NBER WORKING PAPER SERIES

WHY DO COUNTRIES SEEK REGIONAL TRADE AGREEMENTS?

John Whalley

Working Paper 5552

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
April 1996

An earlier version of this paper was presented at the NBER conference on "Regionalization of the World Economy" held in Woodstock, Vermont, October 19-21, 1995. I am grateful to Jeff Frankel and participants both at the preconference meeting held in Cambridge July 19, 1995, and at the conference in Woodstock for helpful comments. Later sections draw on joint work with Carlo Perroni. This paper is part of NBER's research program in International Trade and Investment. Any opinions expressed are those of the author and not those of the National Bureau of Economic Research.

NBER Working Paper 5552
April 1996

WHY DO COUNTRIES SEEK REGIONAL TRADE AGREEMENTS?

ABSTRACT

This paper emphasizes the range of factors which enter country calculations to seek regional trading arrangements. These include conventional access benefits, but extend to safe haven concerns, the use of trade arrangements to underpin security arrangements, and tactical interplay between multilateral and regional trade negotiating positions. In a final section, results from an earlier modelling effort by Perroni and Whalley are used to emphasize that non-traditional objectives may be quantitatively more important than traditionally analyzed objectives.

John Whalley
Department of Economics
The University of Western Ontario
London, Ontario N6A 5C2
CANADA
and NBER

I. INTRODUCTION

This paper argues that a wide range of considerations enter when countries seek to negotiate regional trade agreements. Some see trade agreements as providing underpinnings to strategic alliances, and hence implicitly form part of security arrangements (as in Europe). Smaller countries see trade agreements with larger partners as a way of obtaining more security for their access to larger country markets (as in the Canada-U.S. agreement). Some countries have tried to use regional (and multilateral) agreements to help lock in domestic policy reform and make it more difficult to subsequently reverse (Mexico in NAFTA). Other countries' use of regional trade agreements reflects tactical considerations; conscious efforts to use prior regional agreements to influence subsequent multilateral negotiation (services in Canada-U.S. and in NAFTA). Regional trade arrangements around the world are thus different one from another, not the least because countries have different objectives when they negotiate them.

As a result, a wide range of differences have to be taken in account in analyzing them. Much of the recent literature on regionalism implicitly assumes that regional trade agreements are similar one to another. This is partly because in analytical discussion it is common to analyze the symmetric case in which countries are of equal size (Krugman (1991), Haverman (1992), Krugman (1993)). If any differentiation is noted, it is usually that some agreements (such as the E.U.) are customs unions, while others (such as NAFTA) are free trade areas. Yet some are part of a process headed towards eventual deeper integration (E.C. in the 1960s), some are consciously stand-alone more shallow agreements (NAFTA), some are simple in structure while others are more complex, and these differences go well beyond differences between customs unions (CUs) and free trade areas (FTAs).

The line of argument offered is that these differences need to be factored into both an analysis of the effects of any given regional trade agreement, and to any balanced discussion of the threat that regionalism now poses for the future evolution of the trading system. An implication is that the gain or loss to any country from a regional agreement needs to be evaluated relative to the appropriate counterfactual, which itself may be difficult to specify analytically. In the paper, I discuss how such considerations can change conventional analyses of the impacts of regional trade agreements, and summarize what is known about the significance of some of the factors involved in some specific cases.

II. RECENT AND LONGER STANDING REGIONAL TRADE AGREEMENTS IN THE TRADING SYSTEM

That regional trade agreements have been present in the multilateral trading system since its early days, and that they have grown in coverage and scope recently is hardly news. But the number and range of these agreements is now quite extraordinary.

Table 1 lists the regional trade agreements both notified to GATT/WTO and in operation as of 1st January 1995, and included in a recent WTO volume on regionalism.[2] This long list includes the formation of the European Free Trade Association, the bilateral arrangements between Canada and the United States under the Auto Pact of 1965 and the 1988 Canada-U.S. Free Trade Agreement; and other more recent initiatives including Community Association

---

Also see Stoeckel *et al.* (1990, p.24), for a detailed listing of various trading arrangements, as well as Schott (ed.)(1989), Appendix A, which lists all preferential trade agreements notified to the GATT. Regional trade arrangements are also discussed in two recent volumes; one sponsored by GATT (Anderson and Blackhurst (eds.)(1993)), and the other by the World Bank (deMelo and Panagariya (eds.)(1993)).

Agreements, Community Enlargement, the NAFTA agreement, Mercosur, the Australia-New Zealand Closer Economic Relationship, (CER), and others.

Besides the more prominent regional arrangements involving the U.S. and the E.C., an increasing number of these arrangements are between smaller countries. These usually attract less attention because the trade covered by them has been relatively small. Earlier examples include the Latin American Free Trade Association of 1960, the Central American Common Market of 1960, and the (now defunct) East African Common Market of the same period. More recently, there have also been various bilateral agreements not notified to GATT/WTO; examples are the Chile-Mexico Bilateral Trade Agreement concluded in 1991, and the 1992 Chile-Venezuela bilateral agreement. As well, there are further wider ranging agreements besides those in Table 1; in UNCTAD, for instance, a negotiation on trade preferences among developing countries, the Generalized System of Trade Preferences (GSTP), is still ongoing, although not with any marked vigour.[3]

Thus, and as the chronology from Hamilton and Whalley (1996) shows, regional trade arrangements have been a central feature in the development and evolution of the post-war trading system rather than the exception, and this has been despite the growth in importance of GATT/WTO. Furthermore, as this chronology also clearly shows, the number of regional trade agreements has grown substantially in the trading system in the last few years. Most of the

---

See the cautionary discussion of the GSTP scheme in Hudec (1989) who argues that negotiating preferences in a regime of unbound tariffs (as most developing country tariffs are) is virtually doomed to failure. More details on the GSTP scheme can be found in UNCTAD (1987).

Table 1

Regional Integration Agreements Notified to GATT/WTO and in Force as of January 1995 as Listed in WTO (1995)

RECIPROCAL REGIONAL INTEGRATION AGREEMENTS

EUROPE

European Community (EC)

Austria	Germany	Netherlands
Belgium	Greece	Portugal
Denmark	Ireland	Spain
Finland	Italy	Sweden
France	Luxembourg	United Kingdom

EC Free Trade Agreements with

Estonia	Latvia	Norway
Iceland	Liechtenstein	Switzerland
Israel	Lithuania	

EC Association Agreements with

Bulgaria	Hungary	Romania
Cyprus	Malta	Slovak Rep.
Czech Rep.	Poland	Turkey

European Free Trade Association (EFTA)

Iceland	Norway	Switzerland
Liechtenstein		

EFTA Free Trade Agreements with

Bulgaria	Israel	Slovak Rep.
Czech Rep.	Poland	Turkey
Hungary	Romania	

Norway Free Trade Agreements with

Estonia	Latvia	Lithuania

Switzerland Free Trade Agreements with

Estonia	Latvia	Lithuania

Czech Republic and Slovak Republic Customs Union

Central European Free Trade Area

Czech Rep.	Poland	Slovak Rep.
Hungary		

Czech Republic and Slovenia Free Trade Agreement

Slovak Republic and Slovenia Free Trade Agreement

NORTH AMERICA

Canada-United States Free Trade Agreement (CUFTA)

North American Free Trade Agreement (NAFTA)

LATIN AMERICA AND THE CARIBBEAN

Caribbean Community and Common Market (CARICOM)

Central American Common Market (CACM)

Latin American Integration Association (LAIA)

Andean Pact

Southern Common Market (MERCOSUR)

MIDDLE EAST

Economic Cooperation Organization (ECO)

Gulf Cooperation Council (GCC)

ASIA

Austria-New Zealand Closer Economic Relations Trade Agreement (CER)

Bangkok Agreement

Common Effective Preferential Scheme for the ASEAN Free Trade Area

Lao People's Dem. Rep. and Thailand Trade Agreement

OTHER

Israel-United States Free Trade Agreement

Table 1 (cont'd)

NON-RECIPROCAL REGIONAL INTEGRATION AGREEMENTS

EUROPE

EEC-Association of certain non-European countries and territories (EEC-PTOM II)

EEC Cooperation Agreements with

Algeria	Lebanon	Syria
Egypt	Morocco	Tunisia
Jordan		

ACP-EEC Fourth Lomé Convention

ASIA

Australia-Papua New Guinea Agreement

South Pacific Regional Trade Cooperation Agreement (SPARTECA)

Source: WTO(1995)

chronology is devoted to arrangements since 1991, with a wide range of bilateral and minilateral arrangements recently entering the system. Indeed, despite the presence of multilateral rules and disciplines in the system, it is still the case that most GATT/WTO contracting parties are now parties to at least one regional trade arrangement.

But, these trade agreements, numerous as they are, also vary substantially one from another. These differences include the coverage of the agreements, the balance of concessions between the parties to the agreement, and whether the agreement forms part of an ongoing process of wider economic integration. Differences in coverage relate to such issues as whether or not freer factor flows are included, (as in the EU), whether agreements seek to go beyond the coverage of the GATT at the time (services in the Canada-U.S. agreement; environment and labour standards in NAFTA); whether financial transfers are included; whether industrialization objectives (including production sharing agreements) are included; and whether payments arrangements are a central feature of the agreement. And these all go beyond the widely noted differences between FTAs and CUs noted above.

Table 2

A Chronology of the Growth of Regionalism in the Post-War Trading System and its Acceleration in Recent Years[4]

1947 GATT agreed to by 23 countries, and with Article XXIV which allows formation of customs unions and free trade areas under certain conditions.

1957 Treaty of Rome establishes the European Economic Community; a customs union between Belgium, Luxembourg, France, the Netherlands, Germany, and Italy. Treaty in force January 1, 1958.

1959 Stockholm Convention establishes the European Free Trade Association (EFTA) in effect July 1, 1960. Members include Austria, Denmark, Norway, Portugal, Sweden, Switzerland, and the United Kingdom.

1960 Montevideo Treaty establishes Latin American Free Trade Association (LAFTA) comprising Brazil, Chile, Peru, Uruguay, Argentina, Mexico, and Paraguay.

Central American Common Market (CACM) formed; includes Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua.

1963 Yaoundé Convention between the E.E.C. and former French, Belgian and Italian colonies in Africa, gives these countries preferential access to the E.C. and sets up the European Development Fund.

1965 Canada and the U.S. sign Automobile Products Trade Agreement (Auto Pact).

1969 Yaoundé Convention extended.

1973 European Community enlarged to include Britain, Ireland and Denmark.

1975 Yaoundé Convention superseded by Lomé Convention, and extends preferential arrangements to include former colonies of Britain and is widened to include countries in the Caribbean and Pacific.

1977 ASEAN formed. Includes Indonesia, Malaysia, Philippines, Singapore, and Thailand.

1981 Greece joins the European Community.

1983 Australia and New Zealand form Closer Economic Relationship to provide for a free trade agreement.

1984 U.S. implements Caribbean Basin Economic Recovery Act to extend duty-free treatment to 21 beneficiary countries in the region for 12 years.

1985 U.S.-Israel Free Trade Area Agreement enters into force. Over a 10-year period, all tariffs between the two countries to be eliminated.

1986 Portugal and Spain join the European Community. Single European Act signed to provide for full European integration in 1992.

This appears as Table 6.1 in Hamilton and Whalley (1996) from where it is reproduced.

Table 2 (cont'd)

1989 Canada-U.S. Free Trade Agreement enters into force. Under agreement, by 1998 all items should be traded duty-free between the two countries.

1990 E.C. and EFTA undertake discussions on a European Economic Area to provide for freer movement of goods, services, capital, and people between the two associations.

United States announces 'Enterprise for the Americas' Initiative to explore a hemispheric-wide free trade zone between countries of North, Central and South America.

1991 U.S., Mexico and Canada enter discussions on a North American free trade area, leading eventually to the signing of NAFTA.

Andean Pact members (Bolivia, Colombia, Ecuador, Peru, and Venezuela) sign accord to implement free trade zone by the end of 1995.

Treaty of Asuncion signed between Brazil, Argentina, Uruguay, and Paraguay to form Mercosur (the South American Common Market). Aim is to create a duty-free common market by the end of 1994.

Chile and Mexico sign Free Trade Accord. All non-tariff barriers to be eliminated. Common tariff of 10 percent to apply to 95 percent of trade as of January 1992. Tariff to be reduced to 0 over 4 years.

Turkey and EFTA sign a free trade agreement to go into force January 1992. EFTA to eliminate duties on imports of industrial goods (excluding textiles) and processed farm products.

E.C. and EFTA finalize EEA to go into effect in 1993.

ASEAN Free Trade Agreement (AFTA) formed. Group agreed to 15-year time period in which to create a single ASEAN Market.

EFTA sign trade co-operation accords with Bulgaria, Romania, and three Baltic states.

E.C. signs association accords with Poland, Hungary, and Czechoslovakia. Agreements to result in free trade within 10 years.

1992 El Salvador, Guatemala and Honduras agree to form a free-trade zone. The countries agree to allow unrestricted movement of most goods and capital, and work towards establishing uniform tariffs on imports.

NAFTA (U.S.-Mexico-Canada) negotiations concluded. Agreement provides for the elimination of tariffs in stages over a period of no more than 15 years, and in 10 years in some cases, including a phase-out of tariffs on textiles and apparel. Side agreements later negotiated on labour and environment. The agreement goes into effect January 1, 1994.

Implementation of EEA (due to go into effect January 1, 1993) delayed when Switzerland voted against joining.

Poland, Hungary, Slovakia, and the Czech Republic establish a regional trade zone. Aim is to gradually eliminate tariffs over next 17 years and become more compatible with the E.C. and EFTA.

Table 2 (cont'd)

1993	Hungary and EFTA conclude a free trade agreement. Extends free trade in a range of goods, including processed agricultural goods, industrial goods, and fish.
	Bulgaria and EFTA conclude free trade agreement. Extends free trade in industrial goods, processed farm goods, and fish products.
	Chile and Venezuela sign a free trade agreement. Import tariffs expected to be eliminated on 90 percent of products by 1997.
	Chile and Bolivia sign a bilateral agreement to reduce tariffs.
	South Asian Preferential Trading Agreement established with the aim of forming a common market between Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.
	Nicaragua, Honduras, El Salvador and Guatemala reach an agreement to liberalize trade. Barriers to trade in textiles, shoes and leather goods will be reduced.
	Group of Three (Mexico, Venezuela and Colombia) sign a free trade agreement to go into effect June 1994. Agreement covered market access, rules of origin, investment, government procurement, and intellectual property.
	Chile and Colombia sign a free trade agreement. Most non-tariff barriers eliminated and tariffs reduced.
	Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama sign an agreement towards freer trade and increased integration.
	Turkey and the European Community negotiate a timetable leading to a customs union between Turkey and the E.C. by 1995.
1994	EEA comes into effect, creating a free trade area between the European Union (Community) and the EFTA countries of Austria, Finland, Norway, Sweden and Iceland.
	Sweden, Finland, Austria and Norway negotiate full membership in the European Union.
	Mexico and Costa Rica conclude a free trade agreement to go into effect January 1995. Tariffs and most non-tariff barriers to be eliminated. Provisions included on national treatment for investment, intellectual property rights, labour mobility, and dispute settlement.
	Andean Pact members agree to a common external tariff. Four-tier tariff to go into effect January 1995.
	Colombia and Caricom concluded a free trade agreement to go into effect January 1995. Colombia to gradually reduce tariffs on Caricom products over three-year period; Caricom to take five years.
	Mercosur members reach a compromise agreement on a common tariff structure allowing customs unions to become effective January 1995.
	APEC members agreed to accelerate the liberalization of trade and investment measures within the group. Members will begin liberalizing tariff and other barriers in 2000 and developed country members will achieve an open market by 2010. The developing countries will have 2020 to complete their liberalization. APEC consists of: Australia, Brunei, Darussalam, Canada, Chile, Hong Kong, Indonesia, Japan, Malaysia,

Table 2 (cont'd)

	Mexico, New Zealand, Papua New Guinea, Peoples Republic of China, Philippines, Singapore, S.Korea, Taiwan, Thailand and the United States.
	Chile was formally invited to begin negotiations to join NAFTA. At the Summit of the Americas held in Miami (December 9-11) the 34 countries located in North Central, South America and the Caribbean jointly agreed to negotiate a Free Trade Area of the Americas by the year 2005.
1995	The European Union and Turkey agreed on a customs union accord. Tariffs will be eliminated and a common tariff established on products from outside the customs union. Some EU agriculture restrictions will still apply to Turkish exports. The customs union goes into effect January 1, 1996.
	Chile began negotiating with the members of NAFTA: Mexico, Canada, and the United States. Negotiations are expected to be completed by end of 1995.
	Estonia, Lithuania, and Latvia signed association agreements with the European Union. The agreements provide trade and cooperation deals and possible future EU membership.
	Vietnam joined the Association of Southeast Asian Nations (ASEAN) and was given longer implementation periods to fulfil ASEAN liberalization timetables.

Source: Hamilton and Whalley (1996)

de la Torre and Kelly (1992) list some of these differences for a sample of agreements between developing countries, reproduced here as Table 3. While this table only relates to a subset of developing country arrangements, the diversity among the agreements covered is immediately apparent. Some have provisions aiming to provide freer factor movements; some have payments arrangements, while others do not; some use a positive-list approach, in reaching agreed disciplines, and others a negative-list approach.

A similar range of differences can be found in regional arrangements among developed countries. For example, trade agreements in North America have special dispute settlement procedures for anti-dumping and countervailing duties, trade provisions relating to the environment and labour standards, and complex sectoral arrangements in autos and textiles; while European arrangements instead have much more extensive sectoral arrangements in agriculture and steel, interregional resource transfers through social and regional funds, free labour mobility provisions, and other provisions not found in North America trade agreements.

It is also clear that these regional agreements embody much more than discriminatory trade barrier reduction as it is common to represent them in the literature; whether in explicit tariff form, or in the form of ad valorem equivalents. Factor mobility as well as goods mobility is involved to some degree in more agreements. Moves towards harmonized regulatory arrangements are at issue in financial services, transportation, and other service sectors. And in moving ahead of the GATT/WTO into such areas as environment and labour standards, agreements such as NAFTA have moved into areas where there is an explicit linkage drawn between trade and non-trade objectives, with trade policy potentially becoming the policeman to be used to achieve non-trade objectives. The diversity in regional arrangements, therefore,

Table 3

Differences Among Selected Regional Trade Arrangements between Developing Countries

	CACM	ASEAN	LAFTA/ LAIA	Andean Pact	ECOWAS	PTA	GCC
Tariff elimination	o	o	o	o	o	o	o
Non-tariff elimination	o	o		o	o	o	
Positive list		o			o	o	
Negative list				o			
Rules of origin		o			o	o	o
Common external tariff	o			o	o		o
Specific timetable for liberalization	o			o	o	o	o
Free trade in services							o
Free movement of labour					o		o
Free movement of capital					o	o	o
Promotion of industrialization	o	o	o	o	o	o	o
Compensation fund					o	o	o
Promotion of other trade objectives		o		o	o		
Accompanying payments arrangement	o		o		o		

[1] CACM denotes the Central American Common Market; ASEAN, the Association of South East Asian Nations; LAFTA/LAIA, Latin American Free Trade Association; ECOWAS, the Economic Commission of West African States; PTA, the Preferential Trade Agreement in Eastern and South Africa; and GCC the Gulf Co-operation Council.

Source: de la Torre and Kelley (1992) also implies that analyzing them simply as preferential reductions in ad valorem equivalent trade barriers can be potentially misleading.

III. COUNTRY OBJECTIVES UNDERLYING REGIONAL TRADE AGREEMENTS

These differences in content and form among regional trade agreements, in large part, reflect sharp differences in the objectives of the countries seeking them. Hence, the rationale for the paper; why do countries seek regional trade agreements.

In some cases, country negotiating objectives driving participation in regional trade agreements are multiple; in other cases, one or two single objectives tend to be dominant. It is also the case that objectives frequently only reflect the interests of narrower sub groups within countries, rather than a wider country interest, as with sectoral arrangements in textiles, agriculture, autos, or other areas perceived to be politically sensitive. Nonetheless, once the reasons that countries seek these arrangements are understood, the form that the eventual agreement takes becomes more explicable.

1. Traditional Trade Gains

Perhaps the most conventional objective thought to underly a country's participation in any trade negotiation is the idea that through reciprocal exchanges of concessions on trade barriers there will be improvements in market access from which all parties to the negotiation will benefit. The reasons for participating in a regional negotiation over any other type, including multilateral, are usually that kwy trading partners are involved, that the chances of success are seen as high because the number of countries is small, or there has been a prior history of frustration with negotiating failures at multilateral level.[5] In reality, however, and as is well known from the research literature on regional trade arrangements, gains may not accrue to countries forming a customs union since trade may also be diverted to higher cost suppliers from within the integrating area (Viner (1950)); i.e. trade diversion losses may outweigh trade creating gains.

But, despite this, this idea of trade gains from regional integration was the key economic objectives behind the creation of the E.C. in the late 1950s, although probably not the central objective, which as discussed below, was strategic. The notion that gains follow from increased regional trade has also motivated much of the post-war support for other regional trade agreements, which has in turn stimulated extensive literature on the effects of customs unions and free trade areas.

2. Strengthening Domestic Policy Reform

Yet another objective countries have in seeking regional trade agreements is the idea that a regional trade treaty can underpin and make more secure domestic policy reform; i.e. that by binding the country to the masthead of an international trade treaty, any future reversal of domestic policy reform becomes more difficult to implement.

In reality, this can be an objective in either bilateral or multilateral negotiation and need not be an objective solely for regional trade agreements. However, this was a central

---

[5]These were all key factors in Canada's decision to persue bilateral negotiations with the U.S. in the mid 1980s, but, prior to this the argument had been that the security of multilateral disciplines were needed around any bilateral arrangement with such a dominant trading partner to ensure the enforcement.

preoccupation behind the Mexican negotiating position on NAFTA. As such, it led to the outcome that Mexican negotiators were less concerned to secure an exchange of concessions between them and their negotiating partners, and were more concerned to make unilateral concessions to larger negotiating partners with whom they had little negotiating leverage as part of the bilateral negotiation. The idea was clearly to help lock in domestic policy reform through this process.

Pursuit of this objective by one of the parties to a negotiation, however, makes it likely that the concessions made by the parties in the negotiation are asymmetric (as was the case in the NAFTA negotiation, and also in the Canada-U.S. negotiations).[6] The relative size of the countries involved in both of the North American negotiations (Canada-U.S. and NAFTA) that this was the negotiating outcome was one-sided, and especially so in the NAFTA negotiation, since one of the parties was, in effect, using a negotiation on a regional trade agreement for non-trade purposes.

3. Increased Multilateral Bargaining Power

A further country objective that countries adopt negotiating regional trade agreements is to increase their bargaining power towards third countries by negotiating a regional trade agreement with common external barriers (i.e., through a Customs Union rather than a Free Trade Area). This idea was shared by the countries involved in the formation of the E.C. in the late 1950s. At the time, the notion was that individually European countries might have limited

---

[6]See also the discussion of NAFTA and CUSTA in Whalley (1993).

leverage in a negotiation with the U.S., including multilaterally, but if all the European countries acted cooperatively in using a common trade policy they would increase their leverage.

Indeed, one argument sometimes heard is that it was the creation of the E.C. which propelled GATT negotiations forward, first in the Dillon Round (1959-61), then in the Kennedy Round (1963-67), and subsequently in the Tokyo Round (1973-79). These Rounds were initiated by the U.S. who sought to deal with issues of access to a unified European Market with individual European countries adopting common external (third country) barriers. This objective of increasing negotiating power has also been present in some of the Latin American arrangements (such as Mercosur) where the argument has been that groups of countries will have more subsequent leverage in accession negotiations to NAFTA than will individual countries. Similar arguments were also made in Eastern Europe following 1989, where it was argued that a prior regional negotiation between Hungary, Poland and Czechoslovakia (as it then was) would give increased combined leverage to these countries in EC accession negotiations.

4. Guarantees of Access

An objective present in recent large-small country trade negotiations, beginning with the Canada-U.S. agreement, is to use a regional trade agreement to make access to the larger country market in the region more secure for the smaller country. In the Canada-U.S. case, the Canadian aim was to achieve a regional trade agreement which gave Canadians some degree of exemption from the use of anti-dumping and countervailing duties by the U.S. producers. They also sought special bilateral arrangements which would limit the application of U.S. safeguards measures to Canada (a form of escape from MFN).

These arrangements were secured by implicit side payments in the form of domestic policy disciplines undertaken by Canada and favourable to the U.S. Special bilateral policy disciplines were agreed to as part of the trade agreement on energy and investment policies; which effectively prevented the return in Canada to older policies adverse to the U.S. under the Canadian Energy Policy and the former Canadian Foreign Investment Review Agency. Canada also made changes in pharmaceutical protection laws parallel to the trade agreement, and limited special Canadian protection for wine and beer. This idea of achieving access guarantee objectives for the smaller country in a regional trade agreement was also there in the Mexican case, with investment and energy provisions in the agreement, different from but related to those present in the Canadian case; although this was probably a less significant objective than that of underpinning domestic policy reform, noted above.

5. Strategic Linkage

A further country objective in negotiating regional trade agreements is that such agreements can help underpin security arrangements among the integrating countries, a central theme in early European integration in the 1950s. The idea was that a post-war regional trade agreement which produced enhanced trade flows between Germany and France would help prevent a fresh outbreak of European war, and especially so in light of Franco-Prussian relations over the period between 1870 and 1945. As such, strategic linkage (helping prevent further European war) became the dominant consideration in the negotiation of European trade arrangements, overriding all other integration objectives because the issues at stake were so important.

This is also a key difference between European and recent North American trade agreements, in that strategic linkage is largely missing as a country objective in the latter group of regional arrangements. European integration has been able to move progressively towards ever deeper integration, because the political commitment to it is so strong, almost to the point of agreement to found a European federation to partially supersede arrangements between the individual nation states in Europe. This is reflected in the fact that European integration provides for both an ongoing process of integration, and an institutional framework to support ever deep integration, including a European court structure. More recent North American economic integration, as reflected in NAFTA, stands, in contrast, as a series of one off agreements, and provides no road map for ongoing and more extensive integration.

6. Multilateral and Regional Interplay

A final set of country objectives which enters into country calculations of whether and or how to negotiate regional trade agreements involve the actual or potential use of regional agreements for tactical purposes by countries seeking to achieve their multilateral negotiating objectives. The opposite can also be true in that ongoing multilateral negotiations can be used to influence the outcome of regional negotiations, since multilateral negotiations create regional opportunities.

Hence, during the Uruguay Round, it was widely thought that it was to the U.S. advantage to have regional trade negotiations underway, so that in dealing with recalcitrant multilateral negotiating partners, the U.S. could threaten or actually play the bilateral card, and engage in active discussions with prospective regional partners. If multilateral partners were slow to react, initiation of regional negotiations would be the result.

In turn, it was also widely believed during the Round that smaller countries consciously used multilateral and regional interplay as a way of improving their negotiating leverage in regional arrangements with the larger countries. Hence, Canada consciously offered the U.S. the possibility of negotiating regional arrangements in services, which was then an emerging issue in multilateral negotiation, with the idea that a prior regional agreement would give the U.S. more leverage in subsequently multilateralizing their preferred services agreement. The Canadian hope was that this could then enable Canada to obtain improvements elsewhere in the package of issues making up the regional agreement. In the Canada-U.S. negotiation (with the outcome also echoed in NAFTA), tactical interplay between regional and multilateral trade negotiations also provided a reason why a number of seemingly largely contentless chapters appeared in the final agreement. These were offered for multilateral agenda shaping purposes by the smaller country, and helping establish them in this way on the agenda for future multilateral negotiations was one of the benefits to the larger country.

IV. ASSESSING THE IMPORTANCE OF COUNTRY OBJECTIVES IN REGIONAL TRADE NEGOTIATIONS

Assessing the relative importance of the various objectives set for regional trade agreements by individual countries is difficult, since the quantitative orders of magnitude are often hard to pin down. They also clearly vary in importance from agreement to agreement, and also from country to country. Table 4 sets out a schematic representation illustrating the importance of various objectives for particular agreements, denoting them as strong (s) or weak (w) objectives. This table, however, largely summarizes the discussion in the earlier section but usefully illustrates the diversity in objectives involved.

However, to go beyond this, quantitative work is needed even if it is only be able to provide an assessment of the relative importance of some of these objectives. A calibrated general equilibrium model of world trade and protection, on which I have recently worked jointly with Carlo Perroni (Perroni and Whalley (1994)) provide some insights as to the considerations involved in a number of these cases, indicating where large or small effects are at stake, and offering an assessment of the net effect, when two partially offsetting considerations are involved. These include the relative importance of access security versus trade gain objectives for regional trade agreements, tactical considerations between regional and multilateral trade agreements, and sequencing issues as to who one negotiates with first, and other considerations.

This model has primarily been used to analyze the implications of recent small to large country regional arrangements, and principally the Canada-U.S. agreement, using an enlarged version of the Nash retaliatory tariff and trade structure first used by Johnson (1954), and Gorman (1957), and subsequently expanded on in Hamilton and Whalley (1983), Markusen and Wigle (1989), Kennan and Riezman (1990), and elsewhere. In the process, Perroni and I have been able to compute Nash equilibria in tariff rates in higher dimensional space than previous literature, with a more complex analytical structure and without the restriction to constant elasticity excess demand forms used in some of the earlier literature.

Table 4

Assessing the Importance of Country Objectives for Particular Regional Agreements

Country Objectives	Regional Trade Agreement			
	EC	NAFTA	Canada-U.S.	Mercosur
1. Traditional Trade Gains	W			W
2. Strengthening Domestic Policy Reform		S (Mexico)		
3. Increased Multilateral Bargaining Power	W			W (Bargaining Power in NAFTA)
4. Access Guarantees		W	S (Canada)	
5. Strategic Linkage	S			
6. Multilateral and Regional Interplay		W (U.S.)	W (Canada, U.S.)	S

S denoted strong objective

W denoted weaker objectives

The Perroni-Whalley model incorporates seven regions (United States, Canada, Mexico, Japan, the European Community, Other Western Europe, and a residual Rest-of-the-World) allowing it to capture some of the key regional trading arrangements currently operating in the global economy. It is calibrated to 1986 regional production, consumption, and inter-region trade flow data, and also to literature based trade elasticity estimates. Because of the large dimensionalities involved in computing Nash equilibria in the presence of multiple goods and regions, it is restricted to one produced good for each region - with importables in each region treated as qualitatively different across sources of supply (by exporting country). Preferences in each region are defined over the own good, and a composite of importables; with substitution among the import sources entering as part of the definition of the composite. This specification, in effect, amounts to a pure exchange economy, where trade offer curves are fully determined by endowments and preferences.

The model incorporates regional trade arrangements not only as barrier reductions, but also as mutually agreed constraints on retaliation. In the event that retaliation breaks out between regions in the model, regional trade agreements are assumed to hold. Using the model, if no retaliation is considered, incremental gains or losses to regions from any given agreement can be computed in the conventional way using the status quo as the reference point, assessing the incremental effects of regional barrier reductions. But relative to an unconstrained trade war, the introduction of such constraints produces a different set of gains and losses for the countries involved.[7] Smaller countries gain substantially, while larger countries suffer from the restraints on their retaliatory power.

Indeed, compensation in the form of other non-trade concessions by smaller to larger regions may be required for an agreement to proceed. Perroni and Whalley estimate the side payments involved using a two-stage game structure as described in Riezman (1985). In the first stage of this game, countries form coalitions; in the second stage of the game, Nash tariffs are determined. Riezman's framework, however, is extended by allowing for side payments within coalitions, and by introducing uncertainty in the first-stage bargaining game.

Nash tariff equilibria, whether constrained or unconstrained, are computed in the model by sequentially determining optimal tariff rates for each region, holding the other region's tariff rates constant. Each calculation in the sequence involves the computation of a global competitive equilibrium, with a search across the relevant equilibria for that which gives maximum regional utility. A lengthy computational procedure is thus involved.[8]

In this, all regions are assumed to play strategically in their tariff setting, with the exception of the ROW who offers no strategic response. This assumption reflects the observation that trade policies in a large number of countries belonging to the ROW bloc, are, in reality, not coordinated in any meaningful way, implying that the strategic power of each individual country in the ROW is negligible.[9] In the central-case version of the model, the objective of the tariff-

---

[7]The risk to smaller countries, in reality, is that their largest trading partner (U.S. for Canada) may turn protectionist, more than the outbreak of a full global trade war.

[8]The GAMS/MINOS (General A;gebraic Modelling System) numerical optimization software (Brooke, Kendrick and Meeraus (1988)) is used.

[9]This assumption is clearly a little strong, as the ROW includes a number of larger countries such as China, India, and Brazil, although their individual shares in total world trade are small.

setting authority in each region is welfare maximization for its representative consumer. For Customs Unions, the tariff setting authority is assumed to maximize a linear combination of the welfare levels of the representative consumers of its member countries, where the weights are proportional to benchmark GNP levels.[10]

In those cases where two or more regions form a Free Trade Area, or a Customs Union, model computation of Nash equilibria takes place in the presence of additional constraints on each region's optimization problem. Regions within a Free Trade Area have tariffs on bilateral trade frozen at zero. For Customs Unions, external barriers are identical for all members of the union, in addition to freezing bilateral tariffs. For simplicity, Perroni and Whalley also require that import duties set by all other regions against members of the union are uniform across exports originating from all members of the union.[11]

Model parameters are calibrated to 1986 output, trade flows and protection data by region using the procedures described in Mansur and Whalley (1984). On the basis of surveyed elasticity studies supplemented by information on relative country size, a central case configuration of price and income elasticities is adopted. Perroni and Whalley perform sensitivity analyses around these by varying elasticities values, limited by the number of potential combinations of elasticity configurations which can be considered.[12]

---

[10]Although Gatsios and Karp (1991) show that it may be optimal for smaller countries to fully delegate tariff setting to larger countries in a Customs Union.

[11]They also assume that the Rest of the World, which does not set its tariffs strategically, also conforms to this rule.

[12]In model results, post-retaliation Nash tariffs are directly related to import demand elasticities (and hence, also to export supply elasticities), with tariff levels increasing sharply as import demand elasticities approach unity (in absolute value). With the Armington treatment in preferences, two levels of substitution are involved: one between imports as a composite and

The model described above has been used by Perroni and Whalley to compute a number of counterfactual equilibria to analyze the impact of regional trade agreements. These include Nash (post-retaliation) equilibria where trade wars are unconstrained; cases where countries entering into a Free Trade Area or Customs Union agree not to retaliate against each other; cases where trade wars occur with differing regional groupings; and, for the sake of comparison, cases where no trade wars occur, but regional agreements are implemented. As noted above, in all cases, the assumption is made that the ROW uses no retaliatory tariffs. This implies that retaliation is limited to six of the seven regions in the model.

Table 5 reports welfare results for a variety of regional trade agreements which constrain retaliation, with results for an unconstrained Nash tariff war reported in the first column. In the presence of a Canada-U.S. Free Trade Agreement, in which Canadian and U.S. tariffs remain bilaterally at zero, even in a trade war, large benefits accrue to Canada. This is because of both continued and preferential access to U.S. markets which is ever more valuable as U.S. tariffs against other regions rise. Relative to an unconstrained trade war, shown in the first column of Table 5, gains to the U.S. are converted to a loss, and the previous large loss to Canada is now converted to a small gain. This small gain reflects not only continued access to the U.S. market, but also the added feature that this access is preferential. As barriers rise progressively in the U.S. markets against other suppliers from Japan, the E.C. and elsewhere, the value of trade preferences to Canada become progressively larger. Gains to the E.C. are

---

domestically produced goods (which in the model, is determined by import demand elasticities, and the other between imports of different origin (which in the model is determined by export demand elasticities). These two separate elasticities jointly determine import demand elasticities by import type with region, and at the same time, export supply elasticities in all regions.

Table 5

Perroni and Whalley's Calculations of Post-Retaliation Trade War Equilibria Under Retaliation Constraining Regional Trade Arrangements (Comparison to 1986 Benchmark)

A. Hicksian EVs (US $B)

Region	1 Un-constrained Trade War[a]	2 Canada-US FTA[b]	3 Canada-US CU[c]	4 North American FTA[b]	5 North American CU[c]	6 Simultaneous[d] North American and European FTA[b]	7 Simultaneous[d] North American and European CU
U.S.	+ 52.5	- 9.5	+ 22.1	- 15.3	+ 18.6	- 4.5	+ 19.6
Canada	- 100.2	+ 5.1	+ 3.4	+ 1.2	+ 1.5	+ 13.6	- 2.9
Mexico	- 32.1	- 19.9	- 32.2	- 0.3	+ 0.5	+ 4.6	- 1.2
Japan	- 73.9	- 33.8	- 73.7	- 28.7	- 73.6	- 17.4	- 76.7
E.C.	+ 128.4	+ 142.0	+ 119.4	+ 145.3	+ 116.6	+ 38.7	+ 87.3
OWE	- 131.7	- 119.7	- 135.5	- 118.1	- 137.0	+ 42.3	+ 41.5
ROW	- 1051.0	- 879.1	- 1082.5	- 857.9	- 1101.9	- 461.7	- 1330.0
World	- 1208.1	- 914.8	- 1179.0	- 873.9	- 1175.2	- 384.4	- 1262.3

B. Hicksian EVs as a % of National Income

Region	1 Un-constrained Trade War[a]	2 Canada-US FTA[b]	3 Canada-US CU[c]	4 North American FTA[b]	5 North American CU[c]	6 Simultaneous[d] North American and European FTA[b]	7 Simultaneous[d] North American and European CU
U.S.	+ 1.2	- 0.2	+ 0.5	+ 0.4	- 0.4	- 0.1	+ 0.5
Canada	- 25.5	+ 1.3	+ 0.9	+ 0.3	+ 0.4	+ 3.5	- 0.7
Mexico	- 8.5	- 5.2	- 8.5	- 0.07	+ 0.1	+ 1.2	- 0.3
Japan	- 5.2	- 2.4	- 5.2	- 2.0	- 5.2	- 1.2	- 5.4
E.C.	+ 3.7	+ 4.1	+ 3.4	+ 4.2	+ 3.4	+ 1.1	+ 2.5
OWE	- 32.2	- 29.2	- 33.1	- 28.9	- 33.5	+ 10.3	+ 10.1
ROW	- 10.6	- 8.8	- 10.9	- 8.6	- 11.1	- 4.6	- 13.4
World	- 6.0	- 4.5	- 5.8	- 4.3	- 5.8	- 1.9	- 6.2

[a] Unconstrained trade war involves all regions except ROW adopting optimal bilateral tariffs against each and all trading partners.
[b] In an FTA, tariffs are bilaterally zero among member countries, and remain so throughout any retaliatory trade war.
[c] In a CU, tariffs are bilaterally zero among member countries, remaining so throughout any retaliatory trade war, and a common external tariff is set strategically by the union against third countries.
[d] North America is U.S., Canada, and Mexico; European implies E.C. plus Other Western Europe.

Source: Perroni and Whalley (1994).

higher in the event of a Canada-U.S. Free Trade Area than in the unconstrained trade war case, because a Free Trade Agreement constrains retaliation by the U.S., owing to the significantly lowered tariff which Canada applies to third-country markets in the event of a global trade war between Canada and the U.S. This result is reversed if the U.S. and Canada form a Customs Union rather than a Free Trade Area, since their retaliatory power against the E.C. is now enhanced (third column of Table 5). In the Customs Union case, bilateral tariffs are zero as in a Free Trade Area, but a common external tariff applies against third countries. A surprisingly large difference occurs in results for the U.S. with this change. There are significant benefits to the U.S. and reduced benefits to Canada. Positive benefits for the U.S reflect the feature that, with a common external tariff, the U.S. can now induce Canada to follow a higher tariff, against third countries along with the U.S. As a result, and as results in Table 5 indicate, gains to the E.C. in a trade war are reduced. These results clearly suggest that a bilateral trade agreement between Canada and the U.S. would not occur were it not also accompanied by side payments, since it would represent a losing proportion for the United States compared to a full Nash equilibrium, while it would be a strongly gaining proposition for Canada. The form of Canada-U.S. regional agreement that has emerged as essentially safe haven driven with side payments is thus consistent with these country objectives.

North American trilateral arrangements have similar effects to those of the bilateral Canadian and Mexican agreements, except that now the benefits of access are shared by Canada and Mexico, and benefits to the U.S. are lowered. Under a trade war in the presence of a North American Free Trade Area, the U.S. loses rather than gains as it would with a Customs Union.

Also, the U.S. gains less with a three-way Customs Union than it would in a two-way union with either Canada or Mexico.

Welfare effects of simultaneous bloc enlargements occurring in Europe and in North America[13] are reported in the final two columns of Table 5. The gains to the E.C. and the U.S. are significantly lower than in a full unconstrained trade war, the more so with Free Trade Areas than with regional Customs Unions. The biggest loser is the ROW bloc who loses even more than in the unconstrained case. Also, a trade war with the simultaneous formation of a North-American and a European Customs Unions produces a larger negative aggregate welfare effect than an unconstrained trade war.[14]

Perroni and Whalley also report the welfare effects of alternative regional arrangements in the absence of any strategic tariff setting. Generally speaking, the effects are small relative to a trade war. In most cases, participants in the regional arrangements all benefit, the more so with Customs Unions than with Free Trade Areas. In a few cases where regional participants lose, this is a reflection of elasticity parameters and asymmetric initial protection levels. However, for the purpose of the discussion here, the small size of these welfare effects from regional agreements emphasizes the dominance of access guarantee objectives for these agreements from a smaller country point of view over conventional barrier reduction.

The European trade arrangements considered here are more comprehensive than the current E.C. EFTA agreement, since the OWE bloc includes countries which do not belong to EFTA.

[14]Kennan and Riezman (1990) also show that the formation of a Customs Union in a strategic tariff setting has ambiguous welfare effects, whereas the formation of a Free Trade Area unambiguously improves world welfare.

Perroni and Whalley also provide details as to the model outcome of a Nash tariff war with no prior regional agreement constraining retaliation. Post-retaliation Nash tariffs are extremely high, and the more so the larger the country. These results correspond with the widespread intuition that an all-out global trade war would be extremely destructive of trade, and yield large shocks to individual economies. Thus, in the case of the E.C., tariffs in the range of 900 to 1000 percent are generated by the model, with rates around 500 percent in the case of the U.S.,[15] the difference between these two reflecting the relative importance of trade to GDP in these countries. Smaller estimates are obtained for Mexico and Canada, which have less retaliatory power than the E.C., and the U.S., and Japan. These high post-retaliation tariffs are in part a reflection of the elasticity values used in the central case specification of the model,[16] which, while literature-based, are still on the low side. Associated impacts on trade flows in the Nash tariff equilibrium show large reductions in particular bilateral trade linkages, such as between Canada, and the U.S., where high retaliatory tariffs occur in the larger country.

Results also suggest that large countries benefit substantially from unconstrained retaliation. Large countries thus have more strategic leverage than small countries in regional trade negotiations, and small countries experience sharp reductions in bilateral trade flows with their largest trading partners (Canada, and Mexico with the U.S., and Other Western Europe with

---

[15]In some cases such high tariff rates effectively amount to prohibitive import barriers, resulting in reductions in trade flows of almost 100 percent, although with internationally differentiated products in the model trade, flows never becomes zero.

[16]The U.S.-Canada Nash tariffs computed by Markusen and Wigle (1989) are much smaller then the ones here. This model, however, is calibrated to demand and supply elasticities, and not directly to literature estimates of trade elasticities.

the E.C.). Thus, smaller countries lose from an all out trade war, and in the case of Canada and Other Western Europe, these loses are large; in the region of 25 percent of national income.

These results thus underscore the proposition that it is the threat of global trade war in which small countries are excluded from access to large-country markets which propels the smaller countries into regional trade negotiations with the larger countries. In other words, on quantitative grounds it is sensible that a key objective of smaller countries in regional negotiations should be the quality and reliability of access rather than primarily improvement in amounts of access.

Results reported in Table 6 relate to a different set of country objectives; tactical issues involving sequential formation of regional agreements. Here, model results evaluate the desirability, or otherwise, of first negotiating with a large country, or allowing the others to negotiate, and then joining the regional agreement later; the issue of interplay between localized and wider trade negotiations.[17] For the Customs Union case, model results suggest that there are substantial gains for both Canada and Mexico in being first in entering into an agreement with the U.S. This is because the exclusion from the initial regional grouping increases the bargaining power of the larger group, and thus makes it more costly to enter later.

For the Free Trade Area case, there are benefits to Canada from following Mexico in the arrangement. This is because, as the results in Table 6 show, the first entry of Canada into a Free Trade Area with the U.S. would entail a substantial loss for the U.S.; the side payment

[17]Here, Perroni and Whalley first compute the Nash bargaining solution for the first-stage bilateral arrangement (assuming myopic behaviour in the first stage bargaining game) and then use this outcome to define the disagreement point for the second-stage trilateral bargaining game.

Table 6

Perroni and Whalley's estimates of the Welfare Effects of Sequential Entry into North American Regional Trade Agreement Central Case Elasticity Model Specification
$\pi_w = 0.5$ $\rho = 1.3$

A. Free Trade Area			
	Expected Utilities		
Sequence	**U.S.**	**Canada**	**Mexico**
U.S.-Canada, U.S.-Canada-Mexico	1.015	0.883	0.977
U.S.-Mexico, U.S.-Canada-Mexico	1.013	0.889	0.987
U.S.-Canada-Mexico	1.014	0.873	0.994
B. Customs Unions			
	Expected Utilities		
Sequence	**U.S.**	**Canada**	**Mexico**
U.S.-Canada, U.S.-Canada-Mexico	1.018	0.917	0.971
U.S.-Mexico, U.S.-Canada-Mexico	1.017	0.872	1.018
U.S.-Canada-Mexico	1.016	0.894	1.009

π_w: subjective probability of a trade war occurring

ρ: coefficient of relative risk aversion

Source: Perroni and Whalley (1994)

requested by the U.S. for a first entry by Canada would be accordingly large. By delaying entry, Canada can thus lower the cost of its admission into a North American Free Trade Area.

This result is opposite to that which is now frequently ascribed to NAFTA, which is thought to have detrimental effects on sequential entrants because of their limited ability to obtain new benefits, since their entry merely reapportions gains which have already accrued to other trading partners. The opposite result for Mexico in this case is a reflection of the relative sizes of Canada and Mexico, and of the consequent reduced impact of a Mexico-U.S. Free Trade Agreement in the retaliatory power of the U.S.

In both the Free Trade Area and Customs Union cases, the U.S. is better off by negotiating sequentially with its smaller partners, than by engaging in a single three country trade negotiation. This result also serves to emphasize the dynamic instability of a regime in which large countries turn away from multilateralism, raising the risk of trade wars, increasing the size of the side payments they can extract, and further raising the incentives for a weakened commitment to multilateralism.

Like all analytical structures, this has limits in its application to the issues at hand here. It gives no guide to the importance of strategic objectives in regional trade agreements; not is it able to analyze the security offered to domestic policy reform. Nonetheless, its results do emphasize how particular country objectives in particular cases can be dominant (access guarantees for Canada in the Canada-U.S. agreement); and how if the main objectives set for individual agreements are not kept firmly in mind, analyses of the impacts of agreements can be misleading.

V. CONCLUDING REMARKS

This paper stresses the need to recognize the varied objectives countries set for their involvement in regional trade agreements when evaluating the impacts of any particular agreement. It emphasizes how different regional trade arrangements are around the globe, reflecting the range of objectives that take countries into negotiations on these arrangements. Among those identified are the use of regional trade agreements to underpin domestic policy reforms (Mexico in NAFTA); the desire to achieve firmer market access with large trading partners (Canada in CUSTA); the link between trade agreements and strengthened security arrangements (E.U.); the use of agreements to strengthen collective bargaining power in multilateral trade negotiations (E.U.); the use of regional negotiations as a threat to driving multilateral negotiations forward (U.S. in CUSTA, NAFTA). The paper closes by reporting previous model based results which suggest that some objectives seem to quantitatively dominate others for particular agreements.

REFERENCES

Anderson, K. and R. Blackhurst (eds.)(1993). *Regional Integration in the Global Trading System.* Harvester Wheatsheaf for the GATT.

Brooke, A., Kendrick, D. and Meeraus, A. (1988) ***GAMS:*** *A User's Guide.* Scientific Press.

de la Torre, A. and M.R. Kelley (1992). "Regional Trade Agreements." Occasional Paper No.93, International Monetary Fund, Washington, D.C.

de Melo, J. and A. Panagariya (eds.)(1993). *The New Regionalism in Trade Policy.* The World Bank, Washington, D.C.

Frankel, J.A. and S. Wei (1995). "The New Regionalism and Asia: Impact and Options." Paper written for the *Conference on the Emerging Global Trading Environment and Developing Asia* held at the Asian Development Bank, Manila, May 29-31, 1995.

Gatsios, K. and Karp, I. (1991) "Delegation Games in Customs Unions," *Review of Economic Studies* 58, 391-397.

Gorman, W.M. (1957). "Tariffs, Retaliation, and the Elasticity of Demand for Imports" *Review of Economic Studies,* vol. 25, pp. 133-162.

Hamilton, B., and Whalley, J. (1983) "Optimal Tariff Calculations in Alternative Trade Models and Some Possible Implications for Current World Trading Arrangements," *Journal of International Economics* 15, 323-348.

Hamilton, C. and J. Whalley (1996). *The World Trading System After the Uruguay Round.* Institute for International Economics, Washington, D.C.

Haverman, J.D. (1992). "Some Welfare Effects of Dynamic Customs Union Formation" (mimeo)

Johnson, H.G. (1953/54). "Optimum Tariffs and Retaliation" *Review of Economic Studies,* Vol. 21, pp. 142-163.

Kennan, J., and Riezman, R. (1990) "Optimal Tariff Equilibria with Customs Unions," *Canadian Journal of Economics* 23, 70-83.

Krugman, P.R. (1991). "Is Bilateralism Bad?" in E. Helpman and A. Razin (eds.), *International Trade and Trade Policy,* MIT Press.

Krugman, P.R. (1993). "Regionalism versus Multilateralism: Analytical Notes" in J. de Melo and A. Panagariya (eds.), *New Dimensions in Regional Integration,* Cambridge University Press for The World Bank, Washington, D.C.

Mansur, A.H., and Whalley, J. (1984) "Numerical Specifications of Applied General Equilibrium Models: Estimation, Calibration and Data," in Scarf, H.E., and Shoven, J.B. (eds.) *Applied General Equilibrium Analysis*, Cambridge University Press.

Markusen, J.R., and Wigle, R.M. (1989) "Nash Equilibrium for the United States and Canada: The Roles of Country Size, Scale Economics, and Capital Mobility," *Journal of Political Economy* 97, 368-386.

Nash, J. (1953). "Two-Person Cooperative Games." *Econometrica* 21, pp.128-140.

Perroni, Carlo and John Whalley (1994). "The New Regionalism: Trade Liberalization or Insurance?" NBER Working Paper No.4626, January.

Schott, J.J. (ed.) (1989) *Free Trade Areas and the U.S Trade Policy*, Washington, D.C., Institute for International Economics.

Stoeckel, A., D. Pearce and G. Banks (1990) *Western Trade Blocs. Game, Set or Match for Asia-Pacific and the World Economy*, Centre for International Economics, Canberra.

UNCTAD (1987), *Guidebook for the GSTP: The Global System of Trade Preferences Among Developing Countries: Origins, Dimensions, Negotiations and Prospects*; New York.

Viner, J. (1950). *The Customs Union Issue*; Carnegie Endowment for International Peace, Lancaster, Pa.

WTO Secretariat (1995). *Regionalism and the World Trading System*. World Trade Organization, Geneva, April.

Whalley, J. (1993). "Regional Trade Arrangements in North America: CUSTA and NAFTA" in J. de Melo and A. Panagariya (eds.), *New Dimensions in Regional Integration*, pp.352-382. The World Bank, Washington, D.C.