariff in the importing country is around \$120. The rate of effective tariff depends on the proportion of value added. Suppose that it represents one quarter of the price of product A in the exporting country. The price of \$100 would then be broken into

\$25 value added  
\$75 material inputs

Assuming that material inputs are imported duty-free, the rate of effective tariff would be equal to

$$\frac{\$20 \text{ (amount of duties paid)}}{\$25 \text{ (amount of value added)}} \text{ or } 80\%$$

13. In the above example the effective tariff turned out to be four times as high as the nominal. This is due to the fact that value added was assumed to be one quarter of the price in the exporting country. Had it been one third, the effective tariff would have been three times the nominal one. As a general rule, and assuming that material inputs are imported duty-free, the effective tariff is equal to the nominal tariff multiplied by the inverse of the proportion of value added. Should material inputs be subject to duties, the formula for calculating the effective tariff would be somewhat more complicated. But as long as tariff structure is characterized by escalation in the sense that tariff rates rise with the increase in the degree of fabrication of any given product, the effective tariff would always be higher than the nominal tariff in any stage of production.

14. It is not difficult to see why the effective tariff is more indicative of the degree of protection than the nominal tariff. By excluding raw materials and other material inputs, the concept of effective tariff concentrates on the degree of protection afforded to the original factors of production (labour and capital). This is the true measure of protection. In the above-mentioned example the nominal tariff is 20 per cent while the effective tariff is 80 per cent. Since import duty is 20 per cent, home production could withstand foreign competition as long as the cost per unit is not more than 20 per cent above world market price. In other words the home industry could be 20 per cent less efficient than that abroad. However, by assumption, as much as three quarters of the price of the product is accounted for by raw materials which, if it is duty free, would be available to the home industry on exactly the same terms as it would be to foreign producers, i.e. at world market price. Accordingly, the raw material component of the cost of production would be the same at home and abroad. In this case the original factors of production in the home industry could stand their own against foreign competition if they are less efficient than their foreign counterpart by as much as 80 per cent and not by merely 20 per cent as might be gauged from the nominal tariff rate.

15. The significance of the concept of effective tariff is twofold. First, it indicates that, high as the nominal tariff rates might be in some of the developing countries, the actual degree of protection is in many instances considerably greater. Secondly, the height of the tariff barrier facing the exports of manufactures from developing countries in the industrial countries is much greater than is indicated by the rates specified in tariff schedules. This is particularly so in the case of simply processed raw materials which are normally characterized by a very low proportion of value added.

16. The excessive rate of protection in some cases raises the problem of redundant protection. Protection is said to be redundant whenever a reduction in current tariff rates would not induce a contraction in the size of the home industry, but would simply reduce the amount of excess profits made under the umbrella of high tariff rates. Under competitive conditions redundant protection is inconceivable. The higher the tariff, the bigger the industry and vice versa. In any situation the marginal firm would be making just enough profits to keep it in business. If tariff rates were reduced it would be forced out of business. This is not, however, the typical situation in the modern industrial sector of the developing countries. In most cases the industry consists of few



firms. The entry of new firms is not a simple matter and, in any case, is subject to control by the public authorities. In such a situation the problem of redundant protection becomes a real one. The price charged to consumers would reflect the full amount of the tariff. But it would be higher than is necessary to maintain the current size of the industry.

17. One of the important issues in tariff protection is that of "tariff factories". It is argued that high tariff protection should not be judged solely on the basis of its impact on the allocation of resources but should be considered also from the viewpoint of their power to attract foreign firms. When faced with high tariffs, foreign suppliers may find it in their interest to bypass the barrier by establishing points of supply behind the tariff wall, i.e. in the home market. The inducement to shift their base of operation in this way would be strongest if the tariff regime, while admitting the imports of raw materials and capital equipment duty-free or at very low rates of duty, subjects the finished product to exceptionally high rates. By shifting his source of supply to the home market, the foreign producer would avoid the payment of high duties and would take advantage of the high price of the product in the home market.

18. The issue, however, is not so simple. The tariff wall may be so high as to be prohibitive. In other words the foreign producer would be totally excluded from the home market. If this market is a sufficiently important outlet, the foreign producer may be induced to consider shifting the source of supply to by-pass the tariff barrier. If, however, the existence of the tariff barrier does not preclude the possibility of capturing a certain share of the home market, the foreign producer would certainly make a comparison between the volume of sales as well as the profit per unit under two alternatives; one in which he would supply the home market from abroad; the other in which he would be an inside supplier. Such a comparison would not always be in favour of the second alternative. Although the level of domestic price may be considerably higher than that of the world market price there is no reason to assume that such a price differential is not more than offset by the cost differential. In other words the cost of production in the home market may be so high as to offset any price advantage. In the discussion of this subject the impression is sometimes given that by shifting his base of operation the foreign producer would combine the high domestic price with the low foreign cost.

19. There is perhaps a need to investigate empirically the extent to which the existence of a high tariff wall was the principal determinant of the locus of production. It is clear, however, that the decision to invest in a given market is different in nature from that of being simply a supplier. The investment decision takes into account a host of factors including political risk and stability. In this kind of calculation, the advantage of by-passing the tariff wall would not seem to carry a great weight.

### III. QUANTITATIVE RESTRICTIONS AND THEIR TARIFF EQUIVALENT

20. In many of the developing countries tariffs are no longer the major instrument of control over the flow of imports. On account of the chronic foreign exchange shortage more direct means of control are resorted to. In many cases imports of a wide range of products are subject to a quantitative restriction of one form or another.

21. Although started as an instrument to maintain external balance, QR's soon became a major form of protection. Compared with the tariff, QR's are more effective and more predictable. Unless the level of the tariff is so high as to be prohibitive, home producers remain exposed to foreign competition. The tariff does not break the link between domestic and world market price. It only makes the former higher than the latter by the amount of the tariff. But the domestic price level remains sensitive to changes in the world market price. If, due to increased efficiency, the world market price falls, such a change is transmitted to the domestic market. Stated differently, the tariff is a handicap that places the foreign supplier at a disadvantage, but he is not thereby eliminated from competition.

22. Unlike tariffs, QR's spell the end of price competitiveness. However efficient the foreign supplier may be or may become, his export performance in the market is pre-determined by the quantitative allotment. The link between the domestic price level and the world market price is for all practical purposes totally destroyed.

23. It is assumed, of course, that the import quotas constitute an effective restraint to trade. This means that at the level of prices ruling in the domestic market, foreign suppliers would be willing to offer a quantity of imports which is greater than the quota allotted them. Accordingly, quotas frustrate a certain amount of trade which would otherwise have taken place at the existing level of prices. The amount of frustrated trade depends on the degree of restrictiveness of the quota in each case.

24. It is perhaps not realised that QR's involve in many instances a considerable degree of protection. The concept of the tariff equivalent of quantitative restriction serves to illustrate the point. For every quota situation there is a certain tariff rate which, had it been applied, would have produced the same volume of imports. Such tariff rate is known as the implicit tariff rate to distinguish it from the explicit rate in the tariff schedule. As mentioned in the preceding paragraph the volume of imports under QR's is less than it would otherwise have been. It follows that the implicit tariff rate in any quota situation must be higher than the explicit tariff rate. Stated differently, the invisible trade barrier underlying the quota is higher than the visible trade barrier embodied in the tariff schedule.

25. The following example serves to bring out more clearly the nature of the trade barrier involved in the quantitative restrictions. Suppose that at a tariff of 20 per cent on cotton fabrics, the actual volume of imports would amount to 1,500 units. Assuming normally shaped supply and demand functions, the country in question could regulate the amount of imports simply through variations in tariff rate, raising the tariff when a smaller volume of imports is desired, lowering it in the opposite case. Accordingly, it is possible to conceive of a series of tariff rates against each of which the volume of imports would be recorded. This is shown in the following schedule:

<u>No.</u>	<u>Hypothetical Tariff (%)</u>	<u>Volume of Imports</u>
1	100	zero
2	50	1,000
3	40	1,200
4	30	1,300
5	20	1,500
6	10	1,700
7	zero	2,000

In this schedule seven situations are distinguished, ranging from a prohibitive tariff of 100 per cent under which the volume of imports would be zero, to a free trade situation where tariff would be zero and the volume of imports would be 2,000 units. Starting from situation 5 with a tariff of 20 per cent and imports of 1,500 units the government may wish, for protective or balance-of-payments reasons, to reduce imports to only 1,000 units. According to our schedule, this result could be achieved by simply raising the tariff to 50 per

cent. But revising the tariff upward may not be feasible for legal, political or economic considerations. Accordingly, the government may decide to leave the tariff rate at 20 per cent and impose a quota of 1,000 units. In this case the tariff equivalent of the quota or the implicit tariff rate would be 70 per cent which is evidently higher than the explicit tariff (20 per cent).

26. What this analysis amounts to is that for every QR there is conceptually a tariff equivalent. It would be of particular interest if such equivalent could be measured in actual quota situations. The key to this problem is to be found in the domestic-external price relative. Given that the QR is an effective restraint to trade, it follows that the demand for the non-liberalized products at the delivered price<sup>1/</sup> is greater than the permitted supply. Accordingly, it commands a "scarcity value" which bears no relation to the level of price in the world market. The situation is perfectly parallel to that of products subject to rationing. The "scarcity value" of the non-liberalized products corresponds to the "black market" price of rationed products.

27. The scarcity value of the non-liberalized products points to the tariff equivalent of the quota in force. More precisely, the difference between the domestic price and the export price as a proportion of the latter gives an approximate measure of the tariff equivalent of the quota. To illustrate:

Domestic price	=	\$25
Export price	=	\$10
Tariff equivalent	=	$\frac{25 - 10}{10} \cdot 100 = 150\%$

In this example if the QR gives rise to a domestic price which is two and a half times the world market price, the tariff equivalent would be 150 per cent.

28. On the face of it this looks like a simple method of calculating the tariff equivalent. In many cases it will prove feasible and useful. But it is as well to realize some of the limitations. In the first place, price information is one of the most difficult to come by. Owing to the existence of numerous brands, price data, even if available, may not be comparable. More important, however, is the fact that the price of the non-liberalized product is often subject to government control. Given that the official price would be fixed at a level which is lower than the scarcity value level, it would be useless as a measure of the tariff equivalent. In this case it may be pertinent to take account of the "black market" price if any.

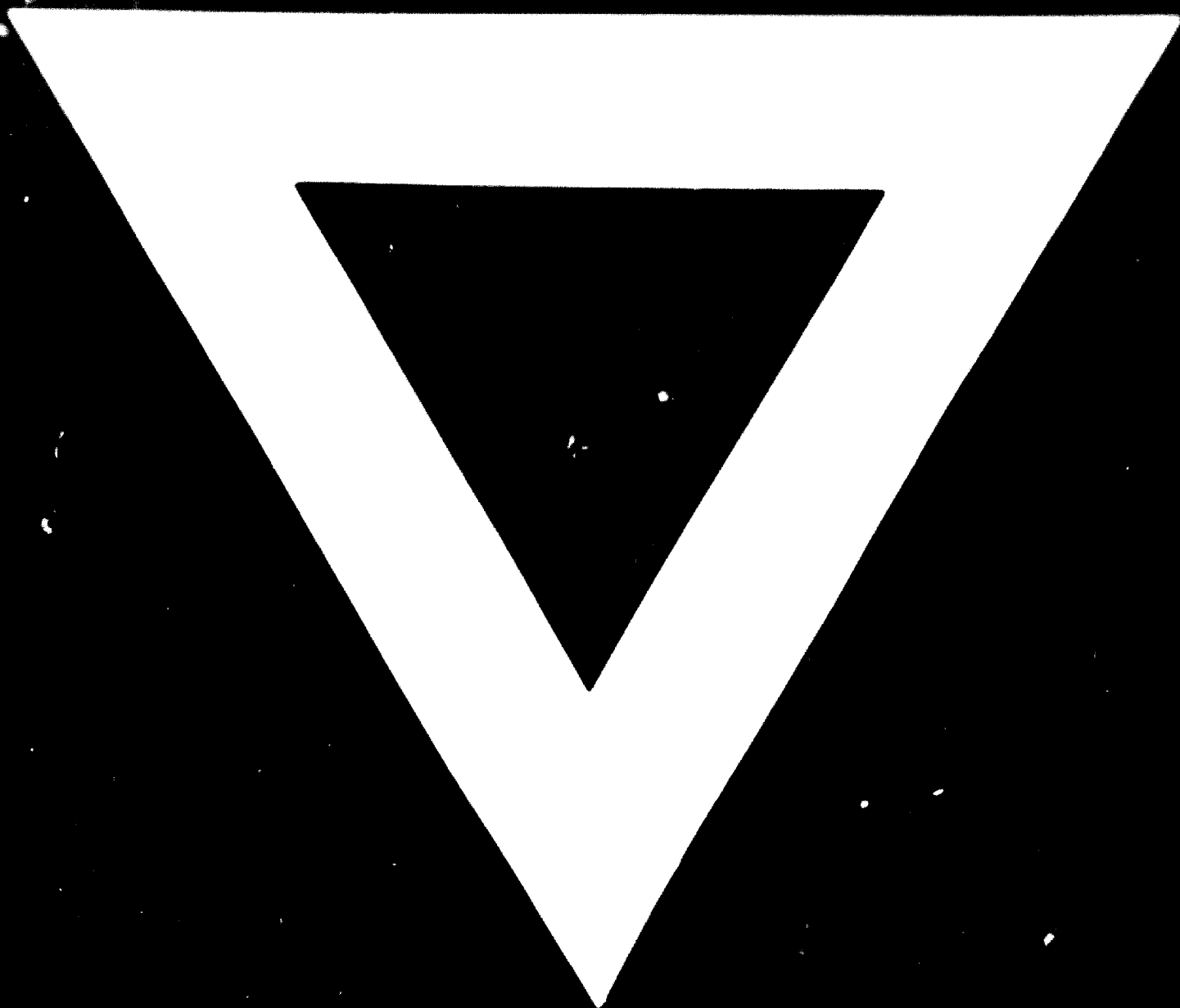
<sup>1/</sup> Price c.i.f. plus import duties.

Alternatively, one may have to make an estimate of the volume of demand - whether satisfied or not - at the government-controlled price. The applications made to the competent authorities would provide a valuable clue. On the basis of such estimates together with price-elasticity of demand assumptions, it would be possible to calculate the tariff equivalent of quantitative restrictions.

#### IV. SUGGESTED ISSUES FOR DISCUSSION

- a) What are the different forms of protection and what is the appropriate scope of each?
- b) What is the relationship between tariff policy and the import substitution programme?
- c) What is meant by the "effective" tariff rate and what is its significance?
- d) Is it conceivable to have a situation of "redundant" tariff protection?
- e) To what extent do "tariff factories" constitute a serious argument in favour of tariff protection?
- f) What is the difference between tariffs and quantitative restrictions with respect to foreign competition?
- g) What is meant by the tariff equivalent of QR's? What is the significance and how to measure it?





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