Regionalism versus multilateralism: analytical notes

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With the Uruguay Round still (at the time of writing) on the brink, with growing tensions between the United States and Japan, and with growing support in the United States for a more or less aggressive industrial policy, it is evident that the GATT-centred system of multilateral trade relations is in considerable trouble. At the same time, regional trading arrangements such as ‘EC 1992’ and the North American Free-Trade Area (NAFTA) have appeared to be the cutting edge of whatever successful international negotiations have taken place. This apparent shift away from globalism to localism has created severe ambivalence among policy intellectuals. Should the rise of regional trading arrangements be welcomed, as a step on the road that will ultimately reinforce global free trade? Or should regional trading blocs be condemned, as institutions that undermine the multilateral system? Or, yet again, should they perhaps be accepted more or less grudgingly, as the best option we are likely to get in an age of diminished expectations?

This ambivalence, and the striking extent to which reasonable analysts find themselves in sharp disagreement, are not surprising. The issue of multilateralism versus regionalism is a difficult one to get one’s arms around, on at least two levels. First, even in narrowly economic terms it is a tricky area: after all, it was precisely in the context of preferential trading arrangements that the byzantine complexities of the second best were first discovered.

Second, the real issues cannot be viewed as narrowly economic. International trading regimes are essentially devices of political economy; they are intended at least as much to protect nations from their own interest groups as they are to protect nations from each other. Any discussion of the international trading system necessarily thus involves an attempt to discuss not what policy ought to be, but what it actually will be under various rules of the game. And the science of politics is, if possible, even less developed than that of economics.

In this realm of foggy discussion it is natural for economists to grab hold of any analytical tools they can find, even if they are ill-adapted to the work at hand. In an earlier paper (Krugman, 1991a), I offered a simple framework for thinking about the effects of the consolidation of a world of many nations into a smaller number of trading blocs. That framework (briefly reproduced in the Appendix to this chapter, see pp. 75–78) had some merit as a concise way of thinking about the issues of trade creation and diversion, but was grossly unrealistic in its description of the trade-policy process. Nonetheless, it was one of the few games in town – at the very least, it offered a language for talking about the issue – and plunged me into the debate. In a follow-up paper (Krugman, 1991b) I used the original model as stiffening for a broader and looser analytical argument, which was in turn used to give some intellectual credibility to a largely model-free discussion of the political economy of trade. That paper proved startlingly controversial, to an extent that was bound to worry an economist who knew that he was speculating well beyond his analytical base.

The problem, of course, is that in spite of decades of intense research into the normative economics of trade policy, there are no widely accepted positive models of policy formation. And the multilateral–regional debate hinges crucially on how the institutions of the trading system will affect not just the consequences of given trade policies, but the choices by governments of what policies actually to adopt.

The purpose of this chapter is obviously not to propose a general theory of the political economy of trade policy – not only do I not have such a theory, I have no idea even where to start. Instead, it offers a set of partial analyses that try to move the discussion of the trading bloc issue a little closer to giving a realistic account of trade policy, and thus a better account of the likely economic effects.

The chapter is in five sections. Section 1 reviews briefly the simple trading-bloc model originally developed in Krugman (1991a), then argues that its main economic conclusions are not too sensitive to the outrageously unrealistic trade-policy process that that paper assumed. Section 2 offers a stab at a more realistic description of unilateral trade-policy formation, based on the idea that governments maximise `weighted social welfare', and tries to relate this description to the issues raised earlier. Section 3 turns to bargaining and international negotiations. Finally, section 4 combines the pieces to offer a loose second cut at the multilateralism–regionalism issue. Section 5 draws some summary conclusions.

1 The narrow economics of trading blocs

The pure economic theory of trading blocs is essentially part of the broader theory of preferential trading arrangements. This theory has been extensively studied. Unfortunately, it is a subject of inherent complexity
and ambiguity: theory *per se* identifies the main forces at work, but offers few presumptions about what is likely to happen in practice. To make any headway, one must either get into detailed empirical work, or make strategic simplifications and stylisations that one hopes do not lead one too far astray. Obviously detailed empirical work is the right approach, but will not be followed in this chapter. Instead, I continue to use the stylised approach from Krugman (1991a).

1.1 A political economy model (Krugman, 1991a)

In my initial trading-bloc model I tried to cut through the complexities of second-best analysis with a highly stylised model of a world economy.

The structure of this world economy was as follows:

1. The world was assumed to consist of a large number of small geographical units ('provinces'), each specialised in the production of a distinct good.
2. The products of all provinces were assumed to enter symmetrically into world demand, with a constant elasticity of substitution \( \sigma \) between any two such products.
3. The world was assumed to be organised into \( B \) trading blocs of equal economic size, with free trade within each bloc and an *ad valorem* tariff rate \( t \) charged by each bloc on imports.
4. The blocs were assumed to set tariffs non-cooperatively, in order to maximise welfare.

The unrealism of this setup is obvious. Yet it had the virtue of offering a simple way to think about regionalism versus multilateralism. One could envision a move to regional trading blocs as involving a reduction in \( B \). In the model, such a reduction in \( B \) leads to a mixture of trade creation and trade diversion. Trade creation occurs because a larger share of world trade takes place within blocs, and hence free from tariffs. Trade diversion occurs for two reasons. First, at any given tariff rate, enlarging blocs will lead to some diversion of trade that would otherwise take place between provinces in different blocs. Second, given the policy assumption (4), larger blocs, which have more market power, have an incentive to levy higher tariffs than small blocs; so as \( B \) falls, trade between blocs becomes less free.

Because of the mix of trade creation and diversion, consolidation into a smaller number of blocs has an ambiguous effect on welfare. Somewhat surprisingly, the best outcomes are with either very few or very many trading blocs. The intuition for the desirability of few blocs is obvious: when there is only one bloc, the world has achieved free trade. The converse case is perhaps less obvious: when there are many small players, each has limited market power and thus sets tariffs low – and imports are so large a share of consumption that a flat tariff has little distortive effect in any case. The worst case turns out to be for intermediate numbers of blocs, where potential inter-bloc trade is important yet tariffs distort it significantly.

The startling result is numerical: for a wide range of elasticities of substitution \( \sigma \), the welfare-minimising number of blocs is three.

What is wrong with this model? The economic assumptions are grossly unrealistic, especially the absence of any structure of natural trading relations that defines natural blocs; we return to this point below. Even worse, however, is the description of trade politics embodied in assumption (4). Whatever it is that countries do when they set trade policy, they certainly do not choose the tariff level that satisfies the optimal tariff criterion. Even in Krugman (1991b), the problems with this assumption were acknowledged: 'This setup is clearly both too cynical and not cynical enough about the political economy of trade. The internal politics of trade are not nearly this benign: governments do not simply (or ever) maximize the welfare of their citizens. At the same time, the external politics of trade show far more cooperation than this'.

In fact, the numerical results themselves are a dead giveaway that the description of politics is very wrong. For any reasonable elasticity of substitution, the model predicts tariff rates that are far higher than what large industrial countries, which are presumably the ones with the most market power, impose in fact.

But do the conclusions about the shape of the relationship between the number of blocs and world welfare hinge crucially on the unrealism of the assumed trade-policy process? In fact, they do not.

1.2 Robustness of the economics to policy description

The surprise of the basic trading-bloc model is its assertion that welfare is U-shaped in the number of trading blocs, and that welfare is minimised for a small number of blocs – which suggests that current trends could indeed be adverse.

The question is whether this result depends crucially on the political piece of the model. That is, does it depend crucially on (i) the very high tariff rates predicted by the model, and (ii) the tendency of larger blocs to impose high tariffs?

One might already have guessed that (ii) was not very important to the results from the charts presented in Krugman (1991a). It turned out that predicted tariff rates did not, in fact, rise very much with reductions in \( B \).
of an endogenous tariff rate. Indeed, for the higher tariff rates world welfare continues to be minimised at $B = 3$, although at a 10 percent tariff the pessimism moves to two blocs.

The moral of this exercise is that the basic story about potential losses from consolidation into a limited number of trade blocs is not dependent on the specific model of tariff determination laid out in earlier papers. We may note also that this means that focusing on policy changes as a result of bloc formation may be missing the point. For example, suppose we ask whether NAFTA will hurt world trade. The participants may pledge solemnly not to raise external barriers, and may even honour that pledge. Nonetheless, this model suggests that the net effect is still one of trade diversion that could easily outweigh trade creation.

What could invalidate the story? The question is how the tariff rate depends on $B$. If the tariff rate rises as $B$ falls, as in the case where $t$ is set non-cooperatively to maximise bloc welfare, then the story is simply reinforced. In order to change the story sharply, one must offer a reason why a reduction in the number of blocs might actually lead each bloc to adopt lower rather than higher external tariffs.

We will turn to (crude) models of policy below. First, however, it is necessary to repeat a caveat that plays a key role in any attempt at realistic discussion: the importance of natural trading relations.

### 1.3 The 'natural' trading-bloc issue

If transportation and communication costs lead to a strong tendency of countries to trade with their neighbours, and if free-trade areas (FTAs) are to be formed among such good neighbours, then the likelihood that consolidation into a few large trading blocs will reduce world welfare is much less than suggested by Figure 3.1. The reason is straightforward: the gains from freeing intra-regional trade will be larger, and the costs of reducing interregional trade smaller, than the geography-free story suggests.

Imagine, for example, a world of four countries, which may potentially consolidate into two trading blocs. Suppose that these countries are all symmetric, and that external tariffs are fixed at 10 percent. Then two blocs is the number that minimises world welfare, and hence this consolidation will be harmful. Suppose, however, that each pair of countries is on a different continent, and that intercontinental transport costs are sufficiently high that the bulk of trade would be between continental neighbours even in the absence of tariffs. Then the right way to think about the formation of continental FTAs is not as a movement from four to two, but as a movement of each continent from two to one – which is beneficial, not harmful.
Table 3.1. Regional trading patterns
Ratio of export share to share of gross product, 1989

<table>
<thead>
<tr>
<th>Exporter</th>
<th>US</th>
<th>Canada</th>
<th>Other Americas</th>
<th>Japan</th>
<th>Developing Asia</th>
<th>EC</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>5.0</td>
<td>0.4</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Canada</td>
<td>2.0</td>
<td>0.6</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Other Americas</td>
<td>1.5</td>
<td>0.6</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Japan</td>
<td>1.1</td>
<td>0.5</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Developing Asia</td>
<td>0.8</td>
<td>0.5</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>EC</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.2</td>
<td>0.3</td>
<td>0.2</td>
</tr>
</tbody>
</table>


In practice the sets of countries that are now engaging in FTAs are indeed ‘natural’ trading partners, who would have done much of their trade with one another even in the absence of special arrangements. A crude but indicative measure of the extent to which countries are especially significant trading partners is to compare their current trade patterns (in a world of fairly low trade barriers) with ‘geographically neutral’ trade, in which country B's share of A's exports is equal to B's share of gross world product outside of A.

Lawrence Summers (1991) has calculated the ratio of actual trade shares to those that geographically neutral trade would predict for major industrial countries; I reproduce his results in Table 3.1. They show that within North America, and especially within Europe, trade is much more intense than geographic neutrality would predict. The Western Pacific is less clearly a natural bloc than either of these, perhaps fitting its dubious status as a political reality as well.

In my policy discussion (Krugman, 1991b), I argued that this correlation between the lines of emerging FTAs and those of natural trading blocs implied that the move to free-trade zones is unlikely to reduce world welfare — that the main concern ought to be not global efficiency, but the problems of small economies that find themselves caught out in the cold. This issue will not be pursued in this chapter, however, which focuses more on the analytical issues than the practical ones.

The point of this section has been that the economic analysis of trade creation versus trade diversion in a simple trading-bloc model is not dependent on taking the assumption of optimal tariff warfare literally. But this still leaves open the question of how to think about what does determine policy.

2 Modelling trade policy

It is one of the well-known ironies of international trade theory that the only intellectually sound basis for a tariff, the terms of trade argument, plays virtually no role in actual policy discussion — even though most empirical estimates suggest that for large countries the unilaterally optimal tariff rates are startlingly high.²

Nor do modern, ‘strategic trade’ arguments play much role. Even in the midst of widespread concern about technology and new calls for a sophisticated industrial policy, when George Bush went to Japan to demand market access he declared the purpose of his trip to be ‘jobs, jobs, jobs’ — and focused the political weight of his demands not on likely candidates for external economies but simply on politically visible sectors.

I have tried to summarise the apparent preferences of governments by a set of rules which can be described as ‘Gatt-think’ (Krugman, 1991b). The essence of these rules is a desire for exports, an abhorrence of imports, but a willingness to trade off increased imports in some sectors for increased exports in others. This summary may or may not be helpful as a way to organise discussion; but in any case it does not lead on to any modelling. In this section I offer a crude further step that may prove usefully suggestive, particularly when (in section 3) we try to apply it to the issue of bargaining in trade.

2.1 An approach to trade policy

It is obvious that governments act as if they care more about the interests of producers — import-competing or exporting — than they do about consumers. This concern may in turn be rationalised as the result of the superior organisation of producers, which enables them to influence government behaviour through, say, campaign contributions. And the superior organisation of producers itself may be modelled as resulting from the role of political activity as a public good, which is more easily provided by small concentrated groups of producers than by large diffuse groups of consumers.

Modelling all these levels explicitly is, however, a difficult task.³ We do not have clear models either of how organised groups influence policy or of how groups get organised. Eventually we will have to devise such models. Meanwhile, however, we need a shortcut.

One such shortcut is simply to take the preference of the government for producer interests as a given. This is the ‘weighted social welfare’ approach.⁴ It has the disadvantage of telling us nothing about where the weights come from, but it can still give us some insights about trade-policy setting.
Consider, then, a country that is setting policy in a single market (an extension to a crude version of general equilibrium is considered below). In this market, there is an upward-sloping domestic supply curve \( S(p) \), where \( p \) is the internal price of the good. There is also a downward-sloping domestic demand curve \( D(p) \). Imports are available at a price \( p^* \), which we take for the moment as given (i.e., we assume away any domestic market power). The internal price is related to the external price by the relationship

\[
p = p^*(1 + t)
\]

where \( t \) is the ad valorem tariff rate.

There are three key quantities here: producer surplus, consumer surplus, and tariff revenue. The two surpluses can most easily be defined in differential form, since the constants of integration are arbitrary:

\[
d(PS) = Sdp.
\]

\[
d(CS) = -D dp.
\]

And revenue is simply

\[
R = p^* t(D - S) = p^* tM.
\]

Suppose the government were to choose \( t \) so as to maximise the sum of producer surplus, consumer surplus, and revenue. It is straightforward to show that the optimal value of \( t \) would be zero: in the absence of market power the government would choose free trade.

What we will assume instead is that the government has a preference for producer interests. Specifically, the government’s objective function is

\[
V = (1 + \pi)PS + CS + R.
\]

In this function, \( \pi \) represents the premium placed on producer interests. The function may equivalently, and usefully, be written

\[
V = [PS + CS + R] + \pi PS
\]

where the term on the left-hand side represents ‘welfare’, and the term on the right-hand side represents the extra preference the government gives to producers.

2.2 Implications of preference for producers

The conditions for maximising government behaviour may be seen by considering Figure 3.2. In Figure 3.2, we show a position in which there is some initial positive tariff \( t \), and the effects of a small increase \( dt \) in that tariff.

Figure 3.2 Tariff equilibrium when government favours producer interests

First, ignore the preference for producers and consider the effect of a tariff increase on welfare. A tariff increase worsens both the production distortion and the consumption distortion. The increase in the production distortion is shown in Figure 3.2 as the area \( b \); it is equal to

\[
 tp^* dS = tp^* S' dp.
\]

The increase in the consumption distortion is shown in the figure as the area \( c \); it is equal to

\[
 - tp^* dD = - tp^* D' dp.
\]

These two areas measure the decline in social welfare \( PS + CS + R \). The government is not, however, maximising social welfare; against these losses it sets the premium it places on benefits to producers. These benefits are equal to \( \pi \) times the area shown in Figure 3.2 as \( a \); they are equal to

\[
\pi S dp.
\]

Suppose that \( t \) is a \( V \)-maximising tariff. Then it must be the case that a small increase in \( t \) has a zero impact on the government’s objective.
function, i.e., the weighted extra payoff to producers must just offset the increase in distortions. So for an equilibrium tariff we must have

$$\pi Sdp = -t\pi^*(D' - S')dp.$$ \hfill (11)

Define the following:

$$\mu = M/S$$ \hfill (12)

as the ratio of imports to domestic production, and

$$\epsilon = -\frac{\partial M}{\partial p} \frac{p}{M}$$ \hfill (13)

as the elasticity of import demand. Then after some rearranging we find that the tariff rate that maximises the government's objective function must satisfy

$$\frac{t}{1 + t} = \frac{\pi}{\epsilon \mu}.$$ \hfill (14)

This equation contains endogenous variables on the right- as well as the left-hand side. Nonetheless, it offers a rather neat summary of the forces that should determine how much protection a given industry receives. It says that tariffs will be high in industries whose producers command an especially large premium in the government's welfare function (surprise), in industries which have a low elasticity of import demand (so that the distorting costs of protection are less), or industries in which imports are low relative to domestic production (so a tariff is effective at transferring income to producers).

2.3 Relationship to previous analysis

Suppose that a relationship like (14), rather than optimal tariff-setting in the public interest, actually determines protection. How does the trading-bloc model of section 1 above hold up?

The key question is how tariffs will vary with the number of trading blocs. Recall that the basic story of trade creation versus trade diversion went through even with fixed tariffs - the rising tariffs that resulted from a reduction in the number of blocs in the original version of the model turned out not to be necessary. So what we need to ask is whether external tariffs will either rise, or at any rate not fall, as blocs become fewer in number.

We can take the preference for producers $\pi$ as fixed, less out of conviction than as an application of what one of my colleagues calls the 'principle of insignificant reason'. The elasticity of import demand represents a more problematic variable. But there is a clear presumption that a larger bloc will, on average, have a smaller import share, other things being equal - that the ratio of imports to domestic production, both overall and industry by industry, will normally be lower in a large country or trading area than in a small one. And this will tend to imply that if countries set tariffs unilaterally, large economic units will be more protectionist than small.

This proposition cannot be tested by looking at modern industrial nations, which have operated under a regime of negotiated tariffs since the 1940s. In the pre-1939 era, however, a crude comparison does suggest that rates of protection were positively correlated with economic size. In particular, as Bairoch (forthcoming) points out, the United States, the largest economy even in the early 20th century, was notably more protectionist than any other major nation. Arguably it has also been the case that large developing countries such as Brazil and India have generally had higher rates of protection than smaller nations.

Thinking of tariff rates as set more with a view toward political pressure than as maximising national welfare does not thus, at first blush, invalidate the proposition that a move toward fewer, larger trading areas may well produce large trade diversion. This conclusion depends, however, on the assumption that tariff rates are set non-cooperatively - an assumption that was true before 1914 but has not (we hope!) been true under the GATT. So we need to turn next to the effects of negotiation on tariff-setting.

3 Negotiation and protection

US protectionism actually peaked with the Smoot-Hawley tariff, and began a 45-year decline during the 1930s. The basic pattern was already visible during the Roosevelt years: the United States would offer nations increased access to the US market in sectors in which we had a comparative disadvantage, in return for reciprocal access in sectors in which we had the advantage. The political economy of this method was apparent: it set the interests of US exporters as a counterweight to import-competing industries.

Trade negotiations have been highly successful in reducing trade barriers. So to make sense of actual trade policy it is necessary to think in terms of a bargaining process in which there is linkage both across industries and between the trade policies of different nations.

3.1 Justifying partial equilibrium

As soon as we introduce multiple-industry complications, we must deal with general equilibrium. Yet full general equilibrium concerns do not
seem to be of the essence in understanding trade negotiations, and are
certainly not uppermost in the mind of, say, Carla Hills. So in this
subsection I introduce a somewhat artificial framework that is formally
general equilibrium in nature but can continue to be discussed using
partial equilibrium techniques.⁵

This setup is as follows: in each of two countries, we suppose that \( n + 1 \)
goods are produced. One of these goods, call it \( K \), is a ‘residual’ good; it plays a special role in both consumption and production. Utility is
separable among the goods and linear in \( K \):

\[
U = K + \sum_i f_i(C_i)
\]  

(15)

where \( C_i \) is consumption of good \( i \), and \( f_i' > 0, f_i'' < 0 \).

Production has a similar structure. There is an interactively mobile
factor of production, labour, which can be used in all sectors. Labour is
the only factor of production in \( K \), so that there are constant returns in
that sector:

\[
Q_K = L_K
\]  

(16)

In each of the \( n \) other sectors, however, there is a specific factor as well.
This gives rise to diminishing returns with respect to labour:

\[
Q_i = g_i(L_i) \quad g_i' > 0, g_i'' < 0
\]  

(17)

for all \( i \).

The behaviour of this model is obvious. Demand for each of the \( n \)
non-residual goods depends only on the price of that good relative to the
residual good. Supply of each of the non-residual goods similarly depends
on the price of the good relative to labour, or equivalently relative to the
residual good.

Suppose that there are two countries that share this production and
demand structure, and that all goods are tradeable. Under free trade,
market equilibrium for the \( n \) non-residual goods can be determined in
partial equilibrium fashion. In effect, we can draw back-to-back supply–
demand diagrams, and set one country’s excess supply equal to the other
country’s excess demand industry by industry. The residual sector’s
market must then clear because of Walras’s Law.

A system of tariffs is also easy to introduce, as long as we maintain free
trade in the residual good. Again, we simply do partial equilibrium good
by good.⁶

What we have done with this setup, then, is rationalise (justify is too
strong a word) the partial equilibrium approach used to discuss trade
policy above. The main qualification is that even in the partial setting
there will now necessarily be some market power on the part of the

![Figure 3.3 Tariff bargaining](image)

protecting nation in each industry, so that there is a terms of trade motive
as well as a weighted social welfare motive for protection. Basically,
however, we have now given ourselves licence to use the partial analysis in
the context of multiple industry trade negotiations.

3.2 Trade bargaining

Imagine that there are two countries and two non-residual industries. We suppose that under free trade each country would be an importer in one of
these industries, and that each has a politically optimal tariff that it would
choose in that industry if acting independently.⁷

Let \( t_1 \) be the tariff charged by the first country, and \( t_2 \) the tariff charged
by the second. We can then illustrate the situation with Figure 3.3. The
tariff rates \( t_1^* \) and \( t_2^* \) are the individual optima; a few contour lines are
sketched in. These contour lines reflect the fact that an increase in either
country’s tariff hurts the other government’s objective function, both by
reducing welfare and additionally by hurting exporting producers.

If the two countries set tariffs non-cooperatively, the outcome will be at
point \( N \). But as is evident from Figure 3.3, both governments prefer points
to the southwest – again, this is both because they care to some extent
about national welfare, and because they want to provide benefits to
domestic producers.
4.1 Consequences of regional blocs

In section 1 of this chapter, I showed that consolidation of the world into a small number of trading blocs was likely, with unchanged external tariffs, to produce more trade diversion than creation — with the important practical caveat that to the extent that the blocs followed the lines of natural trading areas, the effect was likely to be more favourable. If blocs set trade policies non-cooperatively, consolidation will normally lead to higher external trade barriers, reinforcing the likelihood of adverse effects. But what if trade policies are set through negotiation?

Once upon a time, European nations came to multilateral negotiations as individual negotiators; now they come as a bloc. Does this make them more or less able and/or willing to compromise?

The answer seems to be that it can cut either way. On one side, consolidation into regional blocs could make it more likely that negotiated agreements would be reached simply because there were fewer players. A world trading system effectively run by a G-3 of NAFTA, the European Community, and Japan poses many fewer problems of free-riding than one in which France or Italy are free to make independent demands and cheat on their own.

On the other side, as argued in section 2 of this chapter, large blocs would in the absence of cooperation tend to impose higher tariffs than small players, i.e., their temptation to protect is higher. At the same time, in the realistic case where blocs follow natural geographic lines, a collapse of free trade to non-cooperative tariff-setting will probably do less harm if nations are organised into a few blocs — and therefore the prospect of such a collapse is less of a deterrent to cheating. So a consolidation into large trading blocs could undermine the sustainability of a cooperative international system.

All of this needs some careful modelling. But, overall, the answer seems to be definitely ambiguous. Regional trading arrangements could work either for or against global free trade.

4.2 Forces for regionalism

In some sense, the question of whether regional trading arrangements are good or bad is a moot point. There is nobody who is in a position to decree regional blocs either into or out of existence. So we need to ask why such blocs are in fact emerging.

This come down to asking why nations may feel that they are able to negotiate more at a regional than at a global level. Or to put it more pessimistically, what are the problems of the GATT that lead countries to turn to their neighbourhood instead?
I would list four reasons, all of them tied to the Prisoners' Dilemma sketched out above.

First, there is the sheer number of participants in the multilateral negotiations. As a practical matter, this changes the character of negotiations. In the early, highly productive GATT rounds, the relatively small number of players were able essentially to carry on parallel bilateral negotiations, something like playing a game of Risk. By the time of the Kennedy Round, the numbers were too great, and it was necessary to resort to formulaic tariff reductions, which inevitably make it harder to strike the right political balance. Also, once there are many players the threat that cheating will bring down the system becomes less credible—will the GATT really collapse because, say, Thailand fails to honour its rules?

Second, the changing character of trade restrictions makes monitoring increasingly difficult. The rise of the New Protectionism of voluntary export restraints (VERs), orderly marketing agreements (OMAs), etc. has been massively documented; it represents both exogenous bureaucratic creativity and an end run around negotiated tariff reductions. What it does is to make the negotiation space vastly more complicated than indicated in Figure 3.3, and to make monitoring of adherence extremely difficult.

Third, the decline in the relative dominance of the United States has probably made the system more difficult to run. The political theory of 'hegemonic stability'—essentially, the view that some dominant power must be there to enforce the rules of a cooperative game—is not as well founded in theory as one might suppose. Nor is it universally accepted even among political scientists. But it is certainly reasonable to argue that a dominant America, preoccupied with trade as a binding agent in a political and military struggle, may have helped the GATT to work better a generation ago than it does now.

Finally, institutional differences among major countries pose problems for the system. (This means Japan.) The reason is not that there are no gains from trade between countries with different institutions. It is that at least a shared understanding is necessary to overcome the Prisoners’ Dilemma. Suppose that a tariff reduction in country A, with its free-wheeling markets, really does open access to those markets; while a tariff reduction in Country J, whose markets are governed by informal understandings and cartels, does little to open the gates. Then unless J can find something else to offer, the trade-bargaining game between the countries will break down. It may well be the case that A's welfare would be higher if it ignored this problem and simply pursued unilateral free trade. But as the GATT process itself recognises, governments do not maximise national welfare, and a successful trade regime must build on the motives governments actually have, not the ones we wish they did have.

Regional trading arrangements offer an opportunity to reconstitute the bargaining process at a level where all of these problems can be diminished. They involve smaller groups of nations; they can (as in 'EC 92') involve what Robert Lawrence has called 'deep integration', which essentially removes borders and thus the possibility of creative protectionism. Because the numbers are small, the problem of finding a hegemon is much less severe. And regional trading blocs, at least so far, avoid including nations with institutional differences large enough to undermine faith in the process.

5 Summary conclusions

We can pose two questions about the role of regional trading blocs. The normative question is, will the formation of such blocs lead to trade creation or to trade diversion? The answer is clear: more research is needed. Small numbers tend to make cooperative solutions more likely; ability of players to fare well if bargaining fails makes such solutions less likely; both effects are at work.

The positive question is whether there are deep-seated reasons for a move toward regional trading blocs. Although the discussion here is loose and speculative, I would argue that the answer is yes: for a mix of reasons, the ability to support a cooperative solution at the multilateral level is declining, while at the regional level it remains fairly strong.

Appendix: a basic trading-bloc model

This Appendix briefly restates the simple trading-bloc model of Krugman (1991a).

We imagine a world whose basic units are geographic units that we will refer to as 'provinces'. There are a large number $N$ of such provinces in the world. A country in general consists of a large number of provinces. For the analysis here, however, we ignore the country level, focusing instead on 'trading blocs' that contain a number of countries and hence a larger number of provinces. There will be assumed to be $B < N$ trading blocs in the world. They are symmetric, each containing $N/B$ provinces (with the problem of whole numbers ignored). In this simplified world, the issues of free-trade zones reduces to the following: how does world welfare depend on $B$?

Each province produces a single good that is an imperfect substitute for the products of all other provinces. We choose units so that each province
produces one unit of its own good, and assume that all provincial goods enter symmetrically into demand, with a constant elasticity of substitution between any pair of goods. Thus everyone in the world has tastes represented by the CES utility function

\[
U = \left[ \sum_{i=1}^{N} c_i \right]^{1\gamma} \tag{A1}
\]

where \(c_i\) is consumption of the good of province \(i\), and the elasticity of substitution between any pair of products is

\[
\sigma = \frac{1}{1 - \theta} \tag{A2}
\]

A trading bloc is a group of provinces with internal free trade and a common external ad valorem tariff. We ignore the realistic politics of trade policy, and simply assume that each bloc sets a tariff that maximises welfare, taking the policies of other trading blocs as given. This is a standard problem in international economics: the optimal tariff for a bloc is

\[
t^* = \frac{1}{\gamma - 1} \tag{A3}
\]

where \(\gamma\) is the elasticity of demand for the bloc’s exports.

In a symmetric equilibrium in which all blocs charge the same tariff rate, it is possible to show that (see Krugman, 1991a)

\[
\gamma = s + (1 - s)\sigma \tag{A4}
\]

where \(s\) is the share of each bloc in the rest of the world’s income measured at world prices. The optimal tariff is therefore

\[
t^* = \frac{1}{(1 - s)(\sigma - 1)} \tag{A5}
\]

It is apparent from (A5) that the larger the share of each bloc’s exports in the income of the world outside the bloc, the higher will be the level of tariffs on intra-bloc trade. This immediately suggests that a consolidation of the world into fewer, larger blocs will lead to higher barriers on interbloc trade.

One cannot quite stop here, however, because the share of each bloc in the rest of the world’s spending depends both on the number of blocs and on the world-wide level of tariffs. Again after some algebra it is possible to show that this share equals

\[
s = \frac{1}{(1 + t)^\gamma + B + 1} \tag{A6}
\]

so that the share of each bloc’s exports in the rest of the world’s income is decreasing in both the tariff rate and the number of blocs.

Equations (A5) and (A6) simultaneously determine the tariff rate and the export share for a given number of blocs \(B\).

It is straightforward to show that a reduction in the number of blocs will lead to a rise in both \(s\) and \(t\).

Clearly this change will reduce the volume of trade between any two provinces that are in different blocs. Even at an unchanged tariff, the removal of trade barriers between members of the expanded bloc would divert some trade that would otherwise have taken place between blocs. This trade diversion would be reinforced by the rise in the tariff rate.

We now turn to welfare. Given the utility function (A1), it is possible to calculate the welfare of a representative province as a function of the total number of provinces \(N\), the number of blocs \(B\), and the tariff rate \(t\) on interbloc trade. Since \(N\) plays no role in the analysis, we can simplify matters somewhat by normalising \(N\) to equal 1. Again after considerable algebra, given in Krugman (1991a), we find that the utility of a representative province is

\[
U = \left[ \frac{B}{(1 + t)^\gamma + B + 1} \right]^{1/(1 - B^{-1})} \tag{A7}
\]

If trade were free, this would imply a utility of 1. Since the tariff rate \(t\) is also a function of \(B\), we can use (A5), (A6) and (A7) together to determine how world welfare varies with the number of trading blocs.

The easiest way to proceed at this point is to solve the model numerically. This grossly oversimplified model has only two parameters, the number of trading blocs and the elasticity of substitution between any pair of provinces; it is therefore straightforward to solve first for tariffs as a function of \(B\) given several possible values of the elasticity, and then to calculate the implied effect on world welfare. In Krugman (1991a) the values of \(\gamma\) considered are 2, 4, and 10.

Several points about the results are worth noting. First, the relationship between tariff rates and the number of blocs is fairly flat. The reason is that when there are fewer blocs, trade diversion tends to reduce interbloc trade, and thus leads to less of a rise in each bloc’s share of external markets than one might have expected. Second, except in the case of an implausibly high elasticity of demand, predicted tariff rates are much higher than one actually observes among advanced nations. This is not an artifact of the economic model: virtually all calculations suggest that unilateral optimum tariff rates are very high. What it tells us, therefore, is
that actual trade relationships among advanced countries are far more cooperative than envisaged here.

Finally, welfare calculations yield a striking result. World welfare is of course maximised when there is only one bloc, in other words, global free trade. As suggested informally in the text, however, the relationship between welfare and the number of trading blocs is not monotonic but U-shaped: world welfare reaches a minimum when there are a few large blocs, and would be higher if there were more blocs, each with less market power.

But where is the minimum? For the full range of elasticities considered, world welfare is minimised when there are three blocs.

NOTES

1 Grossman and Helpman (1992) are currently engaged in a line of research that seems extremely promising; some of the discussion in this chapter was inspired by initial presentations of their work – although little of the flavour of their elegant analysis will seep through, and I of course bear all responsibility for any foolishness.

2 For example, Whalley (1985) estimates that in an ‘optimal tariff’ war among major world trading areas, the tariff rate levied by the United States would be approximately 150 percent.

3 As mentioned above, Grossman and Helpman have made some important progress toward modelling the process by which organised groups exert influence.

4 Richard Baldwin has proposed using this approach for normative analysis of trade policy, and has proposed a catchy name: ‘politically realistic objective functions’, or PROFs.

5 This framework was originally introduced by Samuelson (1964) in an attempt to psychoanalyse conventional views about the transfer problem. In his version the residual good, described below, was assumed to be non-traded. The version with a traded residual good has been part of the oral tradition in trade for some time, but as far as I know the recent work of Grossman and Helpman represents its first systematic application.

6 This partial approach can be badly misleading in one respect: it misses general equilibrium terms of trade effects. For example, suppose that a country imposes a tariff in an industry in which it has very little monopoly power. Does this tariff improve the terms of trade? One is tempted to say no; yet the tariff will pull resources out of other industries, which will include export sectors in which the country may have substantial market power. The assumption of a linear residual sector sterilises all such effects, but in reality they may be quite important.

7 This politically optimal tariff now combines the terms of trade and weighted social welfare motives.

REFERENCES


Discussion

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In the title of Paul Krugman’s stimulating paper I would have been tempted to replace ‘versus’ connecting ‘regionalism’ and ‘multilateralism’ with an ‘and’. Herein, I think, hangs a tale. Those who view the emergence of regional efforts to establish free-trading areas, especially in Europe and North America, as a threat to the more than forty years of efforts of GATT to lower trade barriers on a multilateral basis are driven to compare the benefits of multilateralism with the potential or actual welfare-reducing possibilities of discriminatory regional arrangements. To my knowledge few economists would do an 180° turn on the comparison to argue that regional efforts raise welfare whereas multilateral reductions in trade impediments lower real incomes. ‘Regionalism and multilateralism’ reflects a different point of view: in today’s world regionalism and multilateralism can coexist. Indeed, given the strong inclinations of certain regions to pursue closer economic associations among small groups of countries, there is an even more important role for GATT and international consultations to ensure that trading blocs join others in a multilateral effort to reduce obstacles to trade. Choosing between the two is not the option.