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## **APEC and Regional Trading Arrangements in the Pacific**

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## **Summary**

This paper examines the feared regionalization of world trade in general, and the question of an agenda for APEC in particular. Econometric evidence on bilateral trade flows suggests that trade is indeed becoming more regionalized. The gravity model is used to correct trade flows for natural determinants such as size, GNP/capita, proximity, and common borders. Even after this adjustment, some regional groupings show significant bloc effects: the EC, the Western Hemisphere, East Asia, and APEC. Some groupings also show evidence of trade-diversion, although the EC and East Asia groupings tend to be open. We then turn to the implications for economic welfare. A theoretical framework can be used to show that there is an optimal degree of regionalization of trade policy that is "naturally" justified by any given magnitude of inter-continental transport costs. Rough parameter estimates suggest that world trade may currently be in danger of becoming over-regionalized, of entering what we call the super-natural zone. The criterion of static economic welfare should be supplemented by political economy considerations, however. In this light, one important item on the APEC agenda should emphasize the management of smaller regional Free Trade Areas within the Pacific, such as NAFTA and a prospective ASEAN FTA, to make sure they are consistent with "open regionalism."

## **APEC and Regional Trading Arrangements in the Pacific**

When the APEC (Asia Pacific Economic Cooperation) forum was established in 1989, at Australian instigation, there was a danger that it would come to be viewed as a vacuous talk-shop. The lukewarm attitude of the United States, in particular, might have doomed it to irrelevance. The ever-rising importance of the Pacific Rim has precluded this, however. In 1993, the Clinton Administration decided to throw its weight behind APEC, taking advantage of the occasion of U.S. government chairmanship to upgrade the meeting of ministers that had been scheduled in Seattle into a high-profile Leaders' Meeting. The "Vision" of a future Pacific *Community*, which was proposed at that time by the advisory Eminent Persons' Group under the chairmanship of C.Fred Bergsten, struck many East Asians as too ambitious. Nevertheless, most APEC members welcomed the renewed emphasis on the region.

For some, APEC is another in a long line of acronyms that spell the increasing regionalization of world trade: EC, NAFTA, MERCOSUR, and so on. There is some alarm that the world may be breaking up into trading blocs, threatening the adverse economic and political consequences that fragmentation of the world system entailed in the 1930s.<sup>1</sup> This paper examines the feared regionalization of world trade in general, and the question of an agenda for APEC in particular.

### **1. Open Regionalism**

The hallmark of APEC is supposed to be the concept of "open regionalism." The term

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<sup>1</sup> Useful introductions to the subject of regional trading blocs include Bhagwati (1992), Fieleke (1992), Krugman (1991b), and Schott (1991).

strikes some as an oxymoron. How can a proliferation of regional economic arrangements, such as the world has seen recently, be consistent with an open multilateral trading system predicated on non-discriminatory policies?

An open multilateral trading system should indeed continue to be the ultimate goal. There is a popular impression that, because free trade helps advance some desirable political goals, and because Americans no longer feel able to bear as high a share of the burden of advancing these goals as in the past, it follows that free trade is no longer in the U.S. interest. This impression is wrong. An open trading system is simultaneously in the political and economic interests of the United States, as of most countries. It is true that we have a new appreciation of the complications for national economies created by imperfect competition, increasing returns to scale, and endogenous technology. Nothing has changed, however, regarding the desirability of mutually-negotiated enforceable agreements to reduce worldwide levels of trade barriers, subsidies, and other distortions.

Regional economic arrangements have a role to play, in part because the 180 countries of the world have found it politically difficult to negotiate rapid liberalization through the GATT. The forces opposing liberalization within each country have been too strong, the GATT as an institution has been too weak, and the set of possible deals among so many parties has been too large and complex, for the negotiators to make progress as rapidly as we would wish. The long-delayed successful climax of the Uruguay Round in December 1993, and the conversion of the GATT into a strengthened World Trade Organization, should give pause to those who thought that multilateral liberalization was dead and that alternative approaches were necessarily required. Nevertheless, it remains true that if subsets of countries can strike mutually beneficial deals in certain areas, then there seems little reason why they should not do so, *provided such arrangements are constructed in such a way as to avoid hurting non-member*

*countries, and provided they are constructed in such a way as to be conducive to the generalization of liberalization measures to include other countries.* This, I believe, is an appropriate way to articulate desires for open regionalism.

Why should such bargains among subsets of countries be struck along regional geographic lines? Neighboring countries are already linked economically and politically, with or without formal institutional arrangements. As this paper will demonstrate, statistical estimates suggest that if two countries are both located in APEC, they trade far more with each other than would otherwise-similar countries. Furthermore, if they are located within intra-continental distance of each other, they trade twice as much; and if they share a common border, they trade twice as much again, in each case holding other factors constant.

The importance of physical and cultural proximity leads to five possible reasons for looking favorably on attempts to draw the boundaries of agreements along "natural" geographic lines. First, some issues, like migration and environmental policy have an inherent regional dimension in their spillover effects. It makes sense to address issues such as acid rain or river pollution within regional agreements like the NAFTA. Second, new issues such as protection of intellectual property rights or trade-related investment measures may gain salience in certain parts of the world before others. It might make sense to design institutional provisions to deal with such issues where there is the political will to do so, and to seek to extend the arrangements to other regions when the issues arise there. Third, there are often important political objectives that motivate regional agreements, such as promoting political stability, democratic evolution, and peaceful relations, which should be encouraged by the world community. Fourth, when domestic interest groups who oppose regional integration are overcome politically, the political momentum often turns out to be favorable for liberalization vis-a-vis the rest of the world as well. Fifth, reduction in tariffs and other trade barriers within

a preferential trading arrangement is more likely to promote economic efficiency -- to promote trade-creation over trade-diversion -- if the members already trade a lot with each other anyway.

We have already noted that they are more likely to trade a lot with each other if they are neighbors. Paul Krugman (1991) has argued that Free Trade Areas (FTAs) are likely to raise economic welfare if their boundaries are drawn along the "natural" geographic lines, e.g., one to a continent. In what the Economist called "the shootout at Jackson Hole," Summers (1991) agreed with Krugman that natural blocs were likely to be beneficial, while Bergsten (1991) was on the other side. Another opponent is Bhagwati (1992), whose reaction to reports from Jackson Hole was: "The prescription is sufficiently strange and hard to defend for me to wonder whether these distinguished economists truly expressed these views" (footnote 8).<sup>2</sup> In Section 3 of this paper we quantify statistically the proposition that nearby countries trade more with each other, and in Section 4 we explore theoretically the idea that a degree of regionalization of trade policy is justified by natural geography.

## **2. Recent Regional Developments Around the Pacific**

To date, income and trade have expanded rapidly within the APEC region with very little reliance on official institutions of any sort. Asia does not have the sort of formal preferential trading arrangements that are found in Europe and, more recently, in the Western Hemisphere. It may be time, however, for the official institutions to begin to catch up with private-sector realities, provided the institutions are designed in the right way.

Already, some neighboring subsets of Pacific region countries have adopted innovative

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<sup>2</sup> It should be noted that the idea of proximity as a desideratum for successful FTAs, on the grounds that it would minimize the amount of trade diversion, was not entirely new with Krugman. (See Wonnacott and Lutz, 1989.)

institutional arrangements in specific issue areas that could be beneficial if emulated more widely. In 1983, Australia and New Zealand agreed on a Closer Economic Relationship, a potentially useful model in that it includes harmonization of competition policy (anti-trust). In 1988, Canada and the United States negotiated their Free Trade Agreement, which included the all-important precedent of a supra-national commission to adjudicate trade disputes. The NAFTA was negotiated in 1992, and came into effect in 1994. In 1991, the countries of the northwestern half of South America turned the Andean Pact into a genuine Free Trade Area, liberalizing significantly vis-a-vis the rest of the world at the same time that they removed trade barriers among themselves.

Japan and China have yet to engage in comparable steps vis-a-vis their neighbors. The ASEAN countries have made relatively little progress toward the 21st-century goal of an ASEAN Free Trade Area. The Malaysians, however, have proposed an East Asian Economic Caucus that would include all of East Asia, while excluding Australia, New Zealand, and North America. Fear that such a geographical grouping would be a Japan-dominated "yen bloc" has been the shared reaction of the United States and of many Asians themselves. Indeed, even in Japan many are wary of any hints of resuscitating the Greater Asian Co-Prosperty Sphere. [In the author's view, the Bush Administration was a bit heavy-handed in its instructions to Japan and other allies not to pursue this path, where judicious silence would have accomplished much the same thing.]

President Clinton's upgrading of the Seattle meeting of APEC ministers that had been scheduled for November 1993 into a high-profile Leaders' Meeting was a brilliant move. It was a cheap way of reassuring the Asian Pacific countries that the United States intended to remain engaged in the region, while simultaneously signaling to the Europeans that if they continued to allow French farmers to hold up the Uruguay Round, other countries might be

prepared to proceed with increased economic integration without them. This message carried some credibility because of the fortunate timing, immediately after the hard-fought approval of NAFTA in the U.S. Congress. The NAFTA outcome demonstrated the political will necessary for meaningful agreements, while the APEC meeting demonstrated the possibility that agreements would cover a fraction of the world economy that was sufficiently large and dynamic to give the Europeans cause for worry at the prospect of being left out.

### **3. Is World Trade in Fact Becoming More Regionalized?**

Table 1 presents statistics on the intra-regional share of trade undertaken by members of these groupings. Intra-regional shares, reported as "Ratio 1," increased between 1965 and 1990 in some parts of the world: from 44.6 per cent to 53.2 per cent among the APEC countries as a bloc, from 0.8 per cent to 2.6 per cent among the Andean countries, from 35.8 per cent to 47.1 per cent among the EC 12, and from 19.9 per cent to 29.3 per cent among the East Asian countries.

Many observers base their belief that world trade is becoming more regionalized on simple statistics such as Ratio 1 in Table 1. That the share of intra-regional trade is increasing within a given grouping, however, does not necessarily mean that the members of this grouping are undertaking explicit discriminatory trade policy measures to bring this about (or even indirect measures such as Overseas Development Assistance and Foreign Direct Investment, which the Japanese are regularly charged with employing to the same end). Rapid growth in intra-regional trade could be the result of natural factors, i.e., rapid growth in per capita GNPs. Indeed we found in earlier work that this is the case for East Asia.<sup>3</sup> A typical East Asian country trades more with another typical East Asian country than it did twenty years ago for the

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<sup>3</sup> Frankel (1991, 1993) and Frankel and Wei (1993, 1994).



same reason that a typical country anywhere in the world does: the East Asian countries simply loom larger in world trade. In Europe and the Americas, on the other hand, there appears to be an increasing and statistically significant role for regional trade policies, even after correcting for natural determinants.

The simplest way to adjust a grouping's intra-regional trade share for natural growth in markets is to divide it by that region's share of worldwide trade. This adjusted measure is presented as Ratio 2 in Table 1. (Such "indexes of trade intensity" have also been computed by Drysdale and Garnaut, 1993, Petri, 1993, and Anderson and Norheim, 1993, with similar conclusions.) We see that East Asia's bias toward intra-regional trade did not in fact increase over the period 1965-1990. In the case of APEC, the Western Hemisphere, the EC, and most of the other groupings, however, there was indeed a trend toward intra-regional bias over the period by this simple measure.

A more thorough way to adjust for natural determinants of bilateral trade is by means of the gravity model. The gravity model says that trade between two countries is proportionate to the product of their GNPs and inversely related to the distance between them, by analogy to the formula for gravitational attraction between two masses. It has a fairly long history and fits the data remarkably well empirically.<sup>4</sup>

In addition to the variables for size and distance, we also add the product of their per capita GNPs, and an "Adjacent" dummy variable to indicate when two countries share a common land border. A dummy variable can then be added to represent when both countries in a given pair belong to the same regional grouping. The goal is to see how much of the high level of trade within each region can be explained by simple economic factors common to bilateral trade throughout the world, and how much is left over to be attributed to a special

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<sup>4</sup> Antecedents stretch back at least as far as the 1940s, and ultimately to Sir Isaac Newton. More recent references are given in Frankel, Stein and Wei (1994).

regional effect. The great advantage of the Ordinary Least Squares (OLS) regression technique is that it can separate out the effects of the various different factors (provided the linear equation is correctly specified). In this way we can avoid attributing what is really the effect of, say, proximity or a common border, to the apparent effect of common membership in a preferential trading arrangement.<sup>5</sup>

Table 2 reports results of the gravity model estimation, for 1980. The variable we seek to explain is trade (exports plus imports), in log form, between pairs of countries. We have 63 countries in our data set, so that there are 1,953 data points ( $= 63 \times 62 / 2$ ) for a given year. We find all four standard gravity variables to be highly significant statistically ( $> 99\%$  level).

The estimated coefficient for the log of the product of the two countries' GNPs is about .7, indicating that, though trade increases with size, it increases less-than-proportionately (by .7 per cent, for every 1 per cent increase in size, holding GNP per capita constant). This reflects the familiar pattern that small economies tend to be more dependent on international trade than larger, more diversified, economies. The estimated coefficient on the product of per capita GNPs is about .3, indicating that richer countries trade more. The coefficient on the log of distance is about -.6. This means that when the distance between two non-adjacent countries is higher by 1 per cent, the trade between them falls by about .6 per cent. The coefficient on the dummy variable representing Adjacency is about .7, indicating that two countries that share a common border trade roughly twice as much [ $\exp(.7) = 2.0$ ] as would two otherwise-similar countries. Other results, not reported here to save space, show that when two countries speak the same language, they also trade more. There is some evidence that this is especially true for

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<sup>5</sup> Wonnacott and Lutz (1989, p.76) is typical of many studies that attribute high intra-regional trade shares solely to the effects of preferential trading arrangements, while Krugman (1991) and Summers (1991) commit the symmetric oversimplification of attributing them primarily to the effects of geographical proximity.

English.<sup>6</sup> Thus the large volume of U.S.-Canadian trade, for example, is easily explained as the sum of five significant effects: size, GNP/capita, proximity, common border and common language.<sup>7</sup>

If there were nothing to the notion of trading blocs, then these four or five basic variables might soak up most of the explanatory power. There would be little left to attribute to a dummy variable representing whether two trading partners are both located in the same regional grouping. In this case the level and trend in intra-regional trade would be due solely to the proximity of the countries, and to their rates of overall economic growth.

But, as in earlier work, we find that dummy variables for intra-regional trade are highly significant statistically.<sup>8</sup> [The bloc dummy variables are indicated by a "2" suffix, indicating that both members of the pair belong to the grouping in question.] If two countries are both Asian/Pacific, for example, column one indicates that they traded more than an estimated three

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<sup>6</sup> And Chinese, but not for Spanish. Some results for individual languages are reported in Tables 5a and 5b in CIDER Working Paper No. C94-034. When the language coefficient is constrained to be the same for different languages, it is highly significant for all years (Table 1 in Frankel and Wei, 1993a). In general, two countries sharing linguistic/colonial links tend to trade roughly 65 per cent more than they would otherwise [ $\exp(.5) = 1.65$ ].

<sup>7</sup> It would be wrong, however, to conclude from high volumes of international trade, such as that crossing the U.S.-Canadian border, that integration is so high that borders no longer matter. McCallum (1993) estimates a gravity model on bilateral trade among 10 Canadian provinces and thirty U.S. states, and finds that intra-national trade is 20 times higher, other things equal, than cross-border trade. Evidently a common legal system, common standards, common media networks, etc., make quite a difference. [It would also be wrong to conclude that such results call into question the usefulness of the gravity model. To the contrary, only by holding constant for the gravity variables can one ascertain that common membership in a Free Trade Area causes trade between two economic units to double, for example, or common membership in a political union causes it to increase twenty-fold.]

<sup>8</sup> In some cases, e.g., the EC, these results confirm what one might have guessed from looking simply at intra-regional trade shares, as in Table 1. In other cases the corrections of the gravity model make a big difference (although in some of these cases, one could have gotten the right answer from looking at the simpler adjusted intra-regional trade shares, Ratio 2 in Table 1).

times as much in 1980 as would two otherwise-similar country [ $\exp(1.27) = 3.56$ ]. If two countries are both located in East Asia as well, they traded an estimated 80 per cent more [ $\exp(.58) = 1.79$ ].

The results reported here differ from earlier work by adding a term for each grouping to try to capture trade-diversion effects. [These terms are indicated by a suffix "N," standing for trade with non-members of the grouping in question.] The 1980 estimates indicate significant trade-diversion in EFTA: Members of EFTA trade 20 per cent less with non-members than do typical countries in our sample [ $\exp(-0.24) = .79$ ]. On the other hand, the coefficients are usually significantly greater than zero for the East Asian grouping and the EC, indicating that these countries are relatively open with respect to non-members at the same time that they are integrated within their respective regions.

Most of our tests have been based on a simple measure of transport costs: the "great circle" distance between the two capital cities (or other major city; the list of countries and cities is available in an Appendix). In some cases this is probably not the best measure. When African countries, for example, trade with each other, the commerce tends to pass over much longer distances than a direct overland route would suggest. We now also try distance measures, generously supplied by Winters and Wang (1992), that take into account the greater distances involved in sea voyages around obstacles like the Cape of Good Hope and Cape Horn. The second column reports results based on this measure of distance. Unfortunately, a quarter of the observations must be dropped for missing data. Regression estimates that substitute the Frankel-Wei distance measure whenever the Winters-Wang measure is not available are reported in the last column. The results are similar, but probably a little more reliable.

The biggest change resulting from the use of the Winters-Wang distance measure is to

boost the East Asian bloc effect, so that it is slightly larger than the APEC effect. The EC bloc effect, which in earlier results was not quite significant in 1980 (or earlier), now acquires clear statistical significance. East Asia and Europe are two continents where shipping does tend to go by relatively direct routes (by sea and overland, respectively).

Table 3 updates the regression estimates to 1990. In these results the East Asia effects appear to have risen slightly during the course of the 1980s, both the bloc effect and openness with respect to outsiders, while the APEC bloc effect falls rather sharply.<sup>9</sup> One finding that is consistent with earlier results is that there was apparently a strong increase in intra-regional bias in the Western Hemisphere in the second half of the 1980s. Two countries located in the Americas trade with each other an estimated three times more than would two otherwise similar countries [ $\exp(1.2) = 3.32$ ].

We next seek to take a slightly more disaggregated view of the bloc effects, first along a geographical dimension, and then along a sectoral dimension. The Western Hemisphere and East Asia variables might be viewed as a bit artificial: There are as yet no preferential trading arrangements that cover these broad groupings. Accordingly, we have tested whether there is a specific ASEAN bloc effect. The finding is that, once one takes into account the broader EAEC bloc effect, there is nothing significant left over to be attributed to a specific ASEAN bloc effect.<sup>10</sup> Similarly, there is no strong evidence of a Greater China bloc effect.<sup>11</sup>

Table 4 here replaces the Western Hemisphere bloc variable with separate dummy

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<sup>9</sup> Surprisingly, APEC appears to have become rather strongly trade-diverting if one accepts the estimate, a finding hard to reconcile with notions of "open regionalism" or with one's intuition.

<sup>10</sup> Frankel (1993).

<sup>11</sup> There does appear to be a significant China bloc effect when one runs the test on official trade figures. But if one corrects the statistics for likely diversion of Taiwan-China trade through Hong Kong, the Chinese bloc effect becomes no greater than that for other common-language groupings. (Frankel and Wei, 1994b.)

variables for three sub-regions that have recently moved toward explicit FTAs: NAFTA, MERCOSUR, and the Andean Pact. Tight standard errors and significant coefficients are not to be expected, in light of the small number of observations: 3 ( $= 3 \times 2/2$ ) for NAFTA, 6 ( $= 4 \times 3/2$ ) for MERCOSUR, and 10 ( $= 5 \times 4/2$ ) for the Andean Pact. But the point estimates are of interest nonetheless, as these are the groupings with explicit trade preferences.

We have also run the tests on trade data disaggregated into three sectors: manufactured goods, agricultural, and other raw materials. We hope thereby to address some views that a trade bloc in East Asia, for example, is concentrated in one sector or another.

The tests are run separately every five years from 1965 to 1990. These tests are similar to Tables 2 and 3 in Frankel, Stein and Wei (1994), but for the trade-diversion variable, indicating when one country is a member of the grouping and the other is not.

The intra-regional bias shows up most strongly for MERCOSUR, especially in 1990. [In earlier estimates (Frankel, Stein and Wei (1994), the Andean Pact also showed a highly significant bloc effect in 1990.] The NAFTA coefficient is neither positive nor significant, as one would certainly expect from the extremely small number of observations.

As in earlier results, the East Asian and APEC groupings show significant bloc effects throughout most of the period 1965-1990. The sectoral decomposition shows that the bloc effect in East Asia is stronger for manufactures than for agriculture.<sup>12</sup> The East Asian countries show the same contrast in their relations with respect to the rest of the world: relative openness to non-members in manufactures, but relative closedness in agriculture. In the case of the APEC countries by contrast, the bloc effect is as strong in agriculture as in manufacturing, and openness to non-members is considerably stronger. The bloc effects in the EC and EFTA tend to be considerably stronger in agricultural goods than in manufacturing.

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<sup>12</sup> Noland (1990) offers an econometric analysis of trade in East Asia with more detailed sectoral disaggregation.

Other extensions of the analysis are possible. Frankel and Wei (1993a, 1993b) consider various econometric extensions of the original gravity model estimation: the inclusion of pairs of countries that are reported as undertaking zero trade, and a correction for heteroscedasticity based on the size of the countries. The results turn out to be robust to these extensions. The papers also considered some economic extensions, in particular testing whether stabilization of bilateral exchange rates has been a factor in promoting intra-regional trade. Small effects are found, disappearing in the 1980s. We have also tried to capture classic Heckscher-Ohlin effects. Finally, we have tried dropping the specific regional groupings and replacing them with one dummy variable to indicate whenever a pair of countries belongs to the same PTA, the same FTA, or the same common market, regardless which geographical grouping it is. All three kinds of arrangements show positive effects in 1985 and 1990.

#### **4. Is the Regionalization of Trade Good or Bad Economically?**

Given evidence, e.g., in Table 2, of intra-regional bias to world trade in such groupings as the EC, Western Hemisphere, East Asia, and APEC, one is moved to turn to the implications for economic welfare. There is little question that the formation of an FTA hurts those who are not in it, to the extent that it diverts trade toward members and away from non-members. In this light, it may be worrisome that our gravity estimates reported above show some evidence of trade-diversion for EFTA in every year, and for most of the groupings in at least some years, though the EC and East Asia seem relatively benign in this regard.

The effect of forming an FTA on *members* is traditionally thought to depend on the relative magnitudes of trade diversion vs. trade creation, though further effects have been introduced. Frankel, Stein and Wei (1993, 1994) consider the welfare effects in a symmetric world where, if blocs form, every country belongs to a bloc, and they are all equal in size and

in the magnitude of intra-bloc preferences. We pursue the idea of Krugman (1991b), that blocs will raise worldwide welfare to the extent they are "natural," that is, to the extent that they are formed along the natural geographic lines of the continents. The argument is essentially that when inter-continental transport costs are very high, there will be little intra-continental trade to divert, and so one is left with the gains from trade creation within each continent.

Our contribution is to extend the analysis to cover the case of intercontinental transport costs that are in a realistic intermediate range: less than infinite, but greater than the costs within continents. Following Krugman (1991a), the theoretical framework is a standard model of imperfect competition, which has the advantage of being consistent with the gravity model. Gains from trade arise, not from classical notions of differences in factor endowments, but from love for variety on the part of consumers, and increasing returns to scale on the production side. We show that a small amount of regional liberalization raises economic welfare, relative to the status quo of MFN (Most Favored Nation, i.e., no preferences). For any given magnitude of inter-continental transport costs, however, there is an optimal degree of regional preferences that is justified by natural geography. If regionalization of trade policy proceeds past this critical point, trade becomes increasingly distorted. Eventually world welfare falls below the status quo of MFN. We call such welfare-reducing blocs "super-natural."

Figure 1 illustrates the possible effects, for a hypothetical world consisting of four continents of 16 countries each. The horizontal axis represents inter-continental transport costs, expressed as a percentage of the value of the good. The vertical axis represents the magnitude of tariff preferences that members bestow on each other within a Preferential Trading Area (PTA): zero is MFN trade policy, and 1 is removal of all intra-bloc barriers, i.e., an FTA. We see that a small degree of liberalization within the PTA lies in the zone of Positive Returns to Regionalization, but that we are likely to hit the zone of Negative Returns to Regionalization



long before intra-bloc liberalization reaches the FTA limit.

One can calculate an estimate of the inter-continental transport cost parameter,  $b$ , from the coefficient on distance in the gravity model, estimated in Table 2, together with the average distance between continents. The implied value for  $b$  is on the order of 20 per cent. In Figure 1 we see that a vertical line at this value of  $b$  reaches the welfare optimum when intra-bloc preferences,  $k$ , are as low as 10.4 per cent, and enters the super-natural zone at around 20.4 per cent preferences.<sup>13</sup> Estimates of existing tariff preferences within formal PTAs and informal blocs, based on the estimated bloc coefficients in the gravity equation for 1990, suggest values for  $k$  that are higher than this. In other words, the world trading system may already have entered the super-natural zone. It seems that, from the viewpoint of static economic welfare, the world might be better off without trading blocs, in particular without the provision of GATT Article 24 requiring that any Free Trade Areas entail the elimination of "substantially" all trade barriers among their members.

Any such conclusion must register some important caveats, primarily of a political economy nature. First, although our definition of partial preferences has been a partial reduction for neighbors in the tariff on all goods, in practice partial preferences usually take the form of special consideration or outright exemption for some industries at the expense of others. Inter-sectoral distortions and rent-seeking behavior can make this kind of partial preferences very costly. Second is the question of the role that regional arrangements play in further unilateral or multilateral liberalization. Assuming the ultimate goal is the achievement of free trade among all countries, regional FTAs might serve as politically useful "stepping stones" toward that goal. The answers are not clear once we include dynamic political economy

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<sup>13</sup> This graph assumes tariffs levied on c.i.f. prices, as well as a world of 64 countries. If tariffs are levied on f.o.b. prices, as in Figure 4b of Frankel, Stein and Wei (1994) [the CIDER working paper version], then Negative Returns to Regionalization set in at  $k = 23.1$  per cent, and the economy enters the Super-Natural zone at  $k = 44.2$  per cent.

considerations in the analysis.

## **5. Conclusion: What Future for Regional Economic Arrangements?**

Top priority should be placed on full implementation of the Uruguay Round, support for the new World Trade Organization, and plans for the next round of multilateral negotiations. If the GATT mechanism proves unable in the next round to deal with such new issues as the environment however, then the impetus may shift toward regional arrangements. If so, APEC will have an important role to play in keeping negotiations among its members on a healthy track, in "keeping regionalism open."

There is always the danger that regional arrangements will turn into trade-diverting "fortresses." Regional agreements can be kept compatible with progress toward multilateral liberalization by following three guidelines. First, neighbors agreeing on a preferential trading arrangement should scrupulously obey the provision of the GATT's Article 24 that requires them to maintain an average level of tariffs vis-a-vis non-members that is no higher than it was before the arrangement. Even this will not always be sufficient to guarantee that non-members are not harmed, especially if rules-of-origin provisions are exploited in a protectionist way. Jagdish Bhagwati suggests going further than Article 24 as written, to require that the level of external tariffs under the arrangement be at least as low as it was previously for the lowest-level country.

Second, when neighbors enter cooperative arrangements in novel areas such as competition policy or the environment, some effort should be made so that they are compatible with similar arrangements elsewhere. If the world system were to evolve toward a few large blocs each following mutually incompatible procedures for antitrust or intellectual property standards, this would make eventual harmonization at the global level more difficult to achieve.

Finally, regional arrangements should be written in such a way as to allow, indeed encourage, the accession of non-members. If the multilateral process falters, it seems likely that such regional groupings as ASEAN, Australia-New Zealand, and NAFTA, would expand. APEC could fulfill a useful role in bridging amongst these sub-Pacific regional blocs, so that they proceed in a harmonized way.

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