

Eymann, Angelika; Schuknecht, Ludger

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## Antidumping policy in the European Community: Political discretion or technical determination

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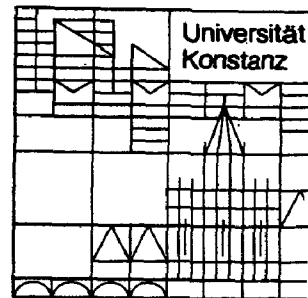
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**Sonderforschungsbereich 178**  
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Diskussionsbeiträge



Juristische  
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Fakultät für Wirtschafts-  
wissenschaften und Statistik

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Angelika Eymann  
Ludger Schuknecht

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in the European Community:  
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**ANTIDUMPING POLICY IN THE EUROPEAN COMMUNITY:  
POLITICAL DISCRETION OR TECHNICAL DETERMINATION**

**Angelika Eymann  
Ludger Schuknecht**

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## Abstract

This paper demonstrates the prominent role of antidumping laws as an instrument of endogenous trade policy in the EC. In contrast with the US where dumping is subject to technical determination, the EC application of antidumping laws reflects political discretion and influence.

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Antidumping Policy in the European Community:  
Political Discretion or Technical Determination

I. Introduction

The considerations underlying the formulation of US trade policy have been subject to detailed study in the literature (see the study by Baldwin, 1985, and the survey by Hillman, 1989). There has on the other hand been little scrutiny of protectionist practices in the European Community (EC). The most prominent instrument of EC protectionism is the application of antidumping laws (AD): Tharakan (1988) and Messerlin (1987, 1989) provide studies of the sector/country incidence of antidumping applications and the protectionist impact. This paper adopts an endogenous trade policy vantage to investigate the motives underlying EC applications of antidumping laws. We study whether antidumping actions in the EC reflect political discretion or technical determination.

Our empirical results indicate that EC antidumping measures, although subject to technical determination de jure, are de facto politically determined. This contrasts with US practice, as described by Finger, Hall, and Nelson (1982), where the application of antidumping measures is subject to technical determination. The differences between the US and EC applications of antidumping law derives from the institutional structures governing the determination of whether dumping has

occurred, and not from different definitions of what constitutes dumping.

In the literature, the classical view of dumping is associated with international price discrimination by a firm with domestic monopoly power (Viner, 1923, Haberler, 1936). Predatory motives have also been imputed. More recent studies of dumping have considered circumstances where exports are priced below marginal cost, and have demonstrated how dumping can be the consequence of imperfect adjustment to changed factor demand (Ethier, 1982) and domestic uncertainty in either supply or demand (Hillman and Katz, 1986). There is a view of antidumping laws as facilitating regulation of firms resident in different national jurisdictions (Hillman, 1990). The laws provide floors below which foreign competitors are legally constrained from decreasing their price, thereby, facilitating a Bertrand equilibrium that sustains increased profits.

The GATT dumping code does not relate to marginal cost, but defines dumping as sales below the "full" per unit cost of production, plus a "reasonable" profit margin. The notions of "full" and "reasonable" are not well specified, and leave considerable scope for discretion in interpretation of whether in a particular instance dumping has occurred. The institutional structure governing the determination of dumping within the national trade laws is therefore of prime importance. At issue is who exercises discretion in interpretation, and in accord with which objectives, political or objectively specified economic criteria.

Our study of the application of European antidumping law supports the conclusion of a prominent role for political discretion in determining whether protection is to be provided.<sup>1</sup> US dumping determination rests more on technical criteria, while escape-clause actions are politically determined (Finger, Hall, and Nelson, 1982). Our results indicate that in the European case dumping determinations have a similar role to escape-clause actions in the US. In the EC, application of the antidumping laws is indicated by our study to be part of the broader spectrum of politically determined endogenous protection.

The EC's use of antidumping actions has been an effective instrument inhibiting import competition. Some 300 antidumping cases were initiated by EC complainants in the 1980-1987 period. The average increase in the domestic price of imports as a consequence of antidumping complaints was in the neighborhood of 23 percent, with increases ranging above 50 percent. This contrasts with the EC's average tariff on manufactured goods of seven percent. Within five years after initiation of an AD investigation, imports of the impacted product on average fell by approximately 50 percent. In 1985, beginning from seven percent, an increasing proportion of the EC's total trade has been subject to antidumping actions (Messerlin, 1987).

Our empirical results have implications for post-1992 EC trade policy. If protectionist interests demand compensation for the abolition of national protectionist barriers after 1992,<sup>2</sup> interest groups have the scope offered by EC AD measures, since such measures are subject to political discretion rather than



technical rules. AD measures can therefore be a pinnacle of "Fortress Europe".

The paper proceeds as follows. The institutional basis is set out in section II for the US and section III for the EC. Section IV specifies hypotheses concerning the EC AD practice and reports the empirical studies. Section V places AD in the context of broader EC trade policy determination.

## II. The US Institutional Setting

Trade policy measures subject to national trade laws can be subject to motives of political influence. However, limited scope for bureaucratic discretion and limited political accountability constrain the political context of the US AD policy.<sup>3</sup>

Figure 1 illustrates the four phases of the US-procedure: application, investigation, decision, and appeal. Procedural discretion of the administration is small: applications that fulfill certain requirements with respect to formality and contents automatically lead to investigations. The procedural rules of the investigation relating to the time frame and the rights of parties involved are clearly defined. The conditions warranting the imposition of preliminary duties, enforcement, and prevention of circumvention, are unambiguous.

In the investigation, the existence of both dumping and injury has to be proven in order to evoke an antidumping measure.<sup>4</sup> Dumping and injury are investigated separately by the International Trade Administration (ITA) and the International

Trade Commission (ITC), respectively. The rules determining the determination of dumping are stringent. Dumping exists when the "normal value" of a product is higher than its export price, "normal value" being defined as either the price of the product in the exporter's home market, the price in a third market, or the full production cost plus a profit margin.<sup>5</sup> The difference between normal value and export price - the dumping margin - determines the AD duty. The criteria for the finding of injury are more vague and contain indicators such as market share, capacity usage, etc..

Two factors further decrease bureaucratic discretion. The protective order system allows parties involved to inspect each other's files, thereby preventing collusion between the administration and one of the parties. The exporters, for example, can review the material on which the injury claim is based. Secondly, parties involved can appeal the decision and the courts can examine the decision of the administration and the use or abuse of its discretion. Both institutions increase the incentive of officials to conduct investigations impartially.

An affirmative determination of both dumping and injury has to result in an AD measure. There is, however, wide discretion regarding whether to impose a duty, or to seek an "undertaking" of a voluntary price increase by the exporter.

Table 1 illustrates the relatively low degree of discretion in the US procedure. Political accountability is also small in the US. Figure 1 indicates that neither Congress nor the President can intervene directly. Indirect influence can be

exerted through the nomination of the heads of the ITA and the ITC.<sup>6</sup>

### III. The EC Institutional Setting

The EC AD process differs significantly from that of the US. In the EC, there is more scope for administrative discretion, and political accountability of the investigators is greater.<sup>7</sup>

The EC process constitutes five phases as set out in figure 2: application, preselection, investigation, decision, and appeal. Applications by interest groups are forwarded to the Commission (the EC's administration). The Commission has discretion to reject an application or initiate an investigation at the stage of preselection. First, the Commission selects those applications that fulfill the formal criteria. It then consults the Council's advisory committee (the Council being the forum of member governments and operating as the EC legislature) in deciding which applications are to lead to an investigation.<sup>8</sup>

The investigation is conducted by the Commission. Procedural rules provide some discretion with respect to time frame, imposition of temporary duties and prevention of circumvention. The rights of the parties involved are well defined.

The rules for the determination of dumping are similar to those of the US. Only since 1984 have formal criteria for injury determination been applied: changes in market share, capacity utilization, employment, profits, etc.<sup>9</sup> These criteria are

vaguely formulated and give the Commission significant discretion in the determination of injury.

Two missing factors of control increase the Commission's discretion relative to political discretion in the US procedure. The investigation is less transparent and verifiable than in the US, because of the lack of a protective order system. Also, in the EC system, there is only limited recourse to the courts for appeal. Parties can appeal on a procedural basis. The European Court of Justice, however, cannot overturn a decision if a party believes that bureaucratic discretion has been abused.

In addition, the Commission is obliged to consider whether an affirmative decision is in the 'public' interest, in terms of whether users and consumers are disproportionately adversely affected by antidumping duties. It is not bound by any specific rules to evaluate the 'public' interest and never chose to reject an antidumping duty on the basis of disadvantage to users and consumers in the eighties.

The Commission has significant discretion with respect to the means whereby the price of competitive imports is increased, via an undertaking to increase price, or via the levying of a duty. The level of duties or undertakings can be set up to the value of the determined dumping margin but can be less. This discretion does not exist in the US where the measure imposed must be equal to the dumping margin.

At the decision stage, affirmative results of the investigation do not automatically lead to an AD measure. The Council has a right to reject the Commission's findings with a 54/76 majority. Table 1 indicates the comparatively high degree of discretion of the EC's decision makers.

With regard to political accountability, EC bureaucrats are subject to political scrutiny. Politicians can interfere through the Council at the two decisive stages of an AD procedure (see figure 2). They can block or promote the initiation of an investigation in the preselection phase and the Commission can be pressured to use its discretion in the investigation in accord with political objectives, because the Council can if it so wishes, reject the Commission's findings. The Council has the right to nominate the heads of the Commission (Commissioners). It determines the latter's salaries, reappointments, and future careers in national politics. The Council can request changes in the regulation implementing the GATT antidumping code. In 1984 for instance, formal rules for the injury determination were introduced.

EC antidumping can, therefore, be politically determined by political intervention at various levels of the decision-making process.

#### IV. An Empirical Investigation of the EC Antidumping Process

##### A. Hypotheses

This section reports on empirical tests of the political discretion versus technical/economic determination alternatives for the motives underlying EC antidumping decisions. Finger et al. (1982) test the choice between rejection and acceptance for the US and conclude that US AD is technically determined. We conduct an analogous test for the EC. In addition, we investigate the choice between duties and undertakings and the

determinants of the level of AD protection. In particular we test three hypotheses:<sup>10</sup>

1) The choice between acceptance and rejection is influenced politically, the impact of rules being non-negligible, though. The respective test is referred to as A/R-test.

2) The choice between "undertaking" and duty is determined politically ("INSTR-test"). More specifically, we test the hypothesis that undertakings reflect the collusive equilibrium, where firms agree to forgo price competition.<sup>11</sup>

3) The actual level of protection is determined politically ("LEVEL-test"). While the upper bound of protection is determined by the dumping/injury margin, we hypothesize that reductions are granted for political reasons. Table 2 surveys the tests at the various levels of decision making.

## B. Description of Exogenous Variables

The set of exogenous variables has been chosen to reflect both political and technical/economic influence as predetermined by our hypotheses. The political variables used are to represent both domestic/EC and international pressure; the administrative variables reflect the main criteria that are supposed to determine the AD process, i.e. injury and dumping. A detailed description of the independent variables is given below and surveyed in the Appendix.

### B.1. Variables measuring political influences:

At the international level, the threat of retaliation is expected to result in free trade lobbying. Therefore, countries absorbing large amounts of EC exports should be confronted with

less trade barriers. The respective variable EXPORTS contains the EC export value per country<sup>12</sup>; its coefficient is expected to have a negative sign in the A/R-test.

As those interested in a rejection or acceptance will lobby for a reduction or a duty equalling the dumping margin respectively, the coefficients of EXPORTS as well as all other variables are expected to have the same sign for the LEVEL-test as for the A/R-test.

The subsequent three variables illustrate the relative international lobbying power of the countries against which AD measures have been initiated. NICs and LDCs are expected to have low political weight due to their mostly decentralized industry structure.<sup>13</sup> State-Trading Countries, as represented by the dummy variable STATRA, on the other hand, are expected to be politically influential and well represented because of centralized trading. Consequently the expected signs for the respective coefficients are negative for NIC and LDC and positive for STATRA.

RESOTHER portrays the available information on the accused parties' resistance against the formal proceedings of EC bureaucrats. Although this variable should adversely affect antidumping protection (negative sign of the coefficient), the results are unreliable for the A/R-test. Information on resistance is not provided for most rejected cases in the AD reports. The dummy variable RESOTHER is, therefore, included in the LEVEL-test only.

The impact of various EC-based interest groups is reflected by the set of domestic political variables. Value added per sector (VALADD) and number of employees per sector (NOEMP) stand

for differences in the lobbying power.<sup>14</sup> The choice of these two variables is based on the proposition<sup>15</sup> that sectors with high employment and value added are particularly effective lobbyists in favor of affirmative and highly protectionist decisions. Positive signs of the coefficients can be expected.

The variables ASSOC, NOFIRMS, and COOP refer to the degree of organization and unanimity among petitioners for an AD measure. Associations are the officially recognized and inclusively organized representations of EC industries, which also have the necessary experience and contacts to affect EC policy. We predict decisions to be more protectionist when an application has been forwarded by an association, and a positive sign of the coefficient for the ASSOC dummy variable. NOFIRMS is a dummy variable indicating that three or more EC firms are involved<sup>16</sup>. Due to the existence of a tradeoff between greater political influence and a rising free riding incentive for an increasing number of firms<sup>17</sup>, we hypothesize that the respective coefficient does not significantly differ from zero. Considering the lobbying structure in Europe, with strong emphasis on associations, it is even more likely that the number of EC-firms does not affect any of the decisions.

When single EC-firms in the petitioning industry explicitly refuse to cooperate or object to an application, a considerable weakening of the petitioners' case can be expected. The respective COOP dummy takes the value of zero when the AD report indicates resistance from an EC competitor; its coefficient is expected to show a positive sign.

Information on the resistance by EC users and consumers was only available for acceptances. The dummy variable RESUSE, which



is biased, therefore, takes the value of one in the case of resistance; we expect that RESUSE influences the probability of a reduced level of protection positively.

LAYOFF indicates layoffs by petitioners as a consequence of dumping as given in the EC's AD reports. Although this variable is cited in the list of administrative criteria by the EC Commission, we claim that it is a proxy for the political power of the sector, and thus reflects not only a protectionist but also a political bias in the EC's dumping rules. Moreover, AD reports cite layoffs as an industrial policy argument in favor of protection. We include a dummy variable (1=layoff) on the political side and predict a positive sign of the respective coefficient.

EC AD-reports include additional industrial policy arguments such as "dependence on foreigners", or "social and political importance". The corresponding IPOL variable indicates direct or indirect intervention by EC governments into the process. A positive impact on the probability of an affirmative decision is expected.

A dummy variable D85 is included into the set of exogenous variables for the A/R-test to clarify the effects of the institutional change in the last quarter of 1984. The implementation of formal rules for the injury evaluation has resulted in a tightening of the procedure. We expect an increase in the number of rejections as compared to acceptances for years 1985 to 1990. D85 takes the value of one for the period 80-84; its coefficient is expected to have a positive sign.

For the INSTR-tests, we hypothesize that foreign producers prefer undertakings to duties because of the rent transfer. We suppose state-trading countries to be particularly successful in achieving undertakings whereas NIC's and LDC's obtain more duties for the same reasons as forwarded for the A/R and LEVEL tests.

Domestic producers may use price undertakings as a vehicle for market cartelization as argued above. The political power of the domestic industry, as mirrored by variables VALADD, NOEMP, and LAYOFF, does not reflect the potential for collusion. Nor should industrial policy arguments determine the choice of the trade policy instrument. The coefficients of these variables should, therefore, not significantly diverge from zero.

Collusion behavior becomes more probable the better and the more inclusively a sector is organized and cooperating. While associations facilitate collusive cooperation of firms, refusal of cooperation, as indicated by COOP, renders collusion less practicable. If the collusion argument applies, the coefficients of ASSOC and COOP have negative signs.

We propose that undertakings should be accepted frequently in cases referring to industries with an oligopolistic structure, e.g. the steel, chemical, or high-tech industries. Coefficients of dummy variables, indicating decisions on high-tech (HTD), steel (STD) or chemical products (CHD) are expected to show a negative sign in the INSTR-test.

## B.2. Technical influences:

In accordance with our political determination hypothesis, technical variables should be insignificant for both the INSTR-

and the LEVEL-test. For the A/R test, the degree of technical dumping determination is examined with the help of variables also used by Finger et al. (1982). Finger et al. argue that high average wages (AVWAGE) in a sector, indicate high human-capital intensity, which is used as a proxy for the existence of a domestic cost advantage. The protectionist bias in the mechanism of decision-making increases the probability for affirmative findings and higher duties in the case of cost disadvantages. This applies especially in cases where the Commission uses production costs to determine the normal value. The expected sign of the respective coefficient is negative in the A/R-test.

Product differentiation within one application is approximated by the number of NIMEXE-positions per case (NOPROD). Finger et al. (1982) suggest that the coefficient of NOPROD should be negative in an A/R test, since the pricing concept is relatively precise and more suitable for individual products than large aggregates.

We hypothesize that NOPROD has a significant effect in the INSTR-test. As negotiation costs increase with the number of products covered by an undertaking, we claim that collusion behavior is less probable for cases covering a large number of products resulting in an expected positive sign for the coefficient of NOPROD.

The administrative injury determination is illustrated by changes in market share, capacity utilization, and profits. These variables are less "political" than LAYOFF, but they do not constitute strict standards and leave significant discretion as to causality and damage (see section III).

Changes in the exporters' market share (CMSF), and the EC producers' market share (CMSEC), are predicted to affect the A/R decision. While the coefficient of CMSF is expected to have a positive sign, increases in the market share of EC producers should affect the decisions adversely. Changes in capital utilization and profits are represented by dummy variables (CAPUTIL and PROFITS) because the exact values were usually not given in the AD reports.<sup>18</sup> A value of one for each dummy variable respectively indicates the existence of decreases in profits and capital utilization. Positive signs for the coefficients of both variables are expected.

### C. Econometric Modelling

Binary logit models are used to analyze the motives underlying the decision of EC bureaucrats as to the acceptance or rejection of applications, choice of instruments, and level of protection.<sup>19</sup>

EC antidumping decisions are taken separately for each of the single countries or firms affected by one application. In the EC AD reports, however, a "case" covers the specific products and countries/firms that are affected simultaneously by a final EC antidumping decision. For the A/R-test, we split cases further into independent<sup>20</sup> "observations" of single affected countries. Firms for which specific decisions have been made, are included as separate observations in the INSTR- and LEVEL-test. The number of observations ranges between 243 and 587, depending on the specific test.<sup>21</sup>

For each of the three tests, three hypothesis as to the correct model specification are tested: only political -, only

technical variables, and a combination of both are tested for influencing the EC decision-making.

One-tailed t-tests (two-tailed for the INSTR-test) are used to check if the null-hypothesis with respect to each coefficient can be rejected at the usual levels of significance (5% and 1% respectively). Goodness of fit is indicated by the adjusted likelihood ratio index as introduced by Horowitz (1983).<sup>22</sup>

Results from maximum likelihood estimations of the respective models are given in tables 3 to 5.

#### D. Results

##### D.1. Rejection v. Acceptance (A/R-test):

The results in tables 3.1 to 3.3 indicate the relevance of both technical and political factors in determining the acceptance or rejection of an AD application as hypothesized. The political determination hypothesis can not be rejected in test 3.1, nor can the administered protection hypothesis in 3.2. However, the goodness of fit-index indicates that the model specification 3.3 is most appropriate.

For all the coefficients of domestic political variables apart from ASSOC, the null-hypothesis can be rejected. Coefficients for value added, layoffs by the petitioner, unanimous support among EC firms, and industrial policy are significant at least at the 95% level in estimations 3.3 as well as in 3.1. ASSOC proves to be a relevant exogenous variables in 3.1. The results for number of employees per sector as an indicator of lobbying power are ambiguous; they are insignificant in 3.1 but significant in the combined estimation.

As expected, the coefficient of variable NOFIRMS is not significantly different from zero.

Our hypothesis on the effect of potential retaliation does not get empirical support: exports from the EC do not seem to be relevant for the AD decisions.

Estimated coefficients for variables reflecting lobbying activities by foreigners do not show the expected sign. The Commission does not seem to discriminate against NICs and LDCs or in favor of state-trading countries.

Estimations 3.1 and 3.3 show evidence that the tightening of administrative rules, represented by D85, has resulted in an increase of the number of rejections relative to acceptances.

Surprisingly, the technical dumping variables NOPROD and AVWAGE do not seem to influence the decision as expected. Contrary to this, coefficients for the injury variables except CAPUTIL show the sign as theoretically expected. The fact that the estimated coefficient for CMSF turned out to be insignificant in estimation 3.3 is noteworthy. One explanation of this occurrence may be that firms/countries that can effectively penetrate the EC market and raise their market share rapidly, are also more effective in the political market. In addition, domestic interests should be more concerned with changes in their own market share than with relative changes among foreigners. Their lobbying efforts will, therefore, not necessarily be proportionate to changes in the foreigners' market share.

## D.2. The choice between undertakings and duties

(INSTR-Test):

The results from estimations 4.1 to 4.3 are ambiguous. Although political variables matter they do not indicate consistent support for the collusion hypothesis. The collusion hypothesis can be accepted for the coefficient of CHD (4.3). Coefficients for variables ASSOC and COOP are insignificant, though.

An alternative explanation of the choice between undertakings and duties is based on the fact that a duty is more protectionist than an undertaking because it does not increase foreign profits and additionally it is easier to enforce than a price fixing. Politically influential EC producers are likely to obtain duties against exporters instead of undertakings. The coefficients of domestic political variables are then expected to yield positive signs.

Results for VALADD (in both 4.1 and 4.3), NOEMP, and IPOL support the hypothesis that domestic interests favor the stronger instrument, i.e. duties. In 4.1 however, estimated coefficients for NOEMP and IPOL are insignificant. At the sectorial level, the EC steel industry does not require AD to collude since it is already cartelized. Consequently, we claim it to be more interested in duties than in undertakings. This argument may explain the unexpected positive coefficient of STD.

Monopolistic firms from state-trading countries prove to obtain more undertakings than other firms showing that foreign lobbyists are interested in undertakings rather than duties.

The ambiguity of our results may stem from the relevance of both the collusion and the strong instrument hypothesis.

Furthermore, firm specific characteristics, e.g. accused foreign firms being the subsidiary of or in joint venture with an EC firm, may also determine the choice of instrument.

The goodness of fit index indicates an unexpected relevance of technical variables for the choice of instrument in both 4.2 and 4.3. The variable NOPROD is an exception: as expected, the imposition of a duty seems to be more probable the higher the degree of product differentiation. The coefficient of CMSEC indicates that a decrease in the market share of EC producers (injury) increases the probability of obtaining a duty.

#### D.3. The Level of Protection (LEVEL-test):

The final estimations (Tables 5.1 - 5.3) examine the motives underlying the decision to grant reductions from the maximum level of protection, i.e. the dumping/injury margin. The hypothesis of political determination is largely supported by our results. The adjusted likelihood ratio index for estimation 5.2 - testing the technical track hypothesis - is close to zero. Only the estimated coefficients for changes in EC market shares CMSEC (wrong sign) and the proxy for human capital intensity AVWAGE (in 5.3) are significant at the 95% level.

Results from estimation 5.3 show that domestic political leverage increases barriers. Resistance by users of products in question (RESUSE) significantly lowered the level of protection, as shown by the results in estimations 5.1 and 5.3. The estimated coefficient of variable NOFIRMS proves to be insignificant in 5.1 and is omitted in 5.3. Surprisingly, the coefficient of variable ASSOC is insignificant and the coefficient of LAYOFF has the unexpected sign.



At the international political level, all variables except for LDC, have the expected significant effect on the AD measure. While NICs more frequently receive the highest possible tariff, state trading countries and parties that resist the accusation of dumping, are able to reduce their measures in the bargaining process. Contrary to the results from the A/R test, adverse lobbying power has a significant effect on the probability of obtaining a reduced level of protection by the Commission.

## V. Conclusion

This paper has demonstrated the prominent role of anti-dumping laws as an instrument of endogenous trade policy in the EC. In contrast with the US where dumping is subject to technical determination, the EC application of antidumping laws reflects political discretion and influence.

Notes:

1 Norall (1986), Finger and Nogués (1987), and Tharakan (1988) have noted the flexible nature of the EC antidumping investigations.

2 See Schuknecht 1990 for an analysis of national protectionism in the EC.

3 A short overview of the US AD policy is provided by Hillman (1989, Ch.11) and Finger (1989). Vermulst (1987) compares the US and the EC practice from a legal perspective; Schuknecht and Ursprung (1990) provide a detailed institutional study.

4 These are the most important criteria. The other conditions for an affirmative decision, the dumping of a "like product" by a domestic firm that causes injury, have not played an important role in both the US and the EC.

5 Several studies have identified a protectionist bias in the antidumping rules (Norall, 1986, Palmeter, 1988, Tharakan, 1988, Messerlin, 1989). The bias increases the expected level of protection; however, it does not decide on political or technical determination.

6 Finger, Hall, and Nelson (1982) therefore argue that US-AD can be viewed as "low track" protection, although they show that some political influence on the ITC's injury decision exists. Their choice of variables indicating political determination of injury decisions is somewhat incomplete. The variables applied

for the technical test are different to those that ITC officials are supposed to take into consideration.

7 A detailed overview over the EC Antidumping law is provided by Bael and Bellis (1985), Beseler and Williams (1986), Vermulst (1987), Bierwagen and Hailbronner (1988), Grolig and Bogaert (1987) and Bierwagen (1989).

8 Data on the preselection is not published, the rate of rejection at this stage is supposedly larger than 50%. This practice suggests the intention to disguise preselection criteria. However, the adverse affect on imports of an AD threat is prevented at this stage to the advantage of exporters.

9 These criteria have been applied voluntarily since 1980 which should reduce the impact of this reform.

10 We suppose that decisions at the preselection stage are under strict political scrutiny. However, the information necessary for an empirical analysis was not available.

11 Cf. Hillman, 1990. Undertakings transfer part of the protectionist rents to foreigners dissipating their resistance. They must be agreed on by the parties involved.

12 Information on exports was drawn from the OECD Statistics of Foreign Trade (Monthly Bulletins). The variable is lagged by one year to reflect the relative situation during the period of investigation. Data for 1989 were not available and therefore substituted by 1988-values.

13 The relatively recent market entry and the lack of EC-lobbying experience of NIC companies works in the same

direction. Korea may be an exception since its economy is partly based on large conglomerates.

14 VALADD and NOEMP were only available at a three digit-level (ISIC).

15 Cf. Finger, et al. (1982).

16 The exact number of firms cannot be reconstructed from the EC AD reports for most cases.

17 Messerlin (1989) mentions an optimal number of lobbying firms which could not be confirmed for our data set.

18 Information was particularly scarce on changes in capital utilization. We suspect a bias in the respective variable CAPUTIL which is consequently omitted in all combined estimations (3.3 - 5.3).

19 The "dependent variable" being a latent variable for qualitative response models, probabilities of choice have to be determined for each alternative, and each observation. Logit rather than Probit models have been chosen for simplicity of (maximum likelihood-)estimation. Coefficients of explanatory variables should be interpreted as reflecting the distinct impact of the respective variables on the probability of choosing a particular alternative rather than the other alternatives in the set. The number of coefficients to be estimated is equal to the product of the number of explanatory variables and the number of all but one alternative in the set. For one alternative in the set (here: the less protectionist

alternative for each model) all corresponding coefficients are set to zero to circumvent problems of non-identifiability.

20 Independence of the observations is assured by the fact that antidumping decisions are, at least partly, based on explanatory variables (observed or unobserved) that are specific for both the product and the accused party.

21 Due to missing values, the number of observations varies significantly.

22  $Rho\_sq.$  adj. is defined as:  $1 - (\text{likelihood of fully specified model} - 0.5 * \text{number of parameters estimated}) / \text{likelihood of model with alternative specific constants as the only "exogenous" variables}$ . Models for which the goodness of fit-index takes a value of around 40% should be considered as fairly well specified. Cf. Horowitz (1983) and Hensher and Johnson (1981), p. 51.

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Table 1  
Discretion in the EC Antidumping Process

	EC	USA
Preselection	++	nu
Investigation		
1) Procedure:		
Time Frame	+	0
Rights of Parties	0	0
Preliminary Duties	+	0
Circumvention	+	0
2) Rejection/Approval:		
Dumping	+	0
Injury	++	+
Community Interest	++	nu
3) Instrument	++	++
4) Level of Protection	+	0

0 = no or little discretion, + = moderate discretion,  
++ = large discretion, nu = not undertaken

Table 2  
Determination of Choice Probabilities

	A/R Test acceptance	INSTR-Test duty	LEVEL-Test full level
political variables	+	++	++
technical variables	+	0	0
base category	rejection	undertaking	reduced level

++ = strong determination, + = weak determination,  
0 = negligible or no determination

Acceptance/Rejection (A/R-Test)

Table 3

ESTIMATION		3.1		3.2		3.3
CONST		-5.1179	(-4.08) **	-1.7618	(-2.24) *	-5.2303 (-2.64) **
<u>Political Variables</u>						
<i>International variables</i>						
EXPORTS	-	0.0003	(1.27)			
NIC	+	-1.3321	(-1.05)			-0.4769 (-0.57)
LDC	+	-0.2013	(-0.46)			0.1063 (0.21)
STATRA	-	0.4660	(1.23)			0.1801 (0.41)
<i>Domestic variables</i>						
VALADD	+	3.5849	(2.70) **			9.8241 (1.67) *
NOEMP	+	0.0017	(0.89)			0.0097 (2.57) **
ASSOC	+	0.9174	(2.36) **			0.8519 (1.38)
NOFIRMS	0	0.7220	(1.59)			
COOP	+	1.5620	(1.86) *			2.0369 (1.80) *
LAYOFF	+	0.7923	(2.40) **			0.8365 (1.66) *
IPOL	+	1.8196	(3.33) **			2.5786 (3.18) **
D85	+	1.1455	(3.13) **			1.0370 (2.08) *
<u>Technical Variables</u>						
<i>Dumping</i>						
AVWAGE	-			10.4936	(2.61) ** <sup>w</sup>	-17.3411 (-0.86)
NOPROD	-			0.0154	(0.24)	
<i>Injury</i>						
CMSEC	-			-0.0560	(-1.60)	-0.0753 (-2.03) *
CMSF	+			0.0600	(1.86) *	-0.0003 (-0.01)
CAPUTIL	+			-1.1126	(-2.01) * <sup>w</sup>	
PROFITS	+			1.9050	(4.55) **	1.0267 (2.48) **
$\bar{\rho}_{adj}^2$		0.146		0.159		0.283
Obs.		296		250		243

$\bar{\rho}_{adj}^2$ : adjusted goodness of fit-index

\*<sup>(w)</sup>: rejection of H<sub>0</sub> at 5% level of significance (unexpected sign)

\*\*<sup>(w)</sup>: rejection of H<sub>0</sub> at 1% level of significance (unexpected sign)

## Choice of Instrument (INSTR-Test)

Table 4

ESTIMATION		4.1		4.2		4.3	
CONST		-2.2326	(-1.74)	-0.0531	(-0.23)	-1.6637	(-1.17)
<u>Political Variables</u>							
<i>International variables</i>							
NIC	+	0.3239	(0.83)			0.4569	(0.95)
LDC	+	0.1210	(0.45)			0.0612	(0.16)
STATRA	-	-0.8339	(-3.72) **			-0.5238	(-1.58)
<i>Domestic variables</i>							
VALADD	0	4.2049	(4.21) **			7.0531	(4.57) **
NOEMP	0	0.0014	(0.47)			0.0013	(0.28)
ASSOC	-	-0.2454	(-0.90)			-0.3006	(-0.76)
COOP	-	0.6485	(0.55)			-0.9168	(-0.74)
LAYOFF	0	-0.8299	(-3.65) **			-1.1941	(-3.84) **
IPOLE	0	0.1277	(0.60)			0.7403	(2.37) *
CHD	-	-0.1705	(-0.47)			-1.3802	(-2.35) *
STD	--	1.0674	(2.40) *			0.8793	(1.28)
HTD	-	0.8472	(1.38)			1.2792	(1.24)
<u>Technical Variables</u>							
<i>Dumping</i>							
NOPROD	+			0.1298	(1.96) *	0.0878	(1.83)
<i>Injury</i>							
CMSEC	0			-0.0839	(-6.14) **	-0.1480	(-6.90) **
CMSF	0			0.0131	(1.36)	-0.0603	(-3.24) **
CAPUTIL	0			-0.0125	(-0.05)		
PROFITS	0			-1.0581	(-4.21) **	-0.4349	(-1.33)
$\bar{R}^2_{adj.}$		0.126		0.101		0.300	
Obs.		587		465		432	

$\bar{R}^2_{adj.}$ : adjusted goodness of fit-index

\*<sup>(w)</sup>: rejection of  $H_0$  at 5% level of significance (unexpected sign)

\*\*<sup>(w)</sup>: rejection of  $H_0$  at 1% level of significance (unexpected sign)

Full vs. Reduced Level of Protection (LEVEL-Test)

Table 5

ESTIMATION		5.1		5.2		5.3
CONST		-0.4496	(-0.34)	0.1565	(0.35)	0.4433 (0.37)
<u>Political Variables</u>						
<i>International variables</i>						
NIC	+	2.0845	(4.79) **			1.9001 (4.75) **
LDC	+	0.0077	(0.03)			0.2705 (0.91)
STATRA	-	-0.4851	(-2.09) *			-0.5802 (-1.96) *
RESOTHER	-	-1.2148	(-4.20) **			-1.7298 (-5.06) **
<i>Domestic variables</i>						
VALADD	+	-0.5266	(-0.55)			6.2382 (1.87) *
NOEMP	+	0.0020	(1.56)			0.0064 (3.45) **
ASSOC	+	-0.3895	(-1.40)			0.0660 (0.19)
NOFIRMS	0	0.0859	(0.26)			
COOP	+	1.2063	(1.05)			1.5120 (1.63)
RESUSE	-	-0.8134	(-3.21) **			-0.7273 (-2.39) **
LAYOFF	+	-0.6558	(-2.76) ** <sup>w</sup>			-1.0084 (-3.47) ** <sup>w</sup>
IPOL	+	-0.4253	(-1.81) * <sup>w</sup>			-0.7553 (-2.78) ** <sup>w</sup>
<u>Technical Variables</u>						
<i>Dumping</i>						
AVWAGE	0			-2.0516	(-0.97)	-25.7115 (-2.37) **
NOPROD	+			-0.0177	(-1.03)	-0.0008 (-1.12)
<i>Injury</i>						
CMSEC	0			0.0238	(1.99) *	0.0293 (2.03) *
CMSF	0			-0.0138	(-1.21)	0.0241 (1.43)
CAPUTIL	0			0.3496	(1.39)	
PROFITS	0			0.2647	(1.17)	0.2947 (1.10)
$\bar{p}_{adj}^2$		0.112		0.008		0.151
Obs.		532		477		477

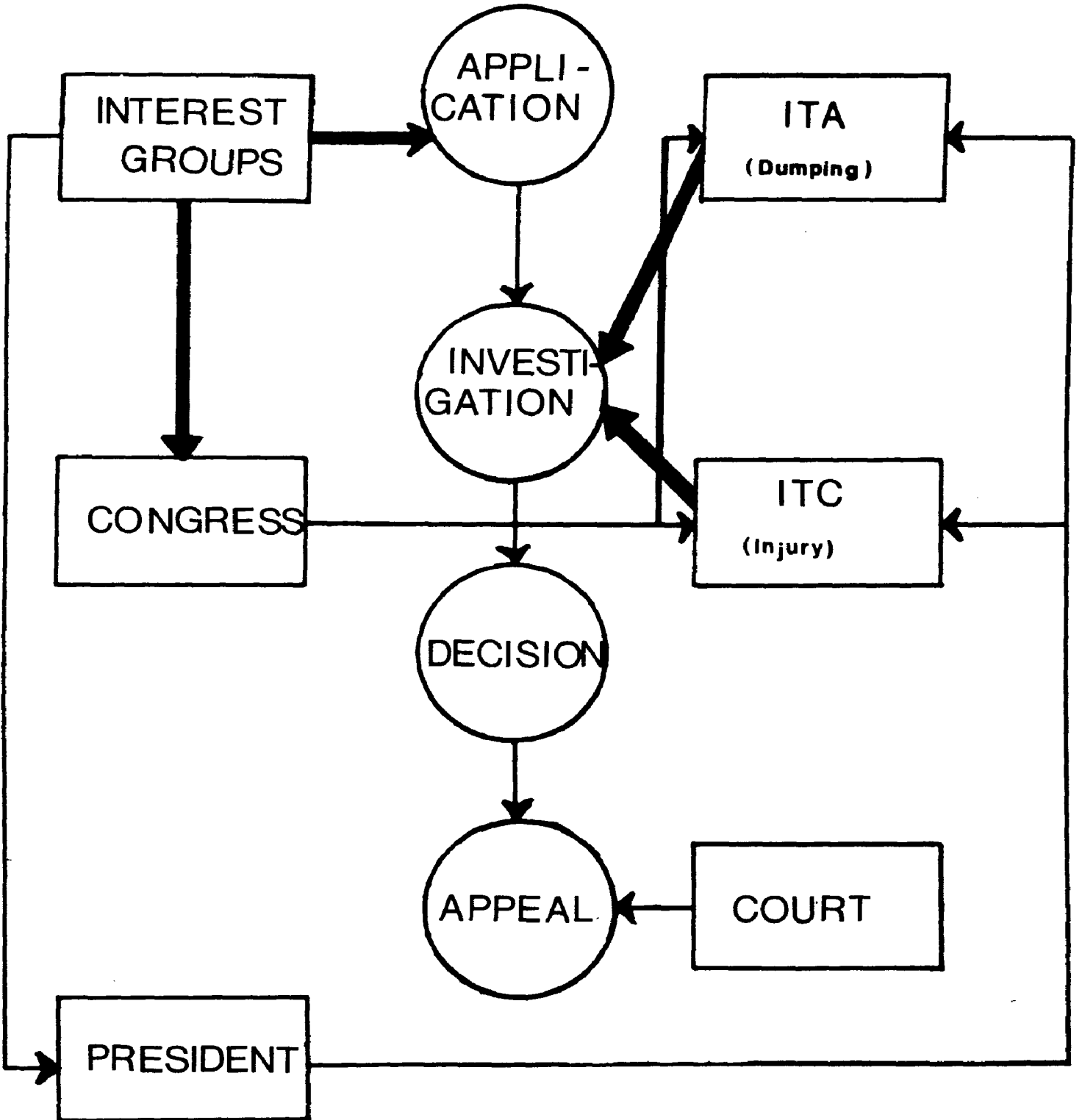
$\bar{p}_{adj}^2$ : adjusted goodness of fit-index

\*<sup>(w)</sup>: rejection of  $H_0$  at 5% level of significance (unexpected sign)

\*\*<sup>(w)</sup>: rejection of  $H_0$  at 1% level of significance (unexpected sign)

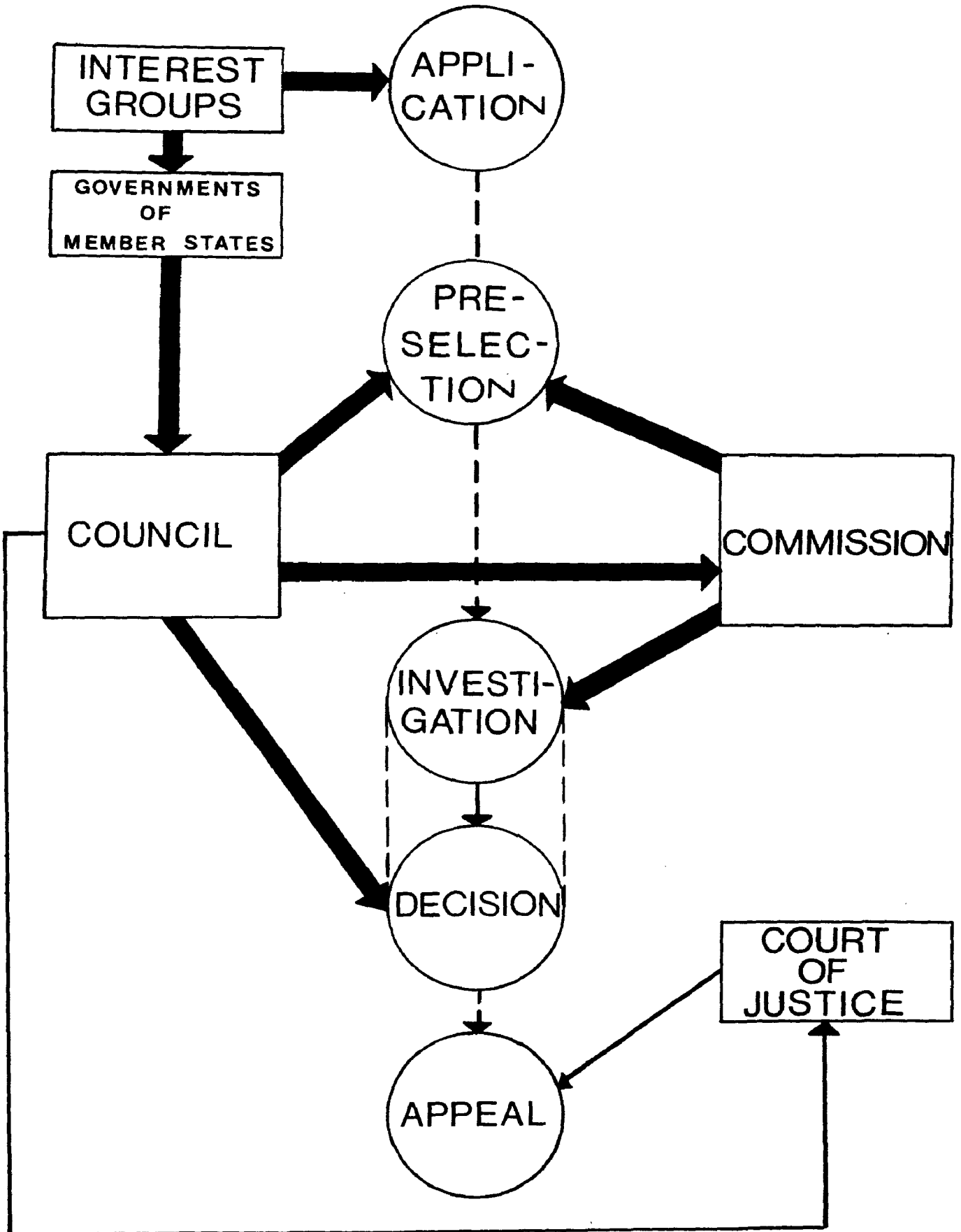
# FIGURE 1

The US Antidumping Procedure



# FIGURE 2

The EC Antidumping Procedure



## Data Appendix: Independent Variables Considered for Inclusion in Estimations

Independent Variable	Description	Data Source
	<u>Political Variables</u>	
	<i>International variables</i>	
EXPORTS	Total exports from EC to country accused in period $t - 1$	OECD Monthly Statistics of Foreign Trade,
NIC	Country accused belongs to group of Newly Industrialized Countries	Official Journal of the EC, Series L
LDC	Country accused belongs to group of LDC's	Official Journal of the EC, Ser. L
RESOTHER	Resistance by party accused against formal proceeding of EC bureaucracy	Official Journal of the EC, Ser. L
	<i>Domestic variables</i>	
VALADD	$10^{-5} \times$ Value added by petitioning EC industry in period $t - 1$ (ISIC 3-digit-level)	UNIDO database
NOEMP	$10^{-4} \times$ Number of persons employed by petitioning EC-industry in period $t - 1$	UNIDO database
NOFIRMS	Three or more EC firms involved	Official Journal of the EC, Ser. L
ASSOC	Association as petitioner	Official Journal of the EC, Ser. L
COOP	No refusal of support by EC firms	Official Journal of the EC, Ser. L
RESUSE	Resistance by EC users	Official Journal of the EC, Ser. L
LAYOFF	Layoffs in petitioning EC industry	Official Journal of the EC, Ser. L
IPOL	Intervention of EC member governments (industrial policy argument)	Official Journal of the EC, Ser. L



Independent Variable	Description	Data Source
	<u>Political Variables (Cont.)</u>	
D85	Final decision within period 80-84	Official Journal of the EC, Ser. L
CHD	Chemical industry as petitioner ISIC-no. of affected products: 351 – 355	Official Journal of the EC, Ser. L, United Nations: Industrial Statistics Yearbook, Vol. II
STD	Steel industry ISIC-no. of affected products: 371	Official Journal of the EC, Ser. L,
HTD	High tech industry ISIC-no. of affected products: 382, 383	Official Journal of the EC, Ser. L
	<u>Technical Variables</u>	
	<i>Dumping</i>	
AVWAGE	$10^{-5} \times$ Average of wages and salaries in petitioning industry (period $t - 1$ )	UNIDO database
NOPROD	Number of NIMEXE-positions affected	Official Journal of the EC, Ser. L
	<i>Injury</i>	
CMSEC	Absolute change in market share of EC-industry	Official Journal of the EC, Ser. L
CMSF	Absolute change in market share of parties accused	Official Journal of the EC, Ser. L
CAPUTIL	Reduction in degree of capital utilization	Official Journal of the EC, Ser. L
PROFITS	Reduction in profits/ increase of losses	Official Journal of the EC, Ser. L

VALADD, AVWAGE: in ECU, EXPORTS: in  $10^6$  ECU (base year: 1980)

Sources of information on exchange rates and price indices:

Deutsche Bundesbank (1990): Statistische Beihefte zu den Monatsberichten der Deutschen Bundesbank: Die Währungen der Welt, Series 5, No. 2, 1990

EUROSTAT (1989): Basic Statistics, 26th edition.