

1 Asia Pacific regionalism: the issues

Ross Garnaut and Peter Drysdale

It is now a commonplace that the Asia Pacific is the world's most dynamic centre of growth in trade and economic output. The phenomenon of Asia Pacific dynamism, with national strategies built on the powerful use of opportunities for international specialisation in production, has been associated with the intensification of international economic ties within the region. With no formal, inter-governmental structures for promoting intra-regional trade and specialisation, and no region-wide trade discrimination, intra-regional trade shares are higher than those within the European Community.

The unusual phenomenon of high regional concentration of trade, with neither official trade discrimination nor formal institutional support, challenged old ideas of regional development, and inspired a new literature. The new literature is informed by but distinct from the theory and lines of empirical inquiry that supported and grew from the emergence of the European Community (EC) in the 1960s. It led to the advocacy and eventually to the establishment of Asia Pacific-wide institutional arrangements that, it was argued, could consolidate and extend the gains from non-discriminatory expansion of regional trade.

This book presents readings from major elements of the literature of Asia Pacific regionalism. It reproduces mostly extracts from major papers over the past two decades, concentrating more strongly on the policy-focused discussion that preceded and accompanied the emergence of formal Asia Pacific Economic Cooperation (APEC) in 1989.

There are some consistent themes in the literature that distinguish it from its counterparts in Europe and North America. The differences are sometimes subtle, and sometimes missed by analysts who have grown up in the older traditions of regionalism and analysis of the nature of regionalism. The new themes include the high importance of market processes in producing economic integration — requiring relative freedom from official controls on international trade and payments, but, in the right circumstances, proceeding powerfully in the absence of special official measures to promote regional trade. The focus on market integration draws attention to the importance of

non-official institutions in achieving gains from trade and the distinction between market integration and institutional integration (Cooper, Chapter 2). Trade-promoting institutions do contain elements of 'public goods' which assist in overcoming the difficulties faced by private investors in appropriating fully the benefits of international specialisation. How this occurs is a powerful interest related to the role of governments in providing regional public goods to promote trade.

The defining concept of Asia Pacific regionalism is open regionalism. Open regionalism encompasses integrative processes that contain no element of exclusion or discrimination against outsiders. The concept of open regionalism grows naturally out of the themes of market integration, and government support for public goods that facilitate international trade within a region. From this perspective, the policy focus is on the agenda set out by Elek (Chapter 17).

Some elements of the literature have sought to push the concept of open regionalism further, to encompass regional cooperation on mutual reduction of barriers to trade within the Asia Pacific region without discrimination against outsiders. This dimension of open regionalism would encompass agreements on trade liberalisation, extended to others on an *unconditional* most-favoured-nation (MFN) basis (see Drysdale, Chapter 4). This element of open regionalism has collided with support in the Americas for concepts of *discriminatory regionalism*. The resolution of this clash of concepts is for the future of discussion of regionalism in the Asia Pacific.

The boundaries of the region

The 'region' of Asia Pacific trade expansion has defined itself as the set of East Asian and Pacific countries joined by intense trade and investment ties. In the early discussion of Asia Pacific regionalism, in the 1960s, this placed the spotlight on the region's five advanced economies: the United States, Canada, Japan, Australia and New Zealand. Successful internationally-oriented economic growth in the newly industrialised economies and several Association of South East Nation (ASEAN) economies in the 1970s broadened the self-selection to include the substantial developing 'market economies' of the Western Pacific. This, with some representation from Southwest Pacific developing countries, but with Taiwan excluded because of ambiguity in its diplomatic status, was the limit of full participation in the original Pacific Economic Cooperation Conference (PECC) in 1980.

China's adoption of an internationally-oriented development strategy in the late 1970s soon propelled it into the Asia Pacific economy. Formal diplomatic recognition by the United States in 1979, the Sino-British agreement on the future of Hong Kong in 1984, the Taiwan government's lifting of major restrictions on contact with the mainland in 1987, and the establishment of diplomatic relations between Seoul and Beijing in 1992 — all progressively removed official inhibitions to China's full participation in Asia Pacific dynamism.

New candidates for membership of the Asia Pacific economy have emerged in recent years. Market-oriented and internationally-oriented reform in Vietnam (and elsewhere in Indochina), reflected eventually in the lifting of US restrictions on economic relations in 1994, and Vietnam's strong response in expansion of production and trade have turned it quickly into an Asia Pacific economy. Mexico's deep integration into the North American economy, with the movement to internationally-oriented policies and membership of the North American Free Trade Agreement (NAFTA) made it a necessary participant in regional integration joined by the United States. Papua New Guinea is linked to the region through intense economic relations with Australia and has also been brought into regional arrangements, in a manner analogous to Mexico through the United States, but without any reciprocal free trade agreement.

The spreading through South Asia and Latin America of more internationally-oriented policies in the East Asian style has raised new and difficult questions about the natural boundaries of the economic region. The continuation of momentum of internationally-oriented economic reform in India and South Asia would integrate these economies deeply into the web of Asia Pacific regionalism, unless retreat into old-style discriminatory regionalism in the established Asia Pacific economies came to limit the opportunities for newcomers.

The spread of more internationally-oriented development strategies in Latin America has an uncertain impact on the natural boundaries of Asia Pacific dynamism. Latin America historically has been a realm of commitment to discriminatory regionalism in the old style that became important with the formation of the European Community. This commitment was an early complement to Latin American protectionism. The new legitimacy of discriminatory regionalism in the Americas following the formation of NAFTA has laid an ideological basis for integration of the Latin into the North American economies, and therefore indirectly into an Asia Pacific economy. Such a basis of Latin American participation — integration through discriminatory trade ties with the United States — would come to challenge open regionalism as the ordering idea of Asia Pacific regionalism. The one possible exception is the case of Chile, where open and market-oriented policies have spurred a pace and pattern of development that shares much with the East Asian style.

The emergence of Asia Pacific regionalism

The web of intense economic ties that bind the Asia Pacific region emerged from market processes (see Drysdale and Garnaut, Chapter 5; Petri, Chapter 10; Anderson and Norheim, Chapter 11; and Yamazawa, Chapter 16).

The role of government was first of all facilitating: the removal of barriers to trade and payments at the borders of participating economies created opportunities that were developed creatively by business enterprises. These steps were taken in the

United States, Canada and Japan to a considerable extent through successive rounds of multilateral trade negotiations under the auspices of the General Agreement on Tariffs and Trade (GATT). In Japan, two other forces were important. After the mid-1970s, and especially through the 1980s, some major liberalising steps were taken in relation to manufacturing activities as part of domestic economic strategy — to promote adjustment out of energy-using, polluting, low technology and labour-intensive products that had been left behind by changes in Japan's resource endowments and comparative advantage. In Japan, some liberalising steps were taken also to resolve bilateral trade disputes with the United States, including early steps in liberalising some trade in services and farm products.

In the rest of the Western Pacific — in the developing countries of East Asia, including China, in Australia and New Zealand, and now in the economies of Indochina — liberalisation of manufactured goods trade was overwhelmingly guided by domestic economic strategy. Hong Kong and Singapore were virtually free trade economies from the beginning, and their deep integration into neighbouring economies was a powerful factor in Asia Pacific trade expansion.

It was the adoption of the policy in the early 1960s to liberalise payments and trade, and especially to bring incentives for export and import-competing production more closely together, that marked the beginning of the long periods of sustained, internationally-oriented growth in Taiwan and the Republic of Korea. Several of the ASEAN economies — Malaysia, Thailand, and later Indonesia — took similar if less decisive steps successively in the early 1970s and through the 1980s. The Philippines' weak progress in liberalisation programs of similar intent was one factor in that country's poor growth performance. Australia and New Zealand embarked upon gradual but radical import liberalisation after the mid-1980s, deepening integration into the international, especially the Asia Pacific, economies. China from the late 1970s and Vietnam from the mid-1980s chose to replace old central planning systems with greater use of markets and integration into the national and international economies.

US pressures on Korea and Taiwan from the early 1980s increased momentum for trade liberalisation, and helped extend it from the manufacturing sector to politically more sensitive areas in agriculture and services. American pressure was reinforcing tendencies that had their origins in domestic economic strategy, and it is difficult to be precise about its undoubted influence over this period (Smith 1994).

Rapid, internationally-oriented economic growth in East Asia and the Pacific was associated with high intensity in and rapid expansion of intra-regional trade (see Frankel, Chapter 19; and Saxonhouse, Chapter 20).

In early years, only tiny proportions of this trade were promoted by trade discrimination in favour of regional partners. Economically important remnants of the old imperial discrimination in US-Philippines and intra-Commonwealth trade had been removed by the mid-1970s. Trade discrimination — in US-Canada and later North American trade relations, in Australia-New Zealand trade under the Closer Economic Relations (CER) Agreement, and within ASEAN, especially after the announcement in 1991 of commitment to establish an ASEAN Free Trade Area

(AFTA) — increased in importance in the early 1990s, but remained a relatively minor influence on regional trade flows. Similarly, the elements of pan-China discrimination in favour of the mainland's economic relations with Taiwan were minor sources of the explosive growth of trade across the Straits after 1987.

Indeed, official discrimination in several potentially important trade relationships inhibited expansion of Asia Pacific intra-regional trade ties until the legacy of the Cold War had been put to rest in the Western Pacific. The development of US economic relations with the People's Republic of China awaited diplomatic recognition in 1979. The Sino-British agreement of 1984 on the future of Hong Kong was the trigger for rapid expansion of investment and trade across the border. Realisation of the huge potential for trade across the Straits of Taiwan was delayed until the government in Taipei lifted many restrictions on contact with the mainland in 1987. Sino-Korean trade expanded rapidly with mutual diplomatic recognition in 1992. Normalisation of US economic relations with Vietnam was delayed until 1994. The new international orientation in Indian economic policy from the early 1990s was partly a response to the geo-political realignment associated with the collapse of the Soviet Union and the end of the Cold War.

Perhaps the most important impact of official trade discrimination in promoting intra-regional trade in the Asia Pacific was associated with the formation of the EC. As a matter of arithmetic, trade creation within the EC increased the intensity of trade among other economies (see Anderson and Norheim, Chapter 11). Of more economic significance, common exclusion from European markets and the associated trade diversion made Asia Pacific economies more competitive in each other's markets, and expanded intra-regional trade (see Drysdale, Chapter 4).

Overwhelmingly, it was market forces acting in a more open general trade and investment environment that spurred the rapid expansion of trade among Asia Pacific economies. Intra-regional trade shares rose to levels higher than those in Europe, without institutional promotion and without trade discrimination — although statistical techniques developed in the Western Pacific cautioned against the use of trade shares as indicators of trade intensity (see Drysdale and Garnaut, Chapter 3).

The literature on *open regionalism*

The extent and dynamism of market integration in East Asia and the Pacific encouraged new lines of economic analysis directed at its measurement, analysis and policy implications.

The Asia Pacific literature on regional economic integration has emphasised the role of transactions costs of varying kinds in determining the intensity of bilateral and regional trade. Some elements of transactions costs are closely related to distance, or relative distance, between trading partners. Transactions costs are affected by the activities of multinational companies, and by many factors affecting ease of communications (see Amelung, Chapter 6).

One determinant of transactions costs is the effectiveness of institutions in internalising the full costs of establishing and maintaining trading relationships. This is where cross-border cultural and investment ties are particularly important.

Where private institutions are inadequate in internalising externalities, there can be large gains from provision by governments of the 'public goods' required to maintain high levels of trade (see Elek, Chapter 17). Recognition of this reality has been one spur to the search for regional institutions to promote trade expansion. In this context, 'institutionalisation' of regional economic cooperation means something very different from the old-style institutions of the free trade area and the customs union.

These are the first two elements of Asia Pacific 'open regionalism': recognition of the power of market forces in promoting high intensity in intra-regional trade; and acceptance in principle that there is a role for governments in provision of public goods to promote regional trade expansion. These are on the original agreed and secured agenda of the Asia Pacific Economic Cooperation (APEC) forum. Neither of these elements of open regionalism lends itself to mutually exclusive or discriminatory trading relationships. Each element lends itself to more rapid and deeper integration in some trading relationships than others within a region of intense trade, and even to especially intense trading relationships between parts of economies (see Chia and Lee, Chapter 27; and Sung, Chapter 28).

Consistently with open regionalism and the avoidance of discrimination in international trade, but beyond the original and secure agenda of APEC, there has been a search for mechanisms to promote trade liberalisation on an MFN basis in regional economies. The literature observes the tendency for individual Western Pacific economies to choose in their own interest unilateral trade liberalisation. This is the world of the 'prisoner's delight' in which each economy in its own interests liberalises foreign trade, coincidentally raising the gains to third countries associated with their own liberalisation, and therefore facilitating the third countries' liberalisation. How much greater the gain from each country's liberalisation if there were concerted action from a number of members of a region? There has been recognition that the prospects for unilateral non-discriminatory liberalisation are greater in commodities in which the world's most competitive suppliers are members of the region.

To this point, the discussion of trade liberalisation remains within the boundaries of open regionalism. But there have been recent pressures to retreat from this point, back into discriminatory regionalism in the old style. The pressure for discriminatory regionalism has been increased by the recent, new legitimacy of regionalism based upon the NAFTA model and by the increased American interest and role in APEC, combined with the dominance of the old models in North American and now pan-American perceptions of regional cooperation.

The American pressures for discriminatory trade in the Asia Pacific have been given enhanced leverage by American leadership of APEC's Eminent Persons Group since early 1993 (see Bergsten, Chapter 18). They are being resisted strongly in the Western Pacific. But the importance of US participation in APEC cannot be denied; nor the increased weight of Latin America as discriminatory regionalism in the

Americas spreads south. But it is more difficult to judge how this contest of philosophies and strategies will be resolved.

The clash between 'open' and 'discriminatory' visions of regionalism in the Asia Pacific is of fateful dimension in its process and outcome. One possible outcome is that Asia Pacific-wide negotiations on trade liberalisation will fail to gain momentum in any form, so that APEC continues to concentrate on its original agreed agenda. APEC could still play a useful role as a force for multilateral liberalisation through the new World Trade Organization. Discussion within APEC could still play a role in encouraging unilateral liberalisation within member economies, by increasing confidence that this is the trend of trade policy within the region. But the clash of visions could also block any efforts in APEC to negotiate a process of regional trade liberalisation on either an open or a discriminatory basis.

This is among the big issues that will be addressed in future literature on Asia Pacific economic regionalism.

Reference

Smith, Heather 1994, *The Role of Government in the Industrialisation of Taiwan and Korea in the 1980s*, Unpublished PhD thesis, Australian National University, Canberra.

3 Trade intensities and the analysis of bilateral trade flows in a many-country world: a survey

Peter Drysdale and Ross Garnaut

Introduction

There is now scattered through the journals a considerable literature on the analysis and measurement of the various determinants of bilateral trade levels. The literature has identified a number of barriers, or *resistances*, to trade that, together with the various factors analysed in the pure theory of international trade, determine the size, commodity composition and welfare effects of bilateral trade flows.

The literature on the analysis of bilateral trade flows has proceeded along a number of independent paths, with some major contributions having been developed apparently in ignorance of other, closely related publications. This suggests the need for an integrating survey. This survey of the literature on the determinants of bilateral trade levels discusses the various methods that have been applied to the analysis of resistances to bilateral trade flows, and assesses evidence on the importance of these resistances in the determination of trade flows in a many-country world.

The concept of obstacles or resistances to bilateral trade flows is central to the survey. We can define resistances to bilateral trade as any factors which prevent or retard the immediate international movement of commodities in response to price differentials. Recent theory distinguishes two basic types of resistance: *objective* resistances, which an individual firm can overcome only at some cost; and *subjective* resistances, which derive from the imperfect information available to businesspeople, from internal constraints on profit-maximising behaviour and from the particular processes through which firms engaged in international trade take decisions that effect the volume or commodity composition of trade. Objective resistances can be further decomposed into transport and other costs of overcoming geographic distance, and the costs of overcoming official barriers to trade (for example, protection).¹

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The presence of resistances to bilateral trade causes absolute prices for given commodities (converted at some appropriate exchange rate) and also relative prices of commodities to vary from country to country. The cost of overcoming resistances varies across bilateral trading relationships. As a result, the prices at which commodities are offered for international sale or purchase vary with the bilateral trading relationship within which the transaction is to be made. The reality that the price a country receives for its exports varies with the market to which it is sold, and the price of imports varies with the market in which it is purchased, has profound implications for determination of the volume and commodity composition of foreign trade and for assessment of the gains from trade.

Mainstream trade theory has been developed to analyse the effects of one important type of resistance on bilateral trade levels: tariffs, quotas and other obstacles imposed by governments on trade. The theory of protection examines systematically the effects of obstacles imposed by one or both governments in a two-country world upon the volume, commodity composition and welfare effects of trade.² The theory of customs unions explores the effects of official constraints on trade being more costly to overcome in some bilateral trading relationships than in others.³

The pure theory of international trade has developed with little reference to trade resistances beyond official barriers to trade. But many authors have been impressed by casual empirical evidence on the importance of several other types of resistances to bilateral trade levels in determining the volume and composition of countries' foreign trade. The two-country models, so important in the pure theory of international trade, assume away all interesting questions about the determination of bilateral trade levels.⁴ Evidence that an economy's aggregate export performance is correlated with the rate of growth of total imports into the particular foreign economies with which it has close ties cannot be understood in terms of the two-country model.⁵ Equally challenging to established theory was evidence that, for some pairs of countries, resource endowments relative to each other provided a better guide to the commodity composition of bilateral trade than each country's resource endowment relative to the world as a whole.⁶

In response to the accumulation of evidence on the importance of bilateral trading relations in the determination of the volume and commodity composition of total foreign trade, Bhagwati (1964, p. 20) in his important survey states that established trade theory provides no *a priori* grounds for deciding whether bilateral trade is of no importance, of some importance or all-important.

There have been a few attempts to integrate the concept of trade resistances into the general corpus of trade theory, most notably by Johnson (1968). Much more must be done before there is a satisfactory general trade theory that incorporates the reality of differential costs of overcoming resistances in different bilateral trading relationships, a theory which can explain simultaneously bilateral trade flows and countries' total foreign trade. This survey has the more limited objective, outlined above, of laying out the literature on the nature, determinants, measurement and use of the resistances concept.

Much of the statistical analysis of trade flows in a many-country world that has been undertaken over the years has been applied to the attempt to understand the nature of resistances to bilateral trade flows and their importance in the determination of trade patterns. Some has been applied further to the projection of bilateral trade flows into the future, on the assumption that there is some predictability over time in patterns of resistances as measured by various statistical indexes.

Two approaches can be identified among systematic studies of the determinants of bilateral trade levels. The gravity model approach seeks to explain each bilateral trade flow independently, by reference to measures of the 'trade potential' of the two economies and to resistances to bilateral trade. The assumption of independent bilateral trade flows gives rise to attempts at estimation of countries' total imports and exports as the sum of these bilateral trade flows. The intensity approach, on the other hand, does not seek to explain countries' total imports and exports. It takes total imports and exports as given and measures and seeks to explain deviations from bilateral trade flows that would obtain if resistances to trade were equal on all bilateral routes. In some applications of the intensity approach, the measures of deviations from randomly established patterns of trade are assumed to be more or less stable over time and are used to project bilateral trade flows on given assumptions about the growth of individual countries' and total world trade.

The next two sections of the paper survey the major contributions that have been made to the analysis of trade resistances and the determination of bilateral trade flows within the gravity model approach and the intensity approach. The final section of the paper then summarises what has come to be understood about the nature of various resistances and their quantitative importance in determining trade flows.

The gravity model approach to trade analysis

Tinbergen's (1962, pp. 262–93) pioneering use of the *gravity model* made bilateral trade levels a function of two potential trade variables (gross national product of importing and exporting countries) and three resistance variables (distance, a dummy variable for adjacent countries and a dummy variable for common membership of a preferential area). Linnemann (1966) elaborated the Tinbergen model by introducing additional potential trade and resistance variables into the analysis. The most important was a complementarity variable, measured by the scalar product of the two vectors representing the commodity composition of the exporting country's total exports and the commodity composition of the importing country's total imports.

Two interesting features of the Linnemann results were the tendency for the distance coefficient to take on a higher value for more isolated countries, and the absence of any clear association between the importance of transport costs as an explanator of trade flows and the importance of high transport cost bulk commodities in countries' trade.⁷ The latter phenomenon suggests that the effect of distance in lowering trade levels may operate through factors other than transport costs.

The gravity model is a very ambitious approach to analysis of the effects of trade resistances, and its ambition raises two important problems. Difficulties in measuring 'potential trade' affect the levels of trade explained by reference to resistance variables and so obscure the relationship between resistances and bilateral trade levels. Of more fundamental importance, the assumption of independent bilateral trade flows is extreme.

Several characteristics of Linnemann's own results seem to be explained best in terms of interdependence among bilateral flows. The tendency for the distance coefficient in the Linnemann regressions to take higher values for countries in more isolated locations suggests that *relative* distance is important in the determination of trade levels. Two close countries at the periphery of the world economy (say, Australia and New Zealand) *relatively* are closer to each other than two similarly proximate countries in Western Europe. The discontinuity in the bilateral trade data observed by Linnemann, with parameter values that were consistent with larger trade flows overestimating smaller flows, is open to the possible explanation that scale factors raise larger trade flows partly by diverting trade from smaller flows. But Linnemann discussed the possibility of interdependence among variances of trade flows (or diversion of trade from high resistance to low resistance routes) in relation to the effects of membership of preferential areas. Evidence presented on this question does not allay doubts that the high levels of trade observed on intra-area trade routes have resulted in considerable part from diversion of trade from non-preferential routes (Linnemann 1966, pp. 91-2).

Linnemann did not publish individual countries' coefficients for the commodity composition variable. However, there is no *a priori* reason why the coefficients as he defined them should take on more extreme values for countries whose foreign trade was concentrated in commodities that held small shares in world trade. His complementarity index, like the distance variable, fails to take account of relative 'closeness'. Yet it is clear that the likelihood of country *i* exporting a given shipment of commodity *k* to country *j* depends on the availability of alternative supplies: the smaller country *j*'s share in world exports, the less likely it is that a particular export consignment of commodity *k* from country *i* would be sent to *j*. Leamer and Stern (1970, p. 165) err in arguing that the Linnemann complementarity index C_{ij} may be close to a weighted inner product C^*_{ij} where the weight of each commodity is in inverse proportion to its share of world trade.

Indeed, a weighting of commodities in the complementarity index according to their uniqueness in world trade would contradict the independence assumption of the gravity model.

Wolf and Weinschrott (1973) have applied the gravity model to identify bilateral trading arrangements which are characterised by high potential for, and low resistances to, trade, with a view to assessing the benefits from trading partners' incorporation within a free trade area or other multi-country association. Their model is distinguished by the incorporation of several variables designed to measure differences in 'natural' comparative advantage, and of a variable designed to measure socio-cultural

'distance'. They conclude that the structural relations in the model (as measured by the various coefficients) are stable in the short and medium term; that the proxy variables included to capture differences in 'natural' comparative advantage have some explanatory power; and the socio-cultural dummy variables are in most cases significant. One interesting further conclusion is that the largest negative residuals are usually found in trading relationships between countries that are separated by great distance.

Bryan (1974) has estimated parameters for a gravity model by examining the experience of Canada's bilateral trade with various countries disaggregated by commodity. The relative importance of various trade potential and resistance factors varied considerably across commodities, with special attention being given to international transport costs. Transport costs are more significant determinants of bilateral trade levels in some commodities (especially primary, simply processed and other more homogeneous products) than in others (especially highly differentiated manufactured goods). One interesting conclusion is that international transport costs are generally more important determinants of bilateral trade flows than tariffs.

Leamer (1974) uses the framework laid out in his earlier work with Stern to test the adequacy of traditional trade theory, alongside more recent theory which stresses the importance of scale economies, and resistances in determining the commodity composition of trade in manufactures. He concludes that trade dependence ratios are best explained by the development variables, GNP and population, but that when the development group is constrained to *per capita* GNP, 'resistance factors of tariffs and distance offer nearly the same predictive accuracy for many commodities' (p. 372). Resource endowment variables do not perform well as explanators of import dependence ratios in the manufactured goods trade.

In another contribution in the gravity model tradition, Geraci and Prewé (1977) use a sophisticated version of the familiar model to demonstrate that the use of an estimate of actual transport costs gives significantly better results than the use of a distance proxy.

Analysis of trade intensity

Intensity indexes

A separate line of analysis was pioneered by Brown (1949) and developed and popularised by Kojima (1964), using an *intensity of trade* index which concentrates attention on variations in bilateral trade levels that results from differential resistances, by abstracting from the effects of the size of the exporting and importing countries. As modified by Kojima, the index I_{ij} takes the form:

$$I_{ij} = \frac{X_{ij}}{X_i} \bigg/ \frac{M_j}{M_w - M_i} \quad (1)$$

where X_{ij} is country i 's exports to country j ,
 X_i is i 's total exports,
 M_j is j 's total imports, and
 M_i is i 's total imports, and
 M_w is total world imports.

M_i is subtracted from M_w in the above expression because a country cannot export goods to itself, and the only share it can meaningfully have in total world trade is a share in the imports of all countries other than itself.⁸

The intensity of trade index is a crude index of relative resistances because it fails to make allowance for the varying commodity composition of countries' foreign trade. Where commodities are not substitutable for each other, opportunities for bilateral trade are limited by the degree of complementarity in the commodity composition of one country's exports and the other's imports. Drysdale (1967, 1969) refined the intensity of trade indexes by developing new indexes that separate the effects of the commodity composition of countries' foreign trade (complementarity) from other factors influencing the intensity of trade. The complementarity index, unlike that of Linnemann, takes account of the closeness of countries' commodity trade structures *relative* to world trade structure.

Drysdale's index of *complementarity* in country i 's exports to country j , C_{ij} , is the weighted sum of the products of each commodity's share in country i 's exports and in country j 's imports, with commodities weighted by the inverse of their shares in world trade. The weighting reflects the increased probability of country j drawing a consignment of commodity k from country i when alternative sources of supply are more limited.

$$C_{ij} = \sum_k \left(\frac{X_i^k}{X_i} \cdot \frac{M_w - M_i}{M_w - M_i^k} \cdot \frac{M_j^k}{M_j} \right) \quad (2)$$

where X_i^k is country i 's exports of commodity k ,
 M_j^k is country j 's imports of commodity k , and
 M_w^k is world imports of commodity k .

The complementarity index C_{ij} indicates the value that the intensity index I_{ij} would take if i 's exports of each commodity k were distributed among world import markets exactly in proportion to each market's share of world imports of commodity k .

Drysdale defined an index of *country bias*, B_{ij}^k in trade for each commodity analogously to the intensity index.

$$B_{ij}^k = \frac{X_{ij}^k}{X_i^k} \bigg/ \frac{M_j^k}{M_w^k - M_i^k} \quad (3)$$

where X_{ij}^k is country i 's exports of commodity k to country j .

A weighted average of indexes of country bias for all commodities k yields an index B_{ij} of country bias in i 's aggregate export trade with j .

$$B_{ij} = \sum_k \left(B_{ij}^k \frac{\bar{X}_{ij}^k}{\bar{X}_{ij}} \right) \quad (4)$$

where $\bar{X}_{ij}^k$ is the hypothetical value of X_{ij}^k obtaining when B_{ij}^k equals unity, and $\bar{X}_{ij}$ is the hypothetical value of X_{ij} obtaining when all B_{ij}^k equal unity. The ratio $X_{ij}^k / \bar{X}_{ij}$ is equal to the percentage contribution of commodity k to complementarity in i 's exports to j . The indexes C_{ij} and B_{ij} are so defined that their product equals I_{ij} .

$$I_{ij} = C_{ij} \cdot B_{ij} \quad (5)$$

The effect of the commodity composition of countries' trade on intensity of trade is measured by the complementarity index. The country bias index B_{ij} measures the *average* effect of differential resistances on intensity in bilateral trade. Among the difficulties associated with Drysdale's decomposition of trade intensity into complementarity and country bias elements is the assumption that the commodity composition of each country's global trade is, in the extreme, independent of influences affecting bilateral trade. It is quite conceivable that, for example, changes in a tariff or the structure of transport costs would have effects on import specialisation and complementarity as well as country bias in trade. If there were many such cases, the distinction between country bias and complementarity would be blurred.

The importance of different resistances varies from commodity to commodity and it is not uncommon for a certain resistance (say, transport costs) to be relatively high for exports of one commodity from country i to country j , but to be relatively low for other commodities in the same bilateral flow. Thus, although the aggregate country bias index B_{ij} is a useful summary of the effects of a range of resistance influences, it needs to be supplemented by the disaggregated indexes B_{ij}^k in a detailed study of the nature of resistances to bilateral trade flows. Country bias indexes for individual commodities are a reliable reflection of the ordering of relative resistances in various bilateral trade flows so long as the commodity classification used identifies homogeneous commodities that are not substitutable for each other.

Kunimoto (1975, 1977) has attempted a taxonomy of trade intensity measures using statistical contingency table analysis as an integrating framework. In describing the logic of the various indexes that have been used in the work on the analysis of bilateral trade flows, he makes no comment on their economic meaning or analytic value but observes that 'it is not possible *a priori* to say which index is best suited for the analysis of international trade flows ... [and] therefore, the choice of index hinges on the nature of the problem to be tackled' (1977, p. 30). However, in his work Kunimoto introduces what he considers to be a new index of trade intensity, which is in fact a contingency table formulation of Drysdale's complementarity index.

The intensity approach acknowledges the interdependence of levels of bilateral trade on different routes. Although it does not seek to answer important questions about the effects of resistances on countries' total exports and imports, it has major advantages as a starting point for analysis of the nature of resistances to trade flows. Country export and import totals are given, in aggregate or by commodity, and so the intensity approach abstracts from the effects of excluded variables and random fluctuations on 'potential trade', which distort the magnitudes to be explained by resistances in the gravity model.

An assumption that all countries' imports and exports are made up of large numbers of independent consignments underlies the intensity approach. Let country i have a share in world exports x_i . This equals X_i / W where X_i is country i 's total exports and W is total world trade. The probability that any trade transaction in the world involves country i as exporter is x_i . Similarly, the probability that j is the home of the importer is m_j , the ratio that j 's imports bear to total world trade.

The probability that a particular transaction will involve two given countries is negatively related to relative resistances to bilateral trade. Deviations from 'expected' levels of bilateral trade occur because resistances vary among bilateral trading relationships. Ratios of actual to expected levels of bilateral trade below unity are associated with high relative resistances and ratios above unity with low relative resistances. Where they are expressed in volumes or value of trade, positive deviations are associated with low relative resistances and negative deviations with high relative resistances.

Intensity indexes and the analysis of trade resistances

Several studies have employed forms of the intensity indexes introduced above as indicators of relative resistances to bilateral trade flows, and have analysed the nature and importance of various resistance factors by explaining variations in the indexes over time and across bilateral trading relationships. Other studies have employed the intensity of trade concept for this purpose, without using explicitly an intensity index. Here we survey some conclusions about the nature of resistances that have emerged from this literature.

Drysdale (1967) examined variations in the complementarity and country bias index in trade between Australia and Japan over the half century from 1913 to 1962. Large variations in the country bias index through this period were associated with major changes in the external political relationships of one or other country and, significantly with the increase in mutual knowledge of each other's markets and trading institutions through the post-war period.

Two publications by Yamazawa (1970, 1971) explored characteristics of the complementarity and country bias indexes. The first of these studies observed changes over time and association between levels taken by the two indexes. The second tested the relationship between intensity of trade and resistance variables and complementarity by the use of least squares regression techniques.

Yamazawa's second study estimated parameters of a log-linear equation relating complementarity as measured by the Drysdale index and a large number of resistance variables to intensity of trade. Apart from the use of the complementarity index, unique features of the analysis included the use of a relative distance variable, inclusion of a variable representing official aid flows, and inclusion of a wider range of trading blocs.

The overall fit between the estimated equation and the data was disappointing, especially since a large part of the multiple correlation was accounted for by the complementarity variable. Only a small fraction of the variance of country bias appears to be explained by the measures or indexes of resistances incorporated in the Yamazawa study. Five of the nine independent variables were significant and all of these showed the sign expected from *a priori* reasoning: complementarity, relative distance, the dummy variable representing common membership of colonial trading blocs, the dummy variable representing common membership of the socialist trading bloc, and the dummy variable that was assigned a non-zero value if one trading partner was a socialist and one a capitalist country. The coefficient of the dummy variable representing common membership of colonial trading blocs took on a lower value in 1965–67 than in earlier years, indicating the declining importance of such ties over time.

Some of the Yamazawa variables could be refined so as to reflect more faithfully the levels of the relative resistances they represent. Yamazawa's relative distance variable is not weighted by the weighted sum of the distance between all pairs of trading partners, as is necessary to preserve the logic of the intensity approach. The index of 'aid' flows covers only the less important types of international capital flows, and it is not surprising that it was swamped by other influences. However, these and other refinements of the variables are likely to raise the correlation coefficient only marginally. As an analysis of trade resistances, the Yamazawa study employed more satisfactory concepts than those used in any other econometric work to that time,⁹ yet the analysed variables accounted for a very small part of the variance in country bias in trade.

Garnaut (1972) used the aggregate and commodity-specific country bias index to generate an ordering of relative resistances across the bilateral trade relationships between Australia and each of the five ASEAN member countries. Despite the similar geographic location of the five Southeast Asian countries, there were large differences in the total and disaggregated indexes across the five trading relationships. The effects of the objective resistances, transport costs and protection, were calculated by statistical methods. The case study method, involving interviews with company executives involved in trading decisions, was then employed to attribute the unexplained variation in country bias to various subjective resistances. This study revealed that the preferences of ultimate users were important in determining bilateral trade patterns in highly differentiated commodities, but not in more homogeneous commodities. For the latter, biases in the trade decision-making processes of companies were of considerable importance. For affiliates of multinational enter-

prises, which accounted for a substantial part of Australian and Southeast Asian foreign trade, there was a high degree of intra-company trade, so that the location of affiliates was a major determinant of bilateral trade patterns. For independent enterprises, the particular order in which pioneering trading firms searched the international environment for trading opportunities was of considerable importance, especially since many firms relied heavily upon other trading firms in their own country for leads on new markets. Explicit internal constraints on profit maximising behaviour appeared relatively unimportant in the determination of trading patterns.

Interactions among the various types of resistances, and between complementarity and country size, were analysed and appeared to be very important to the explanation of variations in country bias. In most cases, subjective resistances tended to reinforce the effects of objective resistances, with the former being of greater direct importance for more differentiated commodities and the latter for more homogeneous commodities. The presence of economies of scale in overcoming all resistances to bilateral trade meant that there was considerable multicollinearity among values taken by the various resistance variables. These economies of scale, together with high external costs of pioneering new trade links, were seen to be major factors in explaining the observed stability in country bias over time.

Two factors seem to have been of particular importance in determining country bias levels: distance, and common former membership of imperial trading blocs. Both influenced the order in which traders searched the international market, patterns of multinational investment and transport costs. Preferential import restrictions dating mainly from the 1930s promoted intra-imperial trade, which continued with high intensity after the cessation of the preference, but increasingly less powerfully over time. The decline in importance of the old imperial blocs caused relative distance to emerge more powerfully as a determinant of country bias in trade.

In analysing the effects of international ownership ties on bilateral trade flows, an index of ownership compatibility was developed, consistent with the logic of the intensity approach. This index explained a high proportion of variations in country bias in those commodities in which a high proportion of trade was conducted within multinational corporations, notably the petroleum trade.

Three later studies applied the intensity of trade and one of them a modified intensity of trade index, to the analysis of the effects of political blocs on levels of bilateral trade. The method of these studies was pioneered by Girgis (1973), who sought to answer the question whether trade between Arab countries and various external countries was more or less intense than might be expected *a priori* from the countries' position in world trade.

Girgis recognised that the particular commodity composition of two countries' foreign trade might cause the index of trade intensity between them to take values away from unity, independently of the effects of those factors which we have described as resistances, although he does not control for this by the use of a precise measure of complementarity. Girgis is interested in intensity in bilateral trading relationships which involve one developed and one developing country. He argues that there are

consistent differences between the commodity composition of the trade of less developed countries and that of the world as a whole. Deviations from unity in the aggregate intensity of trade index can then be expected simply as a result of these variations in 'complementarity'. Thus he employs as an index of intensity of trade between one developed and one developing country the product of the bilateral trade level's share of the developing country's total trade, and the developed country's share of the total trade of developing countries. The Girgis index of trade intensity compares the developed country's share of the trade of the particular developing country with its share of the trade of developing countries as a whole.

The diversity of developing countries' patterns of export specialisation creates difficulties for the use of this method. Take the important case of a developed country that has large domestic oil production (perhaps the United Kingdom) and a developing country heavily specialised in oil exports (one of the Organisation of Petroleum Exporting Countries [OPEC]). Trade intensity measured by the aggregate index will be very low because of very low complementarity. The Girgis correction will yield an even lower intensity value in the common case (again, the United Kingdom) where the developed country's share of the exports of developing countries is greater than its share of total world exports. This is not to argue that the Girgis index is not more satisfactory on average as an index of relative resistances in developed-developing country trade than an aggregate intensity index. But it is certainly less satisfactory than the country bias index, which adjusts precisely for any peculiarities of the two countries' commodity specialisation in world trade.

Kleiman (1976, 1978) has applied a similar approach in analysing the impact of colonial political relationships on bilateral trade patterns. Kleiman compares the metropolitan country's share of the colony's (or ex-colony's) trade with that of a control group of countries, the metropole's trade share of which could have been expected to be similar to that of the colony in the absence of the colonial tie. In one case, he uses the metropole's share in the trade of African dependencies as a whole as his control group (Kleiman 1976). An identical approach, with similar advantages and disadvantages, was employed in a study of the effects of the residual ex-colonial cultural ties on trade between Spain and the former Spanish Latin America (Kleiman 1978). In this case, the ex-Portuguese colony of Brazil was used as the control group. This approach suffers from its failure to allow precisely for differing complementarity in trade, and introduces a new consistent bias in the comparisons to the extent that colonialism caused each of the metropolitan countries' trade with Africa as a whole to be more intense than it would otherwise have been. However, it does have advantages as an approach to the identification of the effects of one particular source of relatively low resistances to bilateral trade, colonial ties, to the extent that its use of adjacent territories (in Africa) as a control group reduces the differential effect on trade intensity of one other source of relatively low resistances, geographic distance.

The approach used by Girgis and Kleiman is in fact very similar to Kojima's (1962) earlier use of intensity indexes to analyse the factors underlying resistances to regional trade flows in Asia and the Pacific.

The substantive conclusions of the Girgis and Kleiman papers are of some interest, despite some lack of precision of their method. Girgis observed some tendency over time towards multilateralisation of Arab countries' trade relations, although political conflicts between pairs of countries were a source of sudden large falls from time to time in values of the indexes. Kleiman observed in his *Economic Journal* article that colonial ties raised the volume of trade between metropole and colony by at least several times, and that this remains with diminishing effect over about two decades from independence. In this later article, Kleiman concluded that the residual cultural heritage of Spanish colonialism now has very little effect in promoting trade between Spain and former Spanish colonies in Latin America.

The use of more precise methods and a more complete conceptual framework of analysis would change the magnitudes associated with these conclusions as well as encourage more qualified judgements about the dominance of particular resistance factors, for example Kleiman's conclusions on Spain's trade with Latin America, but it would not affect their general thrust.

A number of studies have measured changes in trade intensities simply to demonstrate the changes in the geographic structure of trade in the post-war period (see Wilford and Christou 1976) or the effects of customs union and free trade associations on the value of intensities (see Carney 1970; Wilford and Christou 1973). A more ambitious study by Roemer (1977) employs the intensity, complementarity and country bias concepts to explore the effects of 'sphere of influence' and economic distance on the commodity composition of trade in manufactures. He observes that exporters of manufactured goods tend to market their less competitive manufactures disproportionately in the geographic areas of strongest relative market share, and that this phenomenon cannot be accounted for entirely by transportation costs. He suggests that it is due largely to 'sphere of influence factors: supra-market, historical factors that give exporters trading advantages in some areas that other exporters do not have . . . ' (p. 327). Importantly, Roemer notes the difficulty of separating 'sphere of influence' factors from distance factors in the explanation of country bias in manufactured goods trade although no attempt is made to theorise about the interaction between the two factors.

Another area of research within the intensity approach (that is, analysing the determinants of bilateral trade given country totals), but incorporating some of the method of the gravity model, was opened up by Tilton. Tilton (1966, p. 419) used linear programming techniques to test association between actual patterns of bilateral trade, null (equal resistance) patterns of trade and the pattern of trade that would minimise total 'transport costs', for a range of minerals and metals. Focus on individual commodities rather than total trade abstracted from the effects of commodity composition on trade intensity. The effect of differentiation of the individual commodities was very slight, since the minerals and metals studies were relatively homogeneous. Transport costs were a significant determinant of bilateral trade flows. Other resistances (ownership ties, trading blocs) commonly exercised significant pressures in a direction opposite to those of transport costs.

Tilton supplemented his linear programming analysis with an econometric study that incorporated characteristics of both gravity and intensity approaches. The study had several unsatisfactory features, but it did point to ownership ties between exporting and importing firms in different countries as having a very important influence on trade patterns.

Tilton and his associates have refined the original work in a series of papers employing the gravity model methodology, surveyed by Demler and Tilton (1978). All of these studies find that ownership ties greatly influence minerals and metals trade flows, especially at the ores and concentrates stage of metals production. There has been some decline over time in the importance of ownership ties, but they remain very significant. The old colonial blocs continue to have a significant effect on bilateral trade in minerals. Distance has an important effect, but one that is uneven across commodities, and that is clearly less significant than ownership ties.

Conclusions

This survey has sought to digest the considerable literature on the measurement and analysis of bilateral trade flows. It has identified two basic approaches to the question: the gravity model approach, which seeks to explain the level of trade conducted between two countries in terms only of the characteristics of the two countries and the strength of obstacles to trade between them; and the intensity approach which takes each country's total imports and exports as given, and seeks to explain levels of bilateral trade in terms of the strength of obstacles to trade between other pairs of countries in the world economy.

Each of the two approaches is useful for particular purposes. The gravity model approach provides some indication of the importance of resistances to bilateral trade as determinates of the total size of a country's foreign trade. The intensity approach identifies differentials in resistances across various bilateral trade relationships, and the examination of these differentials provides fertile ground for analysis of the nature and relative importance of the various types of resistance to trade. The literature covered by this survey demonstrates that resistances to trade are substantial determinants of bilateral trade flows, and indicates the most important resistance factors.

The relative importance of various resistances varies across commodities and with the particular characteristics of a bilateral trading relationship. Studies in both the gravity model and intensity traditions demonstrate the importance of distance and common membership of imperial trading blocs to bilateral trade flows, and also the declining importance of the latter influence over time. Early studies tended to see distance and common membership of politico-economic blocs as proxies for relatively low transport costs and commercial policy barriers to trade but it has since been shown that these variables are correlated with the cost of overcoming a wide range of objective and subjective resistances. Several studies with widely differing approaches have demonstrated important effects of international ownership ties in determining

trade patterns. There is considerable evidence of the interdependence of trade levels across bilateral trading relationships and of the interdependence of the costs of overcoming various types of resistance within a single bilateral trading relationship. Patterns of resistances to trade, and hence patterns of bilateral trade, tend to be relatively stable over time, and there are important economic reasons why this is so. However, they can change markedly over time in some circumstances, and there is considerable interest in the analysis of the pressures which can generate such change.

Resistances to bilateral trade flows affect the size, commodity composition and gains of foreign trade, and so warrant integration into the pure theory of international trade. This important task has not been attempted in this survey, although a clear view of the nature of resistances may assist this development in trade theory.

Notes

- 1 See Garnaut (1972, pp. 25–6 and ch. 6 *passim*) and Garnaut (1980, ch. 13). Johnson (1968) suggested a slightly different categorisation, distinguishing 'geographic distance and the transport cost of overcoming it', 'differences of political and legal systems, culture and language that differentiate nations from one another as market areas', and 'protection'.
- 2 See Corden (1971) and (1974) for thorough treatments of the theory.
- 3 There is a large literature on the theory of customs unions. For useful surveys, see Lipsey (1960) and Vanek (1965).
- 4 Jones (1977) reviews the limited discussion of many-country trade specialisation, in a world of zero transaction costs.
- 5 Some of the literature on this point is discussed in Leamer and Stern (1970, ch. 7).
- 6 See, for example, Tatemoto and Ichimura (1959), which was the first in a series of Leontief-type studies to draw attention to this phenomenon.
- 7 The latter conclusion should be treated with extreme caution because of the high degree of aggregation in commodity classes defined for the test.
- 8 The calculations of trade intensity indexes in Petri (Chapter 10) and Petri (Chapter 23) are based on an intensity equation which does not subtract M_i from M_w . The variability in the indexes which results from this is only minor.
- 9 Higher correlation coefficients in the gravity model studies are misleading, because much of the variance of total bilateral trade flows 'explained' by the independent variables is accounted for by variation in the size of the trading partners.

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4 International economic pluralism

Peter Drysdale

Domains for international collective action

International agreements and understandings are important pillars on which gainful economic interdependence is built. Growing world economic interdependence over the past several decades is certainly in part the result of both technological developments in industrial countries favouring specialisation within larger and larger international markets and the lowering of transportation and communications costs. But, importantly, it is also a consequence of the various institutional and policy commitments that followed the Second World War and built a stronger framework for international exchange and financial settlements (see Dam 1970).

The process of international economic integration is far from complete, nor has its progress been in any sense uniform throughout the world economy. The levels of integration within the international economy reflect, among other factors, the framework of tacit or explicit arrangements and understandings within which cooperative economic exchange has occurred. Trade among industrial countries generally grew much more rapidly than among other countries in the earlier post-war period. Integration also proceeded much more rapidly among these countries. The Atlantic community and the EC have taken economic integration further than most groups of countries, the latter within the framework of a customs union arrangement and measures encouraging broader economic and political union.

A central question is what criteria can be elicited to determine appropriate domains in which to further collective action aimed at strengthening the arrangements for cooperative international economic exchange and the gains from closer economic integration.

Closer economic integration has many possible roots. It can originate through commitments — multilateral, regional, bilateral — which are simply based upon a

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recognition of the gains to be had from closer international economic cooperation and interaction. The great post-war multilateral institutions, such as the GATT, were based on such commitments. It can germinate within a system of common cultures and social institutions; historically the close commercial ties among the British Empire countries had such origins. It may spring from ideological alignments, as among the former Council for Mutual Economic Assistance (Comecon) countries and, more broadly, among the countries of the Western bloc. It may be encouraged by the advantages that contiguity presents in economic exchange. Or it may grow out of other non-economic interaction among nation states, such as membership of a common political alliance. Both relative contiguity and membership of a common political alliance provided starting points for closer Pacific economic integration. In Europe a commonly felt threat to external security prompted the formation of the EEC (Cooper 1968, p. 7). Any of these factors, separately or in some combination, can provide the impetus and rationale for collective action which effectively promotes closer economic integration within the international community of nations. A wide range of studies of international political and economic systems reveals a great diversity of approaches over time and in different circumstances towards developing institutional frameworks aimed at fostering economic integration. The classic literature on the shaping of the Atlantic community stresses the relationship between the preconditions for integration and the feasibility of alternative approaches to integration (Deutsch et al. 1957). The relative homogeneity among European nations and their common security interests, for example, were critical factors in encouraging the elaboration of a comprehensive framework for economic and, later, political union. Heterogeneity limits the scope for comprehensive union among many countries. However, a heterogeneous group of highly complementary economies can develop an intensive pattern of economic transactions fostered by propinquity, common political associations and a strong coalition of interests, which both encourages and requires closer policy coordination and economic association. Just such an intensive pattern of economic exchange has developed among the diverse countries of the Pacific.

Complete integration among a group of nations might be thought to require not just 'common' commodity markets or 'common' factor markets but also a tendency towards the equalisation of commodity prices and of the prices of the factors of production within them (Cooper 1968, pp. 10–11). Common cultural and institutional factors offer one avenue to encouraging international market integration in this sense, and to creating the increased sensitivity of one nation's markets to developments in the markets of other countries, which is one of the important consequences of integration. Another avenue is presented by the low resistances to bilateral or regional trade which arise from geographic proximity. This is a particularly important factor inducing geographic concentration in trade for whole classes of commodities, such as minerals and raw materials, which are bulky in relation to their value and costly to transport.

The systematic study of international trade resistances is, surprisingly, a new branch of economic enquiry, but it yields some useful general observations.¹ The cost

of overcoming resistances to international trade varies across bilateral trading relationships, and as a result the price at which commodities are offered for international sale or purchase also varies according to the bilateral trading relationship within which the transaction is made. The effect of resistances on relative commodity prices provides incentives for the development of close trading ties among particular groups of trading nations. Low resistances are commonly associated with proximity. But other factors are also influential in determining the structure of trade resistances. In addition to objective trade resistances, which are the product of distance and transport costs or government policies that discriminate between trading partners, traders face various subjective resistances to trade, including imperfect knowledge of trading opportunities and the absence of confident and established business relationships. Low transport and communications resistances interact with institutional, political and other resistances to generate high intensities in trade and other economic relations, such as have developed among the economies of the Pacific. Low resistances to trade on some trading routes encourage the processes of market and institutional integration more strongly among some groups of countries than among others. These discontinuities and fragmentations in otherwise more or less interconnected world markets are important in the management of foreign economic relations within the relevant policy horizons.² Indeed, within a multilateral set of economic relationships, their contours define important domains for international collective action to secure agreements among groups of countries about a framework for economic exchange, as well as agreement on the policy coordination that is required, in one form or another, to manage the development of closer economic integration.³

The distinction between institutional and market integration throws further light on what determines an appropriate domain for international action on the trade regime (Cooper 1974, pp. 2–4, also Chapter 2, this volume). Institutional integration refers to the legal agreements and institutional arrangements which facilitate economic exchange among a community of nations. Market integration refers to the intensity of transactions in the markets for goods and factors of production within the community. If a circumstance exists where there are no governmental or direct institutional barriers to intra-community transactions, but markets are in fact not linked because of either high transportation costs or the ignorance of trading opportunities, then institutional integration exists but market integration is underdeveloped. If, however, there are institutional and legal barriers to trade and capital movements but market ties survive, market integration is frustrated by the lack of institutional integration. This distinction is useful, not so much to draw attention to these different processes in integration as to underline the interaction between them. Institutional and market integration involve an important two-way interaction, in which close economic ties and common economic problems set the requirements for institutional arrangements, and institutional arrangements influence the degree of economic and political cohesion. Institution-building can usually neither wholly precede nor wholly follow the integration of economic markets.

The distinction between institutional and market integration also highlights the scope for advancing integration arrangements on several fronts and at different levels. The literature in international economic theory might seem to take another position: that international economic policy should generally be multilateral in focus to be efficient and constructive. An argument which stresses the importance of the institutional framework within which international economic exchange is to take place prescribes no such automatic policy guideline. From this perspective, multilateral action, regional action and bilateral collective action all provide fertile and potentially efficient routes to elevating exchange possibilities. Multilateral collective action can establish a minimum set of acceptable and sustainable rules for cooperative exchange among the widest and most diverse group of nations. Collective action among smaller (regional) groupings may promise fuller agreement and more intensive economic ties based on the common interests growing out of proximity, common political associations or whatever. Bilateral collective action may allow the development of cooperative exchange arrangements further and faster than is possible within a broader regional and multilateral setting.

It is important to note that collective action directed at shaping international economic regimes cannot, of its nature, be 'unilateral', so that the individual nation state is foreclosed from policy action to secure these important effects, except in the sense that it may be able to implement such policy by exercising hegemony over some other nation or nations, thereby imposing conformity to its preferred rules for economic exchange. In fact, the theory of international relations has given considerable attention to the character and stability of hegemonic systems. It tends to suggest that hegemonies play a crucial role in supplying the collective goods that are necessary to the existence and effectiveness of international regimes. However, as Keohane (1982, pp. 325–56) argues, following Coase's theorem, regimes are also demanded and sustained by incentives to collaborate in the establishment of frameworks for the negotiation of international agreements (thereby reducing transactions costs), and for the coordination of actor expectations (thus improving the quality and quantity of the information available to nation states).

It is significant that agreements at the regional or bilateral level, which are consistent with non-discriminatory principles in international trade, may well be an effective means of building and extending confidence in international exchange. It is arguable, for example, that the 1957 Agreement on Commerce between Australia and Japan, which incorporated MFN principles and was non-discriminatory in its thrust, effected the most significant elevation of Australia's specialisation in the international economy in post-war years (Crawford and Okita 1978, pp. 47–51; Drysdale 1981). However, many bilateral and regional agreements do embody elements of commercial policy discrimination. Some of these agreements may well be effective in serving the objective of promoting and extending confidence in international exchange despite their embodying discriminatory elements. It is arguable, for example, that the New Zealand–Australia CER Agreement serves that purpose effectively for New Zealand. The efficiency or inefficiency of such discrimination in trade arrangements

is a matter that needs separate judgement, although an important conclusion is that discriminatory trade regimes are likely to be damaging to the interests of East Asian and Pacific countries.

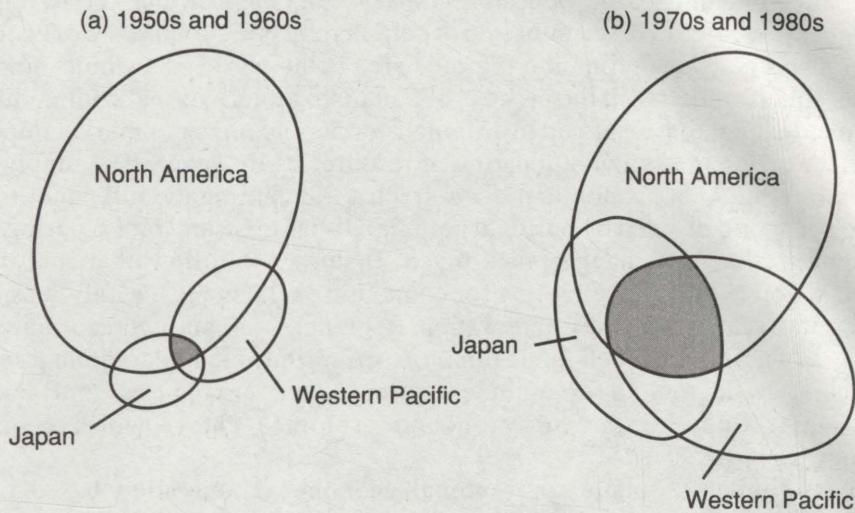
The nature of regional economic cooperation

The intensive network of trade and other economic exchange that has grown up within the Pacific region has developed without a firm framework of institutional ties at the regional level and despite the persistence of significant discontinuities between the commodity markets of the national economies involved. There are no comprehensive trade or economic agreements or understandings within the region. Multilateral arrangements and involvements only partially cover the trade and economic exchanges among Pacific countries. High levels of trade protection and other commercial barriers persist. Purposeful action to reduce these barriers and uncertainties associated with trading within the region, even with only vague and tacit commitments to regional economic cooperation, may have the potential to yield important gains to the countries of the Pacific.

The development of overlapping economic relationships and interests among the nations of the Pacific over the past two decades or so can be illustrated by reference to Figure 4.1. Figure 4.1(a) depicts the pattern of economic interaction between North America, Japan and other Western Pacific countries in the earlier post-war period, while Figure 4.1(b) shows the strong three-way interdependence in recent years. In the earlier period the dominance of the bilateral relationships of Japan and the Western Pacific with North America is represented. Japan is now much more important to other Western Pacific countries and the United States, and the shaded areas reflect the vastly enlarged intersection of regional economic interests. The diagram provides a highly stylised but essentially accurate picture of the development of overlapping economic relations within the Pacific, and suggests the interests that might encourage the development of regional cooperative agreements, institutional arrangements and organisations to define and supervise choices within growing spheres of mutual economic interest.

Regional economic cooperation which strengthens the trade regime has a sound basis in such patterns of trade and economic interaction. What form of regional economic cooperation and what structure of economic association might be adopted are matters taken up in detail in Drysdale (1988). But some of the possibilities, and the characteristics of the more important among alternative forms of economic cooperation, need to be introduced here.

In the field of commercial policy the range of possible commitments to regional economic cooperation include: agreements to consult on commercial policy action; the adoption of codes of trade and investment policy behaviour to maintain open markets; agreements to lower commercial barriers on an MFN basis; the establishment of a limited or complete free trade area; sectoral agreements to free trade; or the

Figure 4.1 **Patterns of economic interaction**

formation of a customs union. The last three forms of economic cooperation involve discrimination against third parties, and are not generally desirable on grounds of economic efficiency (Lipsey 1957, pp. 40–6). Regional economic cooperation can also take the form of macroeconomic policy coordination; arrangements for partial or complete pooling of foreign exchange reserves; monetary union; or broader economic union, including institutional changes to facilitate integration of the markets for factors of production (Cooper 1968).

The case for regional economic cooperation which incorporates discrimination against third parties in commercial or other foreign economic policies (as do customs or payments unions) is said to hinge on whether, on balance, the economic 'liberalisation effects' dominate the 'withdrawal effects' of such arrangements for the world as a whole. Johnson (1962), however, has argued that discriminatory arrangements, such as customs unions, should be regarded as devices for the attainment of collective goods such as political alliance, cultural alliance, or higher levels of industrial production than those that would be achieved with the operation of unimpeded market forces. The issue can then be stated in terms of whether a regional grouping that discriminates against third parties (and carries the economic cost of that) is the most efficient means of attaining a given collective aim; and this has to be demonstrated in each specific case, for there is no general presumption that it will be so (Lipsey and Lancaster 1956, pp. 11–33).

But the argument for regional economic cooperation offered here does not depend on whatever case can be made for arrangements which discriminate against third parties. Rather, it identifies the value of regional arrangements which serve collective ends but not at the price of discrimination in commercial policy. The core of economic theory suggests that the optimum integrated area is the world as a whole, since any 'unnatural' interference with the process of equalising international commodity and factor prices (except that designed to eliminate monopoly power or market imperfections) will cause an inefficient allocation of resources.⁴ However, the point is that a priority in international economic policy directed at attaining the full benefits from exchange in a world divided by political boundaries has to be the joint securing of the regime within which exchange takes place. It does not follow that multilateral collective action to secure the regime for economic exchange is the only feasible or efficient route to closer economic integration. Regional economic cooperation, within a framework of multilateral economic relations, offers the potential for joint provision of a stronger trade regime — a trade regime which also raises confidence in international economic specialisation and promotes closer world economic integration.

There is another rationale for regional economic cooperation based on the provision of the specific alongside the systemic collective good of rules and agreements governing exchange. While the highest priority is clearly securing the trade regime for countries with sufficiently strong common interests, the objects of collective action can also be a wide array of specific public goods — research and information services, communications systems, health systems and environmental controls, as well as military security (see, for example, Olson and Zeckhauser 1976). Within nation states the provision of specific collective or public goods is more or less coterminous with the collective action which sustains the regime for exchange itself. This may also be so within associations of nation states, as in Europe. However, the diversity in social preferences within the international community and the different technological considerations for different types of collective goods both suggest that a variety of overlapping jurisdictions — multilateral, regional, bilateral — will serve in the most rational and sensible way the international provision of systemic and specific collective goods.

The shape of international economic cooperation is not just a technical matter; it is also a political question. The determination of an optimal jurisdiction in the realm of international economic policy-making requires, among other ingredients, careful weighing of the political elements in the various alternative arrangements that might be considered, since they represent potential constraints on the nature of progress towards, as well as forces which can be mobilised more effectively to achieve, international economic goals.

The logic of collective choice

It is evident that the domain for international collective action to achieve economic goals is neither single nor disjoint, in the sense that nation states will have an interest in membership of several groups or levels of international organisation. Moreover, the different domains within which collective action sustains a regime for economic exchange or the international provision of specific collective goods have a wide variety of possible origins — economic, geographic, technological, cultural, political and strategic. In turn, these origins shape the choice of regime and the nature of the specific public goods that are provided internationally. If the sovereignty of the nation state is accepted as an initial condition and, by implication, some kind of equality is accorded among nation states, complex questions of collective choice arise within the international economic system.

Diversity among national preferences in respect of regimes for international economic exchange and the provision of other collective goods is an important influence on the feasibility of collective action. Agreement to collective action is likely to be achieved most readily among countries which do not differ greatly in their preferences for the international economic system or for specific public goods (Cooper 1968, pp. 227–8; 1974, pp. 9–10, also Chapter 2, this volume). On the other hand, differences in these preferences limit the scope for international economic cooperation and are often the cause of considerable international conflict.

If a pluralist international community is one which accommodates a non-homogeneous set of social preferences among its members — on matters to do with how trade and commerce should be organised, commercial policies managed, monetary arrangements operated, or the whole range of social institutions ordered — a fundamental question is whether and by what principles collective choice can be exercised effectively. Within democratic and pluralistic nation states (which acknowledge the 'equal value' and 'right to differ' principles), more or less satisfactory mechanisms have evolved which allow some measure of reconciliation among divergent positions or some measure of tolerance for collective action which does not have a completely unanimous basis. Between sovereign and independent nation states such mechanisms are by no means fully developed.

A practice of reconciliation and tolerance has built up among some countries in certain fields, and priorities have been established within the international economic community — such as through the GATT, the International Monetary Fund (IMF), within the Organisation for Economic Cooperation and Development (OECD), and among the Group of Seven; but the basis for this cooperation is only tenuously founded on the principles of international pluralism. This question needs to be addressed at some length, since it is at the heart of defining an appropriate framework for economic cooperation among a group of nations such as those within the Pacific community.

The problem of international choice and collective action is complex. It almost always involves multi-dimensional decisions, rather than one-dimensional decisions that can be scaled along a single measure, such as the level of expenditure, without a simultaneous consideration of other values. A group of independent nations about to settle on the nature of a regime for cooperative economic exchange is confronted with just such complexity of choice. The nature and difficulty of this kind of choice can be illustrated by a simple example.⁵

Consider a world in which there are three sovereign nation states whose preferences are accorded equal value. They wish to cooperate to secure an agreement to foster trade under a regime which just sufficiently eliminates arbitrary action that would damage their principal trading interests. Assume that the three countries are, respectively, an industrial economy, a newly industrialising economy (NIE) and an agricultural economy. Further, assume that there are three broad classes of commodities: capital-intensive goods, produced most efficiently by the industrial country according to the principle of comparative advantage; labour-intensive goods, produced most efficiently by the NIE; and land-intensive goods, produced most efficiently by the agricultural nation. Each country harbours feelings of insecurity, which are not totally overcome by the will to cooperate rationally with its partners through economic specialisation. Moreover, these feelings are given effective expression through protectionist pressures, justified on the grounds of national interest and revealed in a national preference for some measure of diversification unattainable under free trade but felt necessary for security's sake (Johnson 1965).

Preferences for protection in each country are so ordered that the strongest preference for protection is revealed for the good which has the most comparative disadvantage, there is a less strong preference for protection of the good of intermediate comparative advantage, and, of course, the weakest preference for protection (zero levels are desired) applies for the good with the greatest comparative advantage. A viable trade regime is taken to require a guarantee of freedom to trade in at least two goods, while allowing arbitrary protection of the third. The choice of trade regime can be styled in terms of the good for which arbitrary protection is allowed. There are three possible trading regimes: one in which arbitrary intervention is allowed against capital-intensive goods (the 'capital protected' regime); one in which arbitrary intervention is allowed against labour-intensive goods (the 'labour protected' regime); and one in which arbitrary intervention is allowed against land-intensive goods (the 'land protected' regime).

Each country's preferences for each of these three trade regimes (or states of the world that might be achieved through cooperative agreement) are ranked in Table 4.1.

If each country's order of preference counts equally, the logic of collective choice reveals that it is impossible for the group to make a consistent decision by majority rule. Take first the choice between the 'land protected' regime and the 'labour protected' regime. Only the agricultural country prefers the 'labour protected' to the 'land protected' regime, so that majority rule puts the 'land protected' regime ahead. On the next choice, between a 'labour protected' regime and a 'capital protected'

Table 4.1 **Choice of trade regime**

	Industrial country	NIE	Agricultural country
Land protected	1	2	3
Labour protected	2	3	1
Capital protected	3	1	2

regime, only the industrialising country prefers the latter, so that the 'labour protected' is put ahead of the 'capital protected' regime. This would seem to imply that the group preferred a 'land protected' over a 'capital protected' regime, but the reverse turns out to be true! Indeed, the preferences of the group as a whole are cyclically inconsistent. Pairwise choice leads to an endless cycle which cannot be resolved other than arbitrarily.

This is no trivial application of Arrow's insight into the theory of collective choice (Johnson 1965). Simple as it is, this example typifies the hard choices of international politics and political economy. Indeed, the example is a quite plausible, if partial, representation of the conflicting interests that faced the international community in the establishment of the post-war trade regime. The resolution of such conflicts of choice in international politics is frequently found in the exercise of a decisive role by one or more members of the group. After the Second World War, industrial countries effectively dictated the exclusion of agricultural trading nations from the full benefits of the GATT. The preferences of stronger and larger parties for a choice, such as the one described here, are given fuller rein and are often allowed to dominate when no independent rules or principles can be addressed to effect a decision.

The question arises whether such problems of collective choice are as readily resolved within nation states as has been assumed thus far. Certainly nation states are characterised by the presence of mechanisms which allow some measure of reconciliation among divergent positions, and these mechanisms have more authority and are more fully developed than any such mechanisms among nation states. But the contest of preferences or priorities is sometimes open and commonly vigorous. How this contest is resolved in each individual nation state is a matter of considerable interest and importance in the context of trade and foreign economic policy formation. It will affect, for example, whether and how reliably a particular country can deliver a 'cooperative trade strategy' — that is, maintain a commitment to trade without restrictions or penalties.

Indeed, a prolific literature has developed around the analysis of the political market for protection within nation states. It seeks to explain why countries protect domestic production and restrict external trade when trade theory would suggest that the alternative policy approach would improve national welfare. In this literature there

are some elegant analyses of the determination and structure of tariffs and trade restrictions built upon the presence of competing domestic interests (Krueger 1974; Pincus 1977; Findlay and Wellisz 1983).

Nonetheless, conflict in preference ordering or priority setting within nation states suggests that, for any given country, it is important to have information about the domestic collective choice problems of its economic partners, since that information will affect its assessment of the probable pay-off from whatever international strategy it may choose. International consultative institutions provide an effective method of acquiring and disseminating such information. Certainly, private traders acting alone are unlikely to be able to undertake adequately the role of acquiring such information. Hence, there is an important rationale for the development of consultative mechanisms within the Pacific.

The conflicts of collective choice are endemic in a genuinely pluralist community. They can be resolved in a number of ways: the exercise of authority by a decisive group member; the weighting of some preferences or priorities over others; and the transformation or shaping of preferences so that they become more homogeneous and consistent. All are possible ways of resolving conflicts of collective choice and attaining cooperative outcomes (Mueller 1976, pp. 403–15). In practice, pluralist communities incorporate all three solutions, although the exercise of decisive authority would only seem compatible with the notion of pluralism if it were seen to be in some combination with the other two elements — some weighting of priorities and an openness to persuasion. Hence, agreement to a minimal ordering of priorities and the opportunity for communication and persuasion regarding orders of preference would appear to be two essential conditions to a robust pluralist community. These are evidently two basic requirements for successful economic cooperation among the heterogeneous nations of the Pacific region.

Notes

- 1 For a review of the analysis of these issues, see Drysdale and Garnaut (1982, also Chapter 3, this volume).
- 2 Crawford and Okita (1978, pp. 41–7) justify the strong bilateral policy interest in the Australia–Japan economic relationship on these grounds.
- 3 The trade relations among Pacific countries are analysed in detail in Drysdale (1988, ch. 4) in order to explore the extent to which they provide such a domain for international collective action.
- 4 Cooper (1974, p. 4, also Chapter 2, this volume) makes the point that these allocative issues cannot easily be separated from distributional issues.
- 5 The modern theory of complex choice was developed by Arrow (1951). In the literature there are a vast number of explanations of the Arrowian ‘impossibility theorem’, of which an example follows.

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5 Principles of Pacific economic integration

Peter Drysdale and Ross Garnaut

The Asia Pacific trade model

East Asian and Asia Pacific regional trade expansion is very different in nature from that which is emerging in North America and from what has been established and is continuing to develop in Europe (Table 5.1). There has been no economically important trade-expanding discrimination in East Asia:¹ trade preferences within the ASEAN region so far have had trivial effects (Garnaut 1980), although the 1991 commitment by the ASEAN heads of government to move towards an ASEAN Free Trade Area will have future significance. The two most rapidly expanding intra-East Asian bilateral trading relationships over the past several years, those between mainland China and Taiwan, and between China and the Republic of Korea, have developed around and despite discriminatory restrictions on bilateral trade. Trade discrimination in Australia–New Zealand and North America has been associated with relatively small parts of the total Asia Pacific trade expansion.

East Asian and Asia Pacific trade expansion has nevertheless been associated with reductions in barriers to international, including intra-regional, trade. All the Western Pacific member economies of the APEC group, except Hong Kong and Singapore, have substantially reduced official border restrictions over the past decade, and especially since the mid-1980s. Hong Kong and Singapore have, throughout the period under discussion, been the world's most important examples of free trading economies. There has been major import liberalisation in Japan, Korea, Taiwan, mainland China, Thailand, Malaysia, Indonesia, Australia and New Zealand. Political weakness has meant slower progress in the Philippines, although recent official commitments are impressive. Trade liberalisation has been mostly

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Table 5.1 Asia Pacific and world trade flows, 1970 and 1990 (per cent)

Trading country	Partner country	Western Pacific	Australasia	East Asia	North America	Asia Pacific	Western Europe	European Community	Rest of World
1970									
Western Pacific	Exports	34.99	3.63	31.36	27.88	62.85	18.18	13.64	18.97
	Imports	34.09	6.51	27.58	26.52	60.62	18.39	13.90	20.99
Australasia	Exports	39.06	5.93	33.13	16.33	55.39	27.54	26.38	17.07
	Imports	22.92	5.84	17.08	26.98	49.91	39.61	29.35	10.48
East Asia	Exports	34.22	3.19	31.02	30.04	64.26	16.41	10.27	19.33
	Imports	36.10	6.63	29.47	26.44	62.54	14.58	11.13	22.88
North America	Exports	16.17	2.25	13.92	32.50	48.67	28.61	27.42	22.72
	Imports	19.53	1.88	17.65	38.31	57.84	24.02	19.42	18.14
Asia Pacific	Exports	23.52	2.79	20.73	30.69	54.21	24.53	22.04	21.26
	Imports	25.57	3.80	21.77	33.42	58.99	21.68	17.13	19.33
Western Europe	Exports	4.81	1.47	3.35	9.31	14.13	66.75	53.85	19.12
	Imports	4.79	1.34	3.45	12.30	17.09	61.90	50.97	21.01
European Community	Exports	4.97	1.57	3.41	9.63	14.61	66.24	53.10	19.15
	Imports	5.00	1.54	3.46	13.19	18.19	59.62	50.24	22.19
Rest of World	Exports	21.83	1.16	20.67	17.64	39.47	40.41	38.64	20.12
	Imports	8.89	0.79	8.10	31.19	40.08	37.93	32.96	21.99
World	Exports	12.53	1.76	10.77	16.98	29.51	47.04	40.59	23.45
	Imports	12.40	2.11	10.29	20.11	32.50	43.97	36.19	23.53
1990									
Western Pacific	Exports	42.71	2.63	40.08	27.55	70.26	18.48	19.93	11.26
	Imports	47.35	4.39	42.96	21.17	68.52	16.58	16.11	14.90
Australasia	Exports	57.12	7.25	49.87	12.44	69.56	15.83	15.11	14.61

(Table 5.1 continued)

	Western Pacific	Australasia	East Asia	North America	Asia Pacific	Western Europe	European Community	Rest of World
Imports	42.54	7.29	35.25	23.15	65.68	27.61	21.53	6.70
East Asia								
Exports	41.67	2.30	39.37	28.65	70.32	18.67	16.24	11.02
Imports	47.76	4.14	43.62	21.00	68.76	15.64	14.12	15.60
North America								
Exports	24.50	2.02	22.48	33.98	58.48	23.34	20.55	18.18
Imports	34.81	1.03	33.78	27.49	62.30	20.93	17.18	16.77
Asia Pacific								
Exports	35.23	2.38	32.85	30.19	65.43	20.47	17.97	14.10
Imports	40.95	2.67	38.27	24.39	65.34	18.80	15.97	15.85
Western Europe								
Exports	6.70	0.77	5.93	7.90	14.60	71.66	55.24	13.73
Imports	9.77	0.64	9.12	8.00	17.77	68.99	67.38	13.24
European Community								
Exports	5.99	0.69	5.29	7.29	13.27	66.19	55.77	20.54
Imports	8.21	0.52	7.69	7.27	15.47	59.96	51.18	24.57
Rest of World								
Exports	17.68	0.65	17.03	18.55	36.23	35.22	32.29	28.55
Imports	13.65	1.36	12.29	13.98	27.63	35.89	33.59	36.49
World								
Exports	19.06	1.35	17.71	17.89	36.95	46.79	37.71	16.25
Imports	22.50	1.55	20.95	15.39	37.89	43.78	42.84	18.33

Source: International Economic Databank, Australian National University, compiled from United Nations, International Monetary Fund and national statistics.

non-discriminatory and unilateral, and sometimes influenced by the multilateral disciplines of the GATT. The main exceptions, sometimes temporary, have favoured the United States, following pressure from that country to reduce bilateral trade imbalances. Even more important has been the reduction of non-official barriers to trade of many kinds, as part of the process of deep integration into the international economy.

The new model of regional and international trade expansion that has developed in the Asia Pacific region, and especially in the Western Pacific economies, is consistent with the spirit of the GATT as it was conceived in the 1940s and as it developed in the early post-war decades. Three crucial features distinguish Asia Pacific trade expansion, and take it beyond the GATT's constitution, rules and practice, and beyond the GATT's framework for the encouragement of regional trade expansion under Article XXIV.

The first distinguishing feature derives from the fact that GATT negotiations in practice have assumed that liberalisation is a concession, the withholding of which has value for a member country. The trade negotiations 'game' therefore has elements of the 'prisoner's dilemma', in which, in the absence of deliberate communication and cooperation, the most unfavourable outcome for each participating country is the one that occurs. In contrast, the trade expansion 'game' that has emerged in the Western Pacific can be characterised as 'prisoner's delight'. Observation of the highly beneficial effect of one country's liberalisation on its own trade expansion has led each Western Pacific economy to calculate that, whatever policies others follow, it will benefit more from keeping its own borders open to trade than from protection. Each country's liberalisation in its own interests has increased the benefits that trading partners receive from their own liberalisation. This 'prisoner's delight game' consists of a series of movements towards sets of trade policies that are more favourable for all countries. There are gaps and exceptions (notably in East Asian agriculture), reflecting the domestic political economy of industry policy in most of these economies. It is in these excepted areas that outside pressure plays an important role in each individual country's trade liberalisation, so far most effectively through multilateral negotiations and other fora of the GATT, and sometimes in bilateral negotiations influenced by GATT disciplines.

The 'pay-offs' from unilateral trade liberalisation, across the range of trade policy stances of other countries, that generate the 'prisoner's delight' are recognisable as the outcomes predicted by standard trade theory. What is new in East Asia and the Western Pacific is that close observation in neighbouring country after neighbouring country that trade liberalisation enhances economic performance has changed political perceptions of the pay-off matrix. Any perceived disadvantages in changes in income distribution associated with trade liberalisation are judged by the political process to be less important than the gains for the nation as a whole — helped along by the obviously favourable effects on the incomes of the relatively poor of labour-intensive manufactured export expansion in labour-abundant economies.

Second, Asia Pacific trade expansion has not been associated with substantial discrimination in trade policy. Official barriers have not been lower for intra-regional than for extra-regional trade expansion.

Third, the East Asian and Pacific experience demonstrates powerfully the importance of non-official barriers to trade, and the role that their reduction plays in trade expansion and economic development.

‘Market’ integration and ‘discriminatory’ integration

Analysis of the unusual character of Asia Pacific trade expansion has been advancing over the past quarter century. It is, however, only in the past few years, when the United States and the EC have been seeking to understand and respond to an East Asian presence of obviously large proportions in the international economy, that many trans-Atlantic mainstream economists have turned their attention to the character of Asia Pacific trade expansion. Much of the recent American and trans-Atlantic discussion of East Asian and Asia Pacific trade expansion has made little use of the insights that have emerged from a quarter century of analysis of the different trade phenomenon across the Pacific.

Cooper (1974, also Chapter 2, this volume) was one of the first to draw attention to the various origins of regional trade expansion with his identification of ‘market integration’ around institutional and legal barriers to trade, involving capital movements and other forms of economic interchange. In contrast to this form of integration, economic integration in Europe has flourished within the institutional arrangements of the EC. European ‘institutional integration’ discriminates against economies outside the region: the removal of internal barriers to trade has been accompanied by the maintenance of external barriers, while others, such as those affecting agricultural trade, have become a greater encumbrance to global trade growth.

The terms ‘market integration’ and ‘institutional integration’ have been useful in drawing attention to the difference between European and Asia Pacific economic integration. But they are misleading to the extent that they are interpreted literally. The emergence of new institutions — to a considerable extent private but increasingly inter-governmental — to reduce the costs of trade expansion has been important in the Asia Pacific region. Meanwhile, the important role of integrative institutions embodying large elements of official discrimination in Europe and now North America has not excluded market pressures from a major role in trade expansion (Milner 1991, p. 7).

On balance, we have found it useful to retain Cooper’s term ‘market integration’ for the case where the initiative has remained primarily with enterprises acting separately from state decisions, and where official encouragement of regional integration does not include major elements of trade discrimination. We prefer the term ‘discriminatory’ integration to ‘institutional’ integration for arrangements of the EC and NAFTA kind.

A general theory of economic integration

We define 'economic' integration as movement towards one price for any single piece of merchandise, service, or factor of production. The global economy is, in this sense, considerably disintegrated. The price for an undifferentiated item may vary greatly between a store on 49th Street and another on 120th Street in New York, between a market in East Java and another in North Sumatra, or between Tokyo and Paris.

Disintegration persists because of barriers, or resistances, to trade. We define resistances to trade as phenomena that prevent or retard the immediate movement of commodities in response to price differentials.

One line of literature that has developed out of analysis of the Asia Pacific experience distinguishes two basic types of resistances: objective and subjective.²

Trade resistances and economic integration

Objective resistances can be overcome by firms only at some objectively determined minimum cost. They comprise principally transport, communications and other costs of overcoming distance, and official barriers to trade (principally protection).

Subjective resistances comprise a range of social, psychological, and institutional factors that cause prices to vary across geographic space by larger margins than can be explained by the necessary costs of overcoming objective resistances. Subjective resistances derive from perceptions of risk and uncertainty about property rights and valuations at various stages of trade transactions, from imperfection in the information available to firms, and from the processes through which firms engaged in trade make decisions that affect the volume, geographic direction, or commodity composition of trade.

Johnson has suggested a slightly different categorisation of the same phenomena, distinguishing 'geographic distance and the transport cost of overcoming it', 'differences of political and legal systems, culture and language that differentiate nations from one another as market areas' and 'protection' (Johnson 1968). We think that it is more useful analytically to see Johnson's second category as factors affecting the costs of overcoming subjective resistances to trade, rather than as separate resistances in themselves.

Resistances are present in all economic transactions, whether domestic or international. They are commonly, although far from universally, lower within than between countries. This difference is one of the factors distinguishing international from inter-regional trade. There are, however, important exceptions to the common pattern. Regional price disparities within some large, weakly integrated economies (say, Indonesia and China) can exceed disparities, at least for many commodities, between major cities exposed to trade between countries (Arndt and Sundrum 1975). Border trade occurs between adjacent regions of two countries when the cost of overcoming intra-national resistances exceeds the cost of overcoming international resistances.

The costs of overcoming various resistances vary across bilateral trading relationships. The divergences from the law of one price associated with resistances to international trade are typically very large. Among objective resistances, while official barriers have received the most consideration in public discussion and the literature, these are probably less important than transport costs today, at least in relation to imports of most manufactured goods into advanced industrial economies. There are exceptions, of which restrictions on the import of textiles and clothing into the OECD countries are the most important.

There is some evidence to suggest that subjective resistance can be quantitatively more important than objective resistances (Garnaut 1972). Sung (1992, also Chapter 28, this volume) underlines the importance of these considerations in his discussion of the large and increasing role that Hong Kong is playing in China's trade — a role that contributes a major part of Hong Kong's *raison d'être* today. Interestingly, Hong Kong's role in the China trade has expanded as China has opened to the outside world, despite reductions in resistances to direct trade between established enterprises in China and in the rest of the world. The resolution of this paradox can be found in the effect of China's internationalisation in increasing the range of firms and commodities participating in foreign trade, and therefore the transaction costs in dealing with them.

The costs of overcoming various types of resistance to bilateral trade, objective and subjective, are closely interrelated. Economies of scale affect the cost of overcoming all except official resistances: objective transport and communications costs up to quite large levels of bilateral trade, and subjective resistance of all kinds. There are externalities stemming from one firm's investment to reduce the cost of overcoming resistances to trade: investment in the organisation of a new pattern of transport or communication will reduce costs for other firms in the bilateral trading relationship; and investment in information to support a new pattern of trade provides information to others — including through observation of the resulting trade expansion itself.

These two characteristics of the costs of overcoming resistances to trade together introduce a conservative bias and stability in bilateral trade patterns. They increase the time lags in the adjustment of trade patterns to new relative cost relationships, which in any case would be as long as the time needed for enterprises to search for information, process that information and respond to it. They cause trade expansion associated with reduction in one type of resistance to trade to reduce the cost of overcoming all other resistances to trade. And they demonstrate the importance of institutions, private or public, from the internally integrated multinational enterprise to mechanisms to enforce contracts in international trade, in determining the costs of overcoming resistances to trade.

Resistances and trade discrimination

The cost of overcoming trade resistances has not been treated systematically in the theory of international trade. Subjective resistances make a cameo appearance in the

theory of the product cycle (Vernon 1966), but disappear without influencing the whole corpus of theory.

The exceptions are the theory of protection (Corden 1971, 1974) and the theory of customs unions (Lipsey 1960; Vanek 1965), which analyse the impact of official barriers to trade that are, respectively, uniform and differentiated across countries. Insights from the theories of protection and of customs unions are of considerable value in understanding the impact of resistances more generally on trade and welfare.

'Multilateral' reductions in resistances to a country's international trade unambiguously expand the welfare of the country itself, and the rest of the world. However, reductions in resistances in some bilateral relationships but not in others may raise or lower the welfare of countries involved in the resulting bilateral trade expansion, depending on the balance of trade creation and trade diversion. Such differentiated reductions in resistances in some bilateral trading relationships unambiguously reduce trade with, and the welfare of, countries in the rest of the world, outside the trade-expanding bilateral relationships, unless the income-increasing effects of trade creation are very large compared with other economic effects.

There may be a shift of trade from established channels resulting from reduction in subjective resistances to trade, resulting from investment by private firms in information about opportunities in a new bilateral trading relationship, or in building business relationships to support a new pattern of bilateral trade. In the case of subjective resistances, however, the new knowledge of superior gains from trade with a new partner is more likely to be analogous to the removal of trade discrimination against the new partner than to classical trade diversion. Trade may indeed be 'diverted' from old channels to new. It could be 'trade diversion' in the classical sense, for example if the investment in information and business ties with the new partner is associated with an absolute decline in effort in maintaining the old relationships. It is more likely, however, that the switch will 'divert' trade from a less profitable to a more profitable partner, in the case in which the initiative lies with non-state businesses rather than governments. The latter is not classical 'trade diversion', and has different economic effects.

Let us illustrate the point with one example of considerable contemporary significance. As Taiwan enterprises have put more effort into trade and investment with mainland China in recent years, they have, perforce, devoted less managerial time to identifying and exploiting business ties in the rest of the world. This may have increased absolutely resistances to trade between Taiwan and (parts of) the rest of the world, especially when economies of scale in overcoming resistances to bilateral trade are taken into account. But even if it has not, the reduction of resistances to trade between Taiwan and mainland China, in, say, labour-intensive electronic components, will have had some effect in diverting trade in these components from other bilateral relationships. This tends to reduce welfare in the rest of the world, unless incomes growth associated with trade creation in Taiwan and China makes these two economies much larger participants in trade with the world as a whole.

Such a change in the pattern of subjective resistances is more likely to raise the welfare of the new trading partners, Taiwan and mainland China, than is a discriminatory reduction in official barriers. It is therefore more likely to be associated with a preponderance of classical trade creation over trade diversion, a net increase in the economic welfare of the bilateral trading partners, and welfare gains for the world as a whole and the rest of the world.

The discussion in the preceding paragraphs of 'trade diversion' and 'trade creation' associated with the reductions in resistances in some but not all bilateral trading relationships exemplifies a general difference between differential reduction in official and other resistances to trade. Reductions in other resistances result from independent firms' search for lower-cost and more profitable patterns of trade. While the reduction in the gap between minimum possible and actual transport costs may divert trade from old relationships, it is unlikely to divert trade from lower-cost to higher-cost sources and destinations. Unlike discriminatory reduction in official barriers, it is highly unlikely to reduce welfare in the trading partners experiencing trade expansion or in the world as a whole, although it may still reduce welfare in the rest of the world outside the trading partners.

The presence of externalities in investment to reduce subjective resistances to trade, and to bring transport and communications costs closer to their objective minima, introduces the possibility of economically efficient roles of government, quite separate from those associated with the imposition of official barriers to trade. These are the roles of governments in providing public goods that are relevant to the efficient operation of an international market: improving transport and communications infrastructures, including through regulatory regimes; reducing perceptions of risk in international contracts; and disseminating information on profitable trade opportunities (Garnaut 1993). The impact of these roles of government on trade and welfare is best analysed in a framework analogous to that applied to independent enterprises' efforts to reduce the cost of resistances, rather than that developed in the pure theory of customs unions for analysis of differentiated reduction in official barriers.

In this section we have articulated elements of a general theory of economic integration. Within this theory, disintegration is the normal condition of inter-regional and international trade in goods and services. The reduction of resistances takes investment and time, and is affected by the whole range of cultural, linguistic, legal, and other factors that affect the cost of trade transactions. Much of the dynamism in Asia Pacific trade expansion derives from the progressive reduction of subjective and objective but non-official resistances to trade. The process has been driven by independent enterprises' search for more profitable patterns of trade, sometimes assisted by provision by governments of 'public goods' that affect the operation of private markets.

The general theory of economic integration brings out the crucial distinction between reductions in resistances in some trading relationships through a process of official discrimination, on the one hand, and reductions in resistances through a

process of 'market' and non-discriminatory integration, on the other. Discriminatory integration blocks the economic processes of search for more profitable patterns of trade.

Where discrimination favours trading relationships that would in any case, through market processes, be large relative to the partner countries' total trade, the chances of economic loss in the partner countries and the world as a whole are correspondingly reduced. These conditions reduce the magnitude of economic loss in the rest of the world.

Krugman (1991, 1992, also Chapter 13, this volume) makes the point that discrimination in favour of trade between naturally close states is less likely to reduce world welfare, but takes it too far. Summers (1991, also Chapter 15, this volume) asserts a similar point more strongly, and does not attempt to justify his strong arguments in support of discriminatory liberalisation.

The reality that 'optimal' patterns of trade are different across commodities, increases the costs of general official discrimination in bilateral trading relationships, for the bilateral partners and the rest of the world. The presence of economies of scale and externalities in overcoming many resistances compounds the effect of trade discrimination in promoting welfare-reducing trade. Discriminatory official barriers block the role of market pressures, in reducing trade resistances in new trading relationships when changing economic circumstances and opportunities justify the effort.

Problems with a Pacific Free Trade Area

What does this analysis mean for assessment of proposals to form a comprehensive Pacific Free Trade Area (PAFTA), based on discriminatory approaches to trade policy?

The reality of free trade areas and customs unions in practice is that exceptions have been important, at least in their early years; and where they have not, the establishment of the area has been associated with increased barriers to trade with the rest of the world. This outcome is driven by an important asymmetry in the political economy of protection policy, between the highly focused opposition to trade creation by established interests in protected industries, together with the highly focused support of established interests in trade diversion, on the one hand, and the diffuse beneficiaries from trade creation on the other (Anderson and Garnaut 1987, ch. 4). Hence the tendencies towards higher protection against the rest of the world that can be observed early in the lives of the US-Canadian, Australian and European customs unions, and the proliferation of exceptions early in the lives of the Australia-New Zealand and Canada-US free trade areas.

One would be blind to the realities of the political economy of protection to ignore the likelihood that, in a PAFTA, the process of negotiation and compromise would favour trade diversion over trade creation.

Neither can we presume that all Pacific countries would seek to participate in negotiations to establish a free trade area. China, with its partially reformed prices system, is not now in a position to accept the obligations of participation in a clean free trade area. It would be possible in principle to negotiate a range of commitments to open trade by China that led in the direction of more open and even free trade. But the presence of special rules to govern China's trade relations with the Pacific would invite the proliferation of commitments short of free trade by other participants, especially (but not only) in developing countries. Yet to exclude China would carry considerable costs. It could retard China's progress towards more open trade relations, thus reducing the chances of ultimate success in the whole modernisation program. Trade diversion from China within a smaller PAFTA would generate tensions and retaliation that would carry costs of their own. And if China continued to grow strongly despite these new obstacles, over time a progressively smaller proportion of opportunities for profitable intra-Pacific trade would be covered by the free trade area, thus weakening the presumption of net benefits for members and the world as a whole.

Nor is it likely that the ASEAN countries would accept membership of a clean free trade area. Governments in Indonesia, the Philippines, Malaysia and even Thailand have all compromised heavily in implementing trade liberalisation programs over the past decade (Findlay and Garnaut 1987, pp. 271-3). Attempts at intra-ASEAN liberalisation have yielded much more trade diversion than trade creation. Despite the attraction of open access to North American and Australasian markets, it is unlikely that the ASEAN states would agree to participate fully. To exclude ASEAN and to expose its members to trade diversion in favour of other Pacific economies would reduce the gains from Pacific integration, and set back the hesitant process of trade liberalisation in the ASEAN economies themselves. To welcome ASEAN membership on a non-reciprocal or incompletely reciprocal basis would invite pressures elsewhere for the proliferation of exceptions.

We defined our first objective as the preservation of the relatively but imperfectly open trading environment that had supported the productive extension of rapid growth in East Asia in recent decades. This objective seems to us to rule out embarkation on an integration process that runs a severe risk of setting back severely the prospects for internationally-oriented growth in China and the ASEAN states. Now let us presume for analytic purposes that it was possible to wave a magic diplomatic wand and embark on a process of negotiation that actually delivers a clean and comprehensive PAFTA. Would such a process help or hinder the reduction of barriers to trade between Pacific countries and trading partners in the rest of the world?

The process of establishment of a PAFTA would require a huge concentration of political and administrative effort within all member countries. This would inevitably divert attention from wider trade policy objectives in the international system.

It is not clear to us how a commitment to a PAFTA, involving substantial trade diversion away from the rest of the world in the best of scenarios, would facilitate the negotiations of lower trade barriers with the EC. Action to implement such a

commitment would have the effect of, at best, suspending progress on the negotiation of reciprocal liberalisation with Europe during a long transitional process.

Similarly, the diversion of trade policy-making resources into the development of a PAFTA, and the diversion of trade from the rest of the world, would weaken the region's capacity to respond to early stirrings of interest in internationally-oriented development in the former Soviet Union and Indochina, and the tentative signs of possible future stirrings in North Korea. For the foreseeable future, the expansion of trade relations between the Pacific countries and these centrally planned economies is of minor importance in narrowly economic terms. But it would be foolish to diminish the potential for reduction in political tension and the threat of war, and eventually reduction in military expenditure, that would over time be associated with constructive Pacific responses to these centrally planned economies' interest in closer economic relations.

The United States at least would be mindful of Mexican and other Latin American interests in the process of Pacific integration. The accommodation of these interests would further increase the likelihood of special arrangements and exceptions within a PAFTA.

It may seem that the liberalisation of access to trade in services appears more likely to be susceptible to treatment under the aegis of the 'free trade area' approach. The obstacles to international competition in services do not arise mainly through fiscal mechanisms as they do with tariffs on commodities. They take the form of government monopoly of service (communications); government controls on entry or capacity (aviation); prescriptions of qualifications for entry (professional services); or rules on domestic content (media). Some of the restrictions involve international agreements on rights or conditions of operation. These issues may appear easier to press through arrangements such as the Australia–New Zealand CER Agreement. However, while their multilateral negotiation may be difficult at this point, they are not likely to be treated easily within the framework of a Pacific-wide free trade area (as United States–Canada experience attests). Indeed, the complexities of service trade liberalisation would seem equally amenable to negotiation within the framework of broader MFN-type trade and commerce agreements, alongside commodity trade issues.

We conclude that efforts to establish a PAFTA are not consistent with Pacific countries' interests in more effective movement towards global trade liberalisation. Discriminatory trade arrangements within the Pacific region, and discriminatory treatment of Japan by the United States and other Western Pacific countries, or of other Western Pacific countries by Japan and the United States, are inconsistent with East Asian and Pacific trade policy interests and are likely to damage the growth performance of other countries in the region. If, on the other hand, the 'free trade area' suggestion were not intended to involve trade discrimination within the Pacific, it may provide an impetus for accelerating movement towards liberalisation on an MFN basis, and reinforcement of the 'prisoner's delight' process, both in the region and more broadly. The important requirement in such discussions would be to avoid

any acceptance of the discrimination against non-Pacific countries implied by the term 'free trade area', and to work towards finding areas of reciprocal concession that can be offered on an MFN basis.

Notes

- 1 East Asia includes China, Japan, Hong Kong, Korea, Taiwan, Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand. The APEC group (at the time of writing) additionally includes Canada, the United States, Australia and New Zealand.
- 2 For background to the discussion in this and subsequent paragraphs, see Garnaut (1972), Drysdale and Garnaut (1982, also Chapter 3, this volume) and Drysdale (1988).

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