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The Monopolising of Foreign Markets by Domestic Firms

An Application of the Theory of Tariffs

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1. Introduction

Firms may be oriented towards two kinds of markets for their products: domestic and foreign. The relative importance of the respective markets varies considerably from firm to firm. Accepting a worldwide convergence in the absolute size of the "viable" firms we should take the extent of the domestic market to play the rôle of the most obvious determinant of a firm's proportion of export operations. Therefore, we expect to find especially high export quotas in firms located in small countries.

The available data on the pharmaceutical industry do not reject this hypothesis[1]. For the year 1968 the O.E.C.D. gives the following percentages of exports in total domestic production[2]:

* I am grateful to Professor *Gottfried Bombach* for his comments as well as to the members of our departmental Research Seminar who let me discuss the paper with them. My neighbour *Gerald Mucklow*, M.Sc., helped to improve my English.

[1] Industry data are here taken as an approximation to data at firm level.

[2] *L'industrie chimique: 1968–1969*, Paris, p. 133.

Netherlands	more than 50%
Federal Republic of Germany	30%
United Kingdom	30%
France	15%
Italy	15%
United States	8%
Japan	2%

Most illustrative is the case of the Swiss pharmaceutical industry. According to a recent enquiry the Swiss producers have an average export quota of over 90% and are considering the domestic market above all as a test market[3]. Some of these firms are said to be exporting up to 97% of their annual production. Hidden behind these figures there lies a formidable problem for the domestic competition policy. Firms of a certain internationally "viable" size may be able to dominate export and domestic markets alike. Should the course of domestic competition policy not be affected by the relative scale of domestic and export operations of these firms? Or: *How should the agencies of competition policy deal with firms wielding monopolistic power predominantly in foreign markets?*

Arguing along the lines of traditional price and welfare theory[4] and within the framework of a closed economy we are able to say that any pricing above marginal costs will lead to welfare decreasing inefficiency in the allocation of ressources. There exists no possibility of compensating the losers by those who are benefitting from income redistribution because of the overall reduction of output. In a two-country-world things may be different, at least if we adhere to a nationalistic point of view. If a domestic firm is charging above marginal costs in the domestic as well as in the foreign market we expect increasing inefficiency in ressource allocation in both countries. At the same time, however, an international redistribution of income from the foreign to the home country is taking place. It is clear that, at a given degree of monopoly in both markets, the possibilities for compensating the domestic efficiency losses with the domestic gains from international income redistribution grow with increasing proportions of exporting by the domestic firm. From a nationalistic point of view it may, therefore, be sensible not to interfere with the competition strategies of the predominantly export oriented domestic firms.

[3] Vorort des Schweizerischen Handels- und Industrie-Vereins, *Wirtschaftspolitische Aspekte der Europäischen Integration aus schweizerischer Sicht*, Zürich 1971, p. 113.

[4] It is true that traditional theory has its important limitations, and the present author has already proven elsewhere that he is fully aware of this fact. (See: *Blattner, N., Die Rolle des Wettbewerbs im Aussenhandel* – Beitrag zu einer strategischen Theorie des Aussenhandels, Zürich 1971.)

Generally, domestic competition policy has so far indeed been taking the soft line vis-à-vis export monopoly[5]. Competition agencies have been busy with improving the working of domestic competition. They have either been hoping for the corrective influence of foreign agencies or have they – on the contrary – been pursuing *an implicit strategy of optimal foreign trade discrimination?*

We hold the view that the latter interpretation of the passive attitude towards export monopolies is not generally valid. If it were, it would point to *a striking inconsistency in any country's foreign trade policy which is aiming at the elimination of more and more trade barriers.*

We rather think that the interrelationships between tariffs and private monopoly export pricing are not commonly understood. It is our modest goal to help to clarify the issue by demonstrating the substitutability of tariffs, private monopoly export pricing and, at a later stage, of discriminatory taxes. We do this by applying a typical model of the theory of tariffs[6]. We end up discussing the limitations of the theoretical approach chosen.

2. The Contribution of the Static Theory of the Optimum Tariff

2.1. The Basic Model

In order to demonstrate the substitutability of tariffs, private monopoly export pricing, and discriminatory taxes a well-known model originally formulated by *J.E. Meade* seems to be particularly adequate. *Meade's* model appeared under the title: "The Distribution of Income between Two Countries with One Import and One Export"[7].

Meade's analysis is strongly rooted in the tradition of tariff theory. This is also demonstrated by the assumption that the domestic economic systems of both countries are purely competitive.

It is only the governments which might exploit a certain given macroeconomic market power in export and/or import markets[8]. This position is rather restrictive, of course.

By modifying the model with respect to the possibility of private monopoly we are not only able to apply tariff theory fruitfully to problems of domestic competition policy but also to generalise tariff theory in an obvious way.

[5] Short for all forms of monopolistic power in export markets.

[6] A remark on the usefulness of the theory of tariffs in the present problem setting can be found in: *Stohler, J.*, "Vom 'möglichen' zum tatsächlichen Wettbewerb", in: *Wirtschaft und Recht*, 1968, p. 84.

[7] In: *Meade, J.E., Trade and Welfare – Mathematical Supplement*, London, New York, Toronto (1955) 1966, pp. 86–92.

[8] *Meade, J.E., Trade and Welfare*, London, New York, Toronto (1955) 1964, p. 273.

However, the generalisation of *Meade*'s model is not as broad as one might wish. We do not consider the implications of private monopoly in the domestic market. This neglect can be justified by our assumption that the balance of costs (inefficiency in ressource allocation) and benefits (international redistribution of income) is always positive for the country whose economic policy we discuss[9]. Therefore, the argument is with certainty applicable only to those exporting industries which sell only a minor part of their home production domestically.

By using an existing tariff model we are evidently committed to its strengths and to its weaknesses.

Meade starts his analysis by defining a *social welfare function* such that the welfare effects of any marginal revision of policy can be evaluated cardinally. The welfare criterion reacts not only to the terms of trade effects but also to alterations of the efficiency in the international division of labour[10].

In particular, *Meade*[11] assumes that the *distributional weights* are *intra*nationally identical while they may diverge *inter*nationally. Hence, it is possible that the politically fixed marginal utilities of money income – which serve as distributional weights – are greater for the inhabitants of country A than for those of country B and *vice versa*.

Furthermore, A only exports a single good X to B and only imports a single good Y from B. B's trade policy is absolutely passive. Only A's government may impose an *ad valorem* export tariff ($T_x - 1$) and/or an *ad valorem* import tariff ($T_y - 1$).

The *product markets* are characterised by the following simple excess demand and excess supply functions.

$$X = S_a\ (P_{ax}) \tag{1}$$

$$X = D_b\ (P_{bx}) \tag{2}$$

$$Y = D_a\ (P_{ay}) \tag{3}$$

$$Y = S_b\ (P_{by}) \tag{4}$$

The export supply of X is dependent on the price of X in A in terms of A's currency (P_{ax}). The demand for X-imports in B is only a function of the price of X in B in B-currency (P_{bx}). The same assumptions are made analogously for the Y-market.

[9] Alternatively one could assume that the agency of competition policy would suppress every attempt to monopolise the domestic market without destroying the firms' means to dominate abroad.

[10] For a general description, see *Meade, J. E.*, "A General Method for Measuring Small Changes in Economic Welfare", in: *Trade and Welfare – Mathematical Supplement, op. cit.*, pp. 14–23.

[11] "The Distribution of Income...", *op. cit.*, pp. 86–8.

Meade introduces the tax variables into the *price equations*. The price equations establish the comparability of the national prices with help of the exchange rate E.

$$E P_{ax} T_x = P_{bx} \tag{5}$$

$$E P_{ay} = P_{by} T_y \tag{6}$$

The exchange rate E (measuring the number of units of B's currency traded in for one unit of A's currency) is no independent variable. E is always adjusted such that the *balance of payments is kept in equilibrium*. We have the condition

$$X P_{bx} = Y P_{by} \tag{7}$$

The system of equations is completed by introducing the *welfare criterion:*

$$dU = (\mu_b P_{bx} - \mu_a E P_{ax})\, dX + (\mu_a E P_{ay} - \mu_b P_{by})\, dY. \tag{8}$$

The variation in world welfare (dU) following the alteration of a tariff variable by A is given by the sum of the net welfare alterations in the X and Y sectors of the world economy. The significance of the national distributional weights (μ_a, μ_b) becomes evident in this formulation.

By differentiating equations (1)–(7) and by substituting the resulting terms into (8) one arrives at a form of (8) which contains merely the tariff variables T_x, T_y, the parameters of the price elasticity of B's import demand and of B's export supply

$$\varepsilon_b = -\frac{dX}{X} : \frac{dP_{bx}}{P_{bx}}\,; \eta_b = \frac{dY}{Y} : \frac{dP_{by}}{P_{by}}$$

as well as the distributional weights

$$U_{ba} = \frac{\mu_b}{\mu_a}.$$

This revised welfare function is maximised in the usual way. If dU = 0 world welfare cannot be enlarged any more by marginal variations in the tariff variables. World welfare is at its *maximum*, if

$$(U_{ba} - \frac{1}{T_x})(1 + \frac{1}{\eta_b}) + (T_y - U_{ba})(1 - \frac{1}{\varepsilon_b}) = 0. \tag{9}$$

As the given system of equations implies one degree of freedom[12] we are only able to determine the optimum proportion of import and export duties. If one of the tariff variables is given, the absolute value of the other [satisfying (9)] follows.

2.2. A Frist Generalisation: Tariffs and/or Private Monopoly Export Pricing

According to equation (5) the export tariff variable is

[12] We have only eight equations but nine independent variables (X, Y, P_{ax}, P_{bx}, P_{ay}, P_{by}, T_x, T_y, dU).

$$T_x = \frac{P_{bx}}{EP_{ax}}. \tag{10}$$

In *Meade*'s analysis this definition implies pure competition in A's export industry, i.e.

$$P_{ax} = C_x. \tag{11}$$

The price of good X just before crossing the border of A is equal to the marginal costs of its production (C_x).

Meade's definition of the export tariff variable is rather restrictive, namely

$$T_x = \frac{P_{bx}}{EC_x}. \tag{12}$$

This definition is easily convertible into one that allows for the existence of a positive degree of private export monopoly, written as[13]

$$m = \frac{P_{ax} - C_x}{P_{ax}}, \text{ where } m \geq 0. \tag{13}$$

This more general concept of the export tariff variable is

$$T_x^G = \frac{P_{bx}(1-m)}{EC_x}. \tag{14}$$

The relationship between this generalised variable and the original variable is

$$T_x = \frac{T_x^G}{(1-m)}. \tag{15}$$

2.2.1. The Optimum Tariff in the Case of Nationalism in Country A

The main case discussed by tariff theory is the one in which A tries to maximise welfare of its own inhabitants only. In the present framework this means that the distributional weight of B is set to zero by A's decision makers. In other words, we set $U_{ba} = 0$.

It follows from (9) that the condition for the optimum tariff structure is given by

$$T_y T_x - 1 = \frac{\frac{1}{\eta_b} + \frac{1}{\varepsilon_b}}{1 - \frac{1}{\varepsilon_b}} = \Omega. \tag{16}$$

[13] We generalise *Meade*'s model by introducing *Lerner*'s degree of monopoly. We are fully aware of the fact, that this index has only limited power for the actual measurement of monopoly power. For our present purpose it is sufficient, however.

For a criticism of the *Lerner*-index, see: *Miller, J.P.*, "Measures of Monopoly Power and Concentration: Their Economic Significance", in: National Bureau of Economic Research, *Business Concentration and Price Policy*, Princeton 1955, pp. 123–4.

Generalising this for positive degrees of private export monopoly we have

$$T_y^G \, T_x^G - 1 = \Omega\,(1-m) - m. \tag{17}$$

This (as well as 16) shows plainly the *equivalence of import and export duties*. If A is only using import tariffs, we have $T_x^G = 1$. (17) therefore reduces to[14]

$$(T_y^G - 1) = \Omega\,(1-m) - m. \tag{18}$$

From (17) and (18) it follows how much the scope of A's tariff policy is influenced by private monopoly export pricing. *These equations clearly demonstrate the direct substitutability of tariffs and private monopoly export pricing.*

Let us now have a closer look at the consequences of admitting private export monopoly for the conclusions of tariff theory. Two special cases shall be discussed:

Case a: A's export industry consists of one firm only. This firm realises its optimum degree of monopoly under conditions of perfect information.

Case b: Contrary to *Case a* the monopolist does not possess perfect information. He may find his Cournot point accidentally only.

Case a

As is generally known the profit maximising degree of monopoly is

$$m^* = \frac{1}{\varepsilon_b}. \tag{19}$$

What is the optimum tariff in this case? By substituting m * for m in (18) we find for the optimum import duty

$$(T_y^{G,*} - 1) = \frac{1}{\eta_b}. \tag{20}$$

The interpretation of this result is straightforward. The perfectly informed private monopolist has already taken full advantage of the profit potential implied in B's demand for A's exports. There remains room for further increases of A's welfare at the government level only insofar as A enjoys a certain *monopsonistic* power ($\eta_b < \infty$).

Case b

Under conditions of imperfect information the monopolist may well realise a degree of monopoly which does not correspond to the optimal. The divergence between the actual degree of monopoly and the optimum degree m * is

[14] If A would limit itself to export tariffs, we would set $T_y^G = 1$ instead and we would arrive at

$(T_x^G - 1) = \Omega\,(1-m) - m.$

Therefore, welfare can be maximised either by using export tariffs, import tariffs or any combination of the two.

$$m^* = m(1+f) \text{ where } f \gtrless 0 \qquad (21)$$
$$f > -1.$$

f shows the extent of the monopolist's error in evaluating his market strength. There is

$f = 0$ no error,
$f > 0$ underestimation of the monopolistic dependence of demand,
$f < 0$ overestimation of the monopolistic dependence of demand.

On the basis of (21) equation (19) can be generalised:

$$m = \frac{1}{\varepsilon_b(1+f)}. \qquad (22)$$

By substituting this into (18) we develop the relation

$$(T_y^G - 1) = \frac{\varepsilon_b + \eta_b}{\eta_b(\varepsilon_b - 1)} - \frac{\eta_b + 1}{\eta_b(\varepsilon_b - 1)(1+f)}. \qquad (23)$$

If we have $f = 0$, i.e. if the monopolist accidentally chooses the proper degree of monopoly, (23) reduces to (20), as we expect it to do.

If the monopolist is underestimating his market power ($f > 0$), the scope for welfare increases by tariffs grows with f. The *conditio sine qua non* for any *compensating trade policy* of this kind is that A's government knows the export market better than private industry.

The same requirement has to be fulfilled in the case of a monopolist overestimating his market strength ($f < 0$). There may arise the necessity to pay out *import or export subsidies*, i.e. to raise *negative import or export duties*.

At a given private overestimation of export monopoly power the necessity of a trade subsidy policy will be the likelier the smaller A's monopsonistic power in the import market will be. If there is no such monopsony ($\eta_b = \infty$) and if $f < 0$ we have

$$(T_y^G - 1) = \frac{f}{(\varepsilon_b - 1)(1+f)} \qquad (24)$$

which is always negative.

2.2.2. The Optimum Tariff without Nationalism

After having discussed the main case we may rapidly deal with the generalisation of the argument against tariffs under conditions of private monopoly export pricing.

When there is no nationalism in the bosoms of A's policy makers they fix the distributional weights such that they are equal
($\mu_a = \mu_b$, or $U_{ba} = 1$).

From (9) follows under these circumstances

$$(T_y - 1) = -\frac{(T_x - 1)}{T_x} \cdot \frac{1 + \frac{1}{\eta_b}}{1 - \frac{1}{\varepsilon_b}} \tag{25}$$

This condition can only be fulfilled if no tariffs are set at all, i.e. if $(T_y - 1) = 0$ as well as $(T_x - 1) = 0$.

We expect that even the smallest private exploitation of export monopoly should be compensated by trade subsidies.

Again, we introduce private monopoly with the help of (15). We find with respect to import tariffs only

$$(T_y^G - 1) = -m \frac{1 + \frac{1}{\eta_b}}{1 - \frac{1}{\varepsilon_b}}. \tag{26}$$

Our expectation is confirmed. As soon as there exists a positive private degree of monopoly A's government should subsidise imports (or exports, if we wish[15]).

3. An Excursion into the Dynamics of Trade Wars – A Second Generalisation: Tariffs, Private Monopoly Export Pricing and/or Discriminatory Taxes

So far we kept our argument well within the boundaries of the static theory of the optimum tariff. We assumed that the welfare maximising trade restriction was realisable. As soon as we drop the grossly unrealistic assumption of a non-reacting partner country B we shall be forced to leave the fairy-tale world of statics.

The nationalistic trade policy discussed under 2.2.1. is going to impair the international distribution of welfare from B's point of view. The crucial question is: Is there a positive trade restriction for country A even if it knows that country B is likely to retaliate in order to minimise any welfare losses following from A's policy?

The theoretical answers to this question have been differing. *Johnson*[16] shows that general statements are not to be found. There are cases, however, in which trade restrictions are better than free trade even if A has to stand B's counterattacks.

From all the contributions to this theme follows that the welfare increase which can be won by A is generally greater if there is no retaliation to be expected.

[15] If we work out (26) correspondingly for the case of export duties only we find that the rate of necessary export subsidy is exactly equal to the private degree of export monopoly:

$$(T_x^G - 1) = -m. \tag{27}$$

[16] *Johnson, H.G.*, "Optimum Tariffs and Retaliation", in: *International Trade and Economic Growth*, London, 2nd impr. 1961, pp. 31–5. (Reprinted from *Review of Economic Studies*, Vol. 21, 1953–4.)

Hence, a very interesting question can be posed: *Is it possible to reduce significantly the probability of the partner country's retaliation by choosing alternative forms of trade restrictions?* If it were and if we knew how, one could gain much, at least from a nationalistic viewpoint.

We are not yet ready for a comparison of alternative forms of trade restrictions in the light of this problem. First, we would like to introduce a further instrument to restrict trade: *discriminatory taxes on the production of exportables* (for short: discriminatory export tax).

We already discussed briefly the equivalence of export and import tariffs. In the same way we would be able to show that there is an equivalence between private monopoly export pricing and private monopsony import pricing as well as between discriminatory export and import taxes[17]. We do not go deeper into this, however. When we shall compare three forms of trade restrictions afterwards (import tariff, private monopoly export pricing, and discriminatory export taxes) these equivalence relationships should be kept in mind.

Let us now generalise our formulae (17) and (18) for the optimum tariff under conditions of nationalism further: A's government is able to tax imports or exports, it may also be able to tax those demanding imports or those producing exports. In the first case we speak of tariffs, in the second of discriminatory taxes.

A *discriminatory export tax* can be introduced into our model in a very simple way. We define the price of X in A in A's currency (P_{ax}) as containing elements of the discriminatory export tax. We write

$$P_{ax}^{G} = P_{ax}(1-S_x). \tag{28}$$

The price before tax (P_{ax}^{G}) is smaller than the price after tax (P_{ax}). The amount of the discriminatory export tax included in P_{ax} is given by the rate S_x. So far we have argued with $S_x = 0$.

The tax-adjusted degree of private export monopoly becomes

$$m^{G} = \frac{P_{ax}(1-S_x) - C_x}{P_{ax}(1-S_x)} \tag{29}$$

There is the following relationship between this generalised degree of private export monopoly and the one used up to now

$$m^{G} = m(1-k) \text{ where } k = \frac{S_x}{(1-S_x)} \frac{C_x}{P_{ax} - C_x} \tag{30}$$

[17] The discriminatory import tax should be understood as a discriminatory tax on the consumption of importables.

We proceed in analogy to the developing of (17) and (18) when we look for the still more generalised optimum tariff formula.

The relationship between *Meade's* original export tariff variable T_x and the most generalised variable allowing not only for private monopoly export pricing but also for discriminatory export taxing is

$$T_x = \frac{T_x^{GG}}{(1-S_x)(1-m^G)} \cdot \tag{31}$$

This corresponds to (15). Substitution of (31) into (16) leads to

$$(T_y^{GG} - 1) = \Omega\,(1-S_x)(1-m^G) - S_x(1-m^G) - m^G \tag{32}$$

if we assume that only import duties are raised ($T_x^{GG} = 1$).

Equation (32) corresponds to (18) and it *makes plain the intense relationship between the optimum import tariff, the degree of private export monopoly and the discriminatory export tax.* If market conditions are given (Ω = const.) we can choose free values for any two of the three variables while as the third is determined simultaneously.

Country A may try to realise its welfare maximum in many different ways: it could restrict trade only by tariffs, it could leave welfare maximisation only to private monopolists, it could restrict trade over discriminatory taxes only, or it could, finally, choose any combination of the three.

If we assume that A's government can freely manipulate tariffs, taxes, and private degrees of monopoly the question is: *which of the three instruments to restrict foreign trade is preferably to be used if the probability of B's retaliation depends on A's selection of instruments?*

At first sight, this appears to be an odd question. Did we not prove by means of (32) that the welfare impacts of every instrument are equivalent? Why then should B's reaction differ in dependence of A's selection of instruments? The answer is to be found in the possibility that the fact that A restricts trade may not as easily be detected if it chooses one instrument rather than another. The whole question thus boils down to the *relative detectability of trade restricting practices in dependence of the instruments selected.*

Least easily to keep secret are trade restrictions by means of tariffs. Export and import duties can be read from the officially published tariffs. In the present age of international trade negotiations most of the changes of rates are at least to be bargained for bilaterally.

Less open lying is trade restriction by private monopoly export pricing. B's government should be in the position to lead successfully the demanding investigations into private restrictive practices. One knows how difficult this task generally is

in the case of domestic firms, let alone in the case of firms forming international organisations.

By far the most difficult trade restrictive practice of our sample to detect is given by certain kinds of discriminatory taxes. The term "discriminatory export taxes" may cover many different actual forms of taxes. Some of them may be at least as easily detectable as tariffs. Others, however, may very successfully conceal their true nature of trade restricting discriminatory export taxes.

We might, e. g., think of the following situation: A's export industry may cause a specific kind of external cost to an extent unmatched by the domestically oriented industry. As an example we may mention water pollution. In the course of its environmental policy A's government levies a tax on the export industry's production so as to force cost internalisation. This is an internationally accepted behaviour. But as there are no generally valid quantifications of such external costs – part of them are subjective in nature[18] – A's government is fairly free to vary water pollution tax well beyond the level which would be chosen if the only goal consisted of cost internalisation. Using this kind of device – many alternative variants could be thought of – A's government could nationalistically restrict trade without furnishing evidence to B's government. B can be exploited without noticing and therefore without being induced to retaliate.

4. The Crucial Limitation of the Approach Chosen or: How to Evaluate the Income Distribution Implied in Alternative Trade Restricting Practices?

We have been able to show that tariffs, discriminatory export taxes, and private monopoly export pricing can be considered to be perfect substitutes as trade restricting instruments. According to the welfare criterion used all three instruments may equally well serve to reach maximisation of welfare.

From this the agencies of competition policy could learn that given a certain setting of the distributional weights, a specific level of tariffs and discriminatory export taxes, there is an optimum degree of private export monopoly. If the actual export monopolisation was weaker it should be enhanced, if the reverse were true it should be dampened down.

In terms of the dynamic considerations under 3. private export monopoly appears to be preferable to tariffs while as it is still inferior to discriminatory taxing, however.

Additionally to all that, questions of income distribution enter the scene. Our model already dealt with income distribution, to be sure. *Meade*'s analysis has

[18] For a general discussion, see *Kapp, K. W.*, "Sozialkosten", in: *Handwörterbuch der Sozialwissenschaften*, Vol. 9, Stuttgart, Tübingen, Göttingen 1956, p. 526.

room for distributional weights. While we simply accepted *Meade*'s assumption that there was no intranational divergence in distributional weights we would have been free to select an alternative intranational set of weights.

We could have specified two income groups in A: import consuming workers and export producing capitalists. Or we could have chosen an even more differentiated sample. *Meade*'s method of analysis would be applicable in all these cases.

Apart from formally recognising the possibility that a country's decision makers might not share our assumption on intranational distributional indifference we would not be able to produce any better results. This is so because the essential problem does not consist of showing how alternative intranational distributional weights can be formally introduced but in arguing why a specific set of intranational distributional weights should be better than any other.

One of the important questions to be answered would be: Is it socially desirable that private export industry benefits from export monopoly or should society at large be the heir by means of government tariffs and taxation? Who would be using the funds in a socially more desirable way? If private industry is producing more rapid growth if undisturbed: Is the structure of export monopoly propelled progress socially desirable?

This short list of questions gives an idea how much more analytical work and how many more political processes will have to be carried through before any sound basis for political action will be established.

The Monopolising of Foreign Markets by Domestic Firms – An application of the theory of tariffs

Summary

Generally, domestic competition policy has been taking the soft line vis-à-vis monopolistic power wielded by domestic firms in export markets. This reveals a striking inconsistency in any country's trade policy which is aiming at the elimination of more and more trade barriers.

By generalising a typical model of tariff theory developed by *J.E. Meade* the substitutability of tarriffs, private monopoly export pricing and discriminatory export taxes is demonstrated. Strategies of optimal trade discrimination are discussed. Dynamic considerations are introduced. The practical application of the model would necessitate the evaluation of the intranational income distribution effects of alternative trade restricting practices. This represents the crucial limitation of the approach chosen.

Zusammenfassung

Die Monopolisierung von ausländischen Märkten durch inländische Firmen: eine Anwendung der Zolltheorie

Im allgemeinen verhält sich die Wettbewerbspolitik gegenüber der Marktmacht, die durch inländische Unternehmen auf ausländischen Märkten ausgeübt wird, passiv. Dieses Verhalten steht in auffälligem Gegensatz zu den sonstigen Bemühungen zur Beseitigung von tarifären und nicht-tarifären Handelshemmnissen.

Indem ein von *J.E. Meade* stammendes typisches zolltheoretisches Modell verallgemeinert wird, wird die Substituierbarkeit von Importzöllen, von privatwirtschaftlicher monopolistischer Preisbildung auf Exportmärkten und von diskriminatorischen Exportsteuern herausgearbeitet. Auch im Lichte dynamischer Erwägungen werden Strategien der optimalen Aussenhandelsdiskriminierung diskutiert. Doch stellen sich letztlich die Schwierigkeiten bei der Bewertung der intranationalen Einkommensverteilungseffekte alternativer Handelsstrategien als vorläufig entscheidende Begrenzung der Anwendbarkeit des gewählten Ansatzes heraus.

Résumé

La mo::opolisation des marchés étrangers par des entreprises indigènes – une application de la théorie douanière

En général, la politique en matière de concurrence n'intervient pas envers les tendances monopolistiques exercées par des entreprises indigènes sur les marchés étrangers, ce qui contraste avec les efforts universels d'éliminer les barrières tarifaires et non-tarifaires.

En généralisant un modèle tarifaire de *J.E. Meade*, on démontre la substituabilité des tarifs douaniers sur les importations, de la fixation monopolistique des prix sur les marchés étrangers, des impôts discriminatoires sur les exportations. En plus, on analyse des considérations dynamiques sur des stratégies discriminatoires du commerce extérieur. Cependant, les difficultés d'évaluer, pour les différentes stratégies commerciales, les effets intranationaux dans la distribution des revenus se montrent comme une limitation cruciale pour l'emploi de l'approche choisie.