RESEARCH SEMINAR IN INTERNATIONAL ECONOMICS

School of Public Policy
University of Michigan
Ann Arbor, Michigan 48109-1220

Discussion Paper No. 396

Conflict and Cooperation in International Economic Policy and Law

Robert M. Stern
University of Michigan

April 17, 1996

Recent RSIE Discussion Papers are available on the World Wide Web
at: http://www.spp.umich.edu/rsie/workingpapers/wp.html

CONFLICT AND COOPERATION IN INTERNATIONAL ECONOMIC POLICY AND LAW

Robert M. Stern
Professor of Economics and Public Policy
University of Michigan

April 17, 1996

Address correspondence to:
Robert M. Stern
School of Public Policy
University of Michigan
440 Lorch Hall
Ann Arbor, MI 48109-1220

Tel. 313-764-2373
Fax 313-763-9181
E-mail rmstern@umich.edu

CONFLICT AND COOPERATION IN INTERNATIONAL ECONOMIC POLICY AND LAW

Robert M. Stern
Professor of Economics and Public Policy
University of Michigan

1. Introduction

This paper explores a number of conceptual issues that are germane to the analysis of conflict and cooperation in international economic policy and law. The focus is on issues involving conflict and cooperation that have been treated in the theory of international trade, in particular departures from the free trade optimum that is the center piece of the theory of comparative advantage and the gains from trade. Also considered are situations stemming from departures from full employment and external balance that figure importantly in international macroeconomic theory. Some concluding remarks are made in Section 3 with regard to the use of the Michigan Model of World Production and Trade in providing quantitative analysis of potentially conflictual and cooperative international economic actions and policies. While the paper is written from an international economic perspective, it hopefully will be informative to international legal analysts and policy makers as well.

2. Conceptual Issues in the Analysis of Conflict and Cooperation in International Economic Relations

2.1 The Theory of Comparative Advantage and the Gains from Trade

In the simplest version of the theory of comparative advantage and the gains from trade -- the central focus of international trade theory -- it is assumed that there are two industries located in each of two countries that exist in isolation (autarky), and there is perfect competition in all markets for goods and factors of production.[1] The productivity of factors (e.g., labor and capital) employed in the industries in each country is assumed to be different for unspecified technological reasons, which means that the relative prices of the two goods will be different under conditions of autarky. It is this difference in autarky prices that gives rise to the possibility of international specialization and mutually beneficial

[1] For a textbook exposition of the theory of comparative advantage and the gains from trade, see Ingram and Dunn (1993, esp. Ch. 2-3).

trade. Thus, if trade is permitted to occur, each country will specialize in the production and export of the good in which it has the greatest comparative advantage or least comparative disadvantage compared to the other country. This means that factors of production in each country will be shifted towards the country's export industry and away from what will become its import-competing industry. Factors of production are assumed to be perfectly mobile between industries within each country, but not to move between countries.

The assumption of perfect competition guarantees that there will be optimum use of factors of production since firms are not able to control the price at which they sell their output and will maximize their profits by producing up to the point where the marginal cost of production is equal to the given market price. Individual consumers are assumed to have given preferences and to act rationally in making consumption decisions with respect to the market prices that are given to them and subject to a budget constraint imposed by the size of their incomes. As mentioned, factors of production will move frictionlessly between industries as firms expand or contract output. Given the assumption of no barriers to the entry and exit of firms and the domestic movement of factors, this means that the role of government is designed primarily to foster competition and to maintain the social order. It will be evident that this "ideal" state of affairs will emerge as firms and consumers pursue their self interest. It is as if there were an "invisible hand" guiding the process.

The concept and ideal of free trade have remained at the core of international trade theory for more than two centuries. What is interesting for our purpose here is that unfettered international specialization and exchange will be welfare maximizing and that economic conflict does not appear therefore to be an issue. This should not be taken to mean, however, that international trade theory ends at this point, for this is certainly not the case. Rather, a great deal of attention has been devoted in the past half century or more to the theoretical analysis of departures from the free trade optimum.[2] International economic conflict figures importantly in several of these cases that involve efforts by

nations to engage in exploitative behavior that will improve their welfare at the expense of other nations. Let us turn then to consider the issues involved in analyzing various departures from the free trade optimum.

2.2 Departures from the Free Trade Optimum

2.2.1 National Monopoly Power and the Optimum Tariff

The idealized assumptions of the classic argument for free trade imply the optimality of free trade only for the world as a whole. For individual countries, the optimality of free trade requires the additional assumption that the country is too small to have any influence, through its policies, over the prices at which it trades. Without this assumption, free trade is not optimal from a national perspective, and instead there exists an optimal degree of government intervention in trade, known as the optimal tariff, that works by turning the country's terms of trade in its favor.

One might think that this argument requires that the country in question be large and therefore applies only to such large, industrialized countries as the United States. However, the size that is important is not the size of the country as a whole but rather its share of world trade in markets in which it exports and imports. Since many countries tend to specialize their exports in a fairly small range of goods--as the theory of comparative advantage predicts they should--even quite small countries may have enough market power over the prices of their exports for the optimal tariff argument to apply.[3]

The optimal tariff argument has the important feature that it involves a benefit for the intervening country only at the expense of the country's trading partners. Indeed, since free trade is optimal for the world as a whole, it must be true that the rest of the world loses more than the tariff-levying country gains.[4] It should be evident that a country that attempts to take advantage of its monopoly power in trade

---

[2] For a synthesis of the literature dealing with departures from the free trade optimum and the design of policies to correct such departures, see Bhagwati (1971).

[3] An example would be the oil producing and exporting countries which have sought through the Organization of Petroleum Exporting Countries (OPEC) to raise world oil prices.

[4] That is, with an optimal tariff in place, *world* economic welfare must be lower as compared to free trade.

will create a situation of conflict with its major trading partners. The possibility of retaliation thus looms large in this setting, and it is likely that all countries will lose if they simultaneously pursue this kind of policy. This suggests that there may be complicated and perhaps unsolvable strategic issues that will arise when one or more countries attempt to exercise national monopoly power in foreign trade. But the more that governments realize the potentially damaging effects of optimal tariff intervention and retaliation, the more likely they might be to avoid taking such measures in the first place. Of course, this does not mean that national governments will always recognize the potential losses from their actions, in which case the world will be made worse off.

2.2.2 "Second-Best" Arguments for Government Intervention

A crucial assumption underlying the classic gains-from-trade proposition is that everything within the domestic economy is working properly: all domestic markets are perfectly competitive, prices and wages adjust freely so that markets clear, and that private and social costs and benefits coincide so that there are no positive or negative externalities or spillovers that arise in production or consumption. If any of the foregoing conditions fails to hold, there exists a "domestic distortion," and the first-best optimal results of free trade are no longer assured. There may be grounds therefore for government intervention to correct domestic distortions and thereby restore the first-best optimum.

What is interesting and important here is that government intervention in trade may not be the best policy to use when there are domestic distortions. Suppose, for example, that firms are producing an insufficient amount of a good that confers a positive external benefit on society. An import tariff could be used to encourage domestic production, but this would distort consumer choice and reduce welfare because of the higher domestic price involved. In this circumstance, a production subsidy would be the best policy to use since it would lead firms to increase their output of the good that confers positive social benefit while leaving consumers free to consume at undistorted market prices. The optimal or first-best policy is the one that addresses the original distortion most directly. A tariff is thus second-best compared to a subsidy. By introducing two distortions rather than one, trade intervention

may succeed in solving one problem but only at the same time that it causes another. In this respect, as Deardorff and Stern (1987, p. 39) have remarked, trade policy is like "doing acupuncture with a fork: no matter how carefully you insert one prong, the other is like to do damage."

Similar examples are rife in the theory of protection. The classic example is the "infant industry" argument, where a tariff is said to protect a young industry while it learns to be efficient.[5] The assumption here is that some market failure--such as an imperfection in the loan market or the impossibility of keeping new technical knowledge from being copied--makes it impossible for competitive firms to take advantage of what would otherwise be a profitable opportunity. A tariff or other import restriction can therefore be used temporarily to make the operation profitable even in the short run while the learning process is underway. Naturally, though, the success of such a policy depends crucially on a correct diagnosis of which industries offer the potential for such improvement over time. Also it may be difficult politically to remove protection once it has been put in place.

As in the case of the production externality discussed above, the infant industry argument may be valid in the sense that a tariff may be beneficial. But it is also true that some other policy would be superior. Once again a production subsidy, equal in size to the tariff, would yield the same benefits to producers as the tariff without causing the additional costly distortion of consumer choice. Even better might be a policy that subsidizes or guarantees loans to the industry, if the capital market was the real source of the distortion, or a policy that permits firms to appropriate technology if that was the problem.

Many other arguments for intervention can similarly be traced to the presumption of a distortion somewhere in the domestic economy. But what should be stressed in all of these cases is the need for a correct diagnosis of the distortions at issue and the point that they could be better dealt with by means other than trade policies. While this kind of reasoning is generally accepted by most international trade economists, it is not by any means accepted by practical policymakers who are in the business of trying

[5] See Ingram and Dunn (1993, esp. pp. 148-151) for an exposition of the infant industry argument.

to make only marginal improvements in the economic environment. If they can find some feasible policy that will work, they are unlikely to worry that some other policy might have worked better.

Thus, it may be argued that first-best policies are politically unacceptable and therefore that trade interference, though only second best in economic theory, may be first best in terms of political reality. This may be true, but it is a dangerous argument for several reasons. First, if trade intervention is politically more acceptable than domestic taxes and subsidies, it is probably because its true effects are less well understood by the electorate. If the public would not approve a direct subsidy to an industry, for whatever reason, then that fact should perhaps be taken as evidence that protection of that industry through trade intervention is also socially undesirable because of the consumption distortions involved. Second, it is always a very difficult empirical question whether the benefits of offsetting a domestic distortion exceed the costs that arise from the second distortion caused by trade intervention. While it is very difficult to make precise calculations of the costs and benefits of different policies, there is nonetheless substantial empirical evidence that suggests that the net effects of trade intervention are detrimental to welfare. A strong case can thus be made for using first-best policies. A final and important consideration here is that reliance on first-best policies to correct domestic distortions avoids the potential for conflict between nations that trade intervention entails.

2.2.3 Trade Intervention in Imperfectly Competitive Markets

Recognizing that many markets, domestic and international, are imperfectly competitive, growing attention has been directed in recent years to analysis of trade and trade policy in an imperfectly competitive world.[6] It is clear that the classical case for the gains from trade does not apply directly in such a world. However, we do not yet have a very clear understanding of the alternatives. Instead we have several suggestive ideas about the role of trade policy in particular situations that have not yet been established with any generality.

---

[6] The pioneering works include especially Helpman and Krugman (1985, 1989).

The first such idea is probably also the most important and is also simple. If a domestic market is not competitive, competition can be fostered by removing barriers to trade. Often a major reason that domestic markets are dominated by a small number of producers is that these producers are protected from foreign competition by tariffs or other trade restrictions. If given a choice, producers for the domestic market will opt for quantitative import restrictions, since these increase the profit that can be made by monopoly pricing in the domestic market. The trade policy that will best improve this situation does not require any subtle effort to offset the effects of monopoly power. Instead a simple opening of markets to free international trade will remove the market power itself and restore the benefits of competition. A domestic market with only a few domestic firms may therefore approximate free competition if those few firms must compete with a larger number of foreign producers. The removal of trade barriers in these circumstances will accordingly remove a source of international conflict and promote national and world welfare.

Unfortunately, there is sometimes no assurance that even worldwide free trade will confer the benefits of perfect competition in all markets. Some products are not tradable or are not readily available as substitutes from abroad. In addition, the world market itself may be imperfectly competitive, due perhaps to the historical dominance of a few firms or the nature of the product. Many products in today's international trade more and more seem to lend themselves to product differentiation and the use of large-scale and aggressive marketing techniques. In such cases, while free trade still increases competition, the nature of that competition is sufficiently imperfect that the benefits from it are no longer assured.

Two issues need to be addressed here. First, to what extent are our earlier arguments undermined by the persistence of imperfect competition even under free trade? In particular, is it still true that trade intervention constitutes only a second-best means of dealing with domestic distortions? Second, do imperfect market structures give rise to any new arguments for trade intervention other than the traditional ones?

The first question just mentioned cannot be answered definitively since there is no single model of imperfect competition that can provide the basis for a conclusive proof. Nonetheless, it can be established conceptually that the general principle favoring a domestic policy rather than trade intervention to remove a distortion would continue to hold in cases of imperfect competition.

As for the second question, free trade may fail to ensure perfect competition even in traded goods if world markets are not perfectly competitive. If world markets are monopolistic or controlled by a small number of oligopolistic firms and excess profits are being made at the expense of either foreign or domestic consumers, this suggests that trade intervention may benefit a country if it is able to capture a larger share of these profits. This idea has considerable appeal. Certainly, if you must be exploited, it is better politically to be exploited by domestic residents than by foreigners. Even economically there may be a valid case for trade intervention.

Consider two possible cases. The first involves an effort to capture a portion of foreign monopoly profits by means of an import tariff. In this case, the importing country gains from the tariff only if the price paid to the foreign monopolist falls. The tariff works here much like the optimum tariff mentioned above in so far as it improves the importing country's terms of trade. But, as before, a situation of conflict is created and there is no guarantee that this profit-seeking policy will succeed if the foreign government retaliates by taking measures on its own to prevent or offset the shifting of profits abroad.

A second case involves the use of trade intervention to alter the outcomes of "strategic games" played by imperfectly competitive firms so as to increase the profits that can be shared by them with their sponsoring governments. In effect, the government uses its policy to precommit firms to behavior that would otherwise appear to be--and known by their competitors to be--suboptimal. It turns out that the theoretical models used in generating such results are rather fragile conceptually so that changes in key assumptions can be shown to negate or even reverse the conclusion that profit shifting is possible. Furthermore, this case for intervention is once again exploitative and therefore may give rise to

retaliation. Thus, if both governments were to try to play this particular game, both countries will be worse off. Again, to the extent that this is recognized by governments who desist from exploitative measures, it reduces the scope for international conflict.

2.2.4 Countervailing and Strategic Intervention

However one may feel about the case in economic theory for free trade, the fact remains that countries do make extensive use of policies that interfere with trade, perhaps for the reasons that have been discussed. This raises the question of whether the cases for and against intervention are altered at all for countries whose trading partners use such policies.

There seem to be two distinct rationales for responding to the trade policies of other countries. One is to try to neutralize, offset, or countervail the presumed adverse effects of a foreign country's trade policies. The other is to try strategically to discourage the use of such policies by foreign countries by threatening, or actually implementing, policies that will affect them adversely. The difference between these two approaches is the following. In the former case the policy is to be chosen with a view to benefiting the domestic economy directly. In the latter case, since the purpose of the policy is to alter behavior abroad, a policy might be chosen in spite of having adverse effects domestically.

Countervailing intervention makes sense only if it benefits the domestic economy on its own account. It is not enough that it partially undoes the effect of the foreign country trade policy to which it responds.

The familiar example of this use of trade policy is the national and GATT/WTO-sanctioned use of countervailing duties to offset the effect of foreign export subsidies.[7] This countervailing policy normally does benefit the country using it, but only to the extent that the importing country is large enough to improve its terms of trade by imposing the duty. Where this is the case, the country could have benefited from a duty even had there been no foreign subsidy, assuming that it could have avoided retaliation. The question then is whether the fact of the subsidy, together perhaps with the official

sanctioning of a countervailing duty, reduces the likelihood of retaliation. Only in this case does it appear that the use of a countervailing duty is a responsible policy in a competitive environment.

If instead we have an imperfectly competitive world, subsidies may be used to give a country's producers a competitive edge in a foreign market. In this case, a countervailing duty of some sort may be an optimal response on the part of the importing country's government as it tries to balance the gain from cheaper subsidized imports against the loss of monopoly profit earned by its domestic firms. While this is a possibility, it suggests the more general question of whether countervailing measures may be justified as a means of discouraging the use of export subsidies in the first place. This takes us into the topic of strategic intervention.

We have seen that there are a number of arguments suggesting that trade intervention may benefit one country at the expense of others. Many of these arguments, relating especially to national monopoly power and use of the optimal tariff, have long been familiar to international trade economists. But interest in the analysis of trade under conditions of imperfect competition has seemed to expand the scope for strategic intervention and in turn has led to new interest in the strategic issues of how countries may use intervention to exploit others and to keep from being exploited by them. For the purposes of this paper, it is most appropriate to focus attention on the question of how policymakers should act in a world of exploitative trade intervention.

In simple terms, what we have is the classic Prisoners' Dilemma game, in which each player has an incentive to act at the other's expense, and both lose if both act. Although it is clearly optimal for them collectively to refrain from acting (from intervening in trade), each has an incentive to depart from that optimum if it is ever reached. What is interesting, according to analyses by trade theorists such as Thursby and Jensen (1983) and political scientists such as Axelrod (1983), is that *the greater is the perceived likelihood that a government expects that its trade intervention will be retaliated against, the closer will the solution lie to free trade*. This suggests that although trade intervention itself is harmful

---

[7] See Finger (1994) for further discussion.

for reasons already discussed, it may nonetheless be desirable that countries expect intervention by other countries in response to intervention they themselves may undertake.

Alternatively, one could attempt to pursue negotiated solutions to games such as the foregoing. Such negotiations, however, pose the well known problem of enforcing whatever agreement is reached. On the other hand, the incentives to enter into such negotiations are strong, even if one has no intention of abiding by their outcome. It is therefore not surprising that the trade policy community has managed to keep such negotiations going during a large part of post-World War II history under the auspices of the General Agreement on Tariffs and Trade (GATT).[8]

2.2.5 Trade Intervention for Foreign Policy Reasons

The strategic uses of trade intervention just discussed were focused specifically on influencing analogous policies abroad. But trade intervention is sometimes also used as a means of influencing foreign policies that have nothing to do with trade. Because countries depend on and gain from trade, policies that interfere with trade can serve as weapons and can be used for a variety of aims. Still, one must ask whether trade intervention can succeed in changing foreign country policies and, if so, whether it is worth the cost.

To take the second issue first, trade as a political weapon makes sense only if it is capable of inflicting relatively a lot of harm abroad compared to any disruption it causes at home. For a small country this would clearly not be the case, but for a large country like the United States, it does seem likely that we could do rather severe damage to at least some of our smaller trading partners at relatively little obvious cost to ourselves. But one must be very careful here, especially because markets often work far better than anyone expects. Even the United States might find that long-run effects of its policies will go against it in ways that would be hard to predict. When foreign markets and foreign suppliers are lost, either because the United States accidentally hurts them more than intended or because they look

[8] For a comprehensive analysis of the results of the Uruguay Round, which the eighth round of GATT multilateral negotiations concluded in 1994, see Martin and Winters (1996).

elsewhere for a more certain trading environment, the U.S. claim that it was only manipulating trade to promote the general welfare will fall on deaf ears.

There is also reason to doubt that even draconian trade policies such as embargoes can ever be very effective in changing the behavior of foreign governments and their constituencies. Trade can have powerful effects. But when used as a weapon, it seems more likely to generate resistance, rather than fear, in the hearts of its victims. The world's considerable experience with the use of embargoes does not suggest that they have been particularly successful in drawing concessions from those they were intended to influence. On the other hand, it is conceivable that trade policy might be more successful in influencing policies abroad if it were oriented toward providing positive rather than negative incentives in the political sphere. This is certainly worth exploring further.

2.3 International Factor Movements

The theory of comparative advantage and the gains from trade assumes that factors of production move costlessly between industries within countries but do not move internationally. While this assumption helps to clarify the role of trade and its impact on the returns to factors of production, it is of course unrealistic in view of the often substantial movements of labor and capital from one country to another that in fact occur.

For our purpose here, it is movements of real capital rather than financial capital that are important. Such movements of real capital constitute foreign direct investment (FDI) by international firms. There is a large body of theory of the determinants of FDI, but its main motivation derives from the apparent profitability involved in the internal control by the parent company of the operations of foreign affiliates. There are significant gains in economic efficiency and consumer welfare in both investing and host countries that result from FDI. But in some circumstances there may be costs as well, and conflicts may emerge as governments seek to regulate the investment activities of international firms. In host countries, for example, disputes may arise if it is believed that foreign firms can charge monopoly prices and thus earn excessive profits that they then transfer abroad in large measure. There may be

complaints that indigenous workers are not given adequate opportunity to acquire skills and training, and that the host country is held back because it cannot acquire and develop foreign technologies on its own. It may be believed furthermore that foreign firms undermine the efficacy of host country economic policies and maybe even threaten host country political sovereignty. As for investing countries, they may have their own concerns about the loss of jobs and technological benefits, including spillover effects, as operations are transferred abroad. Strategic and national defense considerations may also be important.

Population movements between countries have been taking place for centuries for both economic and political reasons. These movements have been subject to varying degrees of control and restriction, depending upon the historical circumstances and countries involved. It is generally accepted that host countries maintain the right to limit immigration, whereas countries that attempt to constrain emigration especially for political reasons may be subject to international criticism. Just as in the case of FDI, the international movement of labor may be beneficial to both the sending and receiving countries in so far as it increases economic efficiency and welfare. But there may be costs here as well. The sending country may lose as its stock of human capital is diminished, particularly since those who leave may be among the most skilled and highly productive workers. Offsetting effects here would include somewhat higher wages for those that remain and the receipt of remittances from those who moved abroad. In the receiving country, immigration may displace domestic workers and result in lower wages, and there may be added social costs depending upon the use that immigrants make of the available social infrastructure.

It is evident then that FDI and the international movement of labor may provide the basis for conflict between nations, apart from the conflicts that may arise as countries attempt to deal with the various departures from the free trade optimum that have been discussed. The international community has not developed mechanisms and institutions for dealing with problems posed by FDI and the international movement of workers. Policies here remain the province of individual nations.

2.4 Departures from Full Employment / External Balance

The standard model of comparative advantage and the gains from trade assumes that all factors of production are continuously employed, given that markets for goods, services, and factors are perfectly competitive and function smoothly. Any unemployment of factors that occurs is treated as if it were a domestic distortion arising from difficulties in adjustment especially in the short or medium run or because of the existence of market imperfections that act as a barrier to entry or exit of factors in particular sectors. As was discussed, the first-best policy to deal with distortions is a domestic tax/subsidy that is directed at the source of the distortion. Trade policy will generally be second best or even worse than second best because of the production and consumption costs involved.

This same conclusion applies at the macroeconomic level. Departures from full employment may occur for a variety of reasons. For example, there may be exogenous real shocks due to an unexpected increase in oil prices or some other type of supply disruption. It is also possible that there may be unemployment or inflationary pressures because of cyclical fluctuations in economic activity. Such fluctuations may originate domestically or be transmitted from other countries via induced changes in imports and exports and international capital movements. Finally, changes in monetary and/or fiscal policies may in themselves constitute a disturbance that will affect aggregate employment and involve international transmission effects working through changes in foreign trade and capital flows.

These types of disturbances can have profound effects on aggregate employment, prices, the balance of payments, and exchange rates, and, accordingly, give rise to conflictual situations internationally as countries seek to offset the domestic consequences of the disturbances or to shield themselves from the adverse transmission of foreign influences. Trade intervention seems obviously a suboptimal way of dealing with these macroeconomic disturbances when the underlying problems stem from difficulties of adjustment in the markets for goods and services, labor, and foreign exchange.

International macroeconomic issues and problems have been analyzed at length over the years. To relate these issues and problems to the subject of this paper, it may be helpful to distinguish between

the defensive and offensive uses of policies in trying to cope with various types of macroeconomic disturbances and interactions. For example, if a country were to impose import restrictions to raise the level of employment and improve its current account balance, this could be considered an offensive policy since it would represent an effort by one country to improve its position at the expense of another. A currency devaluation designed for the same purpose would work similarly since it would improve conditions in the home country while at the same time worsening conditions abroad. Policies designed to improve a country's macroeconomic performance through changes in exports and imports thus appear to be exploitative, and, to the extent that other countries may respond in kind, output and employment will be reduced at home and abroad. By the same line of reasoning, the defensive use of macroeconomic policies may appear to be justified if a country wishes to shield itself from the effects of foreign induced changes in international trade and capital movements.

There is a very interesting and important lesson of macroeconomic policy that has emerged from the foregoing theoretical reasoning that is similar to our earlier point concerning first-best policies. The difference here arises from the international transmission effects noted. Thus, suppose two countries are both experiencing a recession or inflation. In either case, the optimal policy for each country would be to undertake domestic expansionary or contractionary macroeconomic policies designed to deal with the unemployment or inflationary pressures. If one country were to use trade or exchange-rate policies, this would be exploitative since it would exaggerate the other country's problems.

One can also imagine situations in which one country may be experiencing a recession and another country experiencing inflationary pressure. Depending on the type of exchange-rate system in effect, this may or may not result in a conflict situation. It will if exchange rates are fixed since expansionary domestic policies in the country with the recession will worsen the country's current account balance and have opposite effects abroad, and conversely if the country with inflation were to implement contractionary domestic policies. This problem does not arise, at least in theory, if the exchange rate is flexible since the exchange-rate movement should help to stabilize each economy.

In any event, the point is that there might be conditions when international harmony will be obtained by nations introducing macroeconomic policies that are targeted on domestic objectives. But international disharmony may ensue if countries use trade or exchange-rate measures for dealing with domestic problems or if countries introduce incorrect domestic macroeconomic policies that work in a destabilizing manner internationally. In these instances, it may be desirable accordingly for countries to attempt to cooperate by coordinating their policy actions rather than going it alone.

3. Conclusion

An effort has been made in this paper to demonstrate how issues of conflict in international economic relations are handled conceptually in the theory of international trade and international macroeconomics.[9]

In an earlier paper (Stern, 1994, pp. 143-152), I sought to illustrate how some particular issues could be analyzed in a pragmatic manner using the Michigan Model of World Production and Trade. The Michigan Model is a large scale computer simulation model of the major trading countries in the global trading system. The model has been used to analyze the cases of implementing tariffs and safeguards policies, focusing on how unilateral U.S. actions would affect other countries. As concerns the imposition of tariffs, because of the possibility of retaliation, the conclusion was that it would be best if the policy action were not taken in the first place. With respect to safeguards policies designed to deal with unanticipated import surges, it appeared that the preferred policy was a multilateral domestic production subsidy rather than a unilateral/multilateral import tariff or quota.

Negotiating options in the Uruguay Round were also analyzed to show how countries might choose to formulate their negotiating positions and identify tradeoffs on particular options in the light of their national interests. The emphasis here was on the employment effects of different options, and the setting was one of cooperation for mutual gain by means of trade liberalization under the authority and influence of the GATT. A fourth set of experiments using the model related to the effects of

unilateral/multilateral embargoes of international trade in armaments on employment effects in the major Western countries. It was shown in particular that the United States would experience only comparatively minor employment shifts if trade in armaments were eliminated. Other countries might experience more disruption of employment, but the effects could be mitigated by phasing in the changes in policies. In this last case, it would require agreement at the highest political levels to effect the reductions in trade in armaments. In reaching such a decision, it would be important to know how disruptive such changes would be. The Michigan Model results suggest that the effects involved would be manageable. If this conclusion were accepted by those countries concerned, then cooperative steps could be taken to defuse the potential for conflict to arise as the result of international trade in armaments.

The Michigan Model is only one example of the contribution that international economists can make to the analysis of conflict and cooperation in the international economic system. One can point to other economic modeling efforts that deal with different aspects of the global trading and payments system. The insights from international trade and macroeconomic theory and from empirical economic modeling thus have much to offer to economic and legal analysts and government officials who are involved in the international policy process.

References

Axelrod, Robert. 1983. *The Evolution of Cooperation*. New York: Basic Books.

Bhagwati, Jagdish N. 1971. "The Generalized Theory of Distortions and Welfare," in Jagdish N. Bhagwati, Robert A. Mundell, Ronald W. Jones, and Jaroslav Vanek (eds.), *Trade, Balance of Payments and Growth: Essays in Honor of Charles P. Kindleberger.* Amsterdam: North-Holland Publishing Co., pp. 69-90.

[9] See Krugman (1995) for an analysis in support of many of the points made in this paper and criticism especially of the idea that international trade can be viewed as warfare between nations rather than as a source of mutual benefit.

Deardorff, Alan V. and Robert M. Stern. 1987. "Current Issues in Trade Policy: An Overview," in Robert M. Stern (ed.), *U.S. Trade Policies in a Changing World Economy*. Cambridge: MIT Press, pp. 15-68.

Finger, Michael J. 1994. "Subsidies and Countervailing Measures and Anti-Dumping Agreements," in OECD Documents, *The New World Trading System: Readings*. Paris: Organization for Economic Co-operation and Development.

Helpman, Elhanan and Paul Krugman. 1985. *Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition, and the International Economy*. Cambridge: MIT Press.

Helpman, Elhanan and Paul Krugman. 1989. *Trade Policy and Market Structure*. Cambridge: MIT Press.

Ingram, James C. and Robert M. Dunn, Jr. 1993. *International Economics*, 3rd ed. New York: John Wiley & Sons, Inc.

Krugman, Paul. 1995. "The Illusion of Conflict in International Trade," *Peace Economics, Peace Science, and Public Policy* 2:9-18.

Martin, Will and L. Alan Winters. 1996. *The Uruguay Round and the Developing Economies*. New York: Cambridge University Press.

Stern, Robert M. 1994. "Conflict and Cooperation in International Economic Relations," in Harold Jacobson and William Zimmerman (eds.), *New Approaches to International Conflict*. Ann Arbor: University of Michigan Press.

Thursby, Marie and Richard Jensen. 1983. "A Conjectural Variation Approach to Strategic Tariff Equilibria," *Journal of International Economics* 14:145-161.