

INTERNATIONAL POLITICAL ECONOMY:
A RISING FIELD (*)

by

Bruno S. Frey and Friedrich Schneider

I. THE NEED FOR AN INTERNATIONAL POLITICAL ECONOMY.

There can be little dispute that international interdependence has strongly increased over the last decades, and that international economic relations have been strongly influenced by politics, and have in turn had a major impact on international politics. This marked international politico-economic interaction is, however, greatly disregarded in international economics which concentrates on purely « economic » aspects. There are some rather isolated areas, in particular multinational corporations, where political influences are at least mentioned, if not analyzed, in the economic literature, probably because of their obviously great importance (see e.g. Kindleberger 1970 a, Dunning 1974, or Gladwin and Walter 1980) (1).

This paper provides a survey of some of the major attempts to link economic and political factors in the study of the international economy. The analytical basis for doing so is provided by the Economic Theory of Politics or Public Choice (see Frey 1978, Mueller 1979). In conformity with this approach only *explicit* analyses of political institutions and processes are considered. The survey presents a *selection* of the research undertaken in International Political Economics; a fuller account including other aspects and areas is provided elsewhere (Frey, forthcoming).

Section II mentions forerunners to International Political Economics as well as a competing approach in political science; section III deals

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(1) Another such area is that of illegal transactions in international trade, such as *smuggling* or *black market exchange rates*. The literature on the subject (see, for example, Bhagwati 1974 or Gupta 1980) is not so much interested in positive analysis (including government behaviour) but stresses the welfare consequences.

with the major area of application of Public Choice in international economics, protectionism. Section IV is devoted to international aid and section V to international organizations. The paper ends with an evaluation and outlook of International Political Economy.

II. FORERUNNERS AND COMPETING APPROACHES.

Two well-known economists have made important early contributions to International Political Economics. In his book «National Power and the Structure of World Trade», which appeared just after World War II, Albert O. Hirschman (1945) addressed the question of the political nature of international trade. Trade is an instrument of national (monopoly) power. It has two effects on the state's power:

- the «supply effect» relates to the country's position with respect to imported goods and services;
- the «influence effect» relates to the ability of a state to interrupt its own exports and imports.

Hirschman stresses the inextricable link between the dependence on trade and the gains from trade: The more a country benefits from trade, the more dependent it is on trade.

Charles P. Kindleberger (1951) studies the influence of economic groups on tariffs in the late 19th century in such countries as Germany or the United Kingdom: The state often pursues the interests of powerful groups, and is therefore not neutral. He stresses that interest groups don't always have their way; there are periods (1850-1875, 1945-1975) with a rise in free trade. His later book «Power and Money» (1970 b) describes in the subtitle exactly the content of the field: «The Economics of International Politics and the Politics of International Economics». Kindleberger's analysis is very broad; his chapters treat e.g. imperialism, war and peace-keeping as part of the «Economics of International Politics», and trade, aid, migration, capital, corporations and money as part of the «Politics of International Economics». While his approach is clearly economic, he supports his arguments mainly with the help of historical and actual economic and political facts.

Besides Hirschman and Kindleberger, a number of other economists have written early in the field, such as Joseph Schumpeter (1951), Kenneth E. Boulding (1962, 1968), Peter Bernholz (1955), Harry G. Johnson (1965), Richard N. Cooper (1968), Thomas Schelling (1960,

1966) and Charles Wolf (1960). On the whole, however, there have been few contributions explicitly using modern economic theory ⁽²⁾.

Within *political science*, there is today a quite well established field called «International Political Economy». This approach has recently been surveyed (Barry Jones 1981, 1982, Tooze 1981) and there exist useful collections of articles (Bergsten and Krause 1975, Bauer 1975, Kegley and McGowan 1981). The most often cited contribution in this field is Robert Keohane and Joseph Nye's book «Power and Interdependence» (1977); other basic contributions are by Susan Strange (1971) and Fred Bergsten (1975) on the politics and economics of international currencies, and Stephen Krasner's «Defending the National Interest» (1978). A series of books in the «Political Economy of International Relations» has been edited by Benjamin J. Cohen, e.g. by Knorr (1973) on «International Power», Wall (1973) on «Foreign Aid», Gilpin (1975) on «Foreign Direct Investment» and Cohen (1977) on «International Monetary Relations».

Political scientists do not hesitate to claim International Political Economy as their proper and exclusive domain. «Power», «regime» and «authority» are taken to be the central concepts with which to study international politico-economic interaction. Moreover the analysis is «dynamic» and takes into account historical processes. Accordingly, there is a marked tendency to *reject* economic theory. This rejection of economics does not, however, seem to be based on an extensive knowledge of both the approach and the literature. Public Choice is almost totally disregarded ⁽³⁾; indeed the «classical» writers (Arrow, Downs, Buchanan, Tullock, Niskanen) are never quoted, not to speak of the specific contributions of this approach to International Political Economy as surveyed in this approach.

The political scientists' International Political Economy can be criticized in various respects. The most important shortcoming is its *non-analytical* structure. It lacks a well spelled out theory based on individual behaviour from which to derive empirically testable hypotheses. The political scientists' approach is, however, useful to point out problems, to give general insights and to suggest areas for research.

⁽²⁾ There is, of course, an old tradition of Marxist writers looking at the problems from their own perspective, for example, Baran and Sweezy (1966) or Mandel (1972). Special emphasis is given to imperialism (see, for example, the collection of articles by Boulding and Mukerjee 1972). The «dependencia» theories studying American imperialism in Latin America are treated, for example, by Magdoff (1969), Galtung (1971) and Frank (1972).

⁽³⁾ The only exception is Olson's (1965) analysis of the conditions for interest representation in the face of public goods, and Olson and Zeckhauser's (1966) application to cost sharing in alliances.

III. PROTECTIONISM.

1. *Why not free trade?*

The pure theory of international trade clearly states that a unilateral shift to free trade is desirable (leads to a higher real income) except if this leads to such a deterioration in the country's terms of trade that its real income falls. The theory therefrom concludes that when the advantages of trade liberalization are explained, the government will (eventually) do away with tariffs. However,

« The traditional approach assumes away the question [of how that optimum can be attained, the authors] by postulating the existence of a benign, omniscient government that can use non-distortionary taxes and subsidies to place society at a point on the utility-possibility frontier » (Findlay and Wellisz 1983, p. 15).

The politico-economic problem thus is to explain why tariffs do exist and why the government does not undertake the Pareto-optimal step of abolishing tariffs (4). It could be argued that the government would win votes because either a majority of the electorate benefits, or if it is only a minority, the government is able to bribe a sufficient number of voters out of the efficiency gains in order to reach a majority. If the citizens determined the tariffs by a direct single majority vote in an assembly, the median voter would cast his vote in favour of free trade.

The ideal conditions of the median voter model are, however, modified in important respects in reality, providing an explanation for the continuous existence and possibly even growth of tariffs. The following five modifications have to be taken into account (see also Baldwin 1976):

(i) The losers of a tariff reduction are not compensated (e.g. because of the high transaction costs involved), and if they form a majority they obstruct the reduction and elimination of tariffs;

(ii) The prospective gainers have less incentive to participate in the vote, to inform themselves, and to organize and to support a pressure group than do the losers. Tariff reductions are a public good whose benefits are received by everybody, including those not taking the trouble and incurring the cost to participate actively in the political process. The benefits of lower tariffs are moreover uncertain and in the future, so that they are discounted by the potential gainers. The prospective

(4) It can be taken for granted that in the vast majority of cases the possible terms of trade effect does not countervail the welfare increasing effect of free trade, so that the optimum tariff argument does not apply.

cost of tariff reduction is, on the other hand, much more direct, concentrated and visible, so that it is worthwhile and possible to fight politically against a tariff reduction (see Downs 1957, Olson 1965);

(iii) The prospective losers of a regime of free trade may be better represented in parliament and in the government, depending on the system of voting ⁽⁵⁾;

(iv) Logrolling or vote trading can make it possible that the will of the majority of the electorate is overruled and protectionist pressures prevail. Vote trading is possible if groups of voters have unequal intensities of preferences for the two issues. This is very likely to be the case where tariffs are concerned. Consider, for example, group I of voters engaged in domestic, import competing activities. Their main preference is against the reduction of tariffs for their *own* products (issue A) and weakly for a reduction of tariffs for some other products (issue B). Assume a group of voters II, whose main interest lies in maintaining the tariff for the products stipulated in issue B, and who have a weak preference for issue A. If neither of the two groups has a majority, and the other voters perceive the benefits of free trade, both issues A and B would be accepted and free trade established. If groups I and II combined have a vote majority, they can, however, agree on trading votes: Group I votes against the tariff reduction which group II strongly opposes (i.e. votes *against* B), provided group II votes in compensation against the tariff reduction which group I strongly opposes (i.e. votes *against* A).

The vote trade then leads to a vote majority *against* tariff reductions.

A particular vote trade to maintain a tariff is beneficial for the participating groups (because otherwise they would not engage in it) but a sequence of various vote trades may lead to unfortunate consequences for all the groups involved (« Logrolling paradox »):

(a) There is a tendency to have a higher overall tariff level (and more trade restrictions) than the groups engaged in the vote trading desire;

(b) The groups of voters not involved in vote trading — in our particular case the unorganized consumers — are « exploited » by the active logrollers.

⁽⁵⁾ Assume, for example, a parliamentary election in three precincts of equal size and the same number of seats. A group (say the opponents of free trade) can win a majority in parliament if in a majority of precincts (in our case in two precincts with 33% of the electorate each) it gets at least 51% of the votes. With an advantageous regional distribution it is thus possible to have a parliamentary majority with (roughly) 33% of the total votes. With 25 precincts of equal size, only 26% of the total votes is required.

The introduction of a « market for votes » may thus not lead to the Pareto-superior outcome of free trade.

(v) Another reason why tariffs may be maintained is that they are a source of revenue for governments, which in their absence would find it (even) more difficult to finance public expenditures. This is especially so in developing countries where due to the tax system's inefficiency there is little tax revenue.

Table 1 shows that the share of tariffs as percent of total government revenues is small in industrialized countries (roughly 4½%), but is higher the poorer the developing country is. For LDCs with a per capita income of less than \$ 250 (1978) tariffs contribute more than 40% to total government revenues.

TABLE 1. — *Tariff revenue as a share of total revenue according to various country groupings, 1972-1977 (averages, in percent).*

— industrialized countries	4.4%
— newly industrializing countries	14.8%
— LDCs:	
— per capita income larger than \$ 250 p.a.	28.2%
— per capita income smaller than \$ 250 p.a.	40.3%

Source: Adapted from Greenaway (1981), Table 8.2.

A government much depending on this source of income will use its discretionary room to maintain or even increase tariffs, and will oppose free trade ⁽⁹⁾.

These five modifications of the ideal simple majority voting model are able to explain why free trade, although optimal from the point of view of the country as a whole, is not a pervasive feature of reality. The arguments suggest that there is a *political market for protection*. The

(9) Whether tax revenue falls, stays constant, or rises when the tariff rate is marginally reduced depends, of course, on the price elasticity of the demand for imports (and exports, in the rarer case of an export tariff). Government usually expects a fall in revenue, at least in the short run.

demand for protection is exerted by particular groups of voters, firms and associated interest groups and parties; the *supply* of protection is brought forward by politicians and public bureaucrats. It is important, however, to carefully specify the objective functions and constraints of the actors in the market for trade protection. It should be observed, for example, that the voters are not only interested in their short-term and narrow economic interests but also in national foreign policy and military power. This may lead to a marked difference in behaviour between members of parliament and the government, especially in the case of the United States (Baldwin 1981). Congressmen depend on the vote received in their district for reelection. As argued above, the protectionist groups with well defined and organized interests are likely to prevail. In general, there will be only a modest demand for tariff reductions by exporters, import agents, large users of dutiable imports, and multinational enterprises. The president finds himself in quite a different position as his constituency is the whole nation. His chances of reelection may seriously be threatened if the international image of the country worsens. He has therefore an interest in using international trade policy as an instrument of general foreign policy. Trade liberalizations provide a means for a successful foreign policy because it tends to reduce international economic tensions. The president needs, however, the acceptance of his liberalization moves by the Congress, i.e. he has to take into account the strong protectionist interest. The trade bills introduced by American presidents into Congress are therefore typically a mixture between general tariff reductions combined with specific protectionist features.

2. *The role of interest groups.*

According to one of the centrepieces of international trade theory, the Stolper-Samuelson (1941) theorem, capital favours free trade, and labour is protectionist if the country is capital abundant compared to other nations. The reverse is taken to hold for a country which is labour abundant: Capital is expected to be for protection, labor for free trade. The analysis thus suggests that lobbying on trade issues occurs along factor lines. It is excluded that both capital *and* labour in any given country favour the *same* position in the issue of protection.

An alternative model (Cairnes 1874) assumes that factors are industry specific and that both capital and labour have the same position *vis à vis* tariffs. In an empirical analysis of the position of capital and labour in the hearings before the American Ways and Means Committee on the American president's trade bill of 1973 (Magee 1980), it is shown that the Cairnes model is more compatible with reality: in 19 out of 21 industries labour and management (standing for capital) held the *same* position; 14 were protectionist, 5 for free trade. Only in 2 industries

(petroleum and tobacco) did labour and management's positions as to protection differ. This suggests that lobbying is best analyzed by looking at the import-competing and export dimension. This is indeed the procedure used in the theoretical and empirical analyses subsequently presented.

Interest groups interact with parties in order to influence tariff formation (Brock and Magee 1978, 1980, Magee and Brock 1980). They « invest » votes and money (economic resources). The more concentrated and better organized gainers from a tariff can compensate their lower vote number by offering financial support to a party considering their wishes. The losers from a tariff usually have a larger voting strength but can muster fewer resources for their benefit. The interest groups find themselves in a prisoner's dilemma situation: No one group can unilaterally stop lobbying, because its interests would be disregarded in the political process.

The parties' goal in this model is to maximize the probability of getting into power by using the financial resources at their disposition and by choosing an appropriate position on the free trade/protection issue. The more protectionist a party's position is, the more resources it will receive from the pro-tariff pressure groups. It thereby alienates, however, the consumer/voters (and loses some resources from the pro-free trade group). Its optimal position on the tariff issue is reached when the positive marginal effect of increased resources on the reelection probability equals the negative marginal effect of lost votes (and resource flows) from the other group. The model endogenously determines the tariff level, the amount and distribution of resources used to finance parties and the distribution of the vote between the parties. Tariffs may in this framework be considered a « price » which equilibrates political markets.

The model sketched is so far quite abstract, it is restricted to the competition between two parties, and does not (yet) yield practically applicable and empirically testable results. The assumption about the parties' (and government's) behaviour is not convincing because they are taken to be solely interested in winning elections. A more realistic assumption would be that they want to pursue ideological goals (e.g. a liberal party may favour free trade for that reason, while a nationalistic party may favour high tariffs to further autarchy), but that they are subject to an election constraint. Despite these criticisms, the model provides a very useful starting point for the explanation of tariff formation.

Another approach attempting to endogenously determine tariff levels in the political context uses the general equilibrium setting of traditional international trade theory (Findlay and Wellisz 1983). There are two goods, agricultural products with the specific factor land, and manu-

facturing products with the specific factor capital. Labour is used in both sectors and is taken from a common pool (\bar{L}). Competition is perfect. It is assumed that the country considered has a relative advantage in agricultural goods which it exports; manufactured goods are imported. The political system is assumed to be democratic and pluralistic. Agricultural interests use labour L_A in order to further free trade, while manufacturing capital also uses labour L_M to attempt to increase tariffs t . The « tariff formation function » thus is

$$(1) \quad t = F(L_M, L_A), F_1 > 0, F_2 < 0.$$

The political struggle can be described by a Cournot-Nash process in which each group takes the resources used to influence the tariff to be constant, and calculates its optimal input in the light of the tariff formation function and the structure of the economy. Assuming that the process is stable, an equilibrium level and distribution of lobbying expenditures is reached at point E (see Fig. 1), the intersection of the reaction functions of the agricultural interest (anti-tariff) AA' and of the manufacturing group MM' .

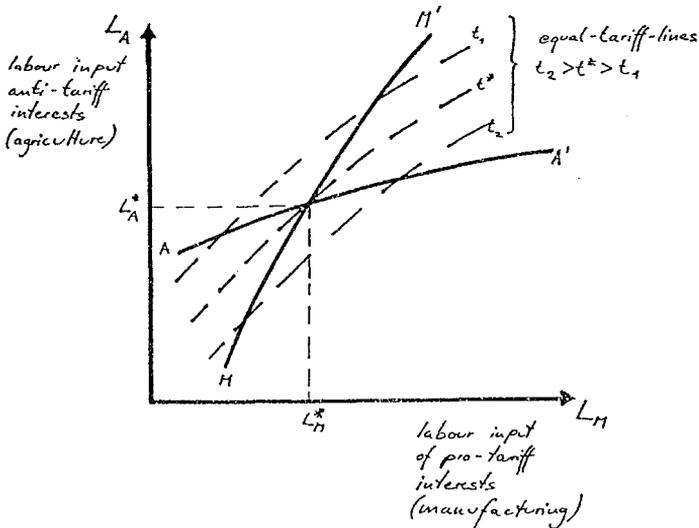


Fig. 1. — Determination of lobbying inputs and of the tariff level.

This equilibrium determines not only the total level ($L_A^* + L_M^*$) and distribution (L_A^*/L_M^*) of lobbying expenditures, but also the level of the tariff t^* (according to eq. 1). An equilibrium above and to the left would mean that a lower tariff is arrived at (because, given L_M^* , the anti-tariff groups use more resources to influence the tariff). The labour force in productive (economic) use is $L^* = \bar{L} - (L_A^* + L_M^*)$, and the welfare loss due to political strife equals $w \cdot (L_A^* + L_M^*)$ (where w is the shadow wage of labour).

This model elegantly analyses the endogenous determination of tariffs from a theoretical, and highly aggregated point of view. One of its main weaknesses is that the public goods character of tariffs and free trade, and the concomitant free rider effect are disregarded.

In both models just sketched the activity of interest groups lobbying for or against protection which has been called « revenue seeking » (see the survey by Tollison 1982) or, more generally, « directly unproductive (DUP) » activities (Bhagwati 1982). This concept has actually been created to analyze the waste of resources generated by the struggle over the rents produced by the government interventions into international trade. So far, only preliminary estimates exist of the likely welfare loss caused by the struggle over tariffs and other trade restrictions. When this concept is applied, care should be taken not to fall prey to the « nirwana approach », i.e. to compare the situation with a competitive struggle over trade restrictions with an ideal situation of free trade. The relevant comparison is between different institutional conditions existing in the real world, for example between a country (or period) in which the interest groups fighting for (and against) tariffs are organized on the level of the nation as a whole compared to a situation in which the interest groups are organized at the industry level.

3. Politico-econometric estimates.

The political and economic factors influencing tariff policy and protectionism discussed have partly been subjected to quantitative analysis. While the early study by Schattschneider (1935) has simply interpreted data, the current studies use econometric techniques.

They provide interesting evidence about the quantitative aspects of tariffs and other protective devices, and they strongly support the politico-economic approach here used. Various aspects of protectionism have been studied: The political pressure or demand exerted in the form of hearings or in parliamentary votes, that is, the *input*, or the *outcome* of the politico-economic struggle as reflected in tariff rates, non-tariff barriers, or more broadly, industry assistance by government. In the following,

some selected econometric studies will be presented, starting with explanations of the degree of protection across industries, followed by explanations of the cyclical development of protection over time.

Voting on tariffs is analyzed for the case of the United States Congress in a study (Baldwin 1976) which seeks to explain the differences in *political pressure* for or against protection from foreign competition between industries. The specific issue to which multivariate probit analysis (a kind of multiple regression in which the dependent variable is constrained between zero and one) is applied is the *trade liberalizing* bill introduced to the House of Representatives by a Republican president in 1973. The probability of a Congressman voting for the trade bill (a liberal trade vote, indicated by a dummy variable taking the value zero) or against the trade bill (a protectionist vote, indicated by a dummy variable taking the value of one) is explained by four determinants. These explanatory variables are (i) The proportion of import sensitive industries in the Congressman's constituency. (A positive sign of the estimated coefficient is expected because the Congressman has an incentive to vote *against* the liberalizing trade bill in order to please his voters); (ii) The proportion of export-oriented industries in his constituency (expected negative sign); (iii) The financial contribution to the Congressman's campaign made by the three major trade unions opposing the bill (expected positive sign); (iv) The party affiliation. If the Congressman is a Republican a respective dummy variable takes the value one, in the case of a Democrat, it takes the value zero. A negative coefficient sign is expected because the bill is introduced by a Republican president.

The probit estimate yields the following equation :

Probability of supporting the 1973 trade bill

$$\begin{aligned}
 &= - 0.40 && \text{(constant)} \\
 &+ 3.49^* && \text{(import-sensitive industries)} \\
 &\quad (2.62) \\
 &+ 1.16 && \text{(export-oriented industries)} \\
 &\quad (1.28) \\
 &+ 0.0004^{**} && \text{(union campaign contribution)} \\
 &\quad (3.22) \\
 &- 1.20^{**} && \text{(party affiliation)} \\
 &\quad (6.79)
 \end{aligned}$$

The values in parentheses are the approximate *t*-values, i.e. the ratio of the maximum likelihood estimate of the coefficient divided by the standard error; the presence of one (two) asterisk(s) indicates statistical

significance at the 95% (99%) confidence level. The explanatory variables as a whole have a statistically significant effect at the 99% confidence level by the χ^2 -test.

The variables relating to import-sensitive industries, trade union contributions and party affiliation are all statistically significant at the 99% confidence level. As theoretically expected, the larger the weight of the industries in competition with imports in his constituency is, the more likely a Congressman will be prepared to yield to their pressure and to vote against the trade-liberalizing bill. It is interesting to note that export-oriented industries do not have a statistically significant influence on the Congressman's vote decisions; this corresponds well with the theoretical notion that anti-tariff interests are politically less influential than pro-tariff interests. As assumed in the two theoretical models just discussed, the financial contributions, here of protectionist trade unions, are able to influence a Congressman's behaviour: The more money he gets, the more likely he is to vote against the free trade bill. Finally, a Republican Congressman is indeed more likely to support the trade bill introduced by a president coming from his party than is a Democratic member of Congress. The results of this econometric analysis of the voting behaviour in the American Congress accords very well with the political economy approach to tariff formation as set out.

Several studies have analyzed the differences in *tariff rates* between industries as the outcome of the political struggle between *demand* for and *supply* of protection. It is hypothesized that more concentrated industries find it easier to organize and to muster political pressure because the small number of enterprises are more willing to bear the transaction, organization and lobbying costs for getting tariff protection, overcoming the free rider problem caused by the public good of protection. This hypothesis has been empirically analyzed by Pincus (1975, 1977) for the U.S. tariff act of 1824. He discusses intuitively which variables may enter the estimation function explaining the level of nominal duties on manufacturing products. A higher industrial concentration of output is found to be associated with a higher tariff level, *cet. par.*, but it remains open whether the thesis also holds for other periods.

A particularly interesting contribution to explain the tariff structure by Caves (1976) compares three competing models:

(i) the government maximizes the probability of winning the election given a geographically represented electorate;

(ii) interest groups determine the structure of tariffs, the various industries having different benefits and costs of lobbying for protection;

(iii) the government sets tariffs to react to a collective nationalistic feeling about the industrial composition of the economy.

Though the three models are not mutually exclusive, they emphasize different politico-economic processes for tariff setting. An econometric test for Canada's tariff rate structure in 1963 broadly supports the interest groups model as against model (i) and (iii).

An alternative interest group explanation of Canada's tariff structure stresses international political influences (Helleiner 1977). A time series analysis for the period 1961-70 suggests that labour and multinational firms have the largest influence on tariffs: Labour seeks increased protection because of the rising supply of industrial products from low-wage countries while multinationals are interested in free trade.

The studies on the determinants of the tariff structure lack a well spelled out behavioural theory of the government and interest groups. Institutional aspects, for example the major differences in political institutions between the imperial, Weimar, and post-WW II Germany are disregarded in Glissmann's (1980) work. The estimation equations are not stringently derived from theoretically derived propositions but might be accused of « fishing for significant variables ». Nevertheless, the analyses present an important advance over attempts to use a purely economic approach to explaining tariff protection (standing for a host of such studies see, for example, Riedel 1977).

Similar studies on the determinants of the tariff structure between industries have been carried out for other countries such as France, West Germany, Japan, the United Kingdom and the United States in the context of a research project sponsored by the World Bank (see the survey by Anderson and Baldwin 1981). The results suggest again that the import-competing industries tend to get higher tariff protection than the industries with export interests. It also turns out that labour-intensive, low-wage industries, and sectors with few firms and large numbers of employees tend to be protected more because they can more convincingly argue in the political discussion that they are directly threatened by foreign suppliers, and due to the large number of voters involved it is of particular interest to government to yield to their demands for protection.

One of the most recent studies (Lavergne 1983) distinguishes three sets of determinants of the level of, and the change over a time period in, tax rates. The first is « political » and refers to the pressure group influences; the second contains « mixed » economic and political influences such as the effort by decision-makers to minimize displacement cost, the comparative advantage of the industry relative to foreign competition, and tariff setting as a means of international bargaining; the third set of determinants includes « principles » such as the maintenance of historical continuity, as well as miscellaneous aspects related to a public interest view of tariff setting. The econometric test is applied on 300 manufacturing industries in the United States from 1930 to the present.

The estimates reveal that the most important influence on the tariff setting process is conservatism: The structure of tariff rates between industries tends to be maintained over time. It also turns out that the more competitive and industry is in the international field (comparative advantage) the lower is its tariff level. Contrary to almost all other econometric studies of tariff formation, the pressure groups do not seem to exert any systematic influence in this particular study.

Tariffs are not the only instrument for protection from foreign competition. A great many forms of *non-tariff barriers* to international trade exist. They are an example of *administrative protection*. Trade restrictions of this nature are rarely voted on directly by the parliament (Congress) but they are used as an instrument for the administrative regulation of imports. The behaviour of American public administrations (the Treasury Department and the International Trade Commission) has been empirically analyzed for the period 1975-79 (Finger, Hall and Nelson 1982).

An explanation of the typical features of the formation of non-tariff barriers may be based on the economic theory of regulation (see e.g. Peltzman 1976). It argues that the regulators serve special interest groups. When an outside interference takes place, the regulatory interventions have to be changed in order to reestablish political equilibrium. In the international trade area one such outside intervention was the Kennedy round whose purpose was to reduce tariffs across the board by 50 percent - the so-called linear rule. If the linear rule envisioned had indeed materialized, the largest cut in absolute terms should have come in those economic sectors with highest trade barriers. This pattern did not in fact obtain. The tariff reductions were not uniform across industries. An important further reason why the structure of tariffs was not strongly affected by the Kennedy round was that the tariff reduction was *substituted* by other forms of protection, in particular by regulatory non-tariff barriers.

This theory of the interaction of tariffs and non-tariff barriers to international trade has been empirically tested for the United States gross manufacturing industries in the year 1970 (when most of the Kennedy round reductions had already materialized) (Marvel and Ray 1983). The results for tariff rates indicate that American manufacturing industries with rapid growth are more likely to have small protection than are declining industries. High concentration industries are more successful in organizing opposition against tariff reductions and therefore have relatively high tariffs. Industries selling primarily to consumers are also better able to avoid tariff reductions, while internationally competitive (high technology) industries have to cope with relatively little protection (low tariffs). The results for *non-tariff barriers* suggest that there is not only a substitutive, but also a complementary effect

between tariffs and non-tariff barriers: Those industries having the highest tariff protection *also* have the political influence to reach high non-tariff protection. The two forms of protection are, however, not equally attractive for specific industries. The estimates indicate that non-tariff barriers are more accessible than tariffs for low-concentration industries. The low concentration industries have greater difficulties to yield political influence, mainly because of the free rider problem. For firms in industries with a great number of suppliers, the rents generated by tariffs cannot easily be appropriated, because they may be bid away through the rapid entry of new domestic firms into the industry. Non-tariff barriers are more advantageous because the rents generated can often be distributed selectively to punish free riders, and can be withheld from new entrants. An example are import quotas based on historic sales of the firms already in the market. On the whole the estimates strongly support the political economy interpretation of the process of protectionism. They indicate that there is a systematic influence of special interests which undermine the linear type of trade liberalization agreed to in such agreements as the Kennedy round. It is shown that the factors which make it possible for industries to gain more protection than others can be empirically identified.

Protection may also take the form of *subsidy assistance* provided by the government, especially when the tariff rates are set by international agreement as is the case in the European Community. For example, the following tariff equation has been estimated across 35 industrial sectors in Italy for the year 1975 (Grilli and La Noce 1983):

Subsidies to industries

$$\begin{aligned}
 &= - 0.83 && \text{(constant)} \\
 &+ 0.41* && \text{(lobbying activity by workers)} \\
 &\quad (8.03) \\
 &- 0.21* && \text{(disincentive for lobbying by entrepreneurs)} \\
 &\quad (3.08) \\
 &- 0.16* && \text{(effective rate of tariff protection)} \\
 &\quad (1.97)
 \end{aligned}$$

$$\bar{R}^2 = 0.68; \quad \text{the figures in parentheses are } t\text{-values.}$$

This estimate indicates that the stronger the lobbying activity of the workers (indirectly measured by labour's share in value added) and the weaker the disincentive for lobbying by entrepreneurs (somewhat implausibly measured indirectly by the share of value added in production), the more subsidies an industry receives. Moreover, the lower (effective) tariff protection is, the more an industry is assisted by subsidies. The

same phenomenon has been noticed for West Germany (Glismann and Weiss 1980). These empirical studies support the notion of protection being an equilibrium « price » equating demand for and supply of protection. In the case of outside intervention (EC tariff rates) the national governments tend to reestablish this politico-economic equilibrium by substituting other forms of protection.

The *development* of tariff rates *over time* has also been analyzed econometrically. Protection is expected to be strongest when a country's economic position is weak and there is unemployment, because this increases the political weight of the industries seeking protection. Trade liberalization is expected to take place when economic conditions are good and when there is inflation. In that case a stimulation of imports may help to keep down price increases, which is good for a government seeking reelection.

One way to measure the intensity of the *demand* for protection in the United States is the number of « escape clause » *petitions* to the International Trade Commission under the trade legislation of the United States. The following equation has been estimated over the period 1949-1979 (Takaacs 1981).

Number of escape clause petitions

$$\begin{aligned}
 &= 10.49 && \text{(constant)} \\
 &- 0.01* && \text{(gross national product)} \\
 &\quad (4.24) \\
 &+ 1.24* && \text{(rate of unemployment)} \\
 &\quad (2.88) \\
 &- 0.17* && \text{(trade balance)} \\
 &\quad (2.28)
 \end{aligned}$$

$$\bar{R}^2 = 0.44; \quad \text{the figures in parentheses are } t\text{-values.}$$

According to this estimate, in the United States the demand for protection rises in a statistically significant way the lower real GNP and the higher unemployment. (The influence of inflation is not tested). More protection is also sought when the trade balance worsens: The domestic producers can in that case convincingly argue that foreign suppliers are « having national interests ».

Dumping cases.

In another study (Magee 1982) the protectionist pressure is measured by the number of *dumping cases* filed with the U.S. Bureau of Customs: the (prospective or actual) losses incurred by import-competing firms cause them to file dumping charges against foreign exporters.

The econometric estimate with annual data from 1933 to 1977 yields the following result:

log (protection)

$$\begin{aligned}
 &= - 0.15 && \text{(constant)} \\
 &+ 0.92^{**} && \text{log (unemployment, percent)} \\
 &\quad (6.77) \\
 &- 5.67^{**} && \text{(inflation, percent)} \\
 &\quad (3.88) \\
 &- 1.38^{**} && \text{(dummy variable)} \\
 &\quad (7.54)
 \end{aligned}$$

$\bar{R}^2 = 0.72$; the figures in parentheses are the *t*-values.

The dummy variable takes the value 1 for 1933-52, and zero for 1953-77, to account for an (unexplained) structural shift.

Unemployment and inflation have the expected positive and negative influences and are statistically significant. A ten-percent increase in the rate of unemployment (e.g. from 5% to 5.5%) is associated with a nine-percent increase in protectionist pressure; each percentage point rise in the rate of inflation (e.g. from 7% to 8%) lowers the protectionist pressure by 5.7 percent. The econometric estimates of the cyclical influences on the tariff formation process are so far limited to the demand side. The difficulty is to find sufficiently long and comparable data series to perform a similar type of analysis on actual tariffs or on other protectionist measures.

4. *Evaluation.*

The discussion of the various contributions shows that the politico-economic analysis based on Public Choice is well under way and that useful theoretical and empirical results have been achieved. The research is, however, only at its beginning and there are various aspects of the analysis which have to be improved upon. Those are, in particular:

- (1) The behaviour of the actors (government, interest groups and public bureaucracy) must be modelled more carefully, taking into account the characteristic preferences and constraints each one is faced with;
- (2) The equations used for econometric estimation must be more closely and consistently linked with the theoretical models;
- (3) The framework of the analysis should be extended, so that all the relevant causal relationships can be imbedded within the analysis.

Thus it is necessary not only to consider the effect of politico-economic conditions on tariffs, but also the effect of tariffs on the state of the economy and polity. This suggests a model composed of a set of equations, and simultaneous estimation techniques.

IV. INTERNATIONAL AID.

Economic aid given by the governments of industrialized to less developed countries is scarcely given for philanthropic and humanitarian reasons. Rather, the donor countries do it out of selfish motives, expecting an economic and/or political benefit from such action. It is also well known that some LDCs manage to get much aid, and from different sources, while other nations are less successful.

The donor nations may have various *economic* motives for helping the poor countries: Aid is expected to stimulate additional exports of the donor country; it helps to get rid of burdensome surpluses, especially of agricultural products; it can contribute to increasing the production of raw materials which the donor country wants to import (at a reasonable price); it may help to improve the climate for successful foreign direct investments in the country receiving aid.

Foreign aid to developing countries may also yield various types of *political* pay offs: An increase in influence on political and cultural decisions relevant to the donor country; a strengthening of the position of the government or regime in power with which the donor country has friendly relationships; an improvement of the military security of the donor state by fostering an ally; and a rise in international prestige by projecting the image of a humanitarian country.

These and other justifications for giving aid to countries of the Third World are all in the interest of the donor country concerned *as a whole*; the question is *which actors* within a country have a motivation to act in the nation's interest. Are there any incentives for the voters, interest groups or the government to act on behalf of the nation's foreign interests? To answer this question it is necessary to look at the role of international aid within the political economy of a donor country.

1. *International aid as a domestic issue.*

The self-interest model of Public Choice may be applied to the domestic actors' behaviour with respect to international aid-giving. *Voters* are not very interested in the aid going to foreign countries because they derive at best an indirect and non-monetary benefit from it, and they therefore make little effort to become well-informed on the particular issues involved. Their general feelings about foreign aid in the form of an undifferentiated « public opinion » nevertheless has some impact

on the foreign aid decision making process. There are some *interest groups* which push for more aid in order to reap economic benefits (e.g. exporters) and there are others which unite people advocating aid for purely humanitarian reasons (e.g. the churches or the Red Cross). However, such interests are few and weakly organized, compared to industrial pressure groups such as trade unions or producers' organizations. They have, in particular, much smaller financial resources available to make their case in the political arena.

The *government* is able to use the discretionary room provided by the voters and interest groups to further its own goals. International aid serves in particular for the purpose of foreign policy. A country's « international standing » may be an important issue for government politicians: they derive high benefits in terms of prestige and possibly influence, if the nation they represent internationally enjoys a high esteem among the other nations. Moreover, due to the discretionary room left to them by the voters and interest groups, the politicians have a chance to put into effect their ideological notions about what a « good » policy is - a possibility which they rarely have with respect to domestic (economic) policy. It is not impossible that the politicians fill this discretionary space by pursuing an aid-giving policy which is in line with the « country's » interests as discussed above. The *public officials* representing a country externally (the diplomats and the many public officials involved in the host of international negotiations) also have an interest in a good standing of their country in the international scene. They will tend to support the politicians in their aid-giving policy. In an international or general setting a government will tend to speak out for international aid but it will be careful not to make any firm commitments: one can speak of a « rhetoric of aid » (Wall 1973). However, when financial decisions have to be made which affect the internal political economy, the government will be rather reluctant to grant a large amount of international aid because it usually benefits more by allocating the funds to groups within the country.

2. *Interactions between donors and recipients.*

The *recipient countries* may actively influence the amount of aid given to them by donor countries who are interested in their support in the international sphere. A country is likely to receive little aid if it *always* supports the donor country politically, or if it will *not ever* support the donor country under any circumstances. It can expect to get the highest amount of aid if it makes it clear that the political position it takes will depend on the amount of aid received. A country wishing to maximize the amount of foreign aid it receives should thus not be a permanent member of any international bloc but should rather indicate that its political position *can* be influenced by giving more aid.

An industrialized country giving aid to a less developed country in turn rarely does so unconditionally, but on the premise that the recipient country takes a political position favourable to the donor country, measured for instance by the proportion of votes it casts in line with the donor country's wishes in the United Nations. Often, the donor country will be willing to invest more aid in a particular country, the higher the return in terms of support is which it receives from the country getting aid. A third world country may aspire to receive aid simultaneously from various donor countries by taking some intermediate position between these two super-powers. This interaction has been modelled by Hirschman (1964) with the help of 'indifference' curves indicating the relative marginal utilities the aid a recipient country attributes to a political position nearer or further to the donor, and with the help of the 'transformation' curve indicating how the donor countries react when a recipient is less willing to support a donor's political aims. Figure 1 shows, for example, the case in which both donor countries do not penalize the recipients when they do not support them but rather take a 'neutralist' position. This means that a 'neutralist' position brings forth the highest amount of aid and the aid transformation curve has the usual concave shape from the origin.

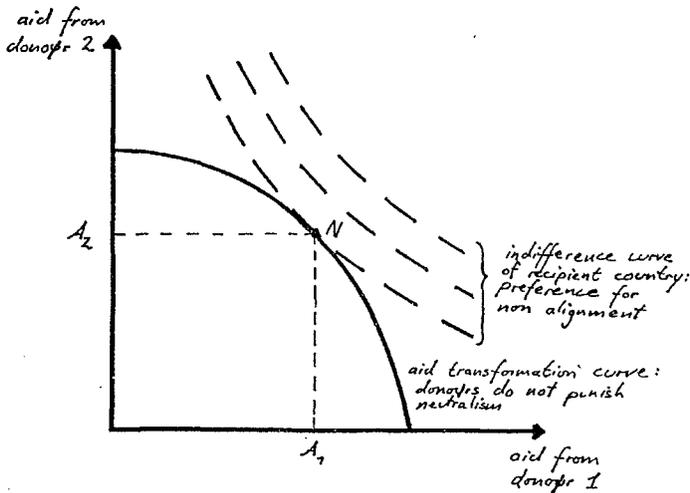


Fig. 2. — Recipient country takes aid from donor 1 and donor 2.

If the aid receiving country has a preference for non-alignment, the indifference curve between aid from the two donors has the usual shape. In the stable equilibrium, indicated by N , the recipient country takes the amount A_1 from donor 1, and A_2 from donor 2. Compare this outcome with figure 2 where both donor countries penalize neutralism, which makes the aid transformation curve convex.

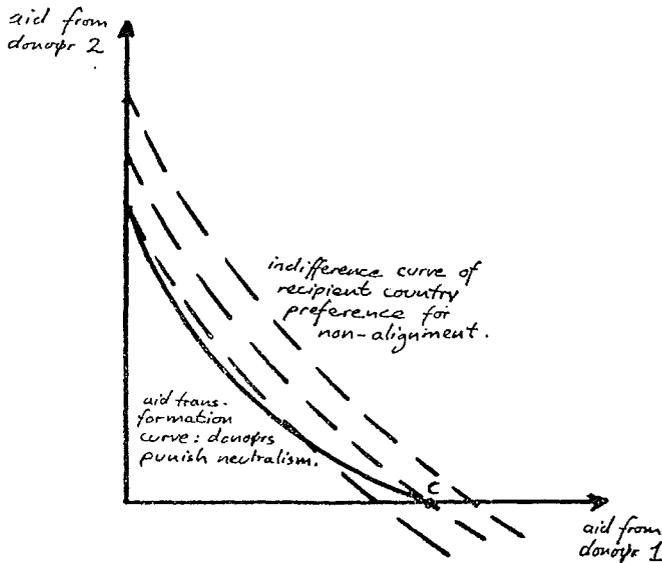


Fig. 3. — Total commitment of aid recipient country to donor 1.

If the recipient country again prefers a non-aligned position, it fares best by either totally committing itself to donor 1 or to donor 2. According to the curves in figure 2, the best position is at C , where aid is exclusively taken from country 1.

It is not difficult to see that the framework of this analysis allows one to analyze many different combinations of the behaviour of the donor and recipient countries. This highly abstract model is able to deal with total aid, the distribution of aid between donors, and the alignment of the aid receiving country. It has so far not been empirically tested; its

main purpose is to show that when aid giving is the result of an effort to yield political influence, an interaction of behaviour between the donor and the recipient emerges. The model also shows that the simple tools of economic analysis may be fruitfully applied to analyze important aspects of international political economy.

3. *Aid as an international private or public good.*

A government of a country, and possibly its inhabitants, may derive utility not only from giving aid itself, but also from the aid given by other countries. What matters in this case is not so much the own contribution to the developing countries (i.e., the own input) but rather the *total* aid received by them, irrespective of who contributes it. In that case aid is an international *public* good. On the other hand, if aid is a means of influencing the recipient country, the government (and population) of the particular country considered may experience a utility loss when other countries extend such aid. In that case aid is an international private good (with negative externalities).

An international aid function has been estimated with data for the 17 members of the Development Assistance Committee of CECD over a three year average for the years 1972-74 in order to test whether international aid is a public or private good (Dudley 1979). The results indicate that a country's per capita aid is *larger*, the *more* is spent by the other countries. This suggests that international aid is not a public good from which all nations benefit: The donor countries analyzed resent the aid given by other countries and tend to increase their own aid spending when other countries do, in order to maintain their influence in the international arena. Assuming that each of two donors takes the other donor's aid volume as given (Cournot-Nash) it may be shown that this mutual resentment among donors leads each one of them to allocate more to international aid than would be the case if it were an international public good. The competition among the donors thus benefits the developing countries.

V. INTERNATIONAL COOPERATION.

1. *Solutions to international free riding.*

The countries are well aware that international cooperation to provide public goods is difficult to achieve. Efforts have therefore been made to overcome or mitigate the free rider incentive in order to still benefit from the international public goods. Solutions have been sought in three different ways; they are not mutually exclusive but may reinforce each other under favourable conditions:

First, private goods are offered selectively to the cooperating nations, making it individually worthwhile for a country to join and to participate in the financing of the international public good and the respective organization. Creating such *selective incentives* is an import prerequisite for the possibility for governments to have their parliaments join in international cooperative acts. Considerable effort is therefore devoted by all participants to transform as far as possible the international public good into *private* (national) goods. The association of the international public good with national private goods means that it becomes possible for the nations to bargain on a « *quid pro quo* » basis: A country only receives benefits if it is in turn prepared to offer benefits to the other countries. The countries involved do not have to face the « *grand* » decision to either participate in the provision of the international public good or not to participate. Rather, the creation of associated private goods makes it possible to proceed sequentially in mutually beneficial steps. This quasi-« *market* » in terms of private goods produces the atmosphere of trust necessary for the international public good to remain linked with the private goods (see Frey 1982, with empirical tests).

A special type of private good which induces nations to participate in the provision of an international public good is the desire to influence the *nature* of the public good. A country which free rides has no say in this respect. This constitutes an incentive to participate all together and perhaps in a generally 'acceptable' degree, but it does not reduce the incentive to contribute less than the (marginal) benefits which the international public goods produces.

The *second* solution to achieve international cooperation is *coercion*. This possibility for forming and maintaining cooperation is often difficult or impossible to put into practice in the international context. The member countries are unwilling to give up their sovereignty. Therefore, *assuming* that coercion is possible does away with the problem of international cooperation as long as the international system is composed of sovereign nations.

The *third* solution to achieve international cooperation and to overcome the free rider incentive is by finding *rules* or *constitutional agreements* which lay down the conditions for cooperation (see Buchanan 1977, Frey 1983). Such agreements set down the « *rules of the game* » which the participating nations are willing to accept in the state of uncertainty about the future.

This form of international cooperation may well benefit all countries as they do not know the particular instances of hijacking that will arise in the future. As the countries have to decide behind the 'veil of ignorance' they agree to the general rule because it allows for the provision of the international public good of air security which is advantageous for each one of them. The rule established must lead to a Pareto-superior move according to the expectations of all the actors. Only under these

conditions will voluntary cooperation come about among the countries involved. Suitable conditions are not easy to find. Once a rule or constitution has been agreed upon, the problem consists in making sure the rules are observed and to overcome the incentives of the individual nations to corrupt the agreement. In general, it is easier to find and to maintain cooperation agreements among a *small group* of nations. Free riding is not as easily possible as in large groups, because the nations find it easier to monitor each other's behaviour. A country breaking a rule is easily found out and punished in some way or another, sometimes by simply ostracizing such damaging behaviour. 'Norms of reciprocity' do exist between nations which interact with each other. It has indeed been empirically shown that small, especially regional, international organizations are more successful than large ones (Russett and Sullivan 1971).

Three important areas will be discussed in which cooperation over the provision of international public goods is sought and where free riding exists, and where rules or 'constitutions' have been used in an attempt to overcome the difficulties. They are international (military) alliances, the international monetary system, and global common property resources.

2. International alliances.

In military alliances the small and poor countries spend a smaller *share* of their GNP for the provision of the alliance's collective security than the large and rich countries, because they can benefit from the public good of defence provided by the large spenders. This proposition has been empirically tested for NATO (see Olson and Zeckhauser 1966), and also applies to the Warsaw Pact. Table 2 lists the member countries' defence outlays as a share of their gross domestic product.

Comparing the nations' defence effort using the share of defence outlays in gross domestic product is questionable, however, for many different reasons. Nevertheless, the figures are able to illustrate the predictions made by the economic theory of alliances: In both defence treaties, the dominating country spends a much higher share of GDP on defence than the other member countries. In the case of NATO, the United States spent 5.9% of its GDP on defence in 1981, while the other countries spent only 3.5% of their GDP. In the case of the Warsaw Pact, the Soviet Union spent 8.8% of GDP for military purposes, while the other member countries spent only 2.9% of their GDP. The dominating country thus spent 70% *more* than an « average » member country in NATO, and 203% *more* in the Warsaw Pact. In earlier years this tendency towards free riding was equally strong, in 1973 the dominating country spent 82% *more* in NATO and 272% *more* in the Warsaw Pact

TABLE 2. — *Military expenditures as a share of gross domestic product of the member countries of NATO and of the Warsaw Pact 1980/81 (percent).*

NATO (1981)

dominating country:	
United States	5.9%
other countries:	
unweighted average over 13 countries	3.5%

Warsaw Pact (1980)

dominating country:	
Soviet Union	8.8%
other countries:	
unweighted average over 6 countries	2.9%

Source: Calculated on the basis of SIPRI (1983), p. 170.

in terms of the share of military expenditures in GNP. Such calculations are capable of providing only a rough and approximate indication of whether the free riding effect produced by the public good defence obtains in reality. There are a great many *other* factors influencing military expenditures, both in the case of the dominating and of the other members of a defence alliance.

Free riding behaviour can also be observed in the *United Nations*: the richest members who presumably have the greatest interest in the maintenance of peace by a collective international organization are by far the greatest contributors. The United States pays a third of the UN budget and when the organization was founded they had to fight hard to avoid having to pay one half or more. The five permanent members of the security council (USA, USSR, UK, France and China) pay two-thirds of the budget, and 20 percent of the members contribute 90 percent (Kennedy 1979).

3. International monetary systems.

All nations engaged in international trade and finance depend on the existence of a monetary order which enables them to make the necessary payments. A monetary order consists of a set of rules which are to be kept by all countries, such as the former gold standard, or after World War II the Bretton Woods system.

These rules, if well designed, are advantageous to all, but the incentives to deviate from them are also marked. It is therefore necessary not only to devise an international monetary scheme which is potentially beneficial to all nations, but also explicitly consider the benefits and costs to the *individual* participating nations. This aspect has been overlooked by the many proposals made for international monetary reform; they usually (implicitly) assume that there is an « international benevolent dictator » who will put them into effect.

A common monetary system, or *monetary integration* yields various benefits to the countries participating. These benefits are international public goods in the sense that all the *members* of the monetary union benefit from the common money. The benefits of a monetary union can, however, be withheld to a large extent from non-members. There is no rivalry with respect to the « consumption » of the benefits (if one member benefits this does not reduce the benefits going to other members), but there is exclusiveness. These special conditions have been studied in the context of the *economic theory of clubs* (Buchanan 1965). In contrast to the benefits, the cost of monetary integration has to be carried nationally. The most important disadvantage of joining a monetary union is that the level of unemployment and the rate of inflation can no longer be determined nationally. The national governments dislike such loss of control or sovereignty, because it reduces their chances to steer the economy according to their own purposes, in particular to secure their reelection. These costs are concrete, while the benefits appear as vague and abstract. Moreover, the costs of the sacrifice of domestic economic objectives and of an independent monetary policy come quickly, while it takes time for the benefits to materialize. Due to the publicness, delayed appearance and vagueness of benefits, and the private, national nature and clear visibility of the cost, few successful monetary integrations are to be expected to be formed and maintained purely for *economic* motives.

A more recent example of the importance of a political leader and of a small number of participants to overcome the public goods aspect of the benefits is the Bretton Woods system with its gold exchange standard. It has been in danger of collapsing for a long period as the countries with large holdings of American dollars had an incentive to

convert them into gold (as France actually did). If this conversion had been made, the system would have been thrown into a major crisis of confidence, doing great harm to the functioning of the international monetary system. The gold exchange standard remained viable under the domination of the United States until the period of massive U.S. balance of payments deficits in the 1970s. Until then there was only a small number of dollar holders who had an interest, and were able to reach an implicit agreement, to collectively assure the stability of the system and to thereby prevent a crisis. Had the dollar holdings been distributed more equally among the more than one hundred countries, it is unlikely that the voluntary reluctance to convert dollars into gold would have been achieved (Willett 1977). A similar situation exists in the international lending crises occurring since 1981. Under the leadership of the United States, the few industrial countries and the few very large commercial banks involved as lenders have so far managed to find agreements not only to refrain from calling back the loans from the debtor countries (such as Poland, Mexico and Brazil) unable to pay the interests and to amortize their debt, but to extend new loans so as to prevent these countries declaring themselves bankrupt. In both instances, international cooperation for the provision of a global public goods is and was achieved because of the leadership of one country, and the small group setting referred to above.

4. *Global commons of natural resources.*

A fundamental cause for the excessive rate of exploitation of such natural resources as fish and oil in the oceans is the difficulty of defining and policing property rights. There are three ways by which the over-use and destruction of common property resources can be prevented: The *first* procedure is to assign newly created *property rights*. Individual nations are given the right to allocate the access to well defined parts of the resource the way they think fit. An effective allocation method under competitive conditions is to sell the permits for exploiting the resource on an open market.

The Third United Nations Conference on the Law of the Sea (called UNCLOS III) has agreed on the principle of 'exclusive economic zones' which grant each coastal state the exclusive management and fishing rights within two hundred nautical miles from the coast. It has been estimated that 99 percent of the total oceanic fish catch is within this zone. UNCLOS III thus proposes that the eighty coastal states own the property rights on the ocean's fishing grounds. Such a 'national enclosure' does, however, not necessarily allocate property rights to the *fishing stock*,

because many kinds of fish migrate from one such 'exclusive economic zone' to another, so no nation has an incentive to protect the stock. Even apart from this problem, the extended fishing limits serve to protect the domestic fishermen, and to prevent fishing by foreigners. Also, the governments are often not eager to effectively control the total catch, since such action would meet the resistance of the domestic fishing interests.

The *second* approach to prevent the destruction of common property resources is *regulation*. An international organization establishes the 'optimal' rate of use and determines to what extent each nation and/or firm may participate in the exploitation. The above-mentioned U.N. Conference on the Law of the Sea proposes this procedure for the seabed and the continental margin, which should not be any nation's property but be regulated 'as part of the common heritage' and 'in the interest of mankind' by an International Seabed Authority. This authority would limit the volume of mineral production and assign exclusive mining rights according to administrative principles.

The main problem with the regulatory approach is that the international organizations have little or no coercive powers and therefore find it difficult to effectively constrain the over-exploitation of this particular part of the global commons.

The *third* way to approach the problem of the destruction of international natural resources is *not to interfere* and to hope that the nations and firms in question are themselves able to prevent an overuse by suitable cooperation. This is often a vain hope. But this strategy of inaction recognizes the point that the existence of a market failure (here the international public goods problem) does not necessarily constitute a case for international action (see Tollison and Willett 1976). International agencies are faced with a great many administrative and political problems such as the frequent intervention of governments in the national interest. International action thus being subject to 'governmental' and 'administrative' failures, the consequences of actively interfering may be worse than that of market failure.

VI. INTERNATIONAL ORGANIZATIONS.

International organizations can be studied from two points of view: The first is to look at the *internal functioning* of the organization, i.e. the specific way in which the members of the organization have dealings with each other, reach decisions, and the extent to which they perform the tasks assigned to them. The second point of view is of the *external*

behaviour of international organizations, i.e. it studies their interaction with nations, among each other, and further international decision-makers (such as multinational corporations).

1. *Internal functioning.*

The internal workings of an international organization are strongly determined by the decision-making mechanisms in force, in particular by the *formal voting rules* which apply in the various areas. It is interesting to note that in international organizations many more types of voting rules are used than in national decision-making bodies where the *simple majority rule* prevails. The reason is that the nations participating in international bodies are reluctant to give up their sovereignty even in limited areas, and therefore are willing to join, and to actively cooperate in, an international organization if the voting rules give it a good chance, or even guarantee, that no (important) decision is taken which violates its interests. The most extreme rule for guaranteeing national sovereignty is *unanimity*, but there are also various forms of *qualified majority* which serve the same purpose.

Besides those time-honoured ways for reaching formal decisions, new voting rules have been devised within Public Choice (see, for example, Mueller 1978, Tideman and Tullock 1976) which are not used at present but which could serve a useful function if they were applied under suitable conditions.

The *distribution of power* among the nations within an international organization may be analyzed with the help of the game-theoretic notion of a decisive or 'pivotal' member of a coalition: The nation which is capable of transforming a losing into a winning coalition can be attributed 'power'. The Banzhaf index (see Brams 1976) is a quantitative measure of this definition of power. It enables to calculate the share of power each nation holds depending on the formal voting rule existing. It is assumed that each nation acts alone, and that its preferences about the (unknown) future issues to be decided upon are not known. The Banzhaf index has been applied to the *ex ante* voting power of the nations in the Council of Ministers of the *European Community* of nine countries (Faber and Breyer 1980). The four large countries (Germany, France, United Kingdom and Italy) have ten votes (17.2%) each, the two middle-sized countries (Belgium and the Netherlands) five (8.6%) each, the two small countries (Denmark and Ireland) three (5.2%) each, and tiny Luxembourg two votes (3.4%), totalling 58 votes. Table 3 shows the power distribution computed by the Banzhaf index for various decision rules.

TABLE 3. — *Vote and power distribution (Banzaf index) in the Council of Ministers of the European Community.*

country group	individual countries	votes per country		power share (in %) per country		
		absolute number	share in %	simple majority (30 votes)	41 votes	unanimity (58 votes)
'large'	D, F, UK, I	10	17.2	17.4	16.7	11.1
'middle-sized'	B, NL	5	8.6	8.7	9.1	11.1
'small'	DK, IR	3	5.2	4.3	6.6	11.1
'tiny'	LUX	2	3.4	4.3	1.6	11.1

Source: Faber and Breyer (1980) and own calculations.

It may be seen that the power share of the four large countries falls when the simple majority rule is substituted by a qualified majority of 41 votes, and by unanimity. Accordingly, the power share of the middle-sized and small countries tends to rise, but there is one reversion: Luxembourg's vote share declines when the required majority is 41 instead of 30 votes. Obviously, when full unanimity is required, every country has an equal share of power, 11.1%.

The change in voting rules at the *International Monetary Fund*, which became effective in 1978, has resulted in a surprising, counter-intuitive change in the power structure according to the Banzaf power index: Four major countries (Federal Republic of Germany, Japan, The Netherlands and Belgium) whose votes were increased to keep pace with their increased weight in the world economy, suffered a decline in power, while 38 countries whose votes were reduced experienced an increase in power (Dreyer and Schotter 1980).

The power index presented should be interpreted with great care. It only measures the potential influence derived from transforming a losing into a winning coalition, given a particular distribution of votes and a particular voting rule. It does not consider any other factor which may contribute to a country's power. The index is only suitable for an evaluation of power when it is completely unknown which countries will side with each other. Each logically possible coalition formation is there-

fore treated as equally likely. If one has knowledge about the probable or actual behaviour of countries when voting, the power distribution may look quite different.

So far, the discussion of the international organizations has been concentrated on formal aspects, the formal decision-making or voting rule, and its consequences for the distribution of power. Now, the *behavioural* aspects will be considered. The typical characteristics of bureaucracies are likely to be more pronounced in the international than in the national setting: they have greater room for discretionary action as there is little possibility and incentive to control them. Control is difficult because the « output » of many international organizations is badly defined and cannot usually be measured. There is little incentive to control since nobody gains by tightly monitoring an international organization. National governments would only run into trouble with other national governments if they tried to interfere with the internal workings of such institutions. They therefore prefer to let things go and only intervene if they feel that their own nationals employed in the organization are being unfairly treated or that their national interests are being threatened by the organization's activity.

Due to the lack of effective control in an international organization, none of the layers in the hierarchy has any real incentive to work towards the « official product » because their utility depends hardly at all on their contribution. The national quotas for a great number of positions that are a feature of many international organizations drive a further wedge between the individuals' utility and the organization's official function. This particular incentive structure leads to a growth of the international bureaucracies quite independent of the tasks to be performed, because all bureaucrats benefit from larger budgets and from a greater number of employees. International bureaucracies are also characterized by a low degree of efficiency and a profusion of red tape as the formalized internal workings of the organization become dominant. A considerable share of the budget will be used for internal purposes, and to provide side benefits for the bureaucrats themselves.

2. *External activities.*

The typical internal features of international organizations combined with the setting of constraints within which they act, make it possible to derive testable propositions about their external behaviour. The *World Bank* is taken as an example (see Frey and Schneider 1983). The World Bank is composed of the International Bank for Reconstruction and Development and of the International Development Agency. Both institutions have been created to extend credits for economic development. For simplicity, only the behaviour of the International Bank for Reconstruction and Development will be discussed.

The public Choice view regards the World Bank as a bureaucracy in which the individual members (the employees) further their own utility, subject to various constraints. The utility is composed of the prestige within the banking community, the discretionary power vis-à-vis donor and recipient governments, and the maintenance of a political attitude biased to the right (due to the fact that the professional staff is heavily dominated by American, British and Continental-European personnel).

Prestige can be gained within the banking community by « performance excellence », i.e. by showing that the organization's tasks are competently handled. This means in particular that those countries receive most credits which have a low per capita income and have shown themselves to be worthy of assistance by having grown rapidly in the past. Discretionary power can be ensured and increased by minimizing the probability and intensity of intervention especially by the donor countries. Governments will only interfere in the Bank's activities if the Bank can be accused of having made serious errors. The officials of the World Bank are therefore strongly interested in avoiding major blunders which induces them to avoid risks. Countries with high external debts and unstable political conditions will accordingly be given less credit, since both features make future defaults more likely. Similarly, a government's budget deficit and a balance of payments deficit will decrease the official's willingness to extend credits, since they make the repayment of the loans harder to achieve. The right-wing political tendencies of the banking community and of the staff are flattered by taking low inflation as an important prerequisite for receiving credits (this also fully accords with the views of the banking community) and by favouring countries with a « capitalist » orientation.

The most important constraint imposed on the behaviour of the World Bankers is the interference of the donor countries mainly exerted through their voting rights in the governing bodies, but also through more informal channels. The donor countries tend to intervene in favour of those developing countries which *depend* on them. Metropolitan countries will support the interests of their former colonies or countries they dominated in cultural, political and economic ways. This applies in particular to the former large colonial powers, the United Kingdom and France, as well as to the LDCs dominated by the United States. It is thus expected that former colonies or dominations of these three countries *cet. par.* get more credits than the other countries.

The World Bank officials are, of course, also subject to financial constraints. However, this has already been provided for by the risk averse behaviour described above which reduces the chance of default, and by the willingness of the Bank's bureaucrats to yield to the pressure of donor countries, thereby securing the future flow of contributions to the funds.

The model is econometrically tested by ordinary least squares with data for 60 less developed countries receiving credits. The dependent variable is IBRD loans in US\$ per capita, averaged over the period 1972-81. All explanatory variables are lagged by two years. The estimation yields:

Loans (per capita)

=	5.04	(constant)	
-	0.57**	(income per capita)	} economic determinants
	(2.87)		
-	0.22*	(rate of inflation)	
	(2.43)		
	0.23*	(balance of payments surplus per capita)	
	(2.62)		
	0.12	(budget surplus as share of GNP)	} political determinants
	(1.72)		
	0.15**	(external official debt per capita)	
	(2.93)		
	0.64**	(growth of GNP)	
	(3.47)		
-	0.12	(political instability)	
	(1.79)		
	3.54*	(capitalistic climate)	
	(2.16)		
	1.84	United Kingdom (ex) colonies	
	(1.89)		
	4.99*	French (ex) colonies	
	(2.61)		
	1.94*	United States (ex) dominations	
	(2.12)		

$\bar{R}^2 = 0.64$. The figures in parentheses are the t -values.

The equation performs well according to the statistical tests; the variable is able to account for 64% of the variance between the countries. Most of the estimated coefficients are statistically significant at the 95% security level. The sign of the coefficients corresponds with the theoretical predictions, with one exception. The lower the per capita income

and the inflation rate in the recipient country are, and the larger the past growth rate, the more loans will a developing country receive from the World Bank. The budget situation turns out not to be statistically significant. The estimate somewhat suggests that a LDC receives higher loans, the higher its external official debt is.

The empirical analysis confirms that besides economic also *political* factors exert a significant influence on World Bank behaviour, as posited by the Public Choice approach. While political instability fails to be statistically significant, a 'capitalist climate' is helpful for getting more loans. Finally ex colonies or dominions of France and the United States *cet. par.* get more loans than the other LDCs (the United Kingdom seems to push the interests of its (ex) colonies somewhat less).

The politico-economic model of World Bank behaviour sketched has been compared with alternative models attempting to explain the determinants of credit giving, and it has proved to perform better according to the usual statistical criteria (see again Frey and Schneider 1983).

VII. EVALUATION AND OUTLOOK.

International Political Economy is only gradually emerging; its specific traits are, however, already visible, so that it is possible to discuss the achievements and shortcomings of this approach. The achievements, and the advantages over the other approaches should have become apparent from our survey: The hypotheses are clearly spelled out and derived from a well developed theory, and the propositions are (in principle) testable and have indeed been subject to econometric analyses. Though only isolated aspects of the whole area have been analyzed so far (and presented here), the various studies belong to a homogenous set because they apply a generally accepted theoretical framework.

It is important to see the shortcomings, too, because only then will there be a chance to overcome them. International Political Economy of the Public Choice variant is deficient in at least four respects:

(a) There is too little interaction with the main body of Public Choice theory, which is due to the fact that the researchers in the area have usually been trained mainly in international trade theory. While the «classics» of the field, especially Downs and Olson, are frequently quoted, the more modern developments are not sufficiently integrated. The models of government behaviour are, for example, still predominantly using the Downsian vote maximization assumption, though a superior model (utility maximization subject to the reelection and economic

constraints) exists and has been successfully tested with econometric methods. There is also too little interaction with political scientists' International Political Economy. Economists would certainly benefit from their problem orientation and from their knowledge of institutions and political processes. Finally, there is too little interaction among the researchers in the field who seem to be not much aware of each other's work. (Hopefully, this survey will help to mitigate this shortcoming).

(b) There is a tendency to sacrifice relevance for rigour, a danger existing in all parts of modern economics. There are already some parts of International Political Economy where the small gain in knowledge is not in proportion to the heavily formalistic apparatus used. The field can only remain fruitful if the theories developed are indeed applied and empirically tested. The econometric (or politometric) studies in International Political Economy, though preliminary and tentative, have already proved able to yield interesting insights.

(c) There is a tendency that the theoretical concepts and powerful econometric methods are applied too quickly, without paying sufficient attention to the particular historical and institutional conditions existing in the field of study. A quick application is tempting because it is seemingly easy to undertake, and the shortcomings of the analysis may be difficult to show. Care should be taken, however, to inquire whether a particular theoretical conception (such as public goods and free riding) is really capturing the essential features of reality. A related shortcoming is that the operationalization of a particular theory is often done in a rather cavalier way.

(d) Empirical research has so far been predominantly undertaken for the United States. This may make it more difficult to develop a generally applicable theory of International Political Economy, because it is difficult to know what result is due to the Public Choice view, and what is due to the particular conditions obtaining in the United States. It is therefore important that empirical tests of the theories are also undertaken for other nations.

The Public Choice approach, despite its shortcomings and possible dangers, provides a fresh view of International Political Economy and can build upon powerful methods of theoretical and empirical analysis which have proved to be successful in other areas of politico-economic interaction.

The field is only at its beginning. There are a great many areas to be studied, and a great many concepts to be applied (several suggestions

have been made in this paper). The field promises to be fruitful, because it combines important problems of our time with an effective scientific method to approach them.

There can be little doubt that the International Political Economy based on Public Choice will receive increasing attention by the traditional theory of international economics, and that it will form an integral part of it, and that it will be included in the respective textbooks.

University of Zurich.

BRUNO S. FREY and FRIEDRICH SCHNEIDER

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RIASSUNTO

Economia politica internazionale: un settore in evoluzione

Sono esaminati alcuni tentativi di collegare i fattori economici e politici nell'ambito dell'economia internazionale. La base analitica è la teoria economica della Politica delle Scelte Pubbliche. Sono esplicitamente considerati e stimati econometricamente le istituzioni e i processi politico-economici. Viene fornita una interpretazione del protezionismo. Altre aree esaminate sono l'aiuto internazionale, la cooperazione internazionale e i concomitanti effetti sui beni pubblici (con riguardo al sistema monetario internazionale e alle risorse mondiali comuni), e le organizzazioni internazionali, in particolare la Banca Mondiale. Sono valutate la situazione presente e le prospettive future.