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EC trade protection law: Produmping or antidumping?

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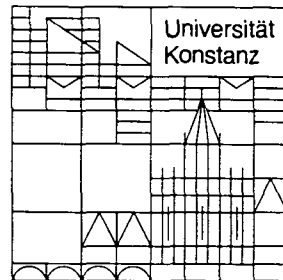
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Sonderforschungsbereich 178
„Internationalisierung der Wirtschaft“

Diskussionsbeiträge



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EC TRADE PROTECTION LAW:
PRODUMPING OR ANTIDUMPING?

Ludger Schuknecht
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**EC Trade Protection Law:
Produmping- or Antidumping ?**

Ludger Schuknecht and Joerg Stephan¹

**Presented at the
Meeting of the European Public Choice Society
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Abstract: This paper argues that the anticipation of protection can have a *stimulating effect on exports* instead of the commonly claimed effect of harassment. If protection serves market cartellization by fixing export quantities or prices, exporters may have an incentive to increase their sales abroad in order to secure a large share of the expected rent, which is brought about by the anticipated import restriction. This may even result in sales below marginal costs or dumping. *The effect of the protectionist threat may then be the reverse of what is intended: it can raise the speed of import penetration and it can provoke dumping.* A formal model and a supportive institutional analysis of EC trade protection is supplemented by preliminary empirical evidence.

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1. Introduction

Trade protection - and the threat of it - are supposed to deter foreigners from exporting as much as they want to. The main justifications for trade restrictions are the promotion of social and commercial fairness. In the first instance, protection should reduce the adjustment costs for an industry and its workers; in the second instance, protection should secure "a level playing field" which guarantees that domestic and foreign producers can compete on equal terms. The EC, for instance claims that its *antidumping* policy promotes commercial fairness (de Clerq, 1988). *Voluntary export restraints*, on the other hand, have been negotiated with reference to social policy arguments. The voluntary export restraint on Japanese cars to the EC, for instance, is supposed to ease adjustment for domestic firms and to reduce the negative effect of job losses in the industry (Frankfurter Allgemeine Zeitung, 29.7.1991). Although the rhetoric nature of these allegations has been stressed frequently in the literature (Stegemann, 1991; Finger, 1992; Schuknecht 1992), it is widely accepted that trade protection actually *has* a chilling effect on imports. This harassment effect on foreign exporters who export less in anticipation of protection has been mentioned by Bhagwati (1988) or Messerlin (1989a) for antidumping. Winters (1990) provides evidence in this direction for EC import surveillance.

The theoretical literature on protection, however, has identified settings in which voluntary export

restraints or voluntary price increases by foreign exporters are preferred to tariffs by the exporter because of the rent transfer (Hillman and Ursprung, 1988). It is perceivable that protection, in which the foreigners obtain the benefit from the price increase, is even preferred to free trade when the foreigners can become part of a cartel where a voluntary price increase sets a floor price (Hillman, 1990) or where quantitative restrictions also have a price raising effect. Evidence in favour of such ongoing in the EC antidumping cases is provided by Messerlin (1990) and Stegemann (1990).

This paper follows this line of argumentation but it concentrates on the effects of anticipated protection on exporters' behaviour. It is argued here that the anticipation of protection can have a *stimulating effect on exports* instead of an effect of harassment. If protection serves market cartelization by fixing export quantities or prices exporters may have an incentive to increase their sales abroad in order to secure a large share of the expected rent, which is brought about by the anticipated import restriction. This may even result in sales below marginal costs or dumping. *The EC trade policy is then produmping because it raises the speed of import penetration and provokes dumping.*

The market structure and the institutional structure for trade policy making are crucial for these results to emerge. There have to be rents and policy makers must be able to transfer these to the foreign exporters. The paper will therefore concentrate on the EC antidumping

policies and negotiations of voluntary export restraints. They are the EC's most important protectionist instruments. In recent times they have been used more and more to deal with high-tech products where the existence of rents is likely. Finally, they allow rent transfers to foreign producers.² After the presentation of the institutional details on which EC antidumping and voluntary export restraints are based, the paper develops a formal rent-seeking model of pro-dumping trade policies. The concluding section provides preliminary evidence and hints at further empirical investigations.

2. The Institutional Framework for Antidumping and Voluntary Export Restraint Protection

In the European Community protectionist requests are forwarded by EC producers who claim to be injured by imports. The speed and the degree of import penetration increase the probability that EC producers will request protection because it improves their case for being injured by imports. Domestic producers can apply for an antidumping investigation or induce the negotiation of a voluntary export restraint. Voluntary export restraints always result in quantitative restrictions which transfer part of the protectionist rent, which is the price increase, into the exporters' pockets. The most popular alternative instrument, the EC antidumping regulation,

² For these issues see Messerlin (1989) or Schuknecht (1992); for the overall importance of voluntary export restraints see also Kostecki (1987).

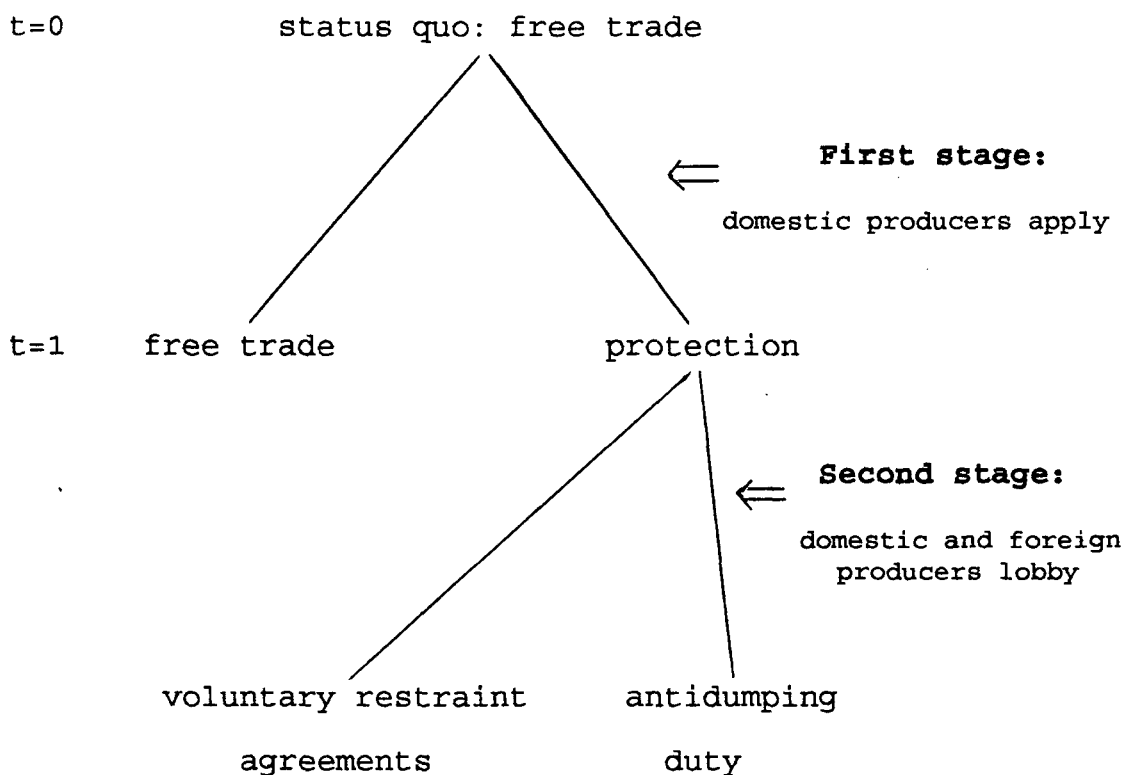
allows two choices in the case of an affirmative decision. It can result in an antidumping duty which transfers the rent as tariff income into the EC's budget or it can lead to a voluntary price increase - a so-called price undertaking - which also transfers part of the rent to the foreigners and therefore works similar to voluntary export restraints. Although foreigners cannot determine whether protection is requested or not, they can lobby for a favourable choice of instrument, i.e. a voluntary export restraint or a price undertaking. (Since these instruments have very similar effects, for reasons of simplicity we will refer to them as voluntary restraint agreements or VRAs when discussing them together.) This yields the decision tree as outlined in figure 1.

The EC Commission investigates the protectionist request.³ The negotiation of voluntary export restraints is conducted by the EC Commission together with EC and foreign producers and under scrutiny from member governments. In antidumping cases, the Commission evaluates the injury to domestic producers and decides whether dumping by foreign producers occurred. In case of an affirmative finding, the protectionist margin is set to provide a non-injurious import price. In the investigation it is negotiated whether this protection should be granted by means of a duty or a price undertaking. In most cases, either all producers get a price undertaking or all of them a duty. Instead of

³ For a detailed description of the EC trade policy institutions see Schuknecht (1992).

waiting for a definite antidumping decision, exporters can offer to negotiate a voluntary export restraint to induce EC producers to withdraw their antidumping claim.

Figure 1:



The EC Commission has significant discretion in the negotiation of voluntary export restraints, in the application of the antidumping regulation and in the choice of instrument. However, it is under close political scrutiny by the EC member governments through the Council. The latter has to approve of all antidumping decisions and supervises the negotiations closely. This makes protectionist decisions in the EC highly sensitive

to the trade policy preference of special interests. Politicians want to increase their support by accommodating such interests (Eymann and Schuknecht, 1991).

If foreigners dump in anticipation of protection it is unlikely that they will continue doing this during an investigation or during negotiations in order to avoid annoying the negotiating parties. This is especially true for antidumping, where the particular contingencies of undertakings are negotiated with firms on an individual basis. Hence, the stimulating effect should end with the beginning of a proceeding.

At the end of an antidumping investigation, only those producers are eligible for an undertaking who have participated in the negotiations; all the other producers receive the highest possible duty that was (or would have been) implemented against any of the exporters. In the recent case against Japanese semiconductors (DRAMs), for instance, all exporters negotiated an undertaking but non-participating firms faced a 60% duty. In the negotiation of a voluntary export restraint, the foreigners negotiate the quota and then distribute it among themselves. Consumers do not have a say in any of these procedures since they are badly organized.

The market structure is crucial for the trade policy preferences of producers. Especially in oligopolistic markets where supply is inelastic and domestic and third country producers cannot (or do not want to) dissipate

the rent by market entry or increased sales, domestic producers can gain rents from any kind of protection. In other words, in such markets, cartellization is a likely motive for protection.

How do the EC and the foreigners prevent rent dissipation? In the case of a VRA, how are the rents distributed among the foreigners? In the case of a voluntary export restraint, the quantity is fixed - rent dissipation is impossible except from third countries. The foreigners distribute the rent among themselves, often following former export patterns, hence "grandfathering" the former relative market share of the involved producers. In the case of antidumping, entry is prevented with the help of the EC which assigns the highest duty to any exporter who is not part of the agreement. Since this duty can exceed 50%, it should be a strong deterrent for entry. The distribution of rents is not problematic because each exporter only has to stick to the agreed minimum price. Imperfect competition in combination with VRAs and entry barriers can, for instance, secure the longevity of rents in markets for new products such as consumer electronics where dissipation of rents is likely to occur over time with market consolidation. In any case, the availability and longevity of rents provides an incentive to foreign producers to secure a large share of this rent by increased import penetration and possibly dumping and by lobbying for such VRAs.

It is reasonable to assume that a duty or VRAs provide about the same degree of protection to domestic producers. These should therefore have no preferences between the two. Foreigners, on the other hand, prefer VRAs and lobby accordingly. Policy makers who can choose between these options therefore always promote a voluntary export restraint or an undertaking instead of a duty in order to gain support from both producer groups (Hillman and Ursprung, 1988). The crucial difference is that the protectionist rent in the case of a voluntary export restraint or an undertaking is divided between the foreigners and the domestic producers. In the case of a duty, only the domestic producers obtain a rent.

However, we observe that only half of all antidumping cases in the 1980s have been terminated with an undertaking. Domestic producers in the EC may not be indifferent regarding VRAs and duties. They prefer duties to VRAs when the foreign producers are expected to invest part of their rent from a VRA into brand name capital, research and development or other cost-saving innovations, which will improve their long term performance. Domestic producers would then also have to invest part of their rent in order to remain competitive. Since lobbying by domestic and foreign firms influences the choice of instrument and determines the outcome, this is likely to be a VRA, presumably when the foreign lobby is strong and the rent domestic producers have to reinvest is small, or it may be a duty.

As mentioned, the EC antidumping investigation involves an injury evaluation. This is based on criteria such as the change in the EC producers' market share, profits, price level, layoffs etc. Often only one of these is fulfilled. Leidy and Hoekman (1991) argue that domestic producers may have an incentive to inflict injury on themselves in order to increase the prospects for protection. They increase production thereby depressing market prices and - in combination with the import surge by foreigners in anticipation of protection - claim injury to obtain protection. Therefore, the foreigners' attempt to gain market shares with aggressive pricing in combination with the domestic producers' efforts to obtain protection can aggravate the problem and depress the domestic price of foreign goods even further.

The EC's protectionist instrumentarium, i.e. antidumping duties and VRAs can lead to the stimulation of exports and even dumping but it does not have to. Such practices, however, need not be the result of predatory pricing or inflexibilities in the factor market which Viner (1923) or recently Ethier (1982) have used as explanations for dumping. They can be the rational response of businesses to the incentives of the EC's "political market" in combination with certain market structures.

3. The Model

The home (EC) industry consists of n identical firms producing a good which is imperfectly substitutable to the imports of m identical foreign firms. The EC demand functions for the EC goods and the imports are:

$$(1) \quad p_0^h = a - b q_0^h + \gamma p_0^f$$

$$(2) \quad p_0^f = a - b q_0^f + \gamma p_0^h$$

where q_0^h denotes EC produced goods and q_0^f foreign goods, p_0^h (p_0^f) denotes the price of domestic (foreign) produced goods in period $t=0$. γ measures the substitutability in consumption between domestic and foreign goods, where $0 < \gamma < 1$.

The model distinguishes between two periods ($t=0$, $t=1$). In period $t=0$ there is free trade without perfect competition.

If the foreign firms are not restricted in entering the domestic market, perfect competition in $t=1$ results. This is because both domestic and foreign firms are free to enter the market. Domestic and foreign firms then supply the competitive output level and profits are zero. However, domestic firms can claim injury and request protection at the end of period $t=0$, if foreign firms expand their output beyond the non-injurious level.⁴ With a probability π^p domestic demand for protection is successful (see also stage 1 in figure 1):

⁴ It is very subjective when a firm feels injured by imports. The EC determines whether injury is inflicted and sets the non-injurious price or quantity in its protectionist decisions.

$$(3) \quad \pi^P = \theta (q_0^f - q^n),$$

where $\theta > 0$

i.e the probability π^P of protection increases with foreign supply in $t=0$ (q_0^f) increasing over the exogenous non-injurious level q^n .

The domestic firms may be protected via tariffs or voluntary restraint arrangements (VRAs).⁵ The foreign firms prefer a VRA to a duty because a VRA transfers the protectionist rent into their pockets.⁶ Domestic firms prefer protection to free trade, because protection transfers part of the protectionist rent to domestic producers. On the other hand they prefer a duty to a VRA: above, we argued that domestic firms anticipate foreign firms investing part of a VRA rent in brand name capital or research and development.

The rent S which the EC can distribute to the producers can be as high as the monopoly rent in this industry. We assume that the rent is exogenous, where the distribution of the rent between foreign and domestic firms depends on their market share α in $t=1$, $(1-\alpha)$ respectively. Table 1 illustrates the gains from protection. In the case of a VRA, foreign firms achieve αS and the domestic firms $(1-\alpha) \beta S$, where $0 < (1-\beta) < 1$ is the fraction of the rent which is lost by the domestic firms due to the rent transfer to the foreign firms. In the case of a duty, the foreign rent is transferred to

⁵ The previous section showed that VRAs consist of voluntary export restraints which limit the exported quantity and price undertakings which set price floors for exporters.

⁶ In our model we assume that duties and VRAs are equally protectionist. Duties do not leave any rent to the foreigners.

the EC budget leading to zero profits for the foreign firms while domestic firms obtain $(1-\alpha)S$.

Table 1 Gains from Protection

	Duty	VRA
foreign producers	0	αS
domestic producers	$(1-\alpha) S$	$(1-\alpha) \beta S$

The domestic and the foreign firms can influence the probability of a VRA. They therefore have an incentive to make lobbying outlays in $t=0$ (see also stage 2 figure 1). The probability of a VRA in $t=1$ is assumed to be a standard Tullock lobbying function:

$$(4) \quad \pi^v = \frac{L^f}{L^h + L^f}, \text{ with: } L^f = \sum_j^m L_j^f, \text{ and } L^h = \sum_i^n L_i^h$$

$$\text{with: } \delta \pi^v / \delta L^f > 0, \delta \pi^v / \delta L^h < 0.$$

where L^f and L^h denote foreign and domestic lobbying outlays.

We can now derive the profit function of domestic and foreign producers. The expected profits of a foreign firm j EPR_{0j}^f are:

$$\begin{aligned}
 (5) \quad \text{EPR}_{0j}^f &= \left[p_{0j}^f \left[q_{0j}^f \right] - c \right] q_{0j}^f \\
 &+ \pi^p(q_0^f) \left\{ \pi^v(L^f, L^h) \frac{\alpha S}{m} + \left[1 - \pi^v(L^f, L^h) \right] 0 \frac{\alpha S}{m} \right\} \\
 &+ \left[1 - \pi^p(q_0^f) \right] \left\{ \left[p^c - c \right] q_{0j}^f \right\} - L_{0j}^f
 \end{aligned}$$

and the expected profits of a domestic firm i EPR_i^h are:

$$\begin{aligned}
 (6) \quad \text{EPR}_{0i}^h &= \left[p_{0i}^h \left[q_{0i}^h \right] - c \right] q_{0i}^h \\
 &+ \pi^p(q_0^f) \left\{ \pi^v(L^f, L^h) (1-\alpha) \frac{\beta S}{n} + \left[1 - \pi^v(L^f) \right] \frac{(1-\alpha)S}{n} \right\} \\
 &+ \left[1 - \pi^p(q_0^f) \right] \left\{ \left[p^c - c \right] q_{0i}^h \right\} - L_{0i}^h
 \end{aligned}$$

where:

$p_{0i}^h (q_{0i}^h) :=$ the price (quantity) of the good produced by the domestic firm i ,

$p_{0j}^f (q_{0j}^f) :=$ the price (quantity) of the good produced by the foreign firm j .

$c :=$ constant marginal costs,

$\pi^p :=$ probability of protection,

$\pi^v :=$ probability of a VRA,

$p^c :=$ the competitive price,

$L_{0i}^h :=$ lobbying outlays of the domestic firm i in period $t=0$.

$L_{0j}^f :=$ lobbying outlays of the foreign firm j

In $t=0$ firms have to choose their profit maximizing levels of output and lobbying outlays. Each firm maximizes its expected profit, assuming that the other firms will not react to its choice:

$$(7) \quad \delta \text{EPR}_j^f / \delta q_{0j}^f = 0$$

$$(8) \quad \delta \text{EPR}_i^h / \delta q_{0i}^h = 0$$

$$(9) \quad \delta \text{EPR}_j^f / \delta L_j^f = 0$$

$$(10) \quad \delta \text{EPR}_i^h / L_i^h = 0$$

(9) and (10) can be used to derive the equilibrium probability of a VRA in $t=1$:

$$(11) \quad \pi^{v*} = \frac{1}{1+m/ng}$$

$$\text{with: } g := \frac{1-\alpha}{\alpha} (1-\beta).$$

(1), (2), (3), (8), (11) in (7) lead to the symmetric Nash equilibria:

$$(11) \quad q_{0j}^{f*} = \frac{[n(1-\gamma)+1] A}{b B} + \frac{(1-\gamma)^2 \alpha S \theta \pi^v \frac{n+1}{m}}{b B}$$

(1), (2), (3), (7), (11) in (8) lead to:

$$(12) \quad q_{0i}^{h*} = \frac{[m(1-\gamma)+1] A}{b B} + \frac{(1-\gamma)^2 \gamma \alpha S \theta \pi^v}{b B}$$

$$\text{with: } A := (1+\gamma) [a-c(1-\gamma)] > 0$$

$$B := (n+1) (m+1) - nm\gamma^2 > 0$$

To identify sales below the free trade price or even dumping of foreign firms, (1), (2), (11) and (12) can to be solved for p_{0j}^{f*} :

$$(13) \quad P_{0j}^{f*} = P_{\text{free trade}} - D \alpha S$$

where:

$$P_{\text{free trade}} = \frac{(1+\gamma)a B - m n (1-\gamma^2) A - (\gamma n + m)A}{(1-\gamma^2) B}$$

$$D = \frac{\theta \pi^v}{B} [1 + n(1-\gamma^2)] > 0.$$

$P_{\text{free trade}}$ would be the optimal price without anticipated protection. The term $(-D)$ stands for the discount granted by foreign producers in order to increase their sales. Since D is positive, the price in $t=0$ is lower than the optimal price without a protectionist threat. In anticipation of EC protection, even dumping by foreign firms is possible.

The equilibrium foreign price p_{0j}^{f*} depends negatively on the rent S , the marginal reaction of the VRA probability in respect to foreign lobbying L^f , the marginal reaction of the protection probability θ in respect to foreign supply in period $t=0$ and on the market share of the foreign firms α .⁷ The higher S , θ and α , the lower the price of the foreign goods. The comparative static results are surveyed in Table 2.

⁷ The market share α of the foreign firms in $t=1$ is not exogenous. The market share of the foreign firms in period $t=1$ should in the case of a VRA be dependent on their quantity sold in period $t=0$. However, if a function $\alpha(q_0^f, q_0^h)$ is employed, the results with respect to p^{f*} should not change qualitatively. The foreign firms can increase their share of the rent S by increasing their market share α . Via an increase in their dumping in period $t=0$ and therefore further lower p^{f*} . The domestic firms' instrument preference for a tariff over VRA on the other hand is not affected.

Table 2: Comparative static results in respect to P_0^{f*}

marginal response on the domestic price of foreign goods:	EC rent	marginal response of the probability of protection to foreign supply beyond the non-injurious level in $t=1$:	market share of foreign firms in $t=1$	number of foreign (domestic) firms
	S	θ	α	m (n)
$\delta p_{0j}^{f*} / \delta x$: ($x=S, \alpha, \theta, m, n$)	-	-	-	+/- (-)

The reaction of the foreign price in $t=0$ p_0^{f*} with respect to an increase of the number of foreign firms m is not clear. If m increases, competition in t_0 increases and prices fall. The competition effect may be more than outweighed by the discount effect of an increase in the number of foreign firms. The discount D becomes smaller because the rent per firm $\alpha S/m$ and lobbying decreases.

So far we have assumed that the probability of protection is not affected by the domestic pricing practice. This need not be true when "spurious injury" of domestic producers is possible.⁸ As mentioned, this injury raises the probability of protection which can be translated into equation (3)':

$$(3)' \quad \pi^P = \theta^f (q_0^f - q^n) + \theta^h (q_0^h - q^c)$$

where the last term reflects the effect of spurious injury.

⁸ See Leidy and Hoekman (1991).

If the spurious injury function (3)' is employed instead of (3), the comparative static results with respect to the foreign goods price p_{0j}^{f*} do not change fundamentally. In addition to the foreigners, domestic firms also "dump" in order to get protection. This further lowers the price of the foreign and the domestic products. Import stimulation and spurious injury can then mutually reinforce each other and dumping becomes more likely. This case, however, is rather extreme and requires that administrators either cannot or do not want to recognize the spurious nature of injury.

4. Conclusion: The Empirical Relevance of Trade Stimulation in the EC

This paper argues that the EC's main protectionist instruments, antidumping duties, price undertakings and voluntary export restraints, can result in more import penetration than without a protectionist threat. In certain cases, even dumping is possible. If protectionist rents are gained by foreigners, the anticipation of EC trade regulation can have the opposite effect from that which is intended because EC institutions provide a high chance of getting a voluntary export restraint or a price undertaking instead of a duty and because rent dissipation by market entry is prevented. To avoid this, EC trade policy institutions should restrict the protectionist options to duties alone.

Recently, the application of antidumping has begun to replace voluntary export restraints on televisions and video cassette recorders. This may be a reaction to the

fact that EC producers recognize the adverse effect the rent transfer can have on their long term competitiveness.

The most important antidumping cases of 1990 were in electronics which covered almost 1.5 billion ECU worth of imports. Since this product category with only few competing countries (Japan, Korea) and companies is susceptible to our argument, case studies may provide empirical evidence in favour of our hypothesis.

In January 1990, an antidumping case against Japanese semiconductors was terminated with price undertakings against the 11 accused Japanese firms. Although it is not clear whether this really is a case where an anticipated protectionist claim caused dumping, it still provides some interesting evidence that import penetration may have increased because of the protectionist threat. Since the Japanese market share was over 65% in the 1986-1987 period rents can be realized for both EC and Japanese producers as a result of establishing a floor price for these exports.

In February 1987, the European Electronic Component Manufacturer's Association, representing all existing and potential DRAM producers of the EC, forwarded an antidumping application to the Commission. Initially only six Japanese exporters were involved and two others quickly joined the group. During the investigation, three other exporters requested to be included in the investigation. The reason is simple: in the end these eleven producers negotiated an undertaking with the

Commission while all other potential exporters from Japan will have to pay a 60% duty.

The development of the foreign market share in the EC is most interesting for our claim. We argued that aggressive pricing and increased market penetration precedes a protectionist investigation but that it is likely to become less prevalent once negotiations have started. In the semiconductor (DRAM) case, Japanese producers raised their market share from 24.6% in 1983 to 85.1% in 1986. The actual figures are even more impressive: Japanese DRAM sales in the EC increased from 7.5 to 105.5 million items in the same period. In 1987 - recall that the antidumping application reached the Commission in February 1987 - the market share of Japanese producers declined to 70.5% or 63.7 million items.⁹ This fits the predicted pattern of rapid initial penetration followed by moderation to prevent annoyance.

Although Winters (1990) provides evidence in favour of a harassment effect of protection on some product categories, he also provides a case which clearly fits our hypothesis. Korea's video cassette recorder imports were under import surveillance by the EC in 1986. At that point, Korea had only a small share in the EC's video cassette recorder market. Anticipating an antidumping claim (import surveillance often precedes quantitative restrictions), Koreans lowered the prices of exports to the EC drastically. In 1987, Korea got the expected antidumping case and "... had managed to attain a

⁹ European Communities, (1991)

reasonable share of the market before the undertakings extracted by the EC antidumping authorities cartelised it" (Winters, 1990).

Other empirical testing is warranted. In the US, for instance, there are no genuine ad valorem antidumping duties - the exporter can always choose to charge a higher price which compensates for the duty. In such a regime, the incentive to enter the market and to gain market shares with dumping is even stronger than in the EC. In the EC, there is at least a certain probability that a duty (damaging the foreigners) will be imposed. In cases against the same product in both the US and the EC, import stimulation in anticipation of protection should therefore be even more prevalent in the US than in the EC. On the other hand, harassment should be stronger in pure tariff regimes.

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