EMERGING TRADE ISSUES FOR POLICYMAKERS IN DEVELOPING COUNTRIES IN ASIA AND THE PACIFIC

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**STUDIES IN TRADE AND INVESTMENT
64**

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Acronyms and abbreviations

AFTA	Association of Southeast Asian Nations Free Trade Area
APEC	Asia-Pacific Economic Cooperation
APTA	Asia-Pacific Trade Agreement
APTIAD	Asia-Pacific Trade and Investment Agreements Database
ASEAN	Association of Southeast Asian Nations
BEC	Broad Economic Categories
BIMSTEC	Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation
BOP	balance of payments
BPO	business process outsourcing
CAP	Common Agricultural Policy
CED	constant elasticity of demand
CEPA	closer economic partnership arrangement
CEPR	Centre for Economic Policy Research
CEPT	Common Effective Preferential Tariff
CES	constant elasticity of substitution
CET	constant elasticity of transformation
CGE	computable general equilibrium
CIF	cost, insurance and freight
CRTA	Committee on Regional Trade Agreements
CTD	Committee on Trade and Development
DDA	Doha Development Agenda
EBOPS	Extended Balance of Payments Services Classification
ELD	economic liberalization dummy
EPZ	export processing zone
ESAF	Enhanced Structural Adjustment Facility
ESCAP	Economic and Social Commission for Asia and the Pacific
EU	European Union
EV	equivalent variation
FAO	Food and Agriculture Organization of the United Nations
FDI	foreign direct investment
FOB	free on board
FTA	free trade agreement
G20	Group of Twenty
GAMS	General Algebraic Modelling System

GATS	General Agreement on Trade in Services
GATT	General Agreements on Tariffs and Trade
GDP	gross domestic product
GMS	Greater Mekong Subregion
GTAP	Global Trade Analysis Project
GVC	global value chain
H-O	Heckscher-Ohlin model
HS	Harmonized Commodity Description and Coding System
ICRG	international country risk guide
ICT	information and communications technology
IDSC	infrastructure development surcharge
IMF	International Monetary Fund
IPN	international production network
IPO	import policy order
ISIC	International Standard Industrial Classification of all Economic Activities
ITA	Information Technology Agreement
LDCs	least developed countries
LES	linear expenditure system
MFA	Multifibre Arrangement
MFN	Most Favoured Nation
MNC	multinational corporation
MNE	multinational enterprise
MTS	multilateral trading system
NAFTA	North American Free Trade Agreement
NGR	Negotiating Group on Rules
NSS	national sample survey
NTB	non-tariff barrier
NTM	non-tariff measure
OECD	Organisation for Economic Co-operation and Development
OEM	original equipment manufacturer
PC	personal computer
PCI	per capita income
PTA	preferential trade agreement
QR	quantitative restriction

RCA	revealed comparative advantage
RBI	Reserve Bank of India
RFTA	regional free trade area
RMG	ready-made garments
ROO	rules of origin
RTA	regional trade agreement
SAARC	South Asian Association for Regional Cooperation
SAF	Structural Adjustment Facility
SAFTA	South Asia Free Trade Agreement
SAM	social accounting matrix
SAP	structural adjustment programme
SD	supplementary duties
SITC	Standard International Trade Classification
SMEs	small and medium-sized enterprises
SPS	sanitary and phytosanitary measures
TBT	technical barrier to trade
TIT	tax on international trade
TPRM	Trade Policy Review Mechanism
TSLS	two-stage least squares
TM	telephone mainline
TRIPS	Trade-related Aspects of Intellectual Property Rights
TVEs	township and village enterprises
UNCTAD	United Nations Conference on Trade and Development
USAID	United States Agency for International Development
VAT	value-added tax
WITS	World Integrated Trade Solution
WTO	World Trade Organization

Part I

Rethinking trade for developing countries

Chapter I

TRADE PARADIGMS FOR DEVELOPING COUNTRIES: SOME OLD, SOME NEW, SOME BORROWED, SOME OUT OF THE BLUE

By Hildegunn Kyvik Nordås

Introduction

One of the most striking features of global economic development over the past few decades has been the rise to prominence of Asia in international trade. Between 1975 and 2005, the ratio of world trade to world gross domestic product (GDP) increased from 0.33 to 0.54, while for East Asia in the same period the figures climbed from 0.21 to as much as 0.86 (World Bank, undated). The figures reflect the fact that an increasing share of what is produced in a country is exported, while at the same time a rising share of what is being processed or consumed is imported. Furthermore, a rising share of what is being consumed everywhere in the world has been produced in East Asia.

However, being produced in East Asia – or anywhere else for that matter – does not necessarily mean that all value added originates there. On the contrary, the deepening international division of labour reflected in the trade to GDP ratio is driven by the fragmentation of production, where parts, components and tasks are produced in a number of countries before being assembled and sold to the final consumer. The iPod, for example, is imported by the United States of America from China; yet, according to a much cited supply chain analysis, of the US$ 299 price of iPods sold in the United States, US$ 75 went to distribution and retail margins in that country while Apple's profits accounted for US$ 80. Most of the remainder went to contractors or subcontractors in Japan, the Republic of Korea, Taiwan Province of China and Singapore while only "a few dollars" went to China (Linden and others, 2007).

A Google search for "global supply chain" yielded 13.9 million hits in August 2008. In the popular debate, global supply chains are frequently mentioned as a fact of life and part of a new trade paradigm that is about to change the old insights on gains and losses from trade, and therefore requires new policy responses. A recent influential study, for example, argues that international trade is not about cloth and wine anymore, but in fact signifies a new paradigm (Grossman and Rossi-Hansberg, 2006). However, empirical evidence suggests that, with the possible exception of the electronics industry, international supply chains are more regional than global and, if anything, the relevance of distance has increased over time for both goods and services (Egger, 2008; Nordås, 2008b).

This chapter takes a closer look at the extent to which recent developments in international trade amount to a new paradigm. Three recent trends are discussed:

(a) fragmentation of production; (b) the role of retailers in international trade; and (c) geographical trade diversification. The first theme lies at the heart of recent debate about the gains from trade and to what extent they can be assessed by means of the familiar trade-policy analysis toolkit. The second theme, the role of retailers, has not until now attracted as much attention. However, in order for the exports of consumer goods to reach the final consumer, the exporters increasingly need to enter a contract with a major retailer. That can often be more of a challenge than getting the goods through customs. On the other hand, major retailers can provide the necessary scale for modernizing production, and they are a source of technology transfer and market information for the successful supplier. The third theme relates to export diversification, which is often a policy objective in developing countries. The chapter concludes with some reflections on the extent to which the fundamentals, as we know them, still apply to international trade.

A. Fragmentation has reached a high level, but is it levelling off?

1. Trends

The fragmentation of production has been one of the major driving forces behind deepening international specialization. Yi (2003) suggested that about half of the increase of world trade since the Second World War can be attributed to it. Studies differ somewhat in terminology; vertical specialization and fragmentation are used interchangeably, which is also the case in this chapter. The concept refers to the manufacturers of final goods slicing up the production process into parts, components and tasks, and distributing the slices geographically to specialized suppliers rather than producing them in-house.

It is not possible to measure cross-border vertical specialization directly from available trade statistics, since that would require information on the use of traded goods. One frequently used proxy is trade in intermediate products. This measure overestimates the extent of vertical specialization, since many products are used both for final consumption and intermediate inputs. Furthermore, many imported intermediate inputs are used in a different industry (for example, carpets imported by car manufacturers) and cannot be seen as fragmentation, at least not in the narrow sense of the term.[1] Nevertheless, it is worth exploring developments in trade in intermediate inputs. The United Nations COMTRADE database is used for this purpose. It provides data by Broad Economic Categories (BEC), distinguishing between capital goods, the industrial supply of parts and accessories, and consumption goods.

Our measure of intermediate goods includes industrial supply (category 22), parts and accessories of capital goods (category 42), and parts and accessories of transport equipment (category 53). These categories accounted for about 48 per cent of total world merchandise non-fuel exports, both in 2004 and in 1996. Although the trend share of total

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[1] Fragmentation is usually defined as sourcing from other companies within the same industry (for example, cars and parts).

intermediate trade has been flat, countries not belonging to the Organisation for Economic Co-operation and Development (OECD) have increased their market share significantly. This was particularly notable from 1996 to 2004 in parts and components of capital goods other than motor vehicles (category 42), when non-OECD countries increased their market share from 40 per cent to 46 per cent of exports and from 25 to 36 per cent of imports (Hill, Lesher and Nordås, 2007). The data thus suggest that non-OECD countries increasingly produce both parts and components for assembly in OECD countries, and assemble parts and components imported from OECD countries.

A more detailed analysis of Asia's role in trade in parts and components reveals that the share of intermediate inputs is larger than it is for the world average or the OECD average. Furthermore, the share of intermediate inputs is significantly higher in intra-Asian trade than it is for Asia's trade with the rest of the world.[2] Tables 1 and 2 show developments during the past decade in Asia's trade in intermediate inputs.

Table 1. The share of intermediate goods in Asia's total trade by trading partner

(Per cent)

Year	Exports			Imports		
	Asia	OECD	World	Asia	OECD	World
1996	56.5	37.1	45.9	47.8	48.7	43.0
1997	56.3	37.4	46.0	52.3	53.7	47.4
1998	58.6	37.8	46.3	53.9	55.4	49.2
1999	59.9	37.7	47.0	55.8	56.4	49.9
2000	61.1	39.9	49.5	56.8	57.0	49.9
2001	58.7	37.4	47.3	55.9	55.4	48.7
2002	59.5	36.5	47.3	56.7	56.1	49.9
2003	59.6	36.6	47.6	57.2	56.6	50.2
2004	60.8	37.9	48.6	58.3	56.5	50.3
2005	60.1	37.3	48.1	58.5	57.0	49.2
2006	60.1	38.6	48.4	58.9	57.3	48.6

Source: Calculated by the author from the United Nations COMTRADE database.

It is clear from table 1 that the share of intermediate goods in Asia's exports and imports has increased over the past decade, and that the increase is particularly large for imports. It is notable that as much as 60 per cent of intra-Asian exports are in intermediate inputs, and that the share has remained stable since 1999. However, it is also notable that

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[2] In the case of these data, Asia refers to Bangladesh, China, India, Indonesia, Japan, the Republic of Korea, Malaysia, Mongolia, Myanmar, Pakistan, the Philippines, Singapore, Sri Lanka, Taiwan Province of China, Thailand, Viet Nam and Hong Kong, China.

the bulk of the increase in the intermediate goods share came in the 1990s and has remained fairly stable or has slightly declined in the 2000s.

Turning to the relative importance of intra-Asian trade (table 2), developments in category 42, parts and components of capital goods (other than motor vehicles) are particularly notable. These shares increased markedly during the past decade to reach as much as 70 per cent of Asian exports and almost 80 per cent of Asian imports in this category. Category 42 contains electronic machinery, which is a product that lends itself easily to vertical fragmentation. Intra-Asian trade not only dominates Asian trade in this sector, Asia also dominates world trade. In 2006, the region's share of world exports of BEC 42 was 31 per cent, while the share of world imports was 41 per cent. This compares significantly with the 30 per cent share of total world merchandise exports and 24 per cent share of total world merchandise imports by the region in the same year.

Table 2. Intra-Asia share of Asia's trade in intermediate goods by BEC category

BEC category	Exports			Imports		
	22	42	53	22	42	53
1996	68.2	56.8	32.2	52.0	59.9	41.8
1997	67.4	59.0	33.8	52.9	61.5	40.4
1998	59.8	56.1	24.9	54.7	60.9	35.8
1999	61.8	58.4	27.3	56.2	64.3	40.2
2000	64.3	59.8	30.2	58.0	67.1	47.3
2001	63.3	62.7	29.7	58.4	67.7	43.8
2002	64.2	67.1	32.7	60.1	71.1	43.8
2003	64.5	69.8	36.1	59.8	73.7	47.5
2004	65.1	70.0	37.7	60.1	75.4	51.2
2005	64.1	70.4	37.8	60.5	77.2	52.3
2006	62.0	70.5	36.7	61.6	77.7	50.1

Source: Calculated by the author from the United Nations COMTRADE database.

Trade in intermediate goods can be seen as an upper boundary of measures of vertical specialization. A lower boundary measure is provided by Hummels and others (2001) who defined vertical specialization as the use of imported intermediate goods in products that were subsequently exported. They found that the share of vertical specialization in exports was about 20 per cent in 1990, and that it had increased from about 15 per cent in 1970, using data for 13 OECD countries plus Taiwan Province of China – a sample that covered 60 per cent of world trade. Henceforth we denote this measure as the HIY index. Chen, Kondratowicz and Yi (2005) used the same methodology for 1968-1998 and found that the import content of exports increased somewhat during the 1990s in Australia, France, Germany, the Netherlands, the United Kingdom of Great Britain and Northern Ireland and the United States, but declined in Denmark and remained flat in

Japan. Nordås (2008a) calculated the HYI index to 22 per cent in 2001, using the Global Trade Analysis Project (GTAP) database for the same sample as Hummels, Ishii and Yi (2001), which suggests that the HIY index had risen by 2 percentage points in the decade since 1990. The index was, however, somewhat higher at 25.5 per cent in the total sample of 75 countries in the GTAP database. Asian countries such as Malaysia, the Philippines and Singapore exceeded by far the average. Finally, Hill, Lesher and Nordås (2007) calculated the HIY index using the newly released OECD input-output tables for 2000, and compared it with 1995. The results are given in figure 1.

Figure 1. Imports embodied in exports and share of export value for selected countries/areas, 1995 and 2000
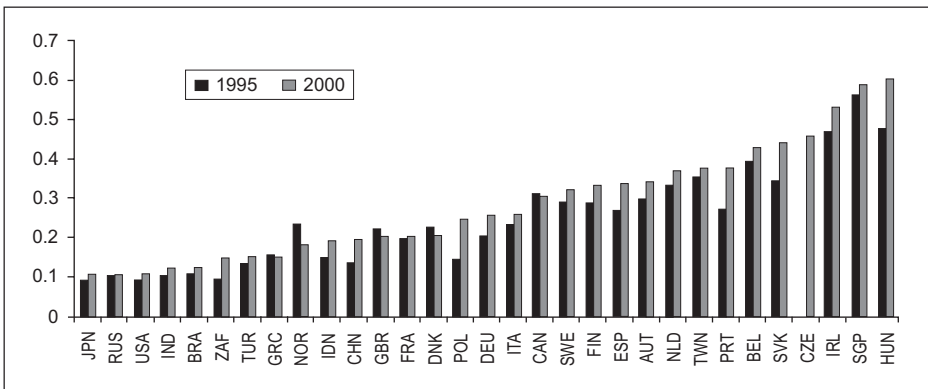
Source: Hill, Lesher and Nordås, 2007.

Note: For the full country/area names, see the annex to this chapter.

During this short period a relatively large increase was seen in the index for the acceding European Union members (Hungary, Poland and Slovakia). The highest levels are found in small countries close to major markets (for example, Singapore and Ireland), while the smallest shares are found in large, diversified economies (Japan and the United States), large economies with relatively high trade barriers (Brazil, India and the Russian Federation), as well as South Africa, which is relatively remote. The HIY index declined in Canada, Denmark, Greece, Norway and the United Kingdom during this period.

The impact of the offshoring of services on labour markets and wages in OECD countries has been hotly debated. Hard evidence of a surge in offshoring services and the resulting downward pressure on skilled wages is, however, difficult to find. First, it appears that the extent of offshoring services is modest. Figure 2 presents the import shares of intermediate services calculated from the OECD input-output database for 1995 and 2000. For most countries, the share was less than 10 per cent, while for major Asian countries such as China, India and Japan, the import share was less than 5 per cent. Ireland and Singapore were at the other end of the spectrum. A closer look at the data, however, reveals that royalties and licence fees constituted a large part of services trade, particularly

Figure 2. Share of imported intermediate services in total intermediate services
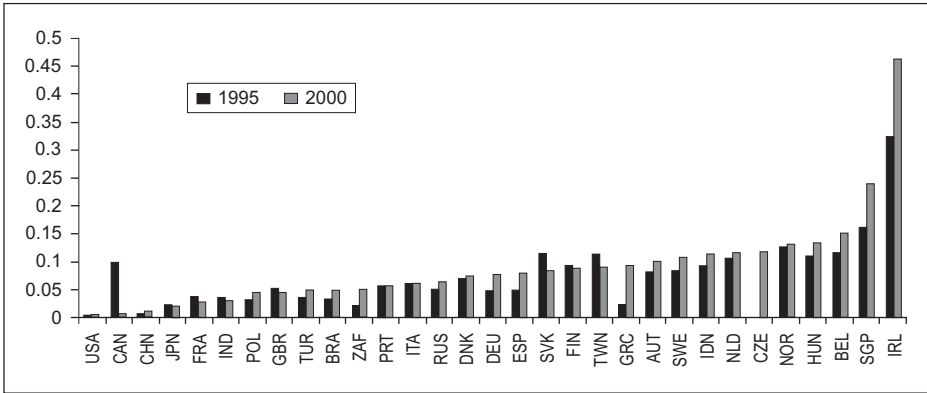
Note: For the full country/area names, see the annex to this chapter.

in Ireland. Although correctly classified as services, royalties and licence fees often represent services provided between or within multinational manufacturing firms. In most, but not all, countries included in the database, the import share of intermediate service increased between 1995 and 2000. Notable exceptions are France, India, Japan, the United Kingdom and Slovakia. The database indicates that Indonesia is among the most open economies as far as services imports are concerned.

It could be argued that 2000 is already history and the major surge in the offshoring of services occurred in more recent years. More recent data on imports of intermediate services are not available. However, business services are mainly used as intermediate inputs and, according to the United Nations services trade database, world exports of other business services (EBOPS category 268) increased by as much as 73 per cent between 2000 and 2006 in nominal United States dollar terms.[3]

To summarize the data analysis, it appears that vertical fragmentation has been an important driving force for deepening international specialization since the 1970s. Regional integration in Asia and strong trade (and investment) links between Asia and OECD countries have played a major role in this development. However, it appears that vertical fragmentation is levelling off and consolidating at its present level. This was first observed among the major OECD countries, but since 2000, vertical specialization appears to have been reaching a plateau also in Asia. Nevertheless, the offshoring of services still appears

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[3]   Calculated by the author by adding the exports of all individual countries reported in each year. Since data for some countries are missing for some years, the figure may not be exactly right; however, at least it gives an approximate idea of the situation. The total world exports of other business services were calculated to have been US$ 313.6 billion for 2000 compared with US$ 542 billion for 2006.

to be on the rise, albeit from a low base compared with total trade or total demand for business services.

2. Driving forces

Having described the trends in vertical fragmentation, it is also interesting to assess the driving forces. According to Lall, Albaladejo and Zhang (2004), four major factors affect vertical specialization. First, the production process must be technically divisible. Second, there must be differences in relative factor intensities across the different stages of production. Third and closely related, technological complexity is important. This refers to the range of activities from routine tasks and standard low-technology, labour intensive processes to skills-intensive, high-technology tasks contained in the production of the good in question. The fourth and final factor is the value-to-weight ratio of the products being outsourced. The higher this ratio, the smaller the transport costs relative to total revenue, and the more easily the component can be sourced from a distance. The sectors that most easily lend themselves to fragmentation according to these factors are electronics and clothing. These are also the sectors where vertical specialization is the most prominent.

In addition to technology-related factors, political factors and geography play important roles. Thus, while technical separability and comparative advantage for different stages in the production process make vertical fragmentation feasible, the gains from it depend on a trade-off between the prices of the outsourced parts, components and tasks, and the additional transaction costs arising from dealing with a supplier at a distance and across an international border. Since parts and components cross international borders several times in an international production network, firms located in countries with high tariffs and time-consuming border procedures are at a disadvantage when it comes to participating in international supply networks.

Transaction costs comprise transport costs; communication costs; costs of entering, monitoring and enforcing contracts; and costs of complying with regulations. Before the recent surge in oil prices, transport costs (particularly for air transport) declined substantially while information and communications technology (ICT) reduced the cost of communications, and organizational innovations – often ICT-enabled – facilitated major leaps in supply chain management. As transaction costs have come down, production has become more transaction-intensive. Just-in-time production has, for example, been extended from the manufacturing plant to a network of suppliers located close to the plant and subsequently to international production networks.

Just-in-time production shows scant tolerance for slackness. Combining it with international outsourcing therefore renders manufacturers vulnerable to increases in transport costs, delays at the border, and long and variable lead times, for example, due to poor infrastructure and weak logistics services. Nordås (2006) estimated the impact of time on exports and imports, as reported in the Doing Business Indictors of the World Bank, found that the exports of intermediate inputs to Japan decline 1.4 per cent for every per cent increase in the time for exports. Furthermore, the exports of intermediate goods are much more sensitive to time than the average for all exports. The study also found that exports

fall off more sharply with distance for intermediate products than for goods in general, suggesting that trade in intermediate inputs exhibits agglomeration forces and possibly regionalization of international trade. However, for electronics, distance matters less if the country has a good telecommunications infrastructure and a well-developed airport infrastructure.

The relations between the HYI index of vertical specialization and various indicators assumed to be associated with transaction costs were analysed for total trade and for the clothing and electronics sectors in particular by Nordås (2008a). Good infrastructure in general and telecommunications in particular were found to be positively associated with the index. Small countries located close to major markets tend to have the highest indices, as shown in figure 1. The study identified port efficiency as the most economically and statistically significant variable associated with a high HYI index. Finally, the study introduced a governance indicator that combined good governance with open markets.[4] A good score on this index was strongly associated with the HIY index for both clothing and electronics.

Thus, the driving forces for vertical specialization appear to be specialization according to comparative advantage within sectors, facilitated by declining trade and transaction costs. Fragmented production distributed over an extensive geographical area is, however, very transaction-intensive and time sensitive, and therefore likely to be highly responsive to increases in transaction costs, be they in terms of time or money.

3. Can vertical specialization be understood within traditional trade policy analysis?

Finally, does vertical specialization, including the offshoring of services, constitute a new paradigm? One important difference between trade in final goods and trade in intermediate inputs is that the latter affects not only the relative price of final outputs and factors of production but also production costs and productivity.[5] Thus, trade in final goods driven by comparative advantage causes a change in relative prices and the reallocation of resources from import-competing to exporting sectors, but it does not by itself affect productivity in these sectors.[6] Trade in intermediate goods and services, on the other hand, provides cheaper, better or a broader variety of intermediate inputs, and thereby reduces costs and improves productivity in downstream industries. One possible impact of this is that the offshoring of routine tasks helps to sustain manufacturing competitiveness in

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[4] Governance indicators (Kaufman, Kray and Zoido-Lobaton, 2002) and the trade restrictiveness index (Kee, Nicita and Olarreaga, 2005) were combined by normalizing the average to one for both indicators and then taking the average of the two.

[5] The relationship between goods prices and factor prices was established by the well-known Stolper-Samuelson theorem.

[6] In practice, it is often argued that trade liberalization increases competition and therefore induces firms to cut costs and raise productivity. It is not clear, however, why firms do not minimize costs in a protected market.

high-income countries. Conversely, restricting trade in tasks may encourage the relocation of the entire manufacturing supply chain to low-cost countries (Robert-Nicoud, 2008).

Few, if any, empirical studies have been undertaken that measure the impact of trade in intermediate inputs on productivity in downstream industries directly. However, Amiti and Konings (2007) offered an indirect approach by analysing the impact on productivity among downstream firms of tariff cuts on intermediate goods in Indonesia. They found that a 10 percentage point fall in input tariffs improved the productivity of importing firms by 12 per cent.

The debate on whether vertical specialization and offshoring constitute a new paradigm has largely focused on the labour market. A conclusion on this issue has yet to be reached. It has been shown that, if parts, components and tasks vary in skills intensity, offshoring through foreign direct investment will raise demand for skilled workers in both the host and the home country of the investor. The home country will presumably have abundant human capital and will outsource the least skills-intensive tasks, while the host will have abundant unskilled labour. From the point of view of the latter, the foreign investor will produce relatively skills-intensive products and raise demand for skills in that country too. The skills premium will consequently increase in both countries (Feenstra and Hanson, 1997).

The fear that vertical specialization in general and services in particular would undermine the wages of skilled labour in countries that are relatively rich in human capital does, however, seem exaggerated.[7] A comprehensive study (Liu and Trefler, 2008) of the effects of offshoring services on a number of labour market indicators in the United States found the effect to be either slightly positive or zero. They dismissed the debate as "much ado about nothing".[8]

The productivity gains from deepening specialization are well known and well documented. However, the gain from splitting a process into two separate operations is probably much larger than splitting off, say, the hundredth task. At one point, the degree of fragmentation is likely to reach a plateau at which the gains from an additional component or task being outsourced or located offshore equal the additional trade cost of doing so. The altitude of this plateau depends on trade costs, broadly speaking, including transport and communication costs, search costs for a supplier or customer, and the cost of establishing, monitoring and enforcing a contract with that supplier. The geographical reach of a supply chain depends on the trade-off between the cost of production and the cost of transactions

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[7] The possibility that poor countries with relatively scarce human capital should still have a relatively low skills premium builds on the assumption that skills are complementary to other factors that are missing in those countries. Consequently, skilled people cannot find employment for their skills and their wages are low due to muted demand. This notion begs the question of what incentives exist for acquiring skills in the first place in such countries. In addition, the rapid rise in wages of skilled workers employed in services industries in countries such as India appears to indicate that skills are indeed in high demand.

[8] The study analyses the net effect of offshoring and inshoring, with the latter defined as sales of services produced in the United States, to unaffiliated parties in low-wage countries.

with a distant supplier. In the case of intra-Asian trade, it appears that the plateau is relatively high because of proximity and relatively low trade costs, complementarity in production, and a large and fast-growing market.

The driving forces and the impact of vertical specialization are more complex than in the neoclassical models of trade in final goods driven by comparative advantage. In particular, further research is needed on the interaction between trade, technology, trade costs and geography in order to better inform trade policy decisions. Nevertheless, trade in intermediate inputs has been analysed within standard trade models at least since the publication of the seminal paper on trade in producer services by Markusen (1989). Furthermore, multisector Ricardian models of comparative advantage appear to predict rather well the broad trends in observed trade patterns.

B. Trade in consumer goods: Role of retailers becoming increasingly important

Most consumer goods pass through the retail sector. In the past, retailers were merely seen as conveyors/distributors of merchandise, but in recent years they have played a more active role in sourcing directly from manufacturers and farmers, setting product standards, promoting products as well as in obtaining and sharing information on consumer tastes and behaviour. Given the enhanced role of the retail sector, it would naturally be expected also to play an important role in the volume and direction of international trade in consumer goods. For example, in the early 1990s, the United States argued that the Large Store Law in Japan constituted an impediment to the sale of United States-made goods in Japan (Flath, 2003). Yet, despite the growing role of retailers as intermediaries in international trade, trade economists and trade policy analysts have largely ignored the sector. Nevertheless, the few studies that do exist have found that the market structure in the retail sector is not only important with regard to the volume and direction of trade in consumer goods, but also to the trade response to trade liberalization (Francois and Wooton, 2007).

Retailers have become more international in recent years and some of the largest companies in the world are found in the sector. Among the world's 250 largest retailers in 2005, foreign sales accounted for 14.4 per cent of total sales and the average number of countries of operation was 5.9 (Deloitte Touche Tohmatsu, 2007).[9] Among the retailers that have made intercontinental investments, European retailers have so far been the most prominent with Carrefour (France) leading the way. The world's largest retailer by far is Wal-Mart (United States), which alone accounted for 10 per cent of the sales by the top 250 retailers in 2005. Furthermore, Wal-Mart accounted for as much as 15 per cent of United States imports of consumer goods from China in 2004 (Basker, 2007). Finally, non-food retailers were among the most global international retailers in 2005; Spanish clothing retailer Inditex ranked top, with stores in 62 countries. The clothing retailers, in

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[9]   Dell, Alticor, Avon and AAFES have global coverage and are not included in the average. Among the 250 largest retailers, 107 of them had no foreign operations.

particular, are lead firms in international supply chains. They have close contractual relationships with their suppliers and their sourcing strategies are important determinants of international trade patterns in that sector.

Retailers that establish operations in developing countries appear to follow a common pattern (Coe and Hess, 2005; Reardon, Henson and Berdegué, 2007). During the first phase, after opening operations in a country, a retailer brings in products from its existing supplier base and the import content of its sales is relatively high. However, local content increases rapidly as the retailer develops linkages with local suppliers, who over time may also become suppliers to retail outlets in other countries. For example, Tesco's investment in Thailand was found to have increased exports from Thailand to the United Kingdom. During the third phase, import content again increases somewhat, due to the development of regional supply chains. Reardon, Henson and Berdegué (2007) reported that retailers helped to ease supplier credit constraints when investing in product and process upgrading in poor countries, through incentives and other forms of assistance. Nordås, Pinali and Geloso-Grosso (2007) explored the extent to which foreign direct investment in the retail sector enhanced trade between the host and home country of the retailer in question. They found that the commercial presence of a retailer was associated with about 20 per cent higher imports of food and 18 per cent higher imports of non-food consumer goods from the host country to the home country.

Larger retailers are associated with higher market concentration in the sector, which could affect the pass-through to consumer prices of lower tariffs. For example, Francois and others (2007) found that the pass-through to consumer prices following the dismantling of textiles and clothing quotas in 2005 depended on in the structure of the retail sector in each European Union country. In other words, the extent to which Asian textiles and clothing exporters, for example, gained from the implementation of the World Trade Organization (WTO) Agreement on Textiles and Clothing depended partly on the competitiveness of the retail sector in the liberalizing countries.[10]

The findings from the textiles and clothing sector also apply to trade in consumer goods in general. Nordås (2008c) distinguished between food and non-food imports, and investigated how market concentration in the retail sector affected imports. Market concentration was measured by the market share of the five largest retailers. It was found that a 1 percentage point increase in the market share of the five largest retailers reduced imports by between 2 and 3.3 per cent for non-food consumer goods, and between 1.2 and 2.65 per cent for food. However, it was also found that the more concentrated the retail sector, the more geographically diversified was the sourcing of food imports. This result is compatible with the observation that there are substantial fixed costs related to international sourcing and that only relatively large firms can afford to import directly, and only very large firms can afford to import from many countries (see, for example, Bernard.[11]

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[10]   The Agreement on Textiles and Clothing mandated the dismantling of import quotas over a 10-year period ending 1 January 2005.

[11]   See, for example, Bernard and others, 2007.

Another interesting development in the retail sector with potential trade impacts is the proliferation of private labels or store brands. Private labels are defined as a brand that is sold exclusively by a specific retailer or chain. They first appeared as a cheaper, lower-quality alternative to branded goods, but retailers with strong brand names have also introduced premium own-label products such as organic food, healthy food and fair trade food to mention but a few. Nevertheless, the budget items still dominate. On average, the price of private labels was 31 per cent lower than comparable branded goods, ranking between 48 per cent (Greece) and 10 per cent (Thailand) in a sample of 38 countries in 2005 (ACNielsen, 2005). The largest price differences are found in personal care products where the price is typically about 50 per cent less for private labels compared with branded products.

ACNielsen, a market research and consultancy firm, provides data on private label sales for the supermarket sector. The aggregate value of private label sales for the 36 countries included in the data accounted for 15 per cent of total sales in 2003, growing to 17 per cent in 2005 (ACNielsen, 2003 and 2005).[12] The share varied greatly among countries and was higher in Europe than in other regions. Figure 3 shows the shares for 2003 and 2005. The differences among countries reflect variation both in the share of private labels in each product category and in the number of product categories where private labels are found. For example, in 2005, almost all product categories had private labels in Switzerland, while only 26 per cent of the categories had private labels in the Philippines.

The rising market share of private labels could benefit potential exporters in developing countries that have low production costs in labour-intensive consumer goods industries, but a relatively weak supportive services industry. Such countries are often at a disadvantage when product innovation, time to market and marketing are important for competitiveness. When the retailer does the innovation and marketing, however, it may open the way to foreign markets for developing country manufacturers. Private labels could therefore lower entry barriers for suppliers in developing countries with sufficient scale, reliability and capability to comply with retailers' standards. In addition, private labels may stimulate investment in quality in developing countries where retailers' private labels represent better than average quality in that market.

Interestingly, Nordås, Pinali and Geloso-Grosso (2007) found that private labels were positively associated with the imports of non-food consumer goods and negatively associated with imports of food. A 1 percentage point increase in the private label share is associated with 0.65 per cent higher imports of non-food consumer goods and 2 per cent lower food imports. As noted above, private labels fetch lower prices than branded goods, and a possible way of keeping prices low and quality up is to source from a limited

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[12] The 2005 data covers 38 countries and 80 product categories. The United States data do not cover Wal-Mart. A separate study of this retailer found that private labels accounted for 17 per cent of this company's sales – not too far from the United States average.

Figure 3. Share of private labels in total retail sales in selected countries/areas, 2003 and 2005
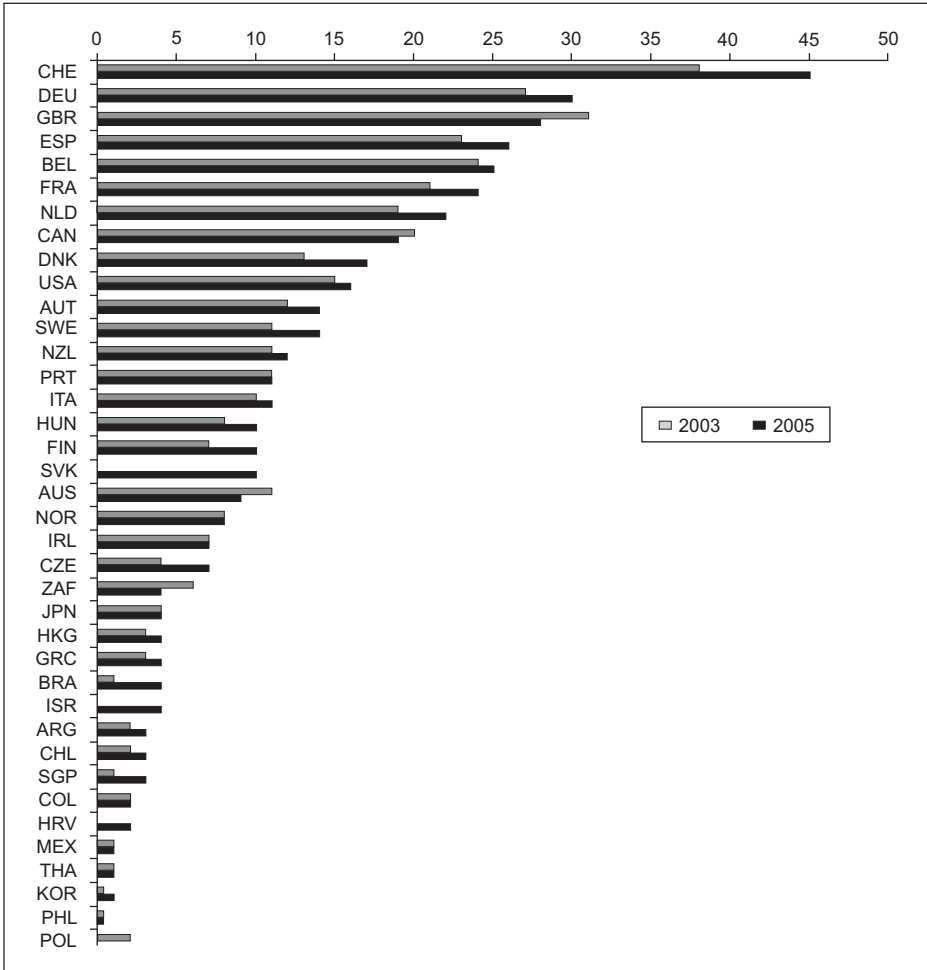
Source: ACNielsen, 2003 and 2005.

Note: For the full country/area names, see the annex to this chapter.

number of closely monitored suppliers from low-cost countries. The growing importance of private labels was indeed found to shift sourcing to poor countries, defined as countries with GDP per capita less than US$ 1,000 (in 2000 prices). For both food and non-food items, a 1 percentage point increase in the private label share would reduce imports by 2 per cent from non-poor countries but increase imports by 1.3 per cent for food and 0.3 per cent for non-food consumer goods.

To conclude, the retail sector is an increasingly important link in the supply chain and its role in international trade should not be ignored when analysing the impact of trade liberalization in consumer goods. These are usually labour-intensive goods for which developing countries in Asia have a comparative advantage. Retailers' sourcing strategies related to private labels has already been discussed. However, a host of other issues including private product standards and social issues such as "short-travelled food", carbon miles and "ethical sourcing" are likely to become increasingly important for retailers' sourcing strategies as they respond to consumer concerns and consumer activism.

With the ebbing of tariffs and other explicit barriers to trade, the role of the distribution sector in international trade will probably become more prominent in trade policy analysis. This aspect can, however, be incorporated into the framework of existing trade models by introducing an imperfectly competitive distribution sector into applied models such as the gravity model or computable general equilibrium models. For policy purposes, it is important to distinguish between trade barriers that are imposed by Government regulation and that fall under international trade laws such as sanitary and phytosanitary measures, non-tariff barriers and non-tariff measures, on the one hand, and trade costs that arise from consumer choices and preferences, on the other hand. While developing countries can address the former through negotiations and dispute settlement under WTO, potential exporters are well advised to adjust to the latter.

C. Trade diversification: The new frontier of trade research

The diversification of the export base has been a major policy objective in developing countries. Trade liberalization as well as establishing export processing zones, investing in infrastructure and export promotion have, at least partly, aimed at diversifying exports. Yet, most trade policy analysis tools used until recently were unable to capture the creation of new trade flows (the extensive margin). The "old" neoclassical trade models abstracted from the extensive margin altogether, while applied multi-country multisector extensions, for example, embedded in computable general equilibrium models do not usually create new trade flows.[13] The more disaggregated the model, the bigger the problem; this is simply because the more disaggregated the data are, the more the zero trade flows.

Trade diversification can be observed at several levels: (a) a country may start trading with new trading partners; (b) industries that do not engage in international trade may enter foreign markets; and (c) firms selling only on the domestic market may start exporting. Understanding the relative importance of the extensive and intensive margins is at the frontier of international economics research today and is arguably the most promising area of research that has policy relevance for developing countries.

Among the world's 200-plus countries and territories listed in the United Nations COMTRADE database, about half of all country pairs do not trade with each other. Figure 4

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[13] A recent attempt to address this problem was made by Zhai, 2008.

Figure 4. Number of trading partners of selected countries
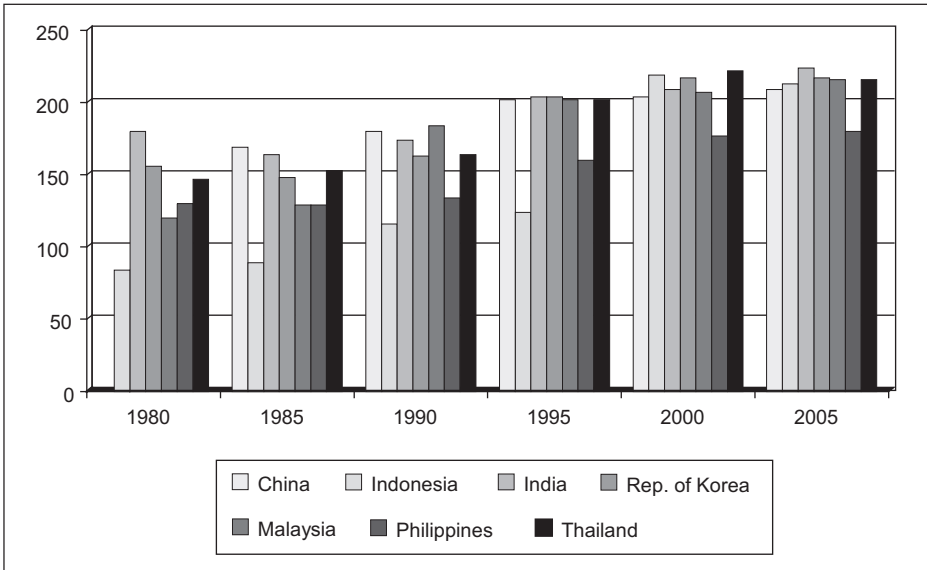
illustrates this dimension for selected Asian countries. For all of them, the number of trading partners has increased over time. Furthermore, by 2005, the selected Asian countries depicted in figure 4 exported to almost all countries of the world. Thus, at the aggregate level, the major Asian exporters are as diversified as they possibly can get.

At the product level, the proportion of zero trade flows is much higher. Baldwin and Harrigan (2007) found that, at the HS10 level, 82 per cent of potential United States export flows were zero in 2005. They defined potential exports as "exports to all countries of goods that were exported to at least one country". This definition probably inflates the potential since a number of countries do not import the product in question at all. For example, landlocked countries would not import ships, city States would not import large-scale harvesting machines for grain, and tropical countries would not import skis. It is therefore argued that potential exports from country *i* to *j* should be defined as goods that are both exported from *i* to at least one country and imported by *j* from at least one country. Even if the potential flows are likely to be exaggerated in the 82 per cent estimate, it remains that a surprisingly large share of potential trade flows is not utilized. Besedeš and Prusa (2007) calculated the actual versus potential trade flows using the same definition at the 4-digit International Standard Industrial Classification (ISIC) level, and they found that, for East Asia, the realized potential was only 5 per cent in 1975, but that it had risen to 22 per cent in 2003.[14]

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[14]   In this study, East Asia includes Indonesia, Malaysia, the Philippines, Singapore, the Republic of Korea and Thailand.

At the firm level evidence of the extent of trade performance by industry and number of markets is even scarcer. Bernard and others (2007) reported that only 4 per cent of all United States firms and 18 per cent of manufacturing firms exported in 2000. Muûls and Pisu (2007) found that 21 per cent of all firms in Belgium exported in 1996, but that only 15 per cent exported in 2004. They explained that the decline in the share of exporting firms was the result of market concentration in manufacturing, where most exporting firms were found, in combination with a sharp increase in the denominator due to the entry of new, small firms in the services sectors.

Despite the majority of all possible trade relationships being zero, there is still a great deal of activity at the extensive margin. Besedeš and Prusa (2007) found that, on average, more than a quarter of all observed bilateral trade flows in manufacturing (at the 4-digit ISIC level) was new each year in East Asia during 1975-2003. However, new trade relationships accounted for only 3 per cent of trade value and most new trade relationships failed after a few years. In fact, as many as 7 out of 10 new export relationships failed within two years on average for the 46 countries included in the study, and only a quarter of all relationships lasted more than five years. This finding has very important policy implications. If it is the case that firms can enter a foreign market relatively easily but that most are unable to stay, the binding barriers to trade are probably not border measures, such as tariffs and quotas. The lack of staying power in foreign markets can stem from weaknesses in the exporting country or behind the border regulatory measures in the destination country. In addition, a plethora of product and process standards that differ between markets, plus a lack of information about new markets on the part of the exporter, can be substantial obstacles. However, it should be noted that, in domestic markets also, the failure rate of new firms is quite high.

The gravity model has been used extensively for explaining the relationship between bilateral trade flows and trade costs. Recently, the model has also been used to analyse the determinants of the extensive margin. For example, Nordås (2006) estimated the determinants of the extensive margin in exports of intermediate goods, electronics and clothing to Australia, Japan and the United Kingdom, respectively. These are sectors that, as discussed in the previous section, are thought to be particularly sensitive to trade costs, including time costs. Based on anecdotal evidence that low-volume, short spells of exports are common, export values below US$ 1 million per country per year were considered one-off and not reflecting an established trade relationship.[15]

The incidence of bilateral trade flows above US$ 1 million was regressed on the usual gravity variables plus time for exports, and the probabilities for exports for each country were estimated. Figure 5 shows some of the results. It is first noted that predicted probabilities are either close to zero or close to unity. In the former case, and as pointed out by Besedeš and Prusa (2007), export promotion of new goods to new markets is unlikely to succeed. It is, however argued that in countries with a predicted probability in the area of

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[15]   Different cut-off rates were introduced for robustness checks. The qualitative results were unaffected. Besedeš and Prusa (2007) confirmed that exports below a certain level were typically short-lived

Figure 5. Predicted relations between probability of entering selected foreign markets and time for exports
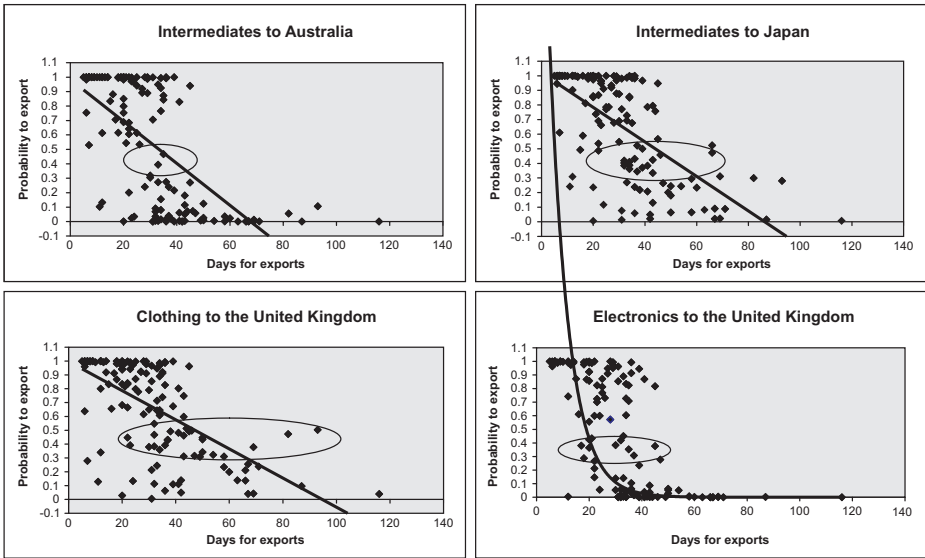
Source: Nordås, 2006.

0.35-0.5 (marked by a circle) could benefit from non-distorting supporting policies in general, and removal of unnecessary time-consuming border procedures, both for imports and exports, in particular. Among the countries encircled are Cambodia and Viet Nam.

In summarizing this section, it can be inferred from the fact that so many potential trade flows are zero that exporters face bridgehead trade costs when entering new markets. Further, the fact that firms in the same industry differ as to whether, and to what extent, they engage in international trade suggests that firms are different in terms of scale and productivity. It can also be inferred which of the "new" trade theories are compatible with the data and which are not. For example, trade models of monopolistic competition driven by love of variety in its simplest form predict that all firms producing exportable goods or services will export to all countries in the world that import these goods or services. This is clearly not the case. Baldwin and Harrigan (2007) argued that a model that was compatible with the data had to feature heterogeneous firms that competed on the basis of both price and quality. Such a model is compatible with the observations that most products are exported only to a few destinations, the incidence of export zeros is positively related to distance and negatively related to the market size of the (potential) export destination, and that the average unit value of exports is positively related to distance – "shipping the good apples out".

D. Conclusion

It has been argued in this chapter that the old Ricardian theories of comparative advantage can explain the broad trends in international trade over the past few decades. Thus, Ricardian models with many goods and differences in technology among countries can capture the driving forces and impact of vertical specialization or fragmentation of production, although many details remain unexplained.

Trade economists do, of course, know that firms are different and that they compete on the basis of both price and quality. However, until now, trade research and policy analyses have largely abstracted from these observations in order to focus on the broad picture including welfare implications. Thus, as tariffs and other border measures come down, trade policy analyses need to shift focus towards behind-the-border constraints, both at home and abroad, and from the macro level towards the micro level.

Insights from industrial organization and geography have been embedded in standard trade models since at least the 1980s. In the author's view, what is needed is continued improvement of the micro-economic foundation of international trade theory and its empirical applications, by asking questions such as: What does it take to enter and stay in a foreign market? To what extent do market dynamics observed within a country apply across borders? How do various types of trade costs accumulate and how do they interact with geography and institutional factors in determining trade patterns? These questions can be addressed by borrowing from other fields of economics such as industrial organization, economic geography, multinational firms and business administration. At this stage, the need is to get the nuts and bolts of international trade right. New paradigms can wait.

21

Annex

ISO country/area codes in figures 1-3

ARG	Argentina	GBR	United Kingdom of	NOR	Norway
AUS	Austria		Great Britain and	NZL	New Zealand
AUT	Australia		Northern Ireland	PHL	Philippines
BEL	Belgium	GRC	Greece	POL	Poland
BRA	Brazil	HKG	Hong Kong, China	PRT	Portugal
CAN	Canada	HRV	Croatia	RUS	Russian Federation
CHE	Switzerland	HUN	Hungary	AUS	Australia
CHL	Chile	IDN	Indonesia	SGP	Singapore
CHN	China	IND	India	SVK	Slovakia
COL	Columbia	IRL	Ireland	SWE	Sweden
CZE	Czech Republic	ISR	Israel	THA	Thailand
DEU	Germany	ITA	Italy	TUR	Turkey
DNK	Denmark	JPN	Japan	TWN	Taiwan Province of China
ESP	Spain	KOR	Republic of Korea	USA	United States of America
FIN	Finland	MEX	Mexico	ZAF	South Africa
FRA	France	NLD	Netherlands		

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Chapter II

DOMESTIC DIMENSIONS OF THE TRADE LIBERALIZATION AGENDA: AN EXPLORATION

By Biswajit Dhar

Introduction

The past quarter of a century has witnessed among many countries across the development spectrum an unprecedented level of activity in the process of trade liberalization. In many respects, this most recent phase of global integration among economies stands out in comparison to all other phases that have occurred in the past few centuries.[1] Most notably, for the first time more than 180 States have engaged in the process of integrating their economies with those of their partners. The second crucial feature of the current phase of globalization is the backing it has received from multilateral institutions. While the multilateral financial institutions provided the initial impetus for the globalization process, the multilateral trading system — now having a widely accepted institution of its own — has provided a forum for countries to find ways of deepening and widening the process of trade (and investment) liberalization.

However, despite its wide following, the liberalization agenda faces a number of challenges, according to Fischer (2003). Stiglitz (1998), in his own inimitable style, commented that Washington Consensus that provided the philosophical underpinnings of the trade liberalization agenda, was incomplete and sometimes even misleading .[2] Elaborating their positions, the commentators have alluded to the range of trade liberalization policies that must be adopted to ensure more inclusive outcomes (Commission on Growth and Development, 2008). In the author s view, a more generic criticism of the policies of globalization in general, and that of trade liberalization in particular, is that in designing these polices, little effort was made to include the development dimension. It may be pointed out in this regard that the 23 founding members of the multilateral trading system established as the General Agreement on Tariffs and Trade (GATT) provided a development context to the trade liberalization agenda. Thus, the GATT signatories stated in the preamble to the Agreement that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, developing the full use of the resources of the world and expanding the production and exchange of goods and that substantial reduction of tariffs and other barriers to trade and to the elimination of

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[1]   See Fischer, 2003, p. 3, for a brief account of the earlier phase of economic globalization that thrived before 1914.

[2]   See Stiglitz, 1998, p. 33.

discriminatory treatment in international commerce were the means to achieve the aforementioned objectives (United Nations, 1947).

The objectives set by the GATT signatories were elaborated further in the preamble to the Agreement establishing the World Trade Organization (WTO).[3] Ironically, a development agenda was formally accepted by WTO six years after the organization began functioning. The so-called Doha Development Agenda (DDA) became the basis of the work programme agreed to by the WTO members at the conclusion of the WTO Ministerial Conference in Doha. One of the often articulated issues under discussion as a part of the DDA was the need to adopt instruments that would allow developing countries the policy space to address their domestic imperatives. However, more than seven years since being launched, the Doha Round negotiations are heading for a prolonged phase of suspended animation , essentially because no agreement appears likely on issues that would help make the multilateral trading system more development friendly.

This chapter makes an attempt to review the policies that could address some of the domestic imperatives of developing countries that have embarked on the path of trade liberalization. It should be emphasized here that it is the efforts by countries to orient their domestic economies to the meet the requirements of the global marketplace that have determined their relative performance in securing additional market access. Thus, pre-occupation with their trade liberalization efforts on the part of most developing countries has meant that, barring a few advanced developing nations, most of these countries have registered modest gains during the past decade in goods and services trade. While China has been able to quadruple its share of global merchandise trade since the mid-1990s, India has likewise been able to do in the global market for commercial services. What this chapter therefore tries to highlight is that domestic policy initiatives can play critical roles in determining the economic fortunes of the developing countries pursuing the trade liberalization agenda.

The above-mentioned objective of this chapter has been developed over several sections. In the first place, a critical examination is made of the foundations of the Washington Consensus, which provided the framework for policies of trade (and investment) liberalization. In fact, there were two problems with the Washington Consensus: (a) the framework was too narrowly specified; and (b) the path followed by the policymakers (supposedly modelled on the Washington Consensus) while embarking on the policy of trade liberalization mostly ignored the critical elements of the Washington Consensus framework that had a bearing on the functioning of the domestic economies. Section A

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[3]   The objectives of WTO, as spelt out in the preamble to the Agreement that established the organization, were: (a) raise standards of living; (b) ensure full employment; (c) support a large and steadily growing volume of real income and effective demand; (d) expand production of, and trade in goods and services, while allowing for the optimal use of the world s resources in accordance with the objective of sustainable development; and (e) protect and preserve the environment. It was further stated that the organization would seek to enhance the means of realizing the above-mentioned objectives in a manner consistent with their respective needs and concerns at different levels of economic development (WTO, 1995).

discusses the need to synergize the domestic productive forces as countries implement their trade liberalization agenda. It is argued here that domestic policy initiatives need to be an integral part of trade policy-making efforts of developing countries, as they provide critical inputs to the enhancement of the competitive strengths of their production enterprises. A body of literature argues, in fact, that developing countries would do well to adopt appropriate policy instruments that would enable them to provide the environment necessary for improving the competitive edge of their enterprises. However, there is little evidence emerging from the developing world that the policymakers have indeed recognized that synergies need to be developed between trade policies and those that are put in place for the rest of the economy.

Together with building synergies with the domestic economy, policy-making should take into consideration measures that are needed to enable developing countries to provide strategic advantages to their domestic players in a market that is rife with distortions. To illustrate this point, the need to devise policies of strategic intervention in two markets, that is, agriculture and technology, is discussed. The author s view is that in the area of technology, developing countries would do well to emulate the developed countries where the State continues to play an active role in improving the technological sinews of the production units in all sectors. The criticality for so doing can be well understood in an age when the technology factor has been well-recognized as being the prime motive force for development. In agriculture, developing countries would need to adopt appropriate instruments to meet the challenges caused by policy-induced distortions. These instruments are needed to counter the slew of subsidies granted by the developed countries as well as the developed-bias against agriculture that has affected the performance of agriculture in most developing countries.

A. Washington Consensus and its mutations

Since the early 1990s, the debates on development strategies to be pursued by developing countries, in particular, have witnessed changes in paradigm as never before. Pursuit of development goals until then was largely dominated by the model that had put the State at the centre of economic activities. The State was expected to play an active role in formulating development policies and to provide the wherewithal to implement these policies.

Development strategies in most developing countries were thus built on a strong public sector that was guided by the interventionist State. The aim of State intervention was to direct the economic processes towards outcomes that were expected to respond to social and human needs, and, above-all, fulfil the requirements of long-term development. These objectives provided the justification for putting in place policies aimed at developing domestic industries as well as measures necessary for protecting these infant industries. However, although industry was protected by trade policy instruments as well as by domestic policy measures that often discriminated against operations of foreign firms, in a number of developing countries — including some of the more active users of protectionist policies such as India — efforts to increase exports were never abandoned.

This development policy framework was cast aside following the developments that first surfaced in the Latin American region. The failure of the Governments to manage their economies in the face of a financial crisis that, many would argue, stemmed from imprudent lending by the private financial markets raised serious questions regarding the State-run economic system. Commentators were quick to point out that Government failure was inevitable given the series of omissions and commissions that the Governments had committed (Krueger, 1990). In addition, it was the assumption of Government failure that formed the basis of the policy package that the multilateral financial institutions had put together while extending structural adjustment loans to the affected countries. The so-called Washington Consensus package sought to reduce the role of Government by encouraging larger play by market forces and the introduction of time-lines for countries to undertake trade liberalization. The Washington Consensus became the standard bearer for the economic reform programmes launched by the developing countries during the 1980s and 1990s. This was the case just as Williamson (2002), the originator of the term, noted when he said the policy package was originally presented as a summary of what most people in Washington believed Latin America (not all countries) ought to be undertaking as of 1989 (not at all times) .[4]

A second, more significant aspect of the Williamson framework lay in its details. The framework was just about a complete reliance on the market, as it also emphasized the specific role of policies during economic reforms. Thus, the reordering of Government priorities was sought by cutting down on the wasteful and non-essential activities that the State was involved in when it was controlling the commanding heights of the economy. The priorities for the Government, according to Williamson, had to be building up the social and physical infrastructure. More concretely, Williamson s view was that policy reform with regard to public expenditure should consist of switching expenditure from subsidies towards education and heath (especially to benefit the disadvantaged) and infrastructure investment .

The framework for trade policy reforms appearing in Williamson s schema requires attention as it proposes an approach that is mindful of the usual problems with which the developing countries are saddled. The first step concerns infant industries, which, according to Williamson, may merit substantial but strictly temporary protection. Second, a moderate general tariff (in the range of 10-20 per cent, with little dispersion) might be accepted as a mechanism for providing a bias towards diversifying the industrial base without threatening serious costs. Williamson also voted in favour of sequencing import liberalization, arguing for the speed of liberalization to be determined endogenously, depending on how much the balance of payments would be able tolerate.

More recently, several commentators, including the proponent of the idea, suggested modifications in the original framework of the Washington Consensus, terming the original framework as being excessively narrow . A major contribution in this regard was made by

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[4] This quote was taken by the author from an Internet document accessed at http://www.iie.com/ publications/papers/paper.cfm?ResearchID=488.

Stiglitz who drew up the elements of what he called the post-Washington Consensus , which essentially entailed broadening the goals and including more instruments. However, possibly the most important contribution of Stiglitz (1998) was that he provided a framework aimed at making the markets work in a manner that met the imperatives of development.

Stiglitz introduced two sets of modifications in the Williamson framework. One, the critical elements of the Washington Consensus, and in particular the adoption of policies on trade liberalization and privatization, were not viewed as ends in themselves, but as necessary prerequisites for promoting better functioning markets. This was done, for example, by critically evaluating the ability of the trade liberalization strategy to meet its professed objectives of competition and promoting efficiencies. Stiglitz argued that the lack of competition in the domestic markets of countries that were liberalizing might, in fact, result in outcomes that were contrary to those professed by the votaries of trade liberalization. It was therefore necessary to not only promote competition in domestic markets but to also take steps for establishing regulatory regimes to check abuse of market power. The second set of modifications recognized that Governments needed to complement the market. In fact, Stiglitz argued, there was a case for making Governments more effective so that they could meaningfully complement the market.

A more forthright comment on the broad policy framework that countries need to adopt, particularly with regard to the role that Government needs to play, was made by the Commission on Growth and Development (the Spence Report). The authors believed that the economic reforms package adopted in the past defined the role of government too narrowly .   They added that [j]ust because governments are sometimes clumsy and sometimes errant, does not mean they should be written out of the script. On the contrary, as the economy grows and develops, active, pragmatic governments have crucial roles to play (Commission on Growth and Development, 2008).

Perhaps the more significant aspect of the Spence Report is that it suggests that a coherent growth strategy will...set priorities, deciding where to devote a government s energies and resources .   These priorities, in the view of the Commission, should...be country- and context-specific, responding to widely varying initial conditions (Commission on Growth and Development, 2008).

The key issue that emerges from the above discussion is that conditions must be created to help create synergy in the domestic forces in the context of an open economy. This issue has been variedly dealt with in the available literature, and which is discussed in the following section.

B. Creating synergy in domestic productive forces

The role that policy measures can play in guiding the economic features of countries has seen a revival of support during the past few years. Commentators have argued that industrialization and economic catch-up are not generally the result of an efficient allocation of resources. A World Bank study (2005), in commenting on the lessons gained from the

1990s, stated that growth entails more than efficient use of resources . It pointed out that growth entailed structural transformation, diversification of production, change, risk-taking by producers, the correction of both Government and market failures, and changes in policies and institutions. The study emphasized the fact that policy reforms should entail an understanding of the forces underlying growth, which could include those introduced for promoting technological catch-up or the encouragement of risk-taking that could, in turn, contribute towards faster accumulation.

In many ways, this World Bank prescription is in the nature of a retraction from the past prescription when the institution had recommended that an unfettered licence for the market forces through the polices of trade and financial liberalization together with a reduction in size for the Government must, of necessity, be the way forward, at all times and in all places (World Bank, 2005). As the study pointed out, the growth objectives could be achieved through diverse ways, which had been amply demonstrated by a number of countries that were able to push through a successful industrialization strategy by adopting proactive policies.

Perhaps the best-documented case of successful industrialization through a proactive industrial policy is that of the Republic of Korea. Westphal (1990) argued that the selective industrial policies of the Government of the Republic of Korea had made a significant contribution to the rapid achievement of competitiveness in a number of industries. According to Westphal, industrial policy in the Republic of Korea was designed for the realization of two objectives: encouraging exports and promoting infant industries. Even more importantly, the quality of intervention enabled the industries to maintain their competitive edge.

One prominent dimension of the experience of the Republic of Korea in developing an industrial base through selective intervention was that it addressed the issue of market imperfections associated with technological change. Westphal pointed that even though there was an abundant supply of available technology through transactions involving licences, capital goods, direct investment, technical assistance and the like, elements of technology were far from being perfectly tradable in the sense that purchase was not sufficient for effective possession. Because of the imperfect tradability of technology, externalities related to technological development can be quite extensive. According to Westphal, additional externalities could result because demonstration effects from an initial entrant s investments in mastering new technology could greatly reduce costs for subsequent, nearby entrants.

The Republic of Korea used the policy of selective intervention to increase the country s ability to capture the dynamic economies associated with the introduction and exploitation of modern technology. The country made significant investments in the successful assimilation and adaptation of industrial technology, and consequently reaped development dividends.

Several recent studies have documented the successes that developing countries have experienced as their economies have been subjected to selective interventions. In all

such studies, the State has been seen as playing the role of a prime mover in setting the development goals, while private enterprise responded to the initiatives taken by the State. One of the major problems in appreciating the relevance of the traditional industrial policy framework in the present context arises from the transformed character of the State in the developing world. The omniscient State lasted only until the end of the 1980s; since then, it has given up considerable space to market forces. In such circumstances, it is imperative that the role of the State be rewritten, particularly in the light of the limitations of the market to deliver on development. While the beginnings of this approach evident, as indicated in section C, considerably more needs to be done to identify the specific failings of the market forces that would impede the development process, especially in the developing countries.

C. A framework for addressing development imperatives

A large number of studies in recent years have tried to examine the policy framework that would appropriately address the development imperatives of developing countries in the context of the present-day global economy. An important contribution in this regard was made by Rodrik (2004), who proposed a policy framework that maximizes economic growth while minimizing the risks that it will generate waste and rent-seeking activities . The professed importance of the Rodrik framework is that it encompasses not only the traditionally advocated industrial policies, but would also be applicable to non-traditional activities in agriculture or services. However, as elaborated below, the approach that Rodrik proposed needs to be appropriately modified in order to take into consideration the peculiarities of small enterprises, and in particular the informal sector that includes the majority of industrial and agriculture enterprises in most developing countries.

The framework that Rodrik proposed does not merely entail developing policy interventions aimed at targeting market failures, but also seeks to provide a blue-print that is effective in addressing market failures. Central to this approach is strategic collaboration between the private sector and Government with the aim of revealing the obstacles and devising appropriate measures for removing them. Thus, the policy framework proposed by Rodrik is a discovery process — one where the firms and Governments learn about the underlying costs and opportunities, and engage in strategic coordination. The virtues of such a partnership are increasingly being understood, as public-private partnership has been adopted as the guiding spirit by most economies.

Diversification of economic activities provides the much needed fillip to economic development. While past generations of economists argued in favour of developing countries diversifying away from primary production and into manufacturing, more recently some analysts have argued that countries develop by latching onto high-productivity goods. However, as pointed out by Rodrik, two key externalities, that is, information externalities and coordination externalities, can pose serious impediments to the process of diversification. Therefore, diversification is unlikely to take place without directed governmental action.

Information externalities need particular attention in most developing countries, as they play a critical role in the creation of an enabling environment for diversification of the production systems in those countries. Overcoming this constraint would essentially help entrepreneurs to experiment with new product lines. In other words, they would indulge in a process that Hausmann and Rodrik (2003) called self-discovery .

Agriculture and the small and medium-sized enterprises (SMEs) would be the major beneficiaries of this process of self-discovery , since in both these sectors the majority of producers find themselves trapped in production patterns that are economically less viable. Typically, information externalities that restrict self-discovery need to be addressed through subsidized investments in new and non-traditional industries. Yet, while most analysts insist that the support for these enterprises should be narrowly focused so as to provide incentives only to the first movers, the reality in most developing countries may warrant a different approach. In such countries, State support for meeting information externalities would have to be maintained for some time in order to allow the benefits to flow in an effective manner. Such an approach would be necessary, in the author s view, because of the preponderance of the micro-production units in agriculture and the SME sector — the two sectors that would feel the effects of information externalities the most in developing countries. Thus, if SME sector enterprises are to diversify their operations, a number of such enterprises must be able to prove that shifting into new production lines will bring in a continuous flow of returns. In other words, they would need to demonstrate that the benefits that accrue from diversification are more than mere windfalls. While Governments must provide support in a sustained manner, in order to allow diversification to have a spread effect, they must be wary of the pitfalls of over-commitment to this process.

In order to be successful over the longer term, enterprises venturing into new and non-traditional industries must have the necessary wherewithal to overcome the technological bottlenecks. In addition to needing the resources for acquiring the technologies they need for start-up, they would require support for suitable adaptation of imported technologies to suit local conditions. The author s opinion is that the above-mentioned imperatives can only be met through strategic market interventions that the State would have to make to enable technology to capture the rents that have shifted decisively in favour of the patent owners since the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights became effective. Section D deals with this issue in detail.

That coordination externalities can affect production systems in developing countries has long been recognized by development economists. It was more than half a century ago that Rosenstein-Rodan (1961), Nurkse (1961) and Scitovsky (1954) backed the big push model that was essentially aimed at coordinating investments. More recently, Murphy and others (1989) argued that a programme that encourages industrialization in many sectors simultaneously can substantially boost income and welfare, even when investment in any one sector appears unprofitable .

Cluster development represents a good example of how coordination externalities can be overcome. Analysts have backed the development of clusters, as they perceive several advantages that such production systems could provide. Considerable support for cluster development has been voiced by the industrialized countries. For example, the Organisation for Economic Co-operation and Development (OECD) Focus Group on Cluster Analysis, an initiative taken in the late 1990s, explored the ways in which the synergies that could develop in a cluster could, in turn, be productively harnessed, particularly with regard to fostering innovation.

Commenting on the virtues of clusters for the United States of America, Porter and van Opstal (2001) argued that achieving a more rapid pace of innovation will require explicit recognition of, and support for the critical role of States and localities in fostering clusters, or geographic concentrations of firms, suppliers and related institutions in particular fields . In their view, clusters innovate faster because they draw on local networks that link technology, resources, information and talent .

Based on the above observations, Porter and van Opstal surmised that clusters build the basis for specialized skills and capabilities, and enable competitive advantage in world markets . However, while the idea of promoting clusters for harnessing development potential has found wide acceptance, commentators are less in agreement with regard to the specific form of State support for the clusters. Rodrik, for example, argued that new activities rather than a sector should be the focus of State support. On the other hand, Rodriguez-Clare (2005) suggested that a State should provide support only when approached by a set of enterprises that are willing to coordinate their production activities. Alternatively, Rodriguez-Clare argued that Governments could pick certain sectors for more intensive support in a problem-solving mode. In such circumstances, support can be lent for strengthening the organization, studying specific problems, identifying coordination failures and implementing simultaneous interventions in several areas.

The emerging literature on the initiatives that countries should take to enhance their development potential (as briefly discussed above) points unambiguously to the fact that countries must seek ways of harnessing their production systems by making efforts to diversify their economic activities. It should be pointed out that this policy of diversification militates against the conventional theory of trade based on comparative advantage, which insists that gains from trade are to be had from specialization. The free trade paradigm adopted of late with new fervour — which strongly advocates adherence to the comparative advantage theory and, unsurprisingly, the contours of the policy framework consistent with this theory — forms the cornerstone of the structure of the WTO regime and provides little scope for developing countries to explore new avenues for development.

This has been the nub of the arguments made by the developing countries since the establishment of WTO, and the persistence of these countries appears to have paid dividends in 2001 when the WTO members agreed to launch a new round of multilateral trade negotiations whose mandate included issues that were expected to respond to the

development needs of the developing countries.[5] In recent years, however, several analysts have argued that the Doha deal could bring adverse results in vulnerable sectors for the developing countries as a whole.[6]

There is no gainsaying that if a development-friendly framework does indeed emerge at the end of the Doha Round negotiations (if they are ever concluded), a decisive move has to be made away from the existing paradigm to one that must be able to factor in the need for countries to diversify their economic activities.

D. A case for strategic interventions

Holding the key to successful forays by the developing countries into the evolving global economy is a set of strategic interventions that Governments need to implement to good effect.   These interventions would allow these countries to overcome the myriad distortions that prevail in the global markets.

Where the prime motivation for introducing market-based reforms was to extricate their economies from state control and, therefore, rent-seekers spawned by the State, developing countries found that these reforms gave rise to formidable challenges that could affect their development prospects. For example, the emerging nature of the technology and knowledge market, where the increased level of protection afforded to the technology owners — particularly following the introduction of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) — has created novo rent seekers.

The implications of the regime of intellectual property protection have been discussed extensively in several contexts. The most prominent of these discussions have been concerned with the problem of access to medicines where the strong intellectual property regime has been seen by developing countries as an obstacle to their efforts to provide affordable medicines to their populations. It has been recognized that some countries would be constrained in their ability to procure medicines at affordable prices because they lack viable domestic production capacities. However, should those countries develop a domestic pharmaceutical industry, they may find it difficult to sustain production levels as they may not be able to procure the relevant technologies.[7]

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[5]   The WTO Ministerial Declaration articulated this dimension in paragraph 2:   The majority of WTO Members are developing countries. We seek to place their needs and interests at the heart of the Work Programme adopted in this Declaration . (See WTO, 2001a).

[6]   For example, Polaski (2006) concluded in her study on the Doha Round that agricultural liberalization alone does not benefit most developing countries or regions .

[7]   The Doha Declaration on TRIPS and Public Health attempted to address the twin constraints that developing countries could face in their efforts to provide affordable medicines to their populations. The Declaration reflected the unanimity among WTO members on allowing developing countries to use compulsory licensing to promote domestic pharmaceutical production. In the case of countries that do not have a viable pharmaceutical industry, it was decided that a mechanism would be developed for them to import pharmaceutical products. The TRIPS Agreement was amended in December 2005 to provide such a mechanism. (See WTO, 2001b and 2005.)

It is the author s opinion that, agriculture is the most significant of the sectors in need of strategic interventions. The agriculture sector in developing countries requires a slew of initiatives due to two sets of problems. In the first place, agriculture has faced benign neglect in the development strategies adopted by the developing countries. The second problem, one that has arisen as developing countries have embraced the trade liberalization agenda set by WTO, is the perceived threat to domestic production from subsidized products originating in the developed countries.

Developing countries need to address the above-mentioned issues through strategic interventions while enumerating their policy options. It is argued here that the discord in the market for technology requires Governments and their related agencies to play a proactive role in promoting research and development (R&D). On the other hand, the policy-induced distortions in agricultural markets would have to be neutralised by the use of appropriate instruments that would allow countries with significant agricultural populations to protect the livelihoods of their farming communities. The two forms of interventions mentioned above are briefly discussed below.

1. Public funding of research and development

In a seminal paper published in 1959, Arrow argued that markets would underinvest in basic R&D, since production of knowledge suffers from all three conditions that would typically result in market failure. This argument became the strongest justification for the use of Government funds for R&D activities in the technologically advanced countries. In recent years, several of those countries displayed significant buoyancy in the deployment of public funds towards R&D. For example, in the United States, federal R&D expenditures increased by nearly 50 per cent during 1995-2003 (Rubestein and Shoemaker, 2006).

Developing countries need to emulate their counterparts in the developed world by providing state funding for R&D for at least two compelling reasons. In the first instance, R&D initiatives taken by the developing countries would provide momentum to the process of economic growth by improving the productivity of their enterprises. This would occur as those countries would be able to successfully assimilate and adapt technologies that they might acquire from the developed world. The second, and undoubtedly the more significant of the reasons for undertaking R&D, is the fact that the strengthening of intellectual property rights following the adoption of the WTO Agreement on TRIPS made access to technologies more onerous than in the past (Federal Trade Commission, 2003).

Several studies have pointed out that the strengthening of intellectual property protection has resulted in increased control over knowledge, information and culture by a small number of very large corporations, often operating in highly concentrated markets (David and Foray, 2003). Furthermore, the protection of intellectual property has, in recent years, moved from a defensive to an offensive corporate strategy; this includes deterring the entry of potential rivals, as patents and copyrights are increasingly seen as a unique means of generating value from intangible assets (UNCTAD, 2007).

Public spending on R&D should essentially contribute towards the development of institutions in addition to providing critical support for human resources development. However, the strategies for conducting R&D must be evolved through an interactive process involving the private sector.

2. Strategic interventions in agriculture

Theorists had long supported the use of trade interventionist policies, but only as a means of countering specific forms of market distortions.[8] However, the advent of strategic trade theory changed that view. Strategic trade theory takes on board the reality of imperfect competition that characterizes the markets in which trade takes place. Based on this understanding, the strategic trade theorists have analysed various situations in which Government intervention can be justified.

The original idea of strategic trade theory was propounded by Brander and Spencer (1984)[9] who showed that Government intervention could raise national welfare by shifting oligopoly rents from foreign to domestic firms. They argued that the granting of export subsidies would have a deterrent effect on foreign exports, resulting in the profits of the home firm rising by more than the amount of the subsidy. This would result in higher home income.

During the past two decades, a large body of literature has emerged based on the foundations laid by the strategic trade theory. The major contribution of those studies has been the amount of analytical insights that they have provided into the functioning of the various sectors (largely in the context of the United States) in which interventions of the type that this variant of trade theory has tried to conceptualize.[10] These studies have assessed the potential gains from using strategic trade policies and have reached a consensus that carefully designed tariffs or subsidies can improve upon free trade in certain markets. However, at the same time, the studies emphasized the point that the findings should in no way be interpreted as general support for pro-interventionist policies.

Although available studies indicate that the use of the strategic trade theory is more of an exception, reality appears to be at considerable variance with this point of view. During the past several decades, Governments in the developed world (especially the United States and the European Union) have, de facto, used strategic trade theory to maintain their domination over the global markets for major agricultural commodities.[11] The instrumentalities for using the strategic trade theory were provided by the farm policies that both the United States and the European Union member countries had been adopting

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[8]   See Bhagwati and Ramaswami, 1963.

[9]   See also Krugman (ed.), 2000.

[10]   For a comprehensive survey see Brander, 1995.

[11]   While the United States and the European Union control nearly 50 per cent of wheat exports, the United States has a share in excess of 50 per cent of exports of soybeans and maize.

without being subjected to multilateral discipline since the 1950s.[12] For example, the farm policy instruments are aimed at managing output in markets that have often suffered because supplies have far exceeded what the markets can carry.

Farm subsidies granted by the United States, in particular, have also led to an increase in concentration in the markets for major agricultural commodities.[13] The Food and Agriculture Organization of the United Nations (FAO, 2003) reported that the phenomenon of horizontal integration, wherein a relatively small number of firms effectively control a given market, was rife in the agricultural markets. According to FAO, horizontal concentration increases the market power of the dominant firms, enabling them to secure excessive profits.[14]

The use of policy instruments by the United States and the European Union to improve their advantage in the global agricultural market has resulted in an interesting debate in the context of the reshaping of the global agricultural policies in which WTO is currently engaged. Initiated by the developing countries, this debate makes the point that the persistence of distortions in the global agricultural market requires strategic interventions on their part. These interventions, they have argued, are necessary in meeting key concerns related to food security as well as safeguarding the livelihoods of the multitude of marginal farmers that dot the agricultural landscape in their countries.

Importantly, the viewpoint of the developing countries on the need to make strategic interventions in agriculture has, of late, found broad acceptance among the WTO member countries. These countries have been in agreement that the developing countries need to impose higher levels of tariffs on special products, that is, products that are vital to the protection of food security and livelihoods. It has also been agreed that developing countries would have access to a Special Safeguard Mechanism, an additional instrument that would help insulate developing country producers from the threat of sudden import surges.

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[12]   Although the United States has, since the 1930s, been using its farm policy to provide a strategic advantage to its farm sector, it only received legal sanction to use the farm policy instruments after the GATT Contracting Parties agreed to grant a waiver from the application of Articles II and XI of the GATT (see GATT, 1955). In 1957, the Treaty of Rome (known more widely as the Treaty Establishing the European Economic Community) established the basis of the Common Agricultural Policy that has directed agricultural policy of the European Union members.

[13]   A Cato Institute study conducted in 1999 gave an account of how the Archer Daniels Midland Corporation (ADM), one of the major players in the grains market, had been the most prominent recipient of corporate welfare in recent United States history. (For details, see Bovard, 1995.)

[14]   In providing evidence of this phenomenon of market concentration, FAO reported that 60 per cent of terminal grain handling facilities was owned by four companies — Cargill, Cenex Harvest States,ADM and General Mills. Some 82 per cent of corn exporting is concentrated among three companies — Cargill, ADM and Zen Noh. Beef packing is dominated by an 81 per cent share held by four companies —Tyson, ConAgra, Cargill and Farmland Nation. A total of 61 per cent of flour milling capacity is owned by four companies —ADM, ConAgra, Cargill and General Mills.

It may be argued that the policy framework for agriculture that is emerging through the WTO negotiations will yield positive results for agriculture in developing countries. Agriculture in those countries has had to contend with a development bias that has adversely affected the performance of this sector. The development bias has manifested itself in at least two ways. First, historically, developing countries adopted policies with regard to agriculture that resulted in the sector being taxed.[15] This resulted from the fact that the focus of such policies was on realizing policy objectives such as the attainment of food security and, in particular, providing the population with basic food items at affordable prices. Consequently, agricultural producers were unable to realize efficiency prices for the products. Thus, while developed country producers received a helping hand from their Governments in competing in the global marketplace, agricultural producers in developing countries had to contend with the disadvantage of being taxed.

A second dimension of the agricultural development bias against developing countries emanated from the fact that the industrial sector in those countries had received large doses of protection for long periods. The policy of import substitution pursued by a large number of developing countries provided a basis for protecting the industrial sector (Baldwin, 2003). The policy bias against agriculture created by import substituting industrialization in the developing countries was reflected in the tardy deployment of a relatively scarce resource, that is, capital. India stands out as a case in point. In the early 1980s, the share of agriculture in gross capital formation in the country was close to 20 per cent, but which by the turn of the century had declined to a mere 6 per cent. Quite clearly, therefore, agriculture in India has been affected by domestic distortions, caused largely by the inherent domestic policy bias against the sector.

Binswanger and Deininger (1997) noted that the policy bias against agriculture was also evident from the lack of appropriate institutions and, more importantly, the syndrome of missing or incomplete markets . They argued that subsistence orientation, reliance on family labour, and the use of land and cattle (or other assets) as savings instruments could be explained as being the consequence of the absence or poor development of markets for products, labour, finance and risk diffusion. Furthermore, where markets are not well-integrated, as is the case with a large majority of developing countries, factor and output prices can vary considerably in response to shocks such as drought, leading to distress sales of assets at very low prices. Such sales leave the seller with insufficient resources to purchase the assets back later when prices return to normal (Binswanger and Deininger, 1997). However, despite the long-standing debates, these conditions have persisted in developing country agriculture primarily due to the slow pace of domestic reforms (World Bank, 2007). Given such conditions, it may seem desirable to shield agriculture in developing countries, and especially crops that support a sizeable section of

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[15] Krueger and others (1991) provided evidence from 18 countries that had taxed agriculture relative to other sectors.

the resource poor producers, from the pass-through of volatile international prices[16] until the domestic reforms start yielding results. Thus, a time-bound and targeted policy of border protection can provide the trigger a turn-around for agriculture in developing countries.

E. Conclusion

Trade and investment liberalization has created immense competitive challenges for most developing countries. The challenges, in the author s view, can be met by two sets of initiatives that these countries must take if they are to have any chance of avoiding negative implications of the liberalization process. In the first place, they would need to hone their domestic productive forces by designing an appropriate policy framework that reflects the needs of all sectors. In the past, several developing countries have introduced domestic policy distortions by displaying an overarching bias towards one sector. This policy framework has often worked to the detriment of the many countries since, more often than not, the neglected sector has been agriculture. As a result, developing countries, particularly those with large rural populations, are now faced with a formidable challenge in helping this sector to catch up with the rest of the world.

This policy framework would need to focus on the factors that would help improve domestic efficiencies as well as create the conditions for the development of technologies. The latter assumes particular importance in the light of the fact that, in most major markets, trade barriers in the form of standards are proliferating, thus causing significant market access impediments. Second, developing countries would to protect their activities, and especially agriculture, to prevent market distortions affecting their economies. This chapter is a preliminary attempt to elaborate on the two strategies discussed above.

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[16] The price trends for rice and wheat in the international market between September 2007 and August 2008 give an indication of the swings that the prices of these two major cereals could witness in the future. The rice price (5 per cent broken, milled white rice), for example, increased by 207 per cent until it peaked in April 2008. Since then, the price has fallen by more than 27 per cent. In fact, one-half of the price increase in nominal terms witnessed during the surge period has been wiped out in the subsequent four months from May 2008. Wheat prices, on the other hand, increased by more than 70 per cent from September 2007 to March 2008, only to decline thereafter by more than a quarter from its peak. In the case of wheat, 62 per cent of the increase has been wiped out during the subsequent five months from April 2008.

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Chapter IV

INTEGRATION OF SMALL AND MEDIUM-SIZED ENTERPRISES IN INTERNATIONAL PRODUCTION NETWORKS: THE AUTOMOTIVE INDUSTRY IN ASIA

By Biswajit Nag and Debdeep De

Introduction

The formation of international production networks is widely recognized as one of the most important growth drivers in East Asia and South-East Asia. A global value chain (GVC) and associated production networks are emerging as the organizing framework for production, investment and trade in an expanding range of product groups such as garments, agro-industry, furniture, automobiles and automotive parts, consumer electronics, telecommunications, and information and communications technology (ICT) as well as various services.   International production networks in this region are quite distinct compared to other parts of the world, in that:

(a)   Their significance in each economy is high;

(b)   They cover large number of countries in the region;

(c)   Sophistication level of intra-firm transactions are high.

There has been a drastic shift in the trade pattern in the region from one-way trade to intra-industry trade, especially in East Asia and, to some extent, South-East Asia. This has also been reflected in the growing importance of regional production networks. Ahearne and others (2006) argued that this phenomenon was a by-product of the flying geese pattern of development led by Japanese investment. According to this idea, as production costs in the first-tier countries and areas (for example, the Republic of Korea and Taiwan Province of China) increase, investment flows to other developing countries for the production of parts and components. This pattern finally gives rise to a country such as China, which moves into the product space vacated by the first and second tier economies with greater integration of trade across the region in production networks. However, Bernard and Ravenhill (1995) argued that whether the phenomena was due to the flying geese pattern or not, greater focus was required in order to understand the changing production relationship between local and transnational firms to demystify the dynamics of production network.   In this context, Bernard and Ravenhill mentioned the production network of microelectronics. Tung (2003) also pointed out that the flying geese pattern might not hold good while analysing the development pattern in different industries. Kojima (2000) considered that the shortening of the product life cycle was one more reason to force firms to fragment their production process by locating them in different countries; this

approach not only reduces production costs but also helps firms to launch new products simultaneously in different countries in order to gain quicker access to the consumer base.

The fragmentation of production and the corresponding firm specialization in tasks is leading towards the development of a new paradigm for international trade (Grossman and Rossi-Hansberg, 2006). Although many large multinational enterprises continue to provide a variety of products and services on global markets, they now increasingly purchase inputs and components from smaller companies in widely dispersed locations that serve particular industry niches. As a result, the stake of small and medium-sized enterprises (SMEs) in international trade is increasing, and the efficiency level of such firms in delivering goods and services has improved significantly.

Policies and incentives towards SMEs in many countries help them to become more efficient, which, in turn, assists firms to become effective players in the international supply chain. Although Japanese investment in the early years initiated the process, the high technology absorption skills of many SMEs has pushed them up in the value chain, which is one of the targets of these highly-integrated players. In this context, many companies — particularly smaller enterprises — are finding that success and value creation may be achieved through specialization in a limited set of activities, outputs and market niches. For example, even simple components such as hubcaps can be produced for regional and global markets by a supplier in the production networks of Toyota Motor Corporation or Ford Motor Company. Therefore, as the international production system evolves, the key role of GVCs and international production networks (IPNs) in a growing number of industries provides an increasingly effective mechanism for SMEs to access global and regional markets as suppliers. However, in order to participate in such value chains and networks, firms must be able to deliver a specified product, in the right quantity, with the required quality and at the right time. In addition, those firms must be able to meet an expanding range of increasingly stringent global market standards, for example on labour conditions and the environment.

Against this background, this chapter attempts to understand the economic environment that allows production networks to grow and how firms increase their efficiency to become part of the global value chain. This study highlights the experience of the automobile sector in different countries of Asia. Since IPNs include trade in parts and components, a data analysis of international trade in automotive components has also been carried out.

From the 1950s onwards, various developing countries used import substitution industrialization policies to promote the development of their domestic automotive industries. By the early 1990s, there were substantial self-contained vehicle industries in Asia with limited imports of vehicles and components and limited exports. Trade liberalization began to change this situation in the 1990s. Quantitative restrictions were phased out and tariffs reduced, while at the same time the global production and sales strategies of leading multinational automotive companies were shifting and developing

countries were becoming more integral to their plans. Nag and others (2007)[1] showed that average MFN duties on various automotive components came down significantly between 2001 and 2005 in major Asian automotive-producing countries compared with full vehicles. Countries such as China, India, Indonesia and Thailand are currently focusing more on the indigenous automotive industries by liberalizing trade in parts and components while protecting the final products. In 2005, average duties on components were close to 10 per cent while for full vehicles duties remained as high as 54 per cent in India, 43 per cent in Thailand and 30 per cent in Indonesia.

This chapter argues that while changes were most evident in the assembly sector, even more significant changes were taking place in components production, driven as much by the alterations in the nature of value chain relationships between assemblers and suppliers as by the industry's globalization and dynamic shift in consumer choices across countries. These changes have had a profound effect on the structure and characteristics of the automotive industry in developing countries. Consideration is given to the implications for the policy options open to the Governments of developing countries, and to the types of policies that will be adequate for creating viable automotive industries in the new environment of lower levels of protection and increasingly globalized production systems.

A. Economic environment to link global value chains and international production networks

A value chain refers to the full range of value-added activities required to bring a product from its conception, through design, sourcing raw materials and intermediate inputs, production, marketing, distribution and support to the final consumer. It presents a set of key activities related to the production, exchange, distribution and after-sales support for a given product or service. Value chains become global when their component activities are geographically dispersed across borders to multiple country locations. In general, the proportion of products conceived, manufactured and consumed entirely within the geographic boundaries of a single country is shrinking. Even services such as financial, consulting and customer support services are becoming mobile across borders. A value chain spanning enterprises in a subregional or regional grouping of economies such as GMS or ASEAN, and the global economy constitutes a GVC.

Traditionally, a basic organizational or management challenge for an enterprise is the coordination of its activities in the value chain (for example, sourcing, design, production, distribution and service), particularly when such activities cross borders. The big firm — together with subsidiaries, affiliates and joint ventures used to retain ownership and control of inputs, components and products, as they are transformed along the value chain. But increases in competitive and cost pressures are leading hierarchical, vertically integrated firms to reorganize and focus on a few selected core activities through the shedding of what are seen as non-productive assets. Advances in ICT are reducing the

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[1]   See table 22 on page 38.

need for ownership or equity-based control of activities in the value chain, enabling lead firms to ask much more of their suppliers in terms of rapid response, design collaboration and lower costs; in addition, they provide for closer product and process monitoring. At the same time, the rising competence of suppliers enables them to take on added responsibilities. As a consequence, firms are increasingly focusing on activities that they see themselves doing well and that enable them to capture higher returns, while outsourcing non-core activities. Given technological and logistical advances, suppliers need not be located in the same vicinity or even in the same country, adding relocation or off-shoring to the strategic options for firms. This is transforming vertically integrated hierarchical firms in a variety of industries into networks.

Global buyers increasingly want more information and indirect control, with regard to their suppliers, further and further back in the value chain. This requirement is driven by a number of factors. Competitive pressures are forcing firms to eliminate stocks to lower costs and risks, and improve flexibility. At the same time, final product markets are increasingly characterized by simultaneous consumer demands for higher quality, lower prices and adherence to increasingly stringent global standards. Therefore, in industries as diverse as electronics, computers, apparel and fresh vegetables, the trend is away from arms length market-based transactions to some form of linkage or alliance among firms along the value chain, which is the basis of production networks.

An IPN represents linkages within or among a group of selected firms in a particular GVC for producing specific products such as computers, mobile phones or cars. It is representative of how lead firms in such a network (such as Toyota, Cisco and Nike) organize their particular networks of subsidiaries, affiliates or suppliers to produce a given product. An IPN involves the distribution and coordination of geographically dispersed activities in multiple country locations. An IPN is sustainable even without a continuous value creation, which may be considered as a low-level production network. In this network, bottom firms remain naive and do not learn or move up the value chain. They remain a supplier of tiny components to bigger firms that, in turn, supply slightly more complicated components to firms positioned at a higher level in the GVC. However, if firms learn and add value at their level, they are not only in a position to supply goods efficiently but will also find new buyers and gradually start producing diversified products. Hence, such firms progressively move up to the next level of the supply chain. In this type of situation, there is a tendency for fresh investment to be made in the sectors for value addition. Perhaps a flying geese pattern is visible in this kind of situation where firms of one country will start investing in those firms in lower tier countries that can add value to that level and send efficiently produced goods to the higher tier country. So product space vacated by tier 1 countries is filled by firms in tier 2 countries, with the majority of these products comprising only parts and components.

In addition, during the process, several firms will emerge as coordinating firms and add value by integrating several manufacturing firms. These will be firms that have never owned production facilities and the basic role of which — and the basis for their competitive advantage — involves coordinating and integrating activities along a given value chain.

Because they own fewer assets and use the resources of partner companies, these firms generally require less capital; they also often generate higher revenues than traditional firms, under both expanding and adverse market conditions, in a growing range of product markets (Hacki and Lighton, 2001). Global suppliers, in particular, support lead firms in a variety of industries by organizing the supplier process, especially in GVCs. For successful IPNs, the emergence of these types of firms is also very important.

Continuous innovation and upgrading throughout the value chain is becoming a requirement in an increasingly wide range of product groups. This is the consequence of the growing intensity of global competition, shortening of product life cycles and the falling of barriers to entry in some industries. Innovation and upgrading by a given firm can allow it to reposition itself, and improve its pricing power and competitive position within a given network or value chain.

The key issue is that value creation can occur anywhere in the value chain. It is not necessarily associated only with high-end activities such as design or branding. Key innovations can also be the source of competitive advantage for a given production network as a whole within a GVC. For example, product innovation by Toyota can strengthen the competitive position of the set of firms in the Toyota-led production network — including its lower-tier automotive parts suppliers — against other such networks (for example, that of Ford) within the automobile industry. In general, there are four ways for a firm to improve its position or create additional value through innovation and upgrading:

(a) Process innovation — increasing efficiencies in the production process, for example through improvements in production technology or labour productivity;

(b) Product innovation — improving existing products or developing new products;

(c) Functional innovation — changing the mix of value chain activities undertaken by a supplier (for example, by moving upstream from manufacturing to product design);

(d) Chain innovation — using existing capabilities to upgrade to a new and more attractive value chain (for example, the shift of some firms in Taiwan Province of China away from producing microwaves to higher value personal computers).

Product and process standards are increasingly shaping production, especially within the framework of GVCs. There is growing pressure in key markets, such as the United States of America and the European Union, for global producers to adjust their operations to reflect not only profitability but also social and environmental objectives (for example, corporate social responsibility requirements). In addition, within the framework of GVCs, standards play the key role in ensuring product and process consistency and reliability along the chain. Therefore, producers wishing to participate within GVCs increasingly have to meet stringent requirements of a growing multiplicity of standards in a wide range of industries (for example, wood furniture, automobiles and electronics).

B. Small and medium-sized enterprises in international production networks

Leading firms in an increasing number of industries are reconfiguring their strategies and reorganizing their production networks; in the process, they are placing lead suppliers in a key role within such networks. This is particularly evident in two important industries, electronics and automobiles. Lead firms in those industries are becoming increasingly reliant on global suppliers, often based close to home but supported by subcontractors globally. These lead firms are surrounded by an increasing number of preferred first tier or global suppliers who, in turn, are surrounded by lower-tier suppliers of parts, components and other inputs. These lower-tier suppliers, further back in the network, are often SMEs doing low-skill, low value-added activities, producing relatively simple outputs and competing on the basis of low cost, and which have limited capacity and options for upgrading. However, this is likely to be an unstable position for a firm since it is easier to be replaced by another lower-cost supplier. The challenge therefore for an SME is to enter the chain as higher-tier supplier or alternatively as a lower-tier supplier but with the opportunity to upgrade — to move up the value chain and increase the value content of activities.

From the perspective of SMEs, the organization of production networks may be seen as an implicit agreement between the lead firm and SME suppliers. The lead firm provides market and technical information with the expectation that lower-tier suppliers will perform to meet global standards set by the lead firm. Supplier SMEs, on the other hand, invest in equipment and specialization with the expectation that the lead firms will continue to use their outputs and ideally, over time, provide opportunities for the firms to upgrade within the network. The key questions for SMEs in this context include:

(a) What does it take to become a supplier with the opportunity to upgrade in a particular GVC?

(b) How stable is this implicit bargain likely to be for a specific SME in a given network?

This spreads the risks and lowers the costs of doing business for lead firms. Global suppliers, in turn, are reorganizing networks within value chains, redefining the role and relationships of lower-level suppliers/producers further back in the chain. In this context, lead firms and their supporting global suppliers are increasingly looking for firms that already have the requisite production capabilities, not firms that need to be brought up to required standards — thus posing new challenges to the enterprises. This reorganization of networks is most pronounced in the automobile industry. As a consequence, global suppliers are emerging as key global investors, with significant influence on the export competitiveness of host countries and on the fortunes of SMEs. For SMEs, success depends on how fast they can start working on the four innovations (as discussed in the previous section) and how much flexibility they have in improving their position in the value chain.

C. Global value chain of the automobile industry

The automobile industry comprises a complex mixture of firms of different sizes and types that are producing an enormous variety of products, from very simple parts to technologically very complex systems. Organizationally, it was originally characterized by a high degree of vertical integration within major producers within the industry. The situation changed dramatically in the 1970s with the emergence of highly efficient, cost-competitive Japanese automakers as global players. The key change that revolutionized the competitive structure and dynamics of the industry was the displacement of Ford s mass production by Toyota s lean production innovation.[2] The major strategic move of the big players, which cascades down to the lowest tiers in their production networks, has been getting the right part or process, in the right numbers, to the right place at the right time and the right cost, with a minimum of inventories in process or in transit. As a result, the automobile GVC has evolved towards a complex, multi-tiered global supplier structure that has, along the way, transformed the key participants and relationships within the automobile industry s GVC.

Japanese automakers such as Toyota have long been known for their extensive reliance on multi-tiered supplier networks and high outsourcing levels. Ultimately, during the 1980s, because the United States and European automakers came under increasing competitive pressure — primarily from their Japanese competitors — they began to import finished vehicles from lower-cost locations (for example, Mexico, Canada and Spain) within the context of regional agreements/groups such as the North American Free Trade Agreement and the European Union. This was followed, in the 1990s, by a new wave of assembly and supplier plant construction in emerging markets such as Brazil, China, India, Mexico, Thailand and Viet Nam as well as in Eastern and Central Europe (Humphrey and Memedovic, 2003). In addition to supplier-driven factors, a key reason for this relocation was changes in demand patterns — an increasingly maturing market in developed countries and a projected growth market in emerging economies, particularly in Asia.

Consequently, the strategies of lead firms are evolving in different directions. They are offloading increasing responsibilities to their top tier suppliers, expecting considerably more in return in terms of activities along the value chain and geographic scope. The new demands on suppliers go well beyond excellence in manufacturing performance and low costs, which are becoming widely available. The international trade dynamics are quite interesting in the automobile sector. Firms from the United States and the European Union have been relocating their production plants and importing vehicles from those plants. On the other hand, Japanese players have not only been relocating their plants but also importing parts and components into the third country through an integrated international production network. The Japanese relocate their plants to increase their global exports from those countries (for example, Thailand). In addition, some tier 1 suppliers also move to

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[2] Toyota lean production includes the system of production where the designs are customized to meet orders by individual customers together with mass production models and designs for a common customer base.

different countries (mainly close to Assemblers new location) so that they can supply OEMs quickly.

The value chain system of the Japanese company Denso Corporation is a good example. Denso Corporation is the one of the largest automotive component manufacturers. It has a broad portfolio of automotive products related to thermal systems, power train control systems, electronic and electrical systems. It has its subsidiaries and affiliates in Japan, North America, Europe and India. Denso relies heavily on a geographically distributed and coordinated production network, primarily in Asia. Figure 1 shows how Denso s plants in different countries are integrated.

Figure 1. Denso Corporation regional production network in South-East Asia
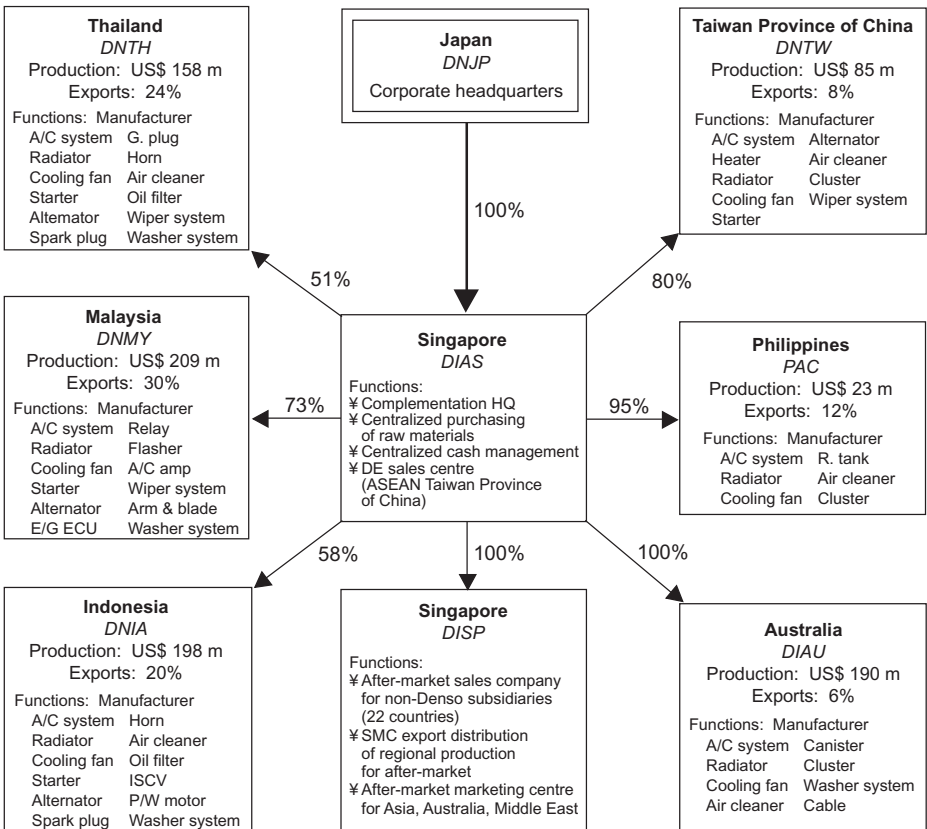
Source: Dicken, 2003.

Baldwin and Thornton (2008) argued that stages of manufacturing that used to be performed in a single nation are now often geographically unbundled in an effort to boost efficiency. Supply chains spread across many borders. Unbundling, which has accelerated since the 1990s, is the most important new element in the regionalism debate. Today s supply chain, especially in case of automobiles, is extremely complex. Figure 2 provides an example from Volvo to explain how different components produced in different countries are put together to produce the complete car. One of the major objectives of the assembler in today s world is to manage the supply chain very efficiently. The entire concept generates enormous potentiality of intra-industry trade in which developed and developing countries are actively participating.

Figure 2. Subcontractors for Volvo S40

Låskabel Kluster Slovakien

Förstärkare Alpine Japan

Navigationskontroll Mitsubishi Japan

Bildskärm Yazaki Japan

Krockkuddar, säkerhetsbälten Autoliv Sverige

Instrumentbräda Faurecia Frankrike

Nackskydd & stolvärme Kongsberg Norge

Hajtensantenn Delphi USA/Japan/ Brasilien

90% av karossen förmonterad Tower USA

Stöt- och vibrationsdämpare Vibracustic Tyskland

Motorns styrsystem Borgwarner USA

Dieselturbo Sanden Japan

Topplockspackningar Elringklinger Tyskland

Kylare Behr Tyskland

Turboladdare Garett England/USA

Stabilisatorer Allevard Rejna Frankrike/Argentina

Luft- och ventilation Mark IV Sverige/USA/Italien

Styrsystem för bensinmotor Bosch Tyskland

Automatlåda Aisim AW Japan

Belysning Automotive Lightning USA/Kanada

Avgassystem Faurecia/ Tenneco Sverige

Drivknutar GKN/Visteon USA

Luftkondi- tionering Valeo Frankrike

Högtalare Harman/ Becker Tyskland

Pedalkontroll Methode Electronics USA

Backspeglar Schefenacker Tyskland

Bränsletank Kutex Textron Tyskland

Dörrar Brose Tyskland

Glas Secunt Frankrike

Säten Johnson Controls USA

Bakljus & bromsljus Seima Frankrike

Kofångare Plastal Sverige/Holland

Fyrhjulsdrift Haldex Sverige

Hjul Borbet Tyskland

Bränsle- & bromsrör TI Automotive England/USA

Antisladdsystem Continental Teves Tyskland

Lås Hülsbeck & Fürst Tyskland

Dörrisolering Plastic Omnium USA

Source: Baldwin and Thornton, 2008, taken from a presentation by Ericsson Chairman Michael Treschow.

The table below provides a picture of the international trade patterns in the automobile industry considering the major auto producing countries. For example, United States and European Union automakers have expanded their production capacities in regional and global markets. On average, United States automakers have higher productivity compared with European producers but less than the Japanese (Warf, 1990).

Asian countries (mainly Thailand, China and India) are coming up fast in the automobile trade. A large portion of their trade is concentrated on the component segments. Body parts, brakes, gear boxes and other non-critical components are now mainly produced in these countries, and are being traded within and outside Asia. According to the WITS database, in 2006, China alone exported more than US$ 7 billion of small parts

Comparative statistics of automobile trade by major automotive producing and Asian countries

(Unit: US$ billion)

	Description	Exports					Imports				
		1995	2000	2004	2005	2006	1995	2000	2004	2005	2006
France	Auto components	10.32	12.19	15.79	15.72	17.35	5.73	6.83	12.73	13.04	13.86
	Vehicles	21.05	24.68	44.94	43.01	40.40	21.76	22.68	35.80	37.78	40.03
Germany	Auto components	12.56	15.95	31.71	34.11	38.36	7.25	9.80	18.66	21.63	23.60
	Vehicles	61.21	73.24	121.81	133.74	143.95	31.25	29.24	46.04	46.17	53.44
Italy	Auto components	6.05	7.17	11.95	12.56	13.25	2.48	3.46	5.35	5.70	6.74
	Vehicles	12.99	12.28	15.92	15.65	18.65	16.33	22.46	37.10	37.53	39.51
United Kingdom	Auto components	5.24	7.30	7.81	7.70	7.84	9.27	9.60	14.43	14.58	16.62
	Vehicles	13.13	16.59	26.24	27.96	27.84	19.18	26.60	42.94	43.60	44.86
Japan	Auto components	19.66	17.44	24.15	25.90	26.45	1.45	2.04	3.50	3.81	4.51
	Vehicles	58.42	70.85	92.20	97.51	113.43	11.09	8.19	9.92	9.89	9.58
Republic of Korea	Auto components	0.67	1.79	5.33	7.79	9.50	1.30	1.21	1.97	2.20	2.55
	Vehicles	9.45	13.64	26.63	29.52	32.92	0.61	0.35	1.39	1.77	2.50
United States	Auto components	23.28	30.50	29.39	29.72	31.77	21.16	29.22	39.11	42.25	45.50
	Vehicles	24.23	26.37	35.26	41.54	52.05	81.48	135.25	151.86	153.82	169.77
China	Auto components	0.38	1.13	4.43	6.63	8.93	0.90	2.13	7.34	6.73	9.04
	Vehicles	2.32	5.44	11.92	15.09	18.53	1.79	1.46	5.68	5.48	7.90
India	Auto components	0.28	0.36	0.75	1.25	1.38	0.38	0.28	0.66	0.77	1.01
	Vehicles	0.60	0.55	1.49	1.83	2.10	0.07	0.04	0.14	0.25	0.36
Thailand	Auto components	0.14	0.51	1.42	2.13	2.51	3.02	1.44	2.84	3.02	2.85
	Vehicles	0.58	1.99	4.31	5.99	7.54	2.22	0.53	0.71	0.83	0.81

Source: Calculated by the authors from the WITS database.

Notes: Data are as per SITC Rev3. For automotive components, code 784 has been considered.

(SITC 78432 and 78439). For India and China, this figure was close to US$ 1 billion and US$ 2 billion, respectively. China s exports of brakes, parts and gear boxes were worth more than US$ 2 billion in 2006, while for Thailand and India, the export value in this category was around US$ 1.25 billion. Interestingly, exports by these countries of critical components such as in engines are still negligible.

As the number of locations has multiplied, automakers have streamlined their operations on a global scale, focusing on vehicle design and component sourcing. General Motors and Ford, historically the most vertically integrated automakers, have increasingly spun off internal parts subsidiaries, shifting to outside suppliers. The trend of automakers performing far fewer functions with their assembly facilities than in the past changes the nature of the relationship between lead firms and their first tier suppliers. Higher-tier suppliers are moving into module design, lower-tier component sourcing and the provision of local content in newer markets. This involves a more centralized global sourcing, tighter coordination of global design efforts and consolidation of project management in core

regional locations. At the same time, the need to respond to unique market demands has created pressure to localize designs to cater to local consumer tastes. The growing need to provide automakers with modules on a global basis is driving expansion of first tier suppliers, who are the entry deciders, to GVCs for lower-tier, smaller suppliers (Kaplinsky and Readman, 2001).

There is an increasing preference among automakers for working with a smaller number of larger suppliers, at least for key components, and to transfer a greater degree of responsibility for aspects of design and engineering to preferred suppliers. In this context, consolidation within supplier networks has involved first tier suppliers embarking on a wave of vertical integration (for example, mergers, acquisitions and joint ventures) and the building of stable links with their preferred lower-tier (for example, second tier) suppliers. This has important implications for lower-tier suppliers whose participation and upgrading in GVCs increasingly depends on a fewer number of larger and more demanding higher-level suppliers. For example, the big three United States automakers (General Motors, Ford and Chrysler) have merged, and in some cases established commercial strategic partnerships, with European and Japanese automobile manufacturers. The Chrysler Daimler-Benz merger was initiated by the European automaker in order to strengthen its position in the United States market. Today, all leading Japanese car producers as well as BMW, Mercedes Benz, General Motors, Ford, Volvo and Peugeot assemble cars in Thailand alongside their legions of suppliers. Overall, there has been a trend among the world automakers to expand by merging with other giant automotive companies in overseas markets (Nag and others, 2007).

**Creation of regional assets through international production networks:
The case of Toyota in Thailand**

Since the 1960s, Thailand has become the hub of South-East Asia s automotive industry. There are a large number of car manufacturers operating in the region, surrounded by a considerable number of first tier suppliers, as well lower tiers, 50 per cent of which are fully or partly foreign-owned. The State plays an important role in coupling the regional assets with the strategic needs of global companies and their networks. In anticipation of a potentially large market after the completion of an Asian Free Trade Agreement (AFTA), the rationale for production in Asia was mainly to avoid existing tariff and non-tariff trade barriers as well as to integrate the region into an international production network.

Toyota is one of the largest carmakers in the world. During the past few years, cost factors and excess capacity in traditional home markets became major factors that influenced decisions to shift production to Thailand. In addition to the arrival of global car suppliers in the market, some global suppliers also entered the Thai market. Consequently, local component suppliers that were mainly SMEs had to restructure their businesses to compete for the new opportunities. Realizing that the company s success depended to a considerable extent on a strong network of quality suppliers, Toyota Thailand played an active role in this restructuring process. As a part of this effort, Toyota Thailand has successfully developed

long-term relationships with local suppliers that benefit both Toyota and the local industries. Toyota Thailand has undertaken commercial transactions with some 134 suppliers that can be categorized into five different groups: (a) independently operating Thai firms; (b) Thai companies that receive technical assistance from overseas; (c) local joint ventures with Japan; (d) joint ventures abroad; and (e) independent overseas suppliers.

Toyota s suppliers excel in quality, cost, delivery, engineering (including technology) and management. In addition, suppliers build and maintain a strong position regarding unique designs or special technologies while also being cost-competitive. They follow and monitor trends in information technology and are able to harmoniously amalgamate state-of-the-art technology with their business organization. However, the transfer of expertise to domestic suppliers is still rather limited. Once a critical mass is reached, Toyota will not only be able to attract additional foreign suppliers to the region, but will also be more likely to invest further in upgrading and developing local suppliers that the company might use in the future.

Toyota is assisting its suppliers, but it cannot solely develop the SMEs. Targeted government intervention is needed in terms of policies and support measures for SMEs. The Thai automotive institution acts as a key facilitator between SMEs and government departments to ensure the implementation of more coherent policies that are consistent with suppliers demands. Government departments relevant to the automobile industry are expected to cooperate and interact more closely in defining national strategy and regulations.

To achieve the goal of upgrading, a number of adjustments are needed in order to facilitate a positive strategic coupling process between global production networks and regional assets. These include efforts by the Government of Thailand to create regional institutions that help to transform and enhance the regional assets, especially in the field of education and vocational training, and cross-border negotiations to pave the way towards an integrated production system with the global forces of multinational companies and economic policy arrangements which may lead to greater regional development.

Source: Liker and Hoseus, 2008.

D. Constraints on the growth of small and medium-sized enterprises in the automobile industry

The automobile sector in most developing countries still faces a very restrictive environment. An extra burden of taxes (such as luxury tax), quotas etc. sometimes act as general barrier to the growth of the indigenous automobile as well as component sectors. Sometimes, when fully assembled cars enter q cross-border market with a lower price tag, it becomes quite a significant blow to the SMEs in the domestic component sector. The lack of effort to harmonize technical standards of the sector acts as barrier to SMEs. Those same technical standards help SMEs to produce their products for many clients.

Because of their size and isolation, individual SMEs are constrained from achieving economies of scale while purchasing inputs such as equipment, raw materials etc. and

accessing other services such as finance, and consulting services. SMEs are often unable to identify potential markets or take advantage of market opportunities that require large volumes, consistent quality and homogenous standards, and a regular supply. Small size is also acts as a constraint on accessing functions such as training, market intelligence, logistics and technology, making it difficult for SMEs to access global markets; it also limits their performance in increasingly open, competitive domestic markets.

Entering into a supplier relationship with larger enterprises in GVCs can mean a larger and more stable market for SME outputs, allowing such firms to better organize their production and improve their technology. However, GVCs also define a more demanding environment, requiring SMEs to work in a more formal manner and to upgrade not only their production methods, but also their management practices. SMEs are thus under additional pressure to innovate in upgrading their operations in order to participate in international markets. However, they often lack the resources to do so. Thus, small firms face constraints on their access to key business development services that large firms either have internally, or can purchase. In addition, a lack of investment restrictions prevents SMEs from expanding beyond borders and thus from gaining entry to new markets. Hence, they need to remain satisfied with a protected and sometimes inefficient domestic automotive market. This is noteworthy from the perspective of the consumer, who wants to receive high-quality products at reasonable prices.

Regionalism enhances growth in the component trade in East Asia and South-East Asia by maintaining barriers against non-members (while allowing free trade among members); however, it hinders the natural expansion of fragmentation-based specialization across countries, especially in South Asia. Rules of origin in trade agreements (free trade agreements or preferential trade agreements) can be more binding in the case of fragmented trade compared with trading in conventional final products. Since value added at each stage of production is normally relatively little, component trade presumably is more sensitive to trade costs and delays arising from rules of origin compliance.

E. Recommendations for supporting small and medium-sized enterprise participation in global value chains

1. Empowering small and medium-sized enterprises

Initiatives at different levels involving Governments and the private sector are necessary for facilitating the operation of SMEs in GVCs. Therefore, a public-private partnership is needed that can address the issues specific to SMEs (USAID, 2005). This should include development of the basic infrastructure and logistics systems as well as the policies, rules and regulations related to exports and imports, channelling of funds to SMEs, streamlining foreign direct investment etc.

For example, some economies see high taxation of the automotive industry as a means of raising revenue to meet fiscal requirements. Government policymakers may avoid the distorting impact of a high level of taxation. Also, policymakers would like to

facilitate easy availability of finance that may help the industry to grow and, in turn, help the component sector to flourish.

Since automotive investment requires the commitment of a large amount of capital for a lengthy period, investors will only want to get involved when the associated risks are minimized; this, however, can only be promoted by governments.

Improvement of the automobile infrastructure, such as roads, parking lots and complementary public transportation, and an appropriate balance between automotive infrastructure and public transport investment should be sought. Good infrastructure provides an incentive and thus attracts investments in setting up an automobile industry as well as end users.

In addition, high inflation in an economy results in the reduction of consumer purchasing power and confidence, thus negatively affecting growth of the industry. Potential investors must also have a very clear picture of the investment rules and a strong knowledge of the competitive business environment in order to make sound business decisions. In addition, customs policy needs to be simplified together with the full utilization of the electronic media in order to facilitate a faster flow of information, which will, in turn, boost integrity and business confidence necessary for an entrepreneur to achieve success.

2. Facilitating participation of small and medium-sized enterprises in global value chains

Facilitating the SMEs in GVCs requires:

(a) Strengthening vertical linkages of domestic producers to GVCs, which at the top of the chain involves strengthening linkages between relatively large national exporters and international buyers/global suppliers. At the bottom of the chain, this involves strengthening linkages between higher-tier suppliers/ buyers (foreign and domestic) linked to GVCs, and lower-tier suppliers (SMEs);

(b) SMEs require a wide range of assistance to meet the challenges of an increasingly competitive and complex international business environment in general, and for participating in GVCs in particular. Herein lies the business development services (BDS), the scope of which includes:[3]

 (i) Training in general business management, entrepreneurship and specific business skills such as marketing, accounting and finance;

 (ii) Counselling and advice, often on a firm-by-firm basis and, where particularly effective, as a follow-up to training;

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[3]   See Committee of Donor Agencies for Small Enterprise Development, 2001.

(iii)   Technology development and transfer, involving the adaptation, design and development of technologies and their dissemination to SMEs;

(iv)   Information on markets, buyers, technology that are increasingly available through ICT-based facilities as well through traditional mechanisms such as trade fairs, exhibitions and visits/tours;

(v)   Business linkages involving the development and strengthening of commercial linkages between SMEs and large firms (e.g., subcontracting) and among SMEs (e.g., development of enterprise clusters);

(vi)   Financing aimed at channelling funds to SMEs, either directly (e.g., special purpose financial institutions such as SME banks) or indirectly (e.g., through special windows of commercial banks), perhaps at preferential rates.

(c)   Cooperation through enterprise clusters can help SMEs improve their capabilities and bargaining power in accessing and upgrading within GVCs. Small firms generally find it hard on their own to overcome constraints on competing in global markets, and individually may be of limited interest to globally buyers and suppliers given the transactions costs involved. However, targeted cooperation among SMEs, as well as between SMEs and institutions in their surrounding environment (for example, industry associations, Government agencies and training institutions) can provide the basis for an effective response to competitive pressures, including the demands of membership in GVCs;

(d)   Achieving economies of scale beyond the reach of individual small firms in the purchase of inputs including technology as well as creating a pool of skilled workers, the use of state-of-the-art machinery, and the pooling of production capacity to meet large volume orders from global buyers. Cooperation in clusters can lead to collective efficiency based on scale. SME networks are groups of firms that (i) complement each other, (ii) are involved in different parts of the same value chain, and (iii) cooperate to achieve collective efficiency through specialization (for example, for gaining access to global markets and GVCs beyond the reach of individual SMEs). Although Thailand, for example, is an automobile hub, this status is under threat from rising labour and land costs. However, over time, this could provide opportunities for neighbouring countries to enter a GVC through a subregionally coordinated strategy of production relocation and integration. This would be consistent with the increasing complementation of production in South-East Asia being organized by global suppliers such as Denso. For example, Cambodia offers a rubber supply and relatively good quality processing, which could provide the foundations for the production of selected components;[4]

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[4]   Thailand Automotive Institute; available at www.thaiauto.or.th/index_eng.asp.

(e)   SME clusters and networks are often characterized by market failures and high levels of complexity. Consequently, the provision of such networks is likely to require both inter-firm and business-government cooperation, and may also require the establishment of new institutions or the strengthening of existing institutions, especially at the industry and local levels. For example, within the Association of Southeast Asian Nations, Thailand has emerged as the major focus of automobile and component production among Japanese and Western automotive companies; it is now a regional export hub for components and the third largest exporter of automotive products in South-East Asia and East Asia after Japan and the Republic of Korea. The Government of Thailand has invested heavily in cluster development and strengthening for the industry, particularly in Rayong and Samut Prakan provinces, south of Bangkok.

F. Conclusion

The development of a regional industry based on open market principles tends to lower manufacturing costs, and maximizes available facilities and resources by increasing the scale of production and promoting competition. This can lead to higher levels of efficiency, more affordable products and more consumer choice. Such integration makes the region much more attractive to global investors. Intraregional trade in parts (see the chapter by Aminian and others in this publication) and components is rising in East Asia, and the automotive components sector will follow this trend. This is a similar situation to that prevailing in Mexico s automotive industry, which has moved from being a high-cost, relatively inefficient production base, to a world-class competitive industry that is now completely integrated.

The entire phenomenon has placed new issues in front of the policymakers. As per Lawton (1999), traditionally industrial policies look into issues related to particular industries or sectors. Now the focus is getting shifted to functional approach. Policymakers need to look into the comparative advantage of a set of functions under the production process from which a new level of efficiency can be derived. As per Porter s (1985) value chain model, the functional approach looks into issues in operations, logistics or research and development rather than specific industry sectors such as semiconductors or aerospace. Lawton and Michaels (2000) claimed that Taiwanese policies were aimed at increasing competitiveness through the improvement of support services, including the transportation sector. They noted this was in contrast to sectoral policies such as those in United States or Japan that opened the way for the proliferation of SMEs in component production and the improvement of their position in the value chain. Added to this has been the investment in ICT, which has integrated fragmented production across Taiwan Province of China.

To improve the position of firms across the value chain, a three-pronged strategy may be pursued. First, an attempt should be made to increase efficiency within the existing national component of the value chain. Mapping the domestic chain will help policymakers to determine what type of trade support services should be provided, by which institution

and where. A commitment towards improvement of efficiency may be made through a public-private participation approach that can attract more foreign buyers and investors, thereby increasing the overall export performance of the sector and the expansion of the production network beyond the national borders.

Second, an approach may be developed to extend the national value chain. For example, local suppliers may be developed in such a way that they can replace foreign suppliers in the long term. Steps may also be taken to create value-addition links, such as grading, product finishing or packaging, which will help foreign buyers to identify quality local suppliers.

Third, a strategy may be taken to build up a new value chain. For example, a battery producer can produce batteries of different types that may be in demand among toys sector manufacturers, or laptop, mobile phones and even automobile producers. Similarly, byproducts can be commercially sold, which might generate a new value chain altogether (International Trade Centre, 2003).

Last but not least, as SMEs are significantly involved in the trading of parts and components in Asia, trade costs and other barriers need to be lowered for this sector. As mentioned above, components are mainly low value-added products, and a small decrease in tariff rates and the relaxation of non-tariffs and other barriers will give a major boost to SMEs. In addition, Government initiatives in providing incentives, protecting intellectual property rights and so forth will help SMEs to move up the value chain. This chapter shows that the involvement of efficient SMEs in a production network can also be driven by multinational corporations (MNCs) as in case of the automobile sector in Asia. Hence, in today s world, the development of public policies concerning international production networks requires a balancing strategy that links the requirement of SMEs and MNCs.

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Part II

Trade and production sharing

Chapter III

FOREIGN DIRECT INVESTMENT, INTRAREGIONAL TRADE AND PRODUCTION SHARING IN EAST ASIA

By Nathalie Aminian, K.C. Fung, Hitomi Iizaka and Alan Siu

Introduction

Free trade agreements (FTAs) have gained increasing global popularity. Although East Asia has lagged behind other regions in concluding FTAs, the 1990s saw a marked change in considering formal regional cooperation treaties in East Asia.[1] One of the leading factors that led to the emergence of such heightened interest is the rapid growth of intraregional trade. In turn, an important new development that has contributed to the expansion of intra-East Asian trade is the international exchange of intermediate goods, which includes parts and components rather than final goods. This phenomenon results from the emergence of a new form of global production — international fragmentation of production where the production process of a final product is split into two or more steps and each production step is undertaken in different locations across national boundaries. Many alternative names have been coined for such a phenomenon, including slicing the value chain (Krugman, 1995), vertical specialization (Hummels, Ishii and Yi, 2001), international production sharing (Ng and Yeats, 2001) and outsourcing (Hanson and others, 2001).

There has been growing evidence of the phenomenal increase in the international fragmentation of production around the globe in a variety of sectors, including textiles and apparel, machinery and transport equipment, consumer electronics, toys and furniture. Recent improvements in service links in terms of lower transportation and communications costs are also enhancing this trend. Moreover, the dispersed production networks created by such fragmentation appear to be more extensive in East Asia than in other parts of the world (Athukorala, 2006; Ng and Yeats, 2001 and 2003).

While there is growing evidence that trade associated with production fragmentation has been the driving force behind increased trade integration in East Asia, it is less certain as to the exact determinants of trade in components and parts in East Asia. In particular, it is known that trade in components and parts in general can be tied to foreign investment in the host countries or to foreign outsourcing to local producers. In the former case, foreign direct investment (FDI) plays an important role in the formation of the production network; in the latter case, local firms rather than FDI are important in fostering trade in components and parts.

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[1] For a comparative study of regional trade agreements in East Asia and Latin America, see Aminian and others, 2007.

It is possible that the global operations of multinational enterprises (MNEs) and consequent FDI have been instrumental in creating the prevalence of production fragmentation in East Asia. The international fragmentation of production occurs if such fragmentation leads to sufficient reduction in production costs. A part of cost reduction arises from the standard theory of comparative advantage. The theory predicts that firms locate a relatively labour-intensive segment of the production in the country where labour is abundant and locate the relatively capital-intensive segment of the production where capital is abundant. In other words, fragmentation of production is encouraged by factor-endowment dissimilarities. Unlike intra-industry trade of similar goods that favours exchanges of final goods among developed economies, this opens the door for many developing countries to be a part of the production network and to engage in trade.

It is widely recognized that a significant amount of trade in the global economy is carried out in the form of intra-firm trade, which is symptomatic of the prevalence of FDI-based production networks. However, the dispersed production networks can include both intra-firm and arm s-length transactions. Initially, the development of international production networks may expand the volume of exports from an FDI source country to the host country since the reallocation of production sites increases exports of intermediate goods as well as capital goods required to engage in production. It may also increase imports by an FDI source country as a host country increases exports of finished products back to the source country. This trade-creating effect of FDI may change over time if foreign affiliates start sourcing intermediate goods locally or from a third country.

Section A of this chapter examines the extent and patterns of trade activities among East Asian nations. An attempt is then made to analyse the impact of inward FDI on four types of trade flow: semi-finished goods; parts and components; capital goods; and consumption goods. In a standard gravity equation, the volume of trade between two countries is a positive function of their gross domestic product (GDP) and a negative function of the geographical distance between them. Starting with the specification, this analysis incorporates host country FDI inflow to examine the influence of FDI on trade in Asia.

Section B describes some characteristics of international trade in East Asia, particularly the extent of intraregional trade and the characteristics of trade by stages of production for each country. Section C discusses the general trend of inward FDI in East Asia. Section D presents a statistical analysis investigating the effects of FDI on the volume of trade in various East Asian countries. It begins with a description of the variables used in the regression analysis, followed by the estimation methodology. The results for all regressions are reported and analysed in section D2. A conclusion is given in section E.

A. Patterns of trade in East Asia[2]

1. Intraregional trade

Table 1 highlights the extent of East Asian trade, including Japan, with other East Asian economies and with other countries such as North America and the European Union in 2005. To do so, the overall trade matrix for the region is provided. It shows that, in general, either China or Japan was the main source of imports to other East Asian economies. The importance of China as an import source country can be seen in all East Asian countries. China has also become an important source of imports for non-regional markets such as the European Union and North America.[3] On the export side, table 1 acknowledges East Asia s importance in exporting to the world. The key players in the importance of global share of East Asia are again China and Japan, followed by Hong Kong, China. The share of intraregional exports is relatively high. Of all the countries examined, a significantly high share of intraregional exports is reported for China, Japan and Hong Kong, China. Another way the intensity of intraregional trade can be analysed is through the use of the trade intensity index. The trade intensity index is defined as:

$$\frac{X_{ij} \big/ X_i}{X_{wj} \big/ X_w} \tag{1}$$

where X_{ij} and X_{wj} are country i and world exports to country j; X_i and X_w are country i and world total exports. The numerator indicates the share of country i s exports to country j in total exports of country i, and the denominator indicates the share of world exports to country j in its total exports. If the bilateral trade intensity index has a value greater than one, the exports of country i to country j are larger than average world exports to country j. It implies that country j is relatively more important to country i s exports than to world exports.

Table 1 presents calculations of the trade intensity indices for East Asian countries as well as for some of their major trading partners. The overall intra-East Asia trade intensity index is 6.1, showing a high dependency on regional trade by all East Asian countries, although sizeable differences exist among those countries with regard to the extent of the dependency.

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[2]   As defined in table 1, in this chapter East Asia consists of China, Indonesia, Japan, the Republic of Korea, Malaysia, the Philippines, Singapore, Taiwan Province of China, Thailand and Hong Kong, China.

[3]   This set of data, which are based on calculations using the latest United Nations COMTRADE statistics, was provided by Francis Ng.

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Table 1. Matrix of East Asian trade in all goods, 2005

Partner (importer)	Exporting country/area										
	China	Hong Kong, China	Indonesia	Japan	Republic of Korea	Malaysia	Philippines	Singapore	Taiwan Province of China	Thailand	East Asia (10)
Export value of total trade in all goods (US$ million)°											
China	0	130 426	6 662	80 074	61 915	9 302	4 077	19 757	40 879	9 134	362 227
Hong Kong, China	124 473	0	1 492	35 960	15 531	8 242	3 339	21 522	30 721	6 128	247 408
Indonesia	8 350	1 265	0	9 214	5 046	3 322	476	22 103	2 336	3 960	56 073
Japan	83 986	15 304	18 049	0	24 027	13 184	7 203	12 532	14 481	15 029	203 796
Republic of Korea	35 108	6 540	7 086	46 630	0	4 739	1 391	8 052	5 575	2 250	117 371
Malaysia	10 606	2 419	3 431	12 531	4 608	0	2 457	30 385	4 154	5 685	76 277
Philippines	4 688	2 635	1 419	9 057	3 220	1 974	0	4 184	4 220	2 050	33 448
Singapore	16 632	6 046	7 837	18 436	7 407	22 009	2 706	0	7 656	7 459	96 187
Taiwan Province of China	16 550	6 769	2 475	43 578	10 863	3 912	1 887	8 976	0	2 694	97 704
Thailand	7 819	3 001	2 246	22 451	3 381	7 586	1 169	9 402	3 718	0	60 773
East Asia (10)[a]	308 213	174 405	50 698	277 932	135 997	74 272	24 704	136 913	113 739	54 390	1 351 264
European Union (27)[b]	145 613	42 942	10 347	87 819	44 354	16 614	7 008	27 907	22 124	15 019	419 745
Americas (13)[c]	192 173	53 088	11 478	158 201	54 543	29 879	7 945	26 411	33 272	19 702	586 691
World	761 953	292 119	85 660	594 941	284 418	140 963	41 221	229 652	189 393	110 110	2 730 431°
Share of intraregional trade in all goods from importer (%)											
China	0.0	36.0	1.8	22.1	17.1	2.6	1.1	5.5	11.3	2.5	100.0
Hong Kong, China	50.3	0.0	0.6	14.5	6.3	3.3	1.3	8.7	12.4	2.5	100.0
Indonesia	14.9	2.3	0.0	16.4	9.0	5.9	0.8	39.4	4.2	7.1	100.0

Table 1 (continued)

Partner (importer)	China	Hong Kong, China	Indonesia	Japan	Republic of Korea	Malaysia	Philippines	Singapore	Taiwan Province of China	Thailand	East Asia (10)
Share of intraregional trade in all goods from importer (%)											
Japan	41.2	7.5	8.9	0.0	11.8	6.5	3.5	6.1	7.1	7.4	100.0
Republic of Korea	29.9	5.6	6.0	39.7	0.0	4.0	1.2	6.9	4.7	1.9	100.0
Malaysia	13.9	3.2	4.5	16.4	6.0	0.0	3.2	39.8	5.4	7.5	100.0
Philippines	14.0	7.9	4.2	27.1	9.6	5.9	0.0	12.5	12.6	6.1	100.0
Singapore	17.3	6.3	8.1	19.2	7.7	22.9	2.8	0.0	8.0	7.8	100.0
Taiwan Province of China	16.9	6.9	2.5	44.6	11.1	4.0	1.9	9.2	0.0	2.8	100.0
Thailand	12.9	4.9	3.7	36.9	5.6	12.5	1.9	15.5	6.1	0.0	100.0
East Asia (10)[a]	22.8	12.9	3.8	20.6	10.1	5.5	1.8	10.1	8.4	4.0	100.0
European Union (27)[b]	34.7	10.2	2.5	20.9	10.6	4.0	1.7	6.6	5.3	3.6	100.0
Americas (13)[c°]	32.8	9.0	2.0	27.0	9.3	5.1	1.4	4.5	5.7	3.4	100.0
World	27.9	10.7	3.1	21.8	10.4	5.2	1.5	8.4	6.9	4.0	100.0
Trade balance of total trade in all goods (US$ million)											
China	0	-4 540	819	-28 403	23 267	-3 871	1 026	-759	20 951	-2 024	6 466
Hong Kong, China	112 248	0	1 201	34 389	13 488	5 390	1 344	17 314	28 834	4 626	218 835
Indonesia	-87	-659	0	-11 603	-3 139	-1 052	-610	11 656	-2 202	832	-6 865
Japan	-16 421	-17 732	11 143	0	-24 376	-3 450	-827	-6 702	-31 460	-11 020	-100 845
Republic of Korea	-41 713	-6 723	4 217	22 215	0	-946	-887	-548	-7 629	-1 622	-33 635
Malaysia	-9 487	-4 935	1 283	-2 138	-1 403	0	685	3 050	-1 039	-2 404	-16 388
Philippines	-8 182	-2 506	1 097	1 357	904	-1 246	0	-464	1 435	168	-7 437

Table 1 (*continued*)

Partner (importer)	Trade balance of total trade in all goods (US$ million)										
	China	Hong Kong, China	Indonesia	Japan	Republic of Korea	Malaysia	Philippines	Singapore	Taiwan Province of China	Thailand	East Asia (10)
Singapore	118	-11 374	-1 634	11 741	2 089	8 594	-1 024	0	2 716	2 078	13 304
Taiwan Province of China	-58 131	-14 874	1 134	25 514	2 813	-2 419	-1 561	-4 347	0	-1 808	-53 679
Thailand	-6 173	-3 049	-1 201	6 893	692	1 544	-489	1 888	851	0	956
East Asia (10)[a]	-27 827	-66 393	18 059	59 966	14 335	2 544	-2 345	21 089	12 457	-11 173	20 712
European Union (27)[b]	71 641	20 169	4 488	28 976	16 940	3 260	3 328	4 612	4 599	4 211	162 224
Americas (13)[c]	110 889	34 689	5 809	69 776	14 849	13 045	-1 154	552	7 622	8 528	264 606
World	102 001	-8 042	27 959	79 074	23 183	26 379	-5 732	29 602	7 801	-8 054	274 171
Trade Intensity Index of total trade in all goods											
China	—	8.0	1.4	2.4	3.9	1.2	1.8	1.5	3.9	1.5	2.4
Hong Kong, China	5.1	—	0.5	1.9	1.7	1.8	2.5	2.9	5.0	1.7	2.8
Indonesia	1.5	0.6	—	2.1	2.4	3.1	1.5	12.8	1.6	4.8	2.7
Japan	2.7	1.3	5.2	—	2.1	2.3	4.3	1.4	1.9	3.4	1.9
Republic of Korea	2.2	1.1	4.0	3.8	—	1.6	1.6	1.7	1.4	1.0	2.1
Malaysia	1.3	0.8	3.6	1.9	1.5	—	5.4	12.1	2.0	4.7	2.5
Philippines	1.2	1.8	3.3	3.0	2.2	2.8	—	3.6	4.4	3.7	2.4
Singapore	1.4	1.3	5.8	2.0	1.6	9.9	4.1	—	2.6	4.3	2.2
Taiwan Province of China	0.8	0.8	1.0	2.6	1.3	1.0	1.6	1.4	—	0.9	1.3
Thailand	1.1	1.1	2.8	4.1	1.3	5.8	3.1	4.4	2.1	—	2.4

Table 1 (*continued*)

Partner (importer)	Trade Intensity Index of total trade in all goods										
	China	Hong Kong, China	Indonesia	Japan	Republic of Korea	Malaysia	Philippines	Singapore	Taiwan Province of China	Thailand	East Asia (10)
East Asia (10)[a]	4.9	7.3	7.2	5.7	5.8	6.4	7.3	7.3	7.3	6.0	6.1
European Union (27)[b]	1.7	1.3	1.0	1.3	1.4	1.0	1.5	1.1	1.0	1.2	1.3
Americas (13)[c]	2.2	1.6	1.2	2.3	1.7	1.8	1.7	1.0	1.5	1.5	1.9

Source: Computations based on United Nations COMTRADE statistics.

Note: The country/area groups are:

[a] East Asia (10) = China, Indonesia, Japan, the Republic of Korea, Malaysia, the Philippines, Singapore, Taiwan Province of China, Thailand and Hong Kong, China.

[b] European Union (27) = European Union 25 members in 2005 plus Bulgaria and Romania.

[c] Americas (13) = Canada, United States, Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela.

2. Composition of trade by stage of production in East Asia

The above section leads to the conclusion that East Asian countries have generally become increasingly interdependent in trade. This section considers the characteristics of intraregional trade in East Asia.

As mentioned above, recent decades have witnessed an increasing trend towards production fragmentation, which has been a key driver of global trade integration. In order to examine the extent to which each East Asian country specializes in the trade of final goods and intermediate goods, the value of exports and imports for each country is decomposed accordingly. A similar decomposition is done for the European Union 15, North America and the world by way of comparison.

Table 2 examines the annual growth rate of trade in total manufactured goods and compares them with the rate of trade in finished and intermediate goods. The table provides strong evidence that trade in intermediate goods resulting from the international fragmentation of production has been the engine driving Asian trade during recent years. Between 1998 and 2004, exports of intermediate goods grew at a rate of 12.6 per cent

Table 2. Average growth rate of total manufactured goods, intermediate goods and final goods, 1998-2004

Country/area	Imports			Exports		
	Total	Intermediate goods	Final goods	Total	Intermediate goods	Final goods
China	24.7	22.8	27.8	22.1	24.7	20.0
Hong Kong, China	7.5	10.7	3.6	9.0	12.7	4.3
Indonesia	10.2	9.6	9.0	9.6	8.1	7.6
Japan	9.3	11	7.4	8.3	9.3	6.8
Malaysia	10.8	11.1	10.3	9.5	10.1	9.4
Philippines	5.9	6.9	0.6	-0.2	-1.0	2.3
Republic of Korea	18.2	16.3	25.9	13.9	13.2	14.8
Singapore	8.1	9.4	5.5	9.3	13.2	2.1
Thailand	15.2	15.5	13.5	11.3	121.3	7.1
North America	6.7	5.6	7.8	3.9	4.1	3.3
European Union 15	7.6	6.8	8.5	7.7	7.4	7.8
East Asian nations*	13.1	14.1	10.5	11.9	12.6	10.7
World	8.5	8.5	8.3	8.7	8.9	8.1

Sources: Compiled from United Nations COMTRADE database and author s calculations.

* Countries/areas included in East Asian nations are Japan, Ryukyu Islands, China, Republic of Korea, Taiwan Province of China,

Singapore, Thailand, Sarawak, peninsular Malaysia, Sabah, the Philippines, Indonesia and Hong Kong, China.

among Asian nations on average, which is faster than the growth rate of 10.7 per cent for exports of final goods. On the import side, trade in intermediate goods grew almost 4 per cent faster than trade in final goods. Compared with other parts of the world, the growth rate in intermediate goods is much faster among Asian nations, both for exports and imports. The growth rate of exports of intermediate goods for the world, European Union 15 and North America was 8.9 per cent, 7.4 per cent and 4.1 per cent, respectively, while that of imports was 8.5 per cent, 6.8 per cent and 5.6 per cent, respectively. This reflects the fact that international fragmentation of production has prevailed more among the countries of East Asia relative to other regions of the world.

Table 3 further distinguishes different types of intermediate goods, that is, parts and components (IMPC) and semi-finished goods (IMSF). Finished goods are also further classified into consumption goods (FC) and capital goods (FCA). Primary goods (P) form the last category. This classification by different stages of production is useful in showing how each nation of East Asia is involved in production fragmentation and to what extent they differ from other regions of the world. The classification is explained in annex 1.

The most notable difference between the world and the East Asian nations can be found in the trade pattern of parts and components. At the global level, approximately one fifth of both imports and exports comprise the exchange of parts and components. That share remained stable between 1998 and 2004. Table 3 shows very different trends for different regions. For example, North America experienced declines of 5.1 and 2.8 percentage points, respectively, in its import and export shares of parts and components from 1998 to 2004. The European Union 15 also experienced a similar declining trend in its parts and components trade. The trend in East Asia contrasts markedly with the other regions, with the share of the parts and components trade increasing during the same period. It accounted for more than 30 per cent of imports in 2004, which was 5 percentage points higher than the share in 1998. The upward trend can also be found, although to a lesser extent, on the export side, the share of which increased from 26.2 per cent in 1998 to 28.8 per cent in 2004.

For finished products, the most distinguishing difference between the world and the Asian nations can be found in the trade pattern of consumption goods, particularly on the import side. Approximately 25 per cent of world imports take the form of consumption goods. In the case of North America, the share is almost 32 per cent. Among the East Asian nations, the corresponding share only amounts to 14 per cent in 2004, which was a decline of more than 5 percentage points from 1998.

There is considerable variation in the trade patterns across East Asian countries. A general picture of the division of production processes in East Asia can be drawn from table 3 as follows: China s trade structure can be characterized by a larger import share of parts and components and semi-finished products, and by a large export share of consumption goods as well as capital goods. This reflects China s role in production fragmentation as a processing and assembly base for finished products destined for the world market. In final goods exports, one notable trend is the shift from consumption goods to capital goods, suggesting that China has been moving up the value-added chain.

Table 3. Trade pattern by stage of production, 1998-2004

(Unit: Per cent)

Import year		China	Hong Kong, China	Republic of Korea	Singapore	Indonesia	Malaysia	Philippines	Thailand	Japan	East Asian nations*	North America	European Union 15	European Union 16	World
1998	FC	4.52	33.95	5.50	12.70	5.72	5.87	8.41	8.13	31.13	19.46	30.30	0.28	27.95	25.39
"	FCA	18.89	15.58	13.80	21.80	22.13	18.08	10.84	18.33	14.16	16.53	19.70	0.17	17.45	18.37
"	IMPC	23.27	19.67	28.40	42.60	17.27	47.70	49.40	30.18	14.90	25.40	22.66	0.19	18.70	20.65
"	IMSF	46.13	27.30	34.30	16.30	39.14	21.12	25.14	35.77	23.05	28.64	18.84	0.27	27.14	26.31
"	P	5.17	1.84	16.30	3.40	8.69	2.87	6.06	6.28	13.59	7.42	4.39	0.06	5.58	5.92
2001	FC	4.29	31.07	9.20	12.10	5.82	7.09	8.14	7.21	30.54	17.82	31.83	0.28	27.63	25.09
"	FCA	20.49	17.01	16.40	20.50	16.68	16.91	10.85	19.28	14.12	17.14	19.06	0.18	17.66	18.07
"	IMPC	27.57	25.22	26.80	44.10	16.58	46.02	45.05	32.07	16.25	27.25	19.67	0.19	18.52	20.71
"	IMSF	37.84	23.53	29.80	14.30	39.36	21.54	25.91	31.85	22.31	26.48	18.18	0.25	25.27	24.90
"	P	7.61	1.65	15.00	3.50	13.04	3.61	8.46	8.06	12.66	8.09	6.06	0.07	6.57	6.97
2004	FC	3.90	25.10	8.80	10.40	8.15	7.53	6.85	7.63	27.38	14.02	31.77	0.30	29.60	24.47
"	FCA	22.85	15.57	18.20	18.70	15.96	15.28	6.81	18.05	13.98	17.71	19.31	0.17	16.68	18.06
"	IMPC	31.92	33.72	24.50	46.90	15.19	44.78	55.01	29.89	17.55	30.44	17.64	0.17	16.86	20.62
"	IMSF	30.24	22.16	32.70	13.60	37.75	23.04	20.96	33.55	23.54	26.03	18.98	0.26	25.55	25.09
"	P	9.05	1.54	13.70	4.00	12.35	3.89	5.62	8.89	13.37	8.52	7.47	0.07	6.98	7.69

Import year		China	Hong Kong, China	Republic of Korea	Singapore	Indonesia	Malaysia	Philippines	Thailand	Japan	East Asian nations*	North America	European Union 15	European Union 16	World
1998	FC	47.27	37.18	18.16	10.11	19.85	13.27	16.13	35.45	17.60	25.30	16.32	0.28	27.70	24.66
"	FCA	14.66	12.45	18.22	27.22	4.08	17.33	12.03	12.43	25.90	18.93	21.37	0.19	19.15	17.84
"	IMPC	10.42	19.61	25.17	39.75	5.18	38.55	61.23	27.01	31.20	26.22	26.92	0.18	18.07	20.50
"	IMSF	22.86	27.74	36.14	13.84	37.67	23.38	8.95	18.57	21.50	23.80	23.74	0.28	28.10	26.51
"	P	4.30	1.69	0.66	0.79	17.86	5.52	1.61	4.43	0.40	2.58	7.22	0.03	3.05	6.71

Table 3 *(continued)*

(Unit: Per cent)

Import year		China	Hong Kong, China	Republic of Korea	Singapore	Indonesia	Malaysia	Philippines	Thailand	Japan	East Asian nations*	North America	European Union 15	European Union 16	World
2001	FC	41.31	33.56	18.04	7.86	20.30	12.60	14.38	31.77	17.50	23.99	16.68	0.28	27.93	23.62
◦	FCA	18.33	14.18	22.29	22.51	6.55	19.92	16.05	12.19	23.90	19.37	20.04	0.19	19.10	17.20
◦	IMPC	14.94	26.16	24.13	45.30	9.54	37.68	59.97	27.59	31.50	28.00	26.55	0.18	18.04	20.43
◦	IMSF	20.64	24.40	28.67	14.11	40.58	21.40	7.36	19.38	22.00	22.34	23.42	0.27	26.73	24.59
◦	P	3.81	1.47	0.40	0.61	20.63	4.89	1.36	3.92	0.60	2.64	8.08	0.03	3.18	9.33
2004	FC	32.67	25.79	15.45	6.76	19.38	10.60	8.90	27.52	16.40	21.07	16.87	0.29	29.13	23.69
◦	FCA	25.34	13.76	23.16	17.81	7.21	18.43	12.70	15.22	23.30	20.77	18.49	0.17	17.23	17.10
◦	IMPC	18.23	35.14	29.22	47.11	10.57	35.37	30.38	25.48	31.40	28.84	24.12	0.17	17.01	20.43
◦	IMSF	20.78	23.58	27.04	17.09	38.84	25.19	8.38	21.79	23.40	22.82	25.39	0.28	27.51	26.07
◦	P	2.14	1.48	0.44	0.61	20.93	6.31	1.70	6.37	0.80	2.37	9.92	0.04	3.83	7.59

The general feature of three Association of Southeast Asian Nations (ASEAN) countries, Malaysia, the Philippines and Indonesia, is a large share of intermediate goods among both imports and exports. The decomposition of intermediate goods shows that while parts and components account for a large share of imports and exports in Malaysia and the Philippines, semi-finished goods account for a large share in Indonesia. The import structure of Thailand is similar to the above-mentioned three ASEAN countries; however, the distinctive difference can be found in its export structure, that is, a much larger share of exports of consumption goods. In this comparison, Singapore is treated separately from the four other ASEAN countries due to its relatively high wages, and is discussed in later paragraphs.

Japan s trade structure is quite a contrast to those of the developing Asian countries. Japan is a large supplier of parts and components, reflecting Japanese industries turning to other countries of the region for the assembly of Japanese products (Jones and others, 2004). The trend is also marked by a small export share of consumption goods. Table 3 also indicates that capital goods hold a large share of Japan s exports, which reflects in part large foreign direct investment (FDI) outflows from Japan. Production fragmentation has been facilitated greatly by multinational corporations and consequent FDI, which has had a significant impact on exports from investing countries to host countries. This may be due to the fact that new production facilities need to be equipped using capital goods from the investing country or because new capital goods are required for expanding existing production capacities.

A large share of parts and components trade can also be found in countries such as Singapore and Hong Kong, China, where wage costs are much higher relative to other developing countries of East Asia. In Singapore, parts and components make up a substantial share of its imports and exports. Almost 47 per cent of both imports and exports are induced by the need for parts and components. This represents Singapore s pivotal role as an outsourcing centre in East Asia, particularly high-tech manufacturing, and as a hub for many leading international firms. Singapore s superior logistics sector as well as finance industry helps to form world-class supply chains in the region.

Most noteworthy is the rapid increase in the parts and components share of imports by Hong Kong, China, during recent years. The share increased from less than 20 per cent in 1998 to almost 34 per cent in 2004. Because it is a trading hub for electronic parts and components in Asia, a number of multinational manufacturers have set their offices in Hong Kong, China, in order to source parts of key components and take advantage of its free port status. At the same time, the Hong Kong, China, electronics industry is characterized by the heavy dependence on imported parts of key components. Local firms source worldwide as well as from Chinese firms on the mainland. On the export side, electronics industry is the largest export industry, accounting for nearly 50 per cent of the total exports of Hong Kong, China, in 2006. Furthermore, two thirds of the electronics exports of Hong Kong, China, comprise parts and components. What contributes to the large amount of parts and components exports is the involvement of Hong Kong, China, in outward processing

production in China. This led to an increase in the export share of Hong Kong, China, from 19.6 per cent in 1998 to 35.1 per cent in 2004.

B. General trend in FDI inflow in East Asia

Table 4 shows that although global FDI inflow continued to be dominated by the EU15 since 1980, East Asia (without Japan) has gained in importance as recipients of FDI over time until mid-1990s in terms of both volume of inward flows and their world share. Total value of inflows of FDI into eight East Asian economies that amounted to US$ 4.5 billion in 1985 increased to US$ 71.8 billion in 1995. Their share in total world inflows rose from 7.7 per cent in 1985 to 22.9 per cent in 1995. The surge of FDI came to a halt however in 1997 with the Asian financial crisis. The swift recovery from the crisis in terms of FDI volume in 1998 was only followed by another sharp downturn in 2001. Since 2003, FDI inflow to the region has been on a rise again. It reached US$ 127.49 billion in 2004, a 50 per cent increase over 2003 with a backdrop of improved economic performance, a more favorable FDI policy environment and a rise in merger and acquisition activities in the region. Considering 27 per cent increase in global FDI inflow in 2004, a gain in the region s FDI inflow is spectacular. It continued to grow in 2005 reaching US$ 151.26 billion, which was up almost thirty four-fold from 1985. The region accounted for over one fifth of global FDI inflow in 2005.

Table 4. Inward FDI and share of world inward FDI, 1985-2005

US$ million	1985	1990	1995	2000	2001	2002	2003	2004	2005
Japan	642.0	1 753.0	41.5	8 322.7	6 241.3	9 239.3	6 324.3	7 815.7	2 775.0
Republic of Korea	218.0	759.0	1 250.0	8 591.0	3 692.0	2 975.0	3 785.0	7 687.0	7 198.0
Taiwan Province of China	342.0	1 330.0	1 559.0	4 928.0	4 109.0	1 445.0	453.0	1 898.0	1 625.0
Hong Kong, China	-267.2	3 275.1	6 213.4	61 924.1	23 776.5	9 681.9	13 623.6	34 034.7	35 897.0
China	1 956.0	3 487.1	37 520.5	40 714.8	46 877.59	52 742.86	53 505.0	60 630.0	72 406.0
Singapore	1 046.8	5 574.7	11 591.3	16 484.5	14 121.6	5 821.5	9 330.8	16 059.8	20 083.0
Thailand	160.0	2 575.0	2 070.0	3 350.0	3 886.0	947.0	1 952.0	1 064.0	3 687.0
Malaysia	694.7	2 611.0	5 815.0	3 787.6	553.9	3 203.4	2 473.2	4 624.2	3 967.0
Philippines	12.0	550.0	1 459.0	1 345.0	899.0	1 792.0	347.0	469.0	1 132.0
Indonesia	310.0	1 092.0	4 346.0	-4 550.0	-2 978.4	145.0	-596.9	1 023.0	5 260.0
East Asia*	4 472.2	21 253.9	71 824.2	136 575.0	94 937.2	78 753.7	84 872.6	127 489.7	151 255.0
ASEAN 5	2 223.5	12 402.7	25 281.3	20 417.1	16 482.1	11 908.9	13 506.0	23 240.0	34 129.0
North America	21 862.0	56 004.0	68 027.0	380 788.0	187 144.0	96 608.0	60 761.0	123 910.	133 265.0
European Union 15	15 965.0	89 459.0	116 324.0	674 278.0	362 418.0	283 863.0	240 572.0	185 227.0	387 858.0
World	57 959.0	201 614.0	340 336.0	1 409 568.0	832 248.0	617 732.0	557 869.0	710 755.0	916 277.0

Percentage	1985	1990	1995	2000	2001	2002	2003	2004	2005
Japan	1.11	0.87	0.01	0.59	0.75	1.50	1.13	1.10	0.30
Republic of Korea	0.38	0.38	0.37	0.61	0.44	0.48	0.68	1.08	0.79
Taiwan Province of China	0.59	0.66	0.46	0.35	0.49	0.23	0.08	0.27	0.18
Hong Kong, China	-0.46	1.62	1.83	4.39	2.86	1.57	2.44	4.79	3.92
China	3.37	1.73	11.02	2.89	5.63	8.54	9.59	8.53	7.90
Singapore	1.81	2.77	3.41	1.17	1.70	0.94	1.67	2.26	2.19

Table 4 (*continued*)

Percentage	1985	1990	1995	2000	2001	2002	2003	2004	2005
Thailand	0.28	1.28	0.61	0.24	0.47	0.15	0.35	0.15	0.40
Malaysia	1.20	1.30	1.71	0.27	0.07	0.52	0.44	0.65	0.43
Philippines	0.02	0.27	0.43	0.10	0.11	0.29	0.06	0.07	0.12
Indonesia	0.53	0.54	1.28	-0.32	-0.36	0.02	-0.11	0.14	0.57
East Asia*	7.72	10.50	21.10	9.70	11.40	12.70	15.20	17.90	16.50
ASEAN 5	3.84	6.15	7.43	1.45	1.98	1.93	2.42	3.27	3.72
North America	37.72	27.78	19.99	27.01	22.49	15.64	10.89	17.43	14.54
European Union 15	27.55	44.37	34.18	47.84	43.55	45.95	43.12	26.06	42.33

Source: UNCTAD, *World Investment Report*, various years.

   * East Asia excludes Japan.

The largest contributor to the region s rising share in global FDI inflow has been China. FDI inflow to China has grown dramatically over the past two decades since China initiated its open-door policy in 1978. It was in the mid-1980s when FDI inflows surged and marked the beginning of China s ride on the wave of globalization. After it achieved unprecedented growth during the early 1990s, however, FDI inflow started to decline. This downturn continued until the next wave of FDI inflow hit China in 2000. Despite the widespread decline in global FDI inflow between 2000 and 2002, China was able to increase FDI inflow with expectations of further deregulation and opening up following that country s accession to WTO. In 2005, FDI in China was 37 times higher than in 1985, accounting for 7.9 per cent of global FDI inflow and almost 48 per cent of aggregated FDI inflow to East Asia.

ASEAN 5 experienced a significant increase in FDI inflow during the early 1990s, accounting for 7.4 per cent of global FDI inflow in 1995. The Asian financial crisis in 1997 triggered a sharp overall decline in the region s FDI inflow of 40 per cent during 1998, although individual national performances varied greatly. In order to enhance the attractiveness of the region for FDI inflow, the ASEAN Investment Area was established in 1998 and required the member countries to reduce or eliminate investment regulations and conditions that might impede investment flows. This provided a new impetus for economic integration among ASEAN member countries. The ASEAN Free Trade Area (AFTA) became fully operational on 1 January 2003 and this added momentum to economic integration in the region. FDI inflows to the ASEAN 5 continued to increase for two consecutive years, reaching US$ 34 billion in 2005.

Among the ASEAN 5, Singapore has been a leader in attracting FDI, which has played a pivotal role in that country s economy. A liberal open-door policy and extensive FDI promotion policies towards foreign investors attracted a massive amount of FDI. In 2005, Singapore retained its position as third-largest recipient in East Asia, attracting US$ 20 billion, which accounted for approximately 59 per cent of total FDI inflow to the ASEAN 5.

FDI inflows to the East Asian tigers (the Republic of Korea, Taiwan Province of China and Hong Kong, China) began to increase rapidly in the early 1990s against the backdrop of strong economic growth and the liberalization of investment regimes. The slowdown of the domestic economy and the regional economic situation as a result of the Asian financial crisis prompted the sharp decline of FDI inflows to Taiwan Province of China in 1998. As a result, the share of the East Asian tigers in global FDI declined to 2.8% during the year. Since then, the share of these economies has quickly picked up and has reached at 5.4% in 2000. Their share in global FDI inflow peaked at 6.1 per cent in 2004 before declining slightly to 4.9 per cent in 2005.

Hong Kong, China, experienced an unprecedented FDI boom in 1999 after it recovered from the turmoil of the Asian financial crisis. The surge reflected the role of Hong Kong, China, as a financial hub for business in the region, particularly in China. Hong Kong, China, is by far the largest foreign investor in China, and its investments have increased dramatically since early 1980s. A significant portion of the investment originates from China

itself. Much of the capital outflow of China that takes place either through legal or illegal channels to Chinese firms located in Hong Kong, China, finds its way back to China as FDI. This type of round tripping of funds is mostly used to escape regulations such as barriers to trade or to gain eligibility for incentives available only to foreign investors (for example, tax concessions). Hong Kong, China, is also used as a stepping stone for investment to China. A large number of foreign firms use affiliates in Hong Kong, China, to invest in China on their behalf. In addition, many overseas companies have regional offices as well as regional headquarters in Hong Kong, China.

Hong Kong, China, has been experiencing another surge in FDI inflows during recent years. This partly reflects the Closer Economic Partnership Arrangement (CEPA) signed between China and Hong Kong, China, which opened up new opportunities not only for firms in Hong Kong, China, but also for foreign investors. In 2005, Hong Kong, China, attracted almost 25 per cent of the FDI inflow into the region, and accounting for 3.9 per cent of global FDI inflow.

Since the 1997 Asian financial crisis, the Republic of Korea has adopted extensive policy reforms in favour of FDI such as simplifying the approval procedure, the removal of various restrictions on foreign ownership, strengthening tax incentive systems and financial support for foreign investors, among others. As a result, FDI inflows began to surge in 1997 and maintained strong growth until 2000. In 2004, the inflows picked up once again and the Republic of Korea absorbed more than 1 per cent of global FDI inflow.

The inflow of FDI to Taiwan Province of China grew rapidly, particularly towards the end of the 1990s, due to a large-scale reform of various laws and regulations on FDI inflows as well as further opening up of the financial sector. However, after 2001, the absolute magnitude of FDI in Taiwan Province of China has been small, which is a clear contrast to the recent surge in FDI inflow in the Republic of Korea.

C. Gravity equation

1. Model specification and estimation method

The gravity model has been widely applied in various studies of international trade. The gravity equation in international trade using cross-country data is commonly written as:

$$X_{ij} = f(GDP_i, GDP_j, F_{ij}) \qquad\qquad (2)$$

where X_{ij} is the value of the trade flow of goods from country i to country j, GDP_i and j are the GDP in country i and j, respectively, and F_{ij} is a vector of factors that influence the trade flow. The factors commonly used include the physical distance between the two countries i and j, which is used as a proxy for transportation costs, a dummy variable that assumes the value 1 if i and j share a common language and 0 otherwise, a binary variable assuming the value 1 if i and j share a common land border and 0 otherwise, and a dummy variable assuming the value 1 if i and j have a free trade agreement and 0 otherwise.

The model specification is augmented in order to examine the economic impact of FDI inflow on the host country s trade. China, Singapore, the Republic of Korea, Thailand, Malaysia, the Philippines, Indonesia, Japan and Hong Kong, China are included in the estimation here for 1998-2004. Of particular interest is the impact of FDI on the various forms of trade in East Asia. One possible specification issue for including FDI in the gravity analysis is the endogeneity problem. More specifically, the causal relationship between FDI and trade may be driven by unobserved common factors such as variation in Government policy, technology, tastes and so forth. The strategy adopted here to deal with this issue is to estimate FDI at the first stage using various instrumental variables while in the second stage, bilateral trade is estimated with the predicted value of FDI as the additional independent variable. The error term in the FDI equation then is uncorrelated with the error term in the trade equation.

The model predicts that FDI flow and bilateral trade flows between any two countries as:

$$FDI_i = \alpha_0 + \beta_1 DIFPGDP_{ij} + \beta_2 DIFWAGE_{ij} + \beta_3 DUTY_i + \beta_4 CTAX_i + \beta_5 CORRUPT_i + \beta_6 GSTAB_i + \beta_7 LAW_i + \beta_8 TEL_i + \varepsilon_{ij} \tag{3}$$

$$T_{ij} = \gamma_0 + \rho_1 GDP_i + \rho_2 GDP_j + \rho_3 DIST_{ij} + \rho_4 DMB_i + \rho_5 FDI_i + \delta_{ij} \tag{4}$$

where subscripts i and j refer to the reporting country and the partner country. The definitions of the variables in the above equation are listed below. Annual data for eight countries from 1998 to 2004 are used in the estimation. Equation (4) is run on semi-finished products, parts and components, capital goods and consumption goods separately. In addition, the impact of an each explanatory variable on bilateral import flows and export flows are examined separately.

¥ FDI_i — the level of inward FDI in the reporting country

¥ $DIFPGDP_{ij}$ — the absolute value of the difference in per capita GDP between i and j.

¥ $DIFWAGE_{ij}$ — the absolute value of the difference in wages between i and j.

¥ $DUTY_i$ — import tariff of the host country.

¥ $CTAX_I$ — corporate tax rate of the host country

¥ $CORRUPT_i$ — an index of corruption in the host country

¥ $GSTAB_i$ — an index of Government stability in the host country

¥ LAW_i — an index of rule of law in the host country

¥ TEL_i — the number of telephone main lines per 1,000 people in the host country.

¥ $DIST_{ij}$ — the geographical distance between the most important cities in i and j.

¥ T_{ij} — the volume of exports or imports by country i to or from j in total trade, intermediate or final products.

¥   GDP — gross domestic product.

¥ DMB_{ij} — a dummy variable that is 1 if i and j share a common border and 0 otherwise.

The independent variables included in equation (3) are believed to exert an influence on inward foreign direct investment in each country of East Asia by changing the investment environment through institutional and policy changes, and economic conditions.

Two variables have been incorporated in this analysis that may influence the level of foreign production — the absolute difference of per capita GDP (DIFPGDP) and wages (DIFWAGE). The gap in per capita GDP and wages between a reporting country and a partner country should have a positive influence on FDI of the vertical type.[4] Trade in intermediate goods can be very sensitive to cost differences between two countries. For production fragmentation to take place, additional coordination costs must be offset by a reduction in the total production costs. Factor price differentials between countries allow at least one fragment to be produced more cheaply in another country (Deardorff, 2001). The gap in production costs between the two countries must be sufficiently large in order for production fragmentation to occur.

Policy-related variables, tariff barriers proxied by import duty and corporate tax rates have also been incorporated. MNEs, which set up vertical production networks, may be encouraged to invest in a country with relatively low tariff barriers due to lower costs of their imported intermediate products. Under such an arrangement, goods-in-process may cross multiple borders while they are being produced. Since a tariff may be imposed each time these goods-in-process cross a border, the effect of the lower tariff rate on the reduction in the cost of production of these goods can be magnified.

Another policy-related variable that can influence a host country s location advantage is the host country s corporate or other tax rates. As global profit maximizers, MNEs can be assumed to be sensitive to tax factors, since such factors have a direct effect on their profits. Evidence of significant negative influence from corporate tax rates on FDI have been reported in previous studies by Wei (1997), Gastanaga and others (1998) and Hsiao (2001).

Also included in equation (3) are institutional factors, the level of corruption, the stability of each Government and the rule of law. Corruption can discourage FDI by inducing a higher cost of doing business. Hines (1995) showed that FDI from the United States grew more rapidly in less corrupt countries than in more corrupt countries after 1977. Wei (1997) presented an alternative explanation of the negative and significant effect of corruption on FDI. Unlike taxes, corruption is not transparent and involves many factors that

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[4]   For a very interesting study on how vertical intra-industry trade helps integrate East Asia, see Wakasugi (2007).

are more arbitrary in nature. An agreement between a briber and a corrupt official is difficult to enforce and it creates more uncertainty over the total questionable payments or the final outcome. Wei demonstrated the fact that this type of uncertainty induced by corruption leads to a reduction in FDI. Political stability of a Government and the sound rule of law can also be important factors in the inflow of FDI. Uncertain political environments and their related risks can impede FDI inflows despite favourable economic conditions.

The last variable, TEL, included in equation (3) is a proxy for quality of infrastructure. On the other hand, as theorized by Jones and Kierzkowski (1990), such fragmentation is not costless. Unlike final goods, the intermediate goods produced among network member countries may cross multiple international borders. This incurs additional costs of transportation as well as costs of a wide variety of services associated with coordinating production, shipments, sales of final goods and so forth.

We now turn to equation (4). The volume of trade in both intermediate and final products is expected to be positively related the market size of the two countries concerned. The variable GDP captures the idea that larger countries trade more than small countries as they can offer more differentiated products to satisfy a wide variety of consumers. At the same time, for producers of both finished products and intermediate products, the larger the market size of both exporting and importing countries due to the presence of economies of scale, the larger the volume of trade. According to the theory of fragmentation outlined by Jones and others (2004), scale of production would determine the lengths to which the division of labour can proceed since the level of the workers specialization increases as the scale of production rises. As Grossman and Helpman (2005) proposed, the variable can also be treated as a proxy for the thickness of the markets; this has a positive impact on the location of outsourcing, as the likelihood of the firms finding an appropriate partner in their search increases as the size of a country increases.

The distance variable is considered to be a crucial factor in explaining international trade since distance increases transportation costs, which is a trade-resistance factor that negatively influences the bilateral trade volume. In particular, transportation costs are considered to have a larger impact on decisions concerning production fragmentation, as each intermediate product that belongs to the same value-added chain may cross national boarder multiple times. Geographical proximity, on the other hand, promotes bilateral trade flows as it reduces transportation needs, information costs, cultural unfamiliarity and so forth. Therefore, the expected sign of the variable is negative. In this study, the great circle distance between the capital cities of the reporting country and the partner country is used.

The final variable is a dummy variable with regard to whether the importing country and exporting country are adjacent. As the variable is assumed to capture additional proximity between trading partners that facilitate trade, it is expected to be positively related to the level of trade.

Except for the dummies, all variables are log-linearized. Sources for the variables are listed in annex 2.

2. Estimation results

Table 5 represents the results of the estimations. It reveals a positive and statistically significant influence of FDI inflow on trade across the board, indicating a complementary relationship between trade and FDI inflow in East Asia. However, a large variation exists in the magnitude of the impact of the variable between exports and imports, and across the four types of disaggregated data. First, FDI inflow appears to have a much larger effect on total imports compared to exports. It shows that a 1 per cent increase in FDI inflow leads to a 0.1 per cent increase in regional bilateral exports, whereas it leads to a 0.24 per cent increase in regional bilateral imports.

Second, an examination of the disaggregated data shows that there are stark differences in the size of the coefficient among four types of trade flows. The impact of FDI inflow is the largest on trade in parts and components in both exports and imports. This suggests a strong two-way trade expansion effect from production fragmentation, reflecting the supply of these intermediate goods by network member countries to each other. An interesting finding is that FDI inflow leads to a greater expansion of parts and components imports than exports. This is generally consistent with the fact that members of regional production networks with low wage costs, such as Malaysia, the Philippines and Thailand, had deficits in regional parts and components trade (Ng and Yeats, 2003).

An equally large impact of FDI inflow is found on trade in capital goods. On the import side, the result may be attributed to various trade liberalization policies and institutional changes that many East Asian economies pursued during the 1990s to help generate greater openness for trade. For example, many East Asian economies unilaterally eliminated their tariffs on capital and intermediate goods. In addition, duties on trade in information technology products were completely eliminated due to the completion of the Information Technology Agreement (ITA) in 1996. This is important because among the commodities actively traded in the East Asian region (excluding Japan) the leading category is information technology products. Regarding institutional changes, the establishment of export processing zones (EPZ), where manufacturers can enjoy import duty exemption on imported inputs as well as extensive usage of a duty drawback system on the imported parts and components used for the production of exports, effectively reduces the impact of tariff barriers on trade.

The coefficient on consumption goods behaves differently compared with other categories of trade flows in response to FDI inflow. The size of the coefficient on exports of consumption goods is less than half the size of that on imports. While production fragmentation boosted intraregional trade in parts and components, East Asia shows heavy reliance on the rest of the world for its exports of final goods. As a result, East Asia continued to increase its trade surplus during the past decade with the largest part of the surplus accounted for by trade in consumption goods (Gaulier and others, 2006). The high dependence on the extraregional trade flow of consumption goods may be reflected in the low responsiveness of consumption goods exports to FDI inflow in the region.

Table 5. Regression estimates of the determinants of bilateral trade flows, 1998-2004

Explanatory variables	Exports				
	Total EX	˚SF	˚PC	˚CA	Con
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
GDP, reporter	0.468 [c]	0.612 [c]	0.308 [c]	0.564 [c]	0.456 [c]
	(0.033)	(0.034)	(0.043)	(0.041)	(0.038)
GDP, partner	0.530 [c]	0.577 [c]	0.398 [c]	0.529 [c]	0.613 [c]
	˚(0.030)	(0.031)	(0.040)	(0.038)	(0.035)
DIST	-0.646 [c]	-0.548 [c]	-0.898 [c]	-0.830 [c]	-0.895 [c]
	˚(0.071)	(0.073)	(0.094)	(0.089)	(0.083)
DB	0.470 [c]	0.766 [c]	-0.202	0.149	0.357 [a]
	˚(0.130)	(0.135)	(0.173)	(0.164)	(0.153)
FDIHAT	0.103 [c]	0.051 [a]	0.288 [c]	0.286 [c]	0.127 [c]
	˚(0.020)	(0.023)	(0.024)	(0.025)	(0.026)
Adj. R-Sqr.	0.557	0.598	0.442	0.580	0.534
No. of obs.	489 ˚	489 ˚	489 ˚	489 ˚	489

Explanatory variables	Imports				
	Total IM	˚SF	˚PC	˚CA	Con
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
GDP, reporter	0.293 [c]	0.436 [c]	0.095 [b]	0.302 [c]	0.358 [c]
	˚(0.029)	(0.035)	(0.042)	(0.041)	(0.038)
GDP, partner	0.651 [c]	0.734 [c]	0.638 [c]	0.794 [c]	0.690 [c]
	˚(0.027)	(0.032)	(0.039)	(0.038)	(0.035)
DIST	-0.548 [c]	-0.459 [c]	-0.794 [c]	-0.700 [c]	-0.734 [c]
	˚(0.063)	(0.076)	(0.091)	(0.089)	(0.081)
DB	0.334 [c]	0.675 [c]	-0.197	0.015	0.410 [c]
	˚(0.117)	(0.140)	(0.167)	(0.164)	(0.151)
FDIHAT	0.236 [c]	0.079 [c]	0.377 [c]	0.301 [c]	0.269 [c]
	˚(0.018)	(0.021)	(0.025)	(0.025)	(0.023)
Adj. R-Sqr.	0.660	0.588	0.535	0.587	0.598˚
No. of obs.	489 ˚	489 ˚	489 ˚	489 ˚	489

Notes: Heteroskedasticity-consistent standard errors (White) are in parentheses. A constant is included in the model, but is not reported. SF, PC, CA and Con denote semi-finished, parts and components, capital and consumption.

[a] Significant at 10 per cent; [b] Significant at 5 per cent; [c] Significant at 1 per cent.

In contrast, exports of semi-finished goods appear to be explained by the basic gravity equation without FDI inflow. Unlike in other trade flow categories, the coefficient on FDI inflow is found to be extremely small and marginally significant. On the import side, although the level of significance increases, the size of the coefficients remains small.

The coefficients for the two standard variables, the market size of both reporting and partner countries and the distance have expected signs and are statistically significant at the 1 per cent level for intermediate goods and final goods. The overall results for GDP are consistent with the hypothesis that larger countries with a large production capacity are more likely to enjoy economies of scale and to export more, while at the same time importing more due to a higher capability of absorption.

Between imports and exports, the GDP of the partner country appears to play a more important role in imports than exports. The difference is pronounced fin the case of parts and components and capital goods, whose coefficients for exports are 1.6 times and 1.5 times larger than those for imports, respectively. The results are indicative of extensive involvement of East Asian countries in production fragmentation. Under such an arrangement, each country limits home production to particular product lines and complements them with imports of other parts and components. The demand for imports of those products is largely driven by their partner s demand and economic condition. At the same time, increased demand from a trading partner may necessitate higher imports of capital goods to compensate for required higher production capacity.

The other potential role that GDP can play in trading in parts and components is to act as a proxy for the thickness of the intermediate goods market. The relatively small coefficient indicates that while it can play a role, it is not a perfect proxy.

Although Asia is reported to have the lowest freight costs among developing countries (UNCTAD, 2004), distance is found to be an important resistance factor for trade flows of both exports and imports under each type of trade. Among the different types of trade, the influence of distance is equally large for parts and components, capital goods and consumption goods.

Distance is likely to represent not only transportation costs, but also other costs incurred in delivering a good to the final user, such as telecommunications, local distribution, and regulatory costs. Lowering the costs of these service links that connect the two production blocks is crucial for countries to successfully be an integral party of production networks. The relatively large impact of the distance variable found in this study implies that high potential benefits for East Asian countries can accrue by reducing the level of trade costs.

The adjacency dummy, which is included to capture additional advantages arising from geographical proximity, shows significant empirical evidence in explaining both total exports and total imports. The dummy variables may capture various factors that lead to reduced business transaction costs. For example, firms in adjacent countries are likely to have a better understanding of business practices than firms from a different business

environment. This familiarity certainly helps to reduce the cost involving uncertainty. The familiarity with the business environment also helps to reduce the difficulty of finding an appropriate outsourcing partner in production networks. The significance is lost, however, in the case of parts and components trade and capital goods trade.

D. Conclusion and policy implications

This chapter examines the trend and nature of East Asian trade, paying particular attention to East Asian trade integration via the trade of components and parts. It shows that East Asia has been rising as an important trading entity in the world. The United Nations COMTRADE BEC classification is utilized to categorize trading into semi-finished goods, components and parts, capital goods and final consumption goods. This classification makes it possible to more clearly decipher the growing importance of the various modes of trade in East Asia. The study finds that the increasing importance of East Asia as a trading region is due, at least partially, to the rising trade in components and parts, that is, due to the increasing density of the production and trade network in East Asia.

The question of whether foreign direct investment plays a role in import and export performance and trends of intra-East Asian trade is a very interesting one. Using an instrumental variable approach, the present study reveals that, in general, FDI is indeed important in explaining the performance of intra-East Asian import and export trade, particularly in the case of trade in components and parts, followed by trade in capital goods. This helps to confirm that FDI is an important driving force in trade associated with production fragmentation in East Asia.[5] Furthermore, in terms of the stages of product cycle associated with production fragmentation, fragmentation can be viewed as having at least two broad phases: (a) one phase associated with intra-firm trade or trade with other foreign multinationals; and (b) a second phase associated with outsourcing to local firms. Given the results of the present study, which show that FDI is an important factor in explaining trade in components and parts as well as capital goods, it can be concluded that the fragmentation stage of outsourcing to the local firms is still premature for East Asia. In comparing the results with recent literature on trade with heterogeneous firms, it is clear that these results are consistent with the empirical findings in this growing body of work. Many of the United States firms that trade (imports and exports) with East Asia are large multinationals. There is a general belief that these firms (together with Japanese multinationals) are responsible for the production network phenomenon in East Asia. The fact that the present study finds FDI to be important to trading in components and parts as well as in capital goods shows that foreign affiliates play a significant and necessary role in these forms of trade.

Given the importance of FDI to the production network in East Asia, one direct policy implication is that measures aimed at trade liberalization are not going to be sufficient. Policymakers who wish to participate further in the network will also need to enact policies that will facilitate FDI. These policies include lower tax rates, more stable and transparent

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[5] A study by Chantasasawat and others (2004) also showed that FDI in East Asia and China were complementary.

Government and an economy governed by a better rule of law. The localization of the fragmentation process will also require better institutions such as improved enforcement of intellectual property rights as well as a more impartial and predictable judicial system. In summary, improving the institutions of the East Asian economies will be important policies to expanding and strengthening the production and trade network in East Asia, which, in turn, will strengthen economic integration among the East Asian economies.

Annexes

Annex 1. Commodity codes

1	Food and beverages
11	Food and beverages, primary
111	Food and beverages, primary, mainly for industry (P)
112	Food and beverages, primary, mainly for household consumption (F-C)
12	Food and beverages, processed
121	Food and beverages, processed, mainly for industry (IM-SF)
122	Food and beverages, processed, mainly for household consumption (F-C)
2	Industrial supplies nes
21	Industrial supplies nes, primary (P)
22	Industrial supplies new, processed (IM-SF)
3	Fuels and lubricants
31	Fuels and lubricants, primary (P)
32	Fuels and lubricants, processed
321	Fuels and lubricants, processed, motor spirit*
322	Fuels and lubricants, processed (other than motor spirit) (IM-SF)
4	Capital goods (except transport equipment), and parts and accessories thereof
41	Capital goods (except transport equipment) (F-CA)
42	Parts and accessories of capital goods (except transport equipment) (IM-PC)
5	Transport equipment, and parts and accessories thereof
51	Transport equipment, passenger motor cars (F-C)
52	Transport equipment, other
521	Transport equipment, other, industrial (F-CA)
522	Transport equipment, other, non-industrial (F-C)
53	Parts and accessories of transport equipment (IM-PC)
6	Consumption goods nes
61	Consumption goods nes, durable (F-C)
62	Consumption goods nes, semi-durable (F-C)
63	Consumption goods nes, non-durable (F-C)
7	Goods nes*

Note: P = primary goods; IM-SF = semi-finished goods under intermediate goods; IM-PC = parts and components under intermediate goods; F-CA = capital goods under final goods; F-C = consumption goods under final goods.

  * 321 and 7 are treated as others .

Annex 2. Source of variables

FDI: Aggregate FDI inflows of each country, aggregate FDI inflows to East Asia, and aggregate FDI to the world are from UNCTAD.

CORRUPT: An index of corruption from the International Country Risk Guide by the PRS Group. It ranges from 0 to 6, with a higher number indicating a lower level of corruption.

GSTAB: An index of Government stability from the International Country Risk Guide by the PRS Group. The range is from 0 to 12. A higher score means higher stability of a Government.

Law: An index of Law and Order from the International Country Risk Guide by the PRS Group. It ranges from 0 to 6, where a higher number indicates a better system of law and order.

DUTY: Import duties are from the International Monetary Fund s Government Finance Statistic Yearbook.

WAGE: Average wages in manufacturing from the United Nations Common Database, LABORSTA and official country websites.

CPTAX: Corporate income tax rate, measured in percentage points, from *Worldwide Summary* by PricewaterhouseCoopers website.

TEL: Telephone mainlines (per 1,000 people) from World Development Indicators.

GDP: GDP in United States dollars are from EconStats.

PGDP: Per capita GDP are from EconStats.

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Part III

Trade in services

Chapter V

MEASURING AND MODELLING RESTRICTIONS ON TRADE IN SERVICES: A CASE OF ASIA-PACIFIC ECONOMIC COOPERATION ECONOMIES[1]

By Greg McGuire

Introduction

Trade in services is a rapidly growing area of international trade. Cross-border trade in services represents about 20 per cent of total world exports and in the past 10 years, has been growing at around 7 per cent in United States dollar terms, slightly faster than merchandised trade (WTO, 2007). However, significant restrictions exist that limit flows of world and Asia-Pacific Economic Cooperation (APEC) services trade.

Since the General Agreement on Trade in Services (GATS) was implemented in 1995, APEC has implemented a number of initiatives to progress the liberalization of trade in services. Much of the analysis of services trade liberalization thus far, which feeds into negotiations, is taking place with relatively unsophisticated data and analysis tools. Yet, such tools are important for making informed policy decisions on the best way to further progress in services trade liberalization.

However, this is not easy. Measuring restrictions on trade in services is more difficult than measuring restrictions on trade in goods. International trade in goods involves an exchange of a product between a producer and consumer, and restrictions on such trade usually take the form of a tariff. The effect of trade restrictions on the price of goods can be measured relatively easily by the amount of the tariff. In contrast, trade in services involves a less tangible exchange between the producer and the consumer, and restrictions usually take the form of government regulations (Productivity Commission, 1999; WTO, 1994).

Too much regulation by Governments, which is the most common form of restrictions, and its effect on the price of services, is often difficult to identify and quantify. Information on government regulation for different economies with different regulatory regimes is difficult to collect and interpret. However, it is necessary to measure the extent of restrictions on trade in services to analyse the costs and benefits of removing such restrictions. Sophisticated general equilibrium models can be used to provide an insight into the projected real welfare gains from liberalization for the APEC region.

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[1]   This chapter draws on the author s work for the Australian National University and the Australian Productivity Commission. The project was partially funded by the Australian Research Council. An earlier version was published as Findlay and McGuire, 2005.

This chapter brings together a comprehensive set of measures for restrictions on trade in services for APEC member economies. It outlines a framework that directly measures restrictions on trade in services, estimates the effect of restrictions on the price and cost of services, and the projected real welfare gains from liberalizing trade in services.

A. Liberalization and regulation of services

1. Why liberalize trade in services?

The liberalization of trade in services increases competition, lowers prices and improves quality. The international competition that comes with trade liberalization is the best guarantee that domestic service suppliers are, and will remain, efficient. Through competition forces, service suppliers reduce waste, improve management and become more efficient (McGuire, 2003b). Costly rent-seeking activities, for the purpose of gaining or maintaining preferential access to a services market, are also less feasible in a liberalized environment. These pressures reduce the operational costs of providing services, with overall welfare increasing as cost savings are passed on to consumers — in a competitive market — in the form of lower prices.

As excess profits of service suppliers are reduced and the number of service suppliers expands, there is a corresponding increase in the choice of services for consumers and businesses. With more service suppliers, they tend to be more attentive to the needs or demands of consumers, and provide services in line with those demands. Innovations produce new services where existing services previously met consumer demands inadequately. Consumers are also more attentive to purchasing value for money services and, as service suppliers respond, the quality of services supplied improves.

Liberalization not only introduces competition and improves the quality of services, but it also facilitates trade in goods. Financial services provide essential trade finance and insurance, telecommunications services facilitate the communication of transactions across borders while transport services provide a means of delivery from one location to another.

If there are clear benefits from trade liberalization, why measure restrictions? These benefits do not accrue equally to economies or through the same transmission mechanisms. A major component in determining the effects is to first measure the size of the restrictions placed on service sectors, because the greater the restrictions the higher the prices paid by consumers and generally the lower the welfare.

Robust and comparable cross-country measures of the costs of restrictions on trade in services can also be used by economies to illustrate the costs to their trading partners of maintaining restrictions. This is particularly important at a time when trade in services is becoming an increasingly important part of the international trade agenda. Economies are exchanging information that supports participation in international trade negotiations, preparing case studies on the benefits of liberalization and developing options for economies to present their liberalization commitments.

2. What to measure?

Researchers aim to measure the effect of restrictions on market outcomes — profit margins or price-cost margins, prices and costs. This provides the necessary input for general equilibrium modellers to simulate the global welfare gains of removing restrictions.

Measuring restrictions and their effects raises the vexing question of what is a restriction. Restrictions can be any type of measure that limits a service being supplied to a consumer in the most efficient way. The restriction can be imposed on a service, such as limits on the distribution of certain services, or on a service supplier, such as a limit on the number of firms in a services market. The effect of restrictions can be partially or fully reflected in the price of a service.

Why do restrictions exist? With many restrictions taking the form of too much government regulation, Governments impose restrictions because either they succumb to the calls from powerful interests groups to be protected or they overregulate without realizing their implications.

Restrictions can be regulatory or non-regulatory in nature. Regulatory restrictions that are imposed by a Government also impinge on competition. An example is stringent and unjustified licensing requirements. Non-regulatory restrictions are usually private sector practices that restrict the effective competition in a market (for example, the buyer-seller networks that exist in some distribution services markets of economies). In some instances, regulation is often required to correct for the effect of non-regulatory restrictions and ensure effective competition (see below).

Restrictions on trade in services are also non-regulatory and regulatory, and have the effect of limiting the free flow of international trade. These restrictions are often only thought of in terms of being discriminatory or treating foreign service suppliers less favourably than domestic service suppliers. Restrictions can, however, also be non-discriminatory. Non-discriminatory restrictions treat domestic and foreign service suppliers equally but are more than necessary to ensure the quality of a service. For example, a restriction that prohibits the entry of foreign service suppliers into a market is discriminatory. A restriction that prohibits the entry of all service suppliers is non-discriminatory when it is placed on a market where there is a monopoly supplier.

The prevalence of non-discriminatory measures that affect trade in services makes it difficult to differentiate measures with legitimate regulatory objectives from those that are intentionally or unintentionally restrictive. In the case of discriminatory measures, most are aimed at restricting trade, but some measures have legitimate regulatory objectives. These issues are central to why Governments regulate. Governments regulate when markets fail to produce optimal economic outcomes, and for addressing environmental, equity and other social objectives that are unlikely to be met by market forces (Coghlan, 2000). Regulation that meets these objectives by using the most efficient regulatory instruments can be considered as achieving optimal economic outcomes or, for measurement purposes, an optimal level of regulation.

3. An optimal level of regulation

Too much regulation above the optimal level can be restrictive (box 1). It stifles competition, restricts trade and increases prices of services for consumers. However, lower levels of regulation in some sectors does not necessarily equate to better regulation. In some sectors, regulation is essential to foster competition and produce optimal economic outcomes. In network sectors, such as telecommunications, elements of the system possess natural monopoly characteristics. These services need to be regulated to facilitate access to networks for new operators, limit market power of large incumbents and ensure efficient prices are charged.


Box 1. Effect of different types of restrictions on prices

Restrictions on trade in services limit the entry, or operations after entry, of service suppliers in a market. Many of these restrictions affect the price of services. The effect of different types of restrictions that solely affect prices is shown in figure 1. D_s is the demand for a service in an economy. For simplicity, the service market is competitive, and the only effect on prices is that restrictions and supply curves are horizontal. Foreign service suppliers are also assumed to be more efficient at supplying the service than domestic service suppliers.

P_o is the lowest price at which a service can be supplied when regulation is at an optimal level to ensure the quality of the service — that is, there are no unnecessary discriminatory or non-discriminatory restrictions. P_o can also be viewed as the world price. Prices start at P_m and fall as restrictions are removed. P_m is the price where there is a monopoly supplier and government regulation prohibits new entrants. Under these conditions the consumer pays the highest price for the service. P_d is the price where there is free and open domestic competition among domestic service suppliers, but no international competition. P_f is the price of a service with restrictions on foreign service suppliers. Foreign service suppliers are able to enter and operate in the market but have more onerous restrictions than domestic service suppliers. Domestic service suppliers continue to supply services in the market, but at the price set by the more efficient foreign service supplier. P_n is the price of a service with non-discriminatory restrictions — applied equally to foreign and domestic service suppliers — that are more than necessary to ensure the quality of the service.

The imposition of different types of anti-competitive restrictions on domestic and foreign service suppliers raises the price of services in the domestic market above P_o. Too much regulation can have adverse effects on prices while too little regulation can have adverse effects on quality. P_i is the price at which there is insufficient regulation. The price of the service is lower than P_o but the quality is poor.

Figure 1. Effect of different types of restrictions that solely affect prices

Price

P_m ....

P_d ....

P_f ....

P_n ....

P_o ....

P_i ....

D_s

Quantity
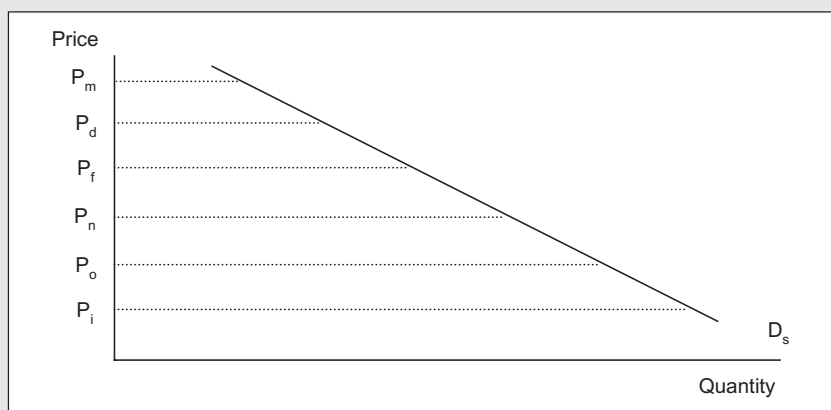
Many restrictions are thought to be price-increasing, but some restrictions are cost-increasing or can be a combination of price-increasing and cost-increasing. Pure cost effects, although not illustrated, will increase the costs of service suppliers. Price and cost effects will increase the prices and costs. The extent of the increase in prices is dependent on the ability of service suppliers to pass on these increased costs in the form of higher prices to consumers.

While too much regulation can be restrictive, too little regulation can also have adverse economic effects. Too little regulation can cause externalities by being less stringent than necessary to achieve the desired objective. For example, Governments regulate (a) financial services to ensure stability, (b) professional services to ensure quality advice and (c) transport services to ensure safety. Kalirajan (2000) argued that too little regulation could also be a restriction. Inadequate protection of intellectual property rights can be a deterrent to foreign service suppliers establishing a presence in a domestic economy.

From a measurement perspective, the more than necessary or restrictive component of regulation needs to be determined. In practice, this is achieved by measuring the difference between the level of regulation that is necessary (or optimal) and the total level of regulation. This difference can be considered as a restriction on trade in services. This approach is practical, given the many constraints that come with international comparisons of regulation; however, but several qualifications need to be made.

There are always difficulties in judging an optimal level of regulation for use in empirical work. Among other things, judgements need to be made about the suitability of the instruments chosen to meet the desired objectives and the appropriateness of the levels at which the instruments are set. International assessments of regulatory regimes are even harder as Governments often pursue different policy objectives, and the needs, priorities, values and circumstances can differ between economies (Doove and others, 2001).

4. Linking levels of regulation to market outcomes

Restrictions on trade in services affect the economic performance of services suppliers — profit margins or price-cost margins — in different ways. Restrictions on trade in services can have the effect of being:

(a)   Price-creating —restrictions protect incumbent firms from competition, which allows firms to increase their prices or rents and expand their price-cost margins; or

(b)   Cost-creating — restrictions limit potential or existing firms from operating efficiently and thus push up business costs.

Many restrictions or too much regulation protect incumbent service suppliers from the entry of new competition, which allows them to increase their prices or create rents and expand their price-cost margins.   Restrictions on the entry of foreign service suppliers include prohibitions on entry, placing limits on the number of firms or strict licensing requirements.

While many restrictions are thought to increase prices, some restrictions increase the costs of service suppliers (Dee, 2001). Most economies regulate to ensure that services are provided at or above a certain standard. This regulation can have the effect of limiting potential or existing service suppliers from operating efficiently, thus pushing up business costs.   This increased cost may be partially or fully reflected in an increase in price, depending on the ability of service suppliers to pass on these costs in the form of higher prices to consumers.

In measuring the different effects, it would be ideal to have data on unit prices and price-cost margins for firms operating under different restriction regimes. The sum of the higher price-cost margins directly attributed to price-creating restrictions and the absolute value or higher costs created directly by restrictions would give a measure of the economic costs of restrictions.   However, unavailability of data on unit costs (or unit prices) unfortunately rules out this option. Kalirajan (2000) provides a full discussion of these measurement issues.

Kalirajan (2000) and Nguyen-Hong (2000) proposed an alternative. They used only data on price-cost margins — which are readily available from accounting data sets — to gain an indication of the effects of restrictions.   The increases in price-cost margins are interpreted as evidence of price-creating effects and reductions in price-cost margins are interpreted as indirect evidence of cost-creating effects of restrictions.   This may be imperfect but it is a workable methodology, given the data constraints. Kalirajan (2000) and Nguyen-Hong (2000) discussed the difficulties involved in this approach. In summary, they basically recognized that price-cost margin data are likely to embody changes in prices and costs other than those created directly by the imposition of restrictions.

These effects can be narrowed down by econometric models developed for the estimation. In measuring the effect of restrictions on price-cost margins, an econometric

model is developed from theory that includes all the relevant determinants on the economic performance of service suppliers in that services market — industry- and economy-wide influences. Some of the common econometric variables in the models for these service sector studies are measures of restrictions on trade (trade restrictiveness index — see below), competition and the cost of capital. These variables are added to variables that are specific to each services market. For example, based on the theory of the economic performance of engineering firms, research and development, recent growth in sales and diversification, among others, are important determinants of price-cost margins.

Clarifying whether restrictions are price-creating or cost-creating is important. Price-creating and cost-creating effects used by general equilibrium modellers have different effects on welfare (Hoekman and Konan, 1999). The removal of price-creating restrictions results in an overall redistribution of welfare. The results for the domestic economy also hinge on who gets the rents — foreign or domestic service suppliers. The removal of cost-creating restrictions results in an efficiency gain. Other things being equal, overall gains from reform tend to be greater in general equilibrium models from removing cost-creating than price-creating restrictions.

B. Framework for measuring and modelling restrictions on trade in services

Measuring the effects of restrictions on trade in services has, until recently, been put in the too difficult basket . This has mainly been because of the difficulty in identifying restrictions on services. Restrictions on trade in goods usually take the form of a tariff, while restrictions on trade in services usually take the form of government regulation and a certain level of regulation is usually justified to meet regulatory objectives.

These difficulties have, to some extent, been overcome with advances in economic thinking and the collection of information on restrictions. In a collaborative project, the Productivity Commission and the Australian National University have been measuring and modelling the effect of restrictions on trade in services for a number of economies in Asia, Europe, North America and South America.

The methodology for measuring and modelling restrictions involves three broad steps:

(1) Calculate a trade restrictiveness index. This measures how restrictive a service sector is in an economy;

(2) Estimate the effect of restrictions on the performance of service suppliers — price, cost, price-cost margin or quantity;

(3) Project the economy-wide and global benefits of removing restrictions on services using a computable general equilibrium model.

While there have been advances in this research area, it must be pointed out that this work is still in its infancy. During the past 30 years or more, trade practitioners have developed sophisticated techniques to measure and model the effects of removing restrictions on trade in goods. There is no doubt that the corresponding services research has come a long way in a short space of time; however, much still needs to be done to improve this work further, including the collection of more detailed information on restrictions, the determination of the optimal level of regulation, accurately identifying the precise effects of restrictions and incorporating greater sophistication into general equilibrium models to cater for the analysis of services trade liberalization (McGuire, 2003a; OECD, 2003).

This methodology is best applied to developed countries as they tend to have better available information and data than developing countries (box 2).

1. Measuring restrictions on trade in services

Restrictions on trade in services are measured using a trade restrictiveness index. The index is a sophisticated frequency measure that estimates the restrictiveness of an economy s trading regime for services based on the number and severity of restrictions.

(a)   Collecting and classifying restrictions

Information on restrictions is first gathered and then classified. The information on restrictions is drawn from a number of sources, including material produced by APEC, OECD, WTO and the United States of America Trade Representative. While a comprehensive database of restrictions can be compiled from these sources, it is possible that some service sector regulation and developments may not be covered. However, the information compiled on restrictions is the best that is currently available and is more comprehensive than that provided solely by the GATS schedules of WTO members.

The index methodology then classifies restrictions in two ways. The first is by whether a restriction applies to:

(a)   Establishment — the ability of service suppliers to establish a physical outlet in a territory and supply services through those outlets; or

(b)   Ongoing operations — the operations of a service supplier after it has entered the market.

Restrictions on establishment often include licensing requirements for service suppliers or firms, restrictions on direct investment in existing firms and restrictions on the permanent movement of people. Restrictions on ongoing operations often include restrictions on firms conducting their core business, the pricing of services and the temporary movement of people.

Box 2. Measuring restrictions on trade in services in developing economies

The majority of studies that measure restrictions and their effects at least cover developed economies. The coverage of measures decreases significantly as methodologies are applied to developing economies.   This is unfortunate because general equilibrium modelling shows that developing economies would experience major structural changes and gain the most from liberalization (Dee and Hanslow, 2000).   Robust measurement of restrictions would assist developing economies to understand the precise nature and extent of the costs of, and benefits from liberalization.

There are a number of challenges in applying the methodologies for measuring restrictions to developing economies. The methodologies fundamentally rely on information about restrictions. Developing economies tend to have little or no regulation in some service sectors or broad sweeping laws that are applied on a case-by-case discretionary basis. Restrictions on the entry of one foreign service supplier can be applied differently to those imposed on another seeking to enter the same market. Information for developed economies is sourced from domestic and international reports on trade policy. Such information does not exist or is not available in as much detail for developing economies. Although incomplete because of the positive listing approach, GATS illustrates this information gap. High-income economies scheduled about 45 per cent of their services while low-income economies scheduled about 12 per cent (Hoekman, 1995).

Comparable international financial data on service suppliers is also difficult to obtain for developing economies. The Worldscope database is often used to measure the effect of restrictions on price-cost margins (Disclosure, 2000). These data are obtained from publicly listed companies on domestic stock exchanges. Poor corporate governance and reporting requirements in developing economies produces poor financial data and sample sizes that are unacceptable for estimating the effect of restrictions on price-cost margins.

Some methodologies also rely on measuring the level of restrictions or too much regulation and then estimating the effects of removing restrictions.   However, many developing economies start from a point of having too little regulation, most of which is poorly implemented. For example, a contributing factor to the 1997 Asian financial crisis was poor prudential regulation. Affected economies were required to improve their institutional prudential framework and standards as part of the International Monetary Fund s Stand-by Credit Facilities (Fischer, 1998*).

These limitations may undermine the results and may require a slightly different approach.   Information gaps could be filled by seeking feedback from foreign service suppliers operating in a developing economy market regarding restrictions and their effects. Comparable international survey information could be an alternative to collecting information on actual restrictions. An assessment of the level of regulation in developing countries may also need to be conducted before estimating the effect of restrictions.

*   The first Deputy Managing Director of the International Monetary Fund.

The second way a restriction is classified is by whether it is:

(a)   Non-discriminatory — that is, restricting domestic and foreign service suppliers equally; or

(b)   Discriminatory —that is, generally restricting only foreign service suppliers.

This two-by-two classification is similar to that used in the GATS schedules of commitments and generally adopted by economies (WTO, 1994).   Restrictions on establishment (or commercial presence) include those affecting services delivered via foreign direct investment (FDI).   Restrictions on ongoing operations can affect services delivered by cross-border supply, consumption abroad or the presence of natural persons (other modes of supply recognised under GATS). Non-discriminatory restrictions are similar to GATS limitations on market access while discriminatory restrictions are similar to limitations on national treatment. Table 1 provides an example of how trade restrictions on banking services are classified.

Table 1. An example of classifying trade restrictions on banking services

	Establishment (commercial presence mode of supply)	**Ongoing operations (cross-border, consumption abroad and movement of natural persons modes of supply)**
Non-discriminatory	The number of banking licences is restricted.	Banks are restricted in the manner in which they can raise funds.
Discriminatory	The number of foreign bank licences is restricted.	Foreign banks are restricted in the manner in which they can raise funds.

(b)   Calculating the trade restrictiveness index

A trade restrictiveness index score is calculated for each economy using a methodology of scores and weights. Scores are assigned for each restriction on the basis of a judgement about how stringent it is. The more stringent the restriction, the higher the score. For example, an economy that restricts the number of banking licences is assigned a higher score than an economy that issues new banking licences with only prudential requirements.

The restriction categories are then weighted together according to a judgement about their relative economic cost.   For example, restrictions on banking licences are weighted more heavily than restrictions on the temporary movement of people. The weights are generally chosen so that the total restrictiveness index score ranges from 0 to 1. The annex to this chapter outlines the methodology for calculating the trade restrictiveness index score for an economy.

The trade restrictiveness index for each economy comprises two indices — a foreign trade restrictiveness index (or foreign index) and a domestic trade restrictiveness index (or domestic index). An alternative way of looking at it is that the trade restrictiveness index score for each economy is calculated separately for domestic and foreign service suppliers.

(a) The foreign index score measures all restrictions that hinder foreign service suppliers from establishing and conducting ongoing operations in an economy. It covers both discriminatory and non-discriminatory restrictions;

(b) The domestic index score measures all restrictions that hinder domestic service suppliers from establishing and conducting ongoing operations in their home economy. It covers non-discriminatory restrictions;

(c) The difference between the foreign index and domestic index scores is a measure of the discrimination against foreigners.

Figure 2 provides an example of the results from the trade restrictiveness index.

Figure 2. An illustration of results from the trade restrictiveness index
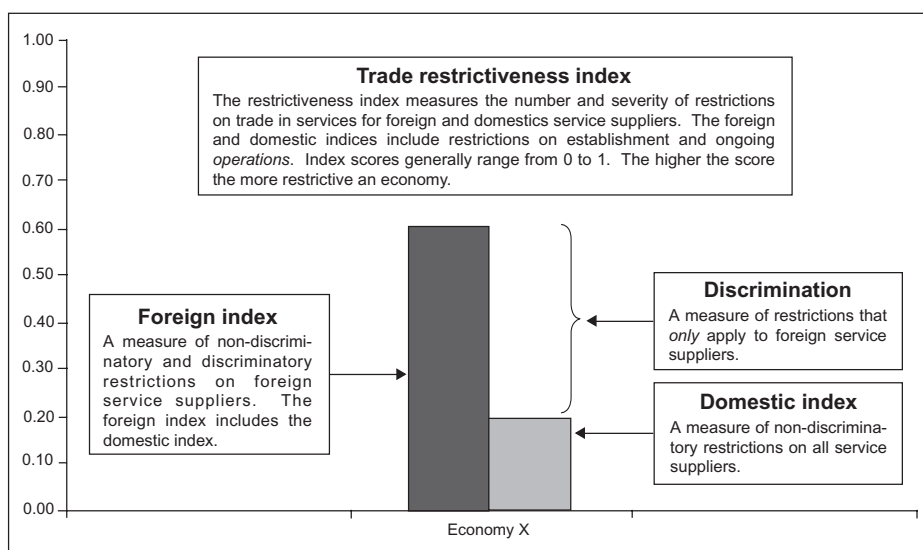
In calculating a score for an economy, it was not determined which restrictions might be justified to enhance efficiency of a services sector and which might not. In general, by reducing competition in a services market, trade restrictions, will reduce that market s efficiency. However, regulation that limits competition is sometimes necessary to deal with market failure and to meet particular objectives. Under this methodology, no assessment was made on the merits or otherwise of the restrictions covered by the trade restrictiveness index or the optimal level of regulation. Thus, a score of 0 for an economy does not

represent an optimal level of regulation but is based on the criteria of the trade restrictiveness index that is compiled on the basis of the information collected on restrictions. As mentioned above, it is extremely difficult to assess the merits of regulation for economies with different regulatory objectives and structures.

(c)   Results for APEC member economies

The results of these cross-country studies indicate that APEC member economies vary in their level of restrictiveness for service sectors. Many of the economies that have experienced financial difficulties in recent years — mainly Asian and South American economies — have medium to high restrictiveness index scores. These economies were also found to be the most discriminatory against foreign suppliers.

Figures 3 to 8 show the results for service sectors from the trade restrictiveness indices for APEC member economies. The results are for one year with the exception of banking and telecommunications services, where results for two separate years are available. The second year of the results has been calculated as part of this chapter. Data for each service sector with greater economy coverage (beyond APEC member economies) and more disaggregated data for the trade restrictiveness indices are available in individual papers collected under the Productivity Commission (2001) database on Measuring Restrictions on Trade in Services. It also provides completely disaggregated data down to the scores for specific types of restrictions such as FDI.

Indonesia, Malaysia and the Philippines were the most restricted markets in the region for banking services in 1997 (figure 3). These economies are all characterized by very tight entry controls and restrictions on business operations. Generally, they limit new foreign bank entries, strictly limit foreign equity participation and prohibit banks from expanding their existing operations.

Chile, the Republic of Korea, Singapore and Thailand are moderately restricted. These economies have at least one significant restriction that limits foreign access to their market. This includes either a restriction on licensing, foreign equity participation in domestic banks or restrictions on their operations such as opening new outlets and street branches.

Australia, Canada, Japan, Mexico, New Zealand, the United States and Hong Kong, China are relatively open markets. These economies have minor restrictions on licensing and foreign equity participation, and some limit banks from providing insurance and securities services. Indonesia, Malaysia, the Philippines and Thailand have the most discriminatory restrictions against foreigners in banking services.

The results of McGuire and Schuele (2000) have been updated as part of this chapter, using their methodology and updated information sources with regard to banking services (figure 4). The results show that there appears to be some liberalizing banking reforms that have reduced the level of restrictiveness in APEC member economies. Indonesia, Japan, the Republic of Korea, Mexico, Singapore and Hong Kong, China have

Figure 3. Banking services, 1997[a, b]
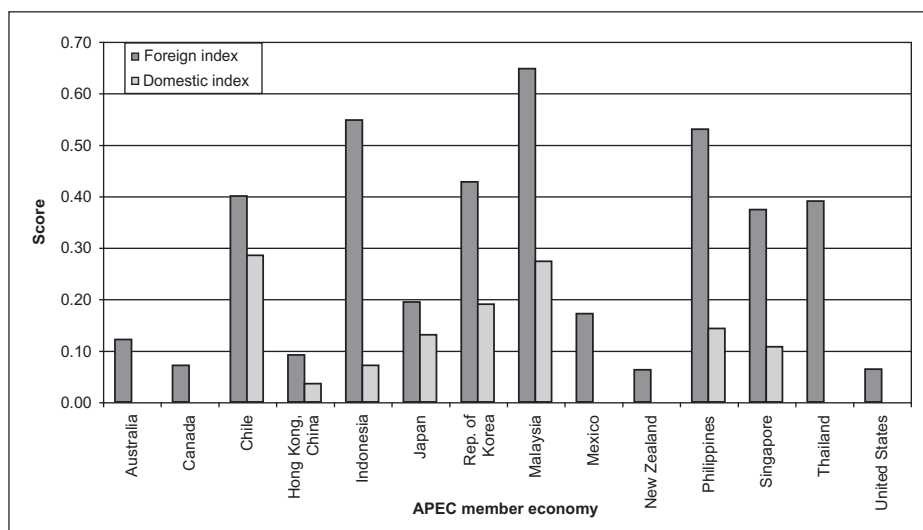
[a] Insufficient information was available to calculate trade restrictiveness indices for Brunei Darussalam, China, Papua New Guinea, Peru, the Russian Federation, Taiwan Province of China and Viet Nam.

[b] The trade restrictiveness indices are based on available information of restrictions in place as of 31 December 1997.

been implementing liberalizing reforms since 1997. Hong Kong, China liberalized the ability of banks to open new branches. Indonesia, Mexico and Singapore significantly liberalized FDI in banks. Japan is phasing out its traditional banking, insurance and securities segmentation between financial institutions and has liberalized the ability of banks to open new branches.

Malaysia s score was refined because of better available information on non-discriminatory direct investment restrictions in domestic banks. The maximum permissible shareholding in a licensed banking institution is 10 per cent for˚individuals˚and˚20 per cent˚for˚corporations (APEC, 2002).

Canada s score was also refined for a change in policy and more transparent information on its policy. Ownership restrictions are complex. They vary depending on the size of a bank, with ownership being restricted to 20 per cent of large banks (Department of Finance, 1999). Having said that, Canada liberalized part of its banking sector in 1999 by permitting the entry of foreign bank branches. However, as the index only covers restrictions on domestic banks and foreign subsidiaries, this reform had no impact on the results.

Figure 4. Banking services, 2001[a, b]

Source: Results calculated as part of this chapter.

[a] Insufficient information was available to calculate trade restrictiveness indices for Brunei Darussalam, China, Papua New Guinea, Peru, the Russian 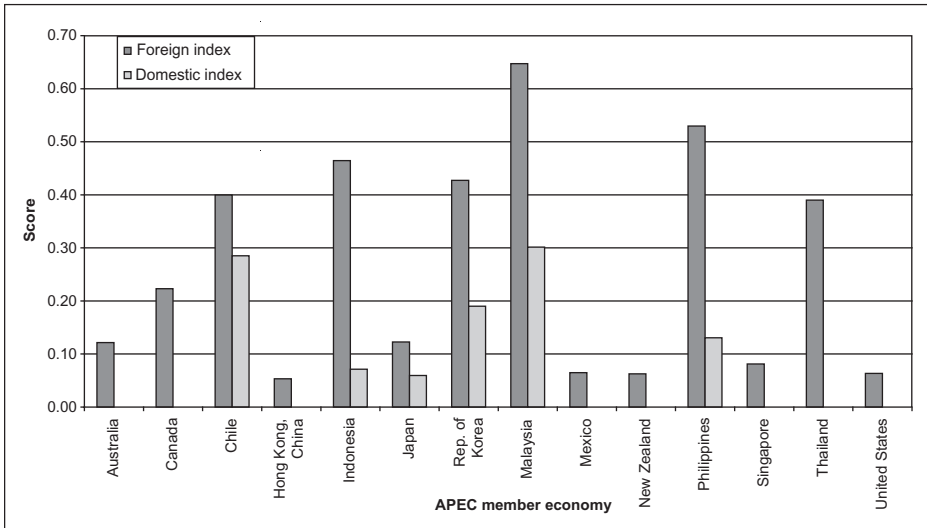Federation, Taiwan Province of China and Viet Nam. Little information was available to update the results for the Republic of Korea.
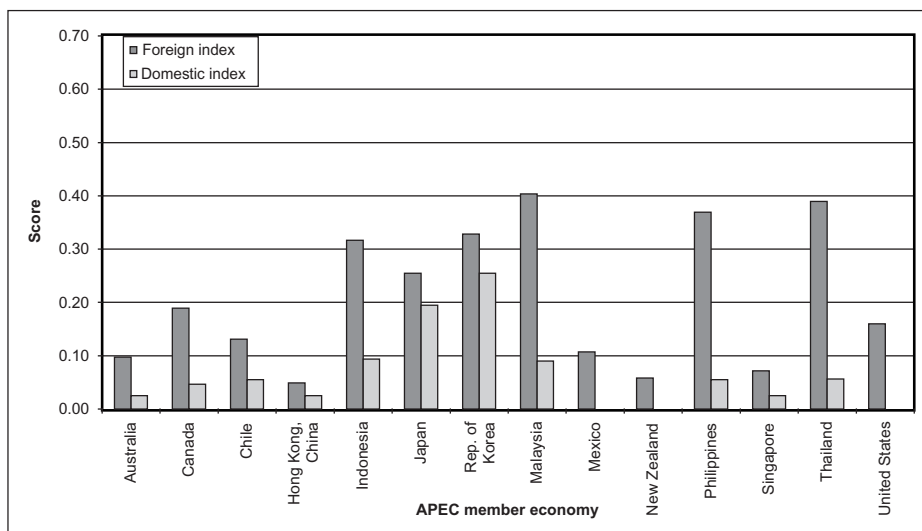
[b] The trade restrictiveness indices are based on available information of restrictions in place as at 31 December 2001.

Australia, Canada, Chile, New Zealand and Thailand do not appear to have implemented any significant liberalization reforms that have affected the trade restrictiveness indices.

In the case of distribution services, Indonesia, Malaysia, the Philippines, the Republic of Korea and Thailand are the most restricted markets in the region (figure 5). These economies are characterized by foreign firms being prohibited from participating in retail distribution, limits on the number of import licences granted to foreigners, and limits and performance requirements on foreign equity participation in domestic firms. The Republic of Korea imposes non-discriminatory restrictions on all distributors that limit the availability of land and the ability of firms to establish large-scale stores.

Canada, Chile, Japan and the United States are moderately restricted. These economies have a number of restrictions on ongoing operations. They typically restrict opening hours and promotional activities, impose licensing requirements on management and restrict the movement of people. Japan has non-discriminatory restrictions on the establishment of large-scale stores, zoning and import licences.

Figure 5. Distribution services, 1999[a, b]

Australia, Mexico, Singapore, New Zealand and Hong Kong, China are relatively open markets. They require screening of foreign investment and licensing of management.

Malaysia, the Philippines and Thailand have the most discriminatory restrictions against foreigners with regard to distribution services.

In the case of maritime services, the Republic of Korea, the Philippines, Thailand and the United States are the most restricted markets in the region with regard to maritime services (figure 6). These economies all have several significant restrictions on maritime services. They permit the formation of liner conferences, require ships to use specified suppliers for port services and restrict ownership of shipping service suppliers. The United States has a highly restricted market for maritime services. Under the Merchant Marine Act 1920 (the Jones Act) all goods transported by water between United States ports must be carried in United States-owned, operated, built and crewed ships.

Chile, Indonesia, Malaysia and Mexico are moderately restricted. These economies require foreigners to have a commercial presence in the form of a joint venture with a domestic supplier, non-commercial cargoes to be carried by a Government-owned shipping line, foreign equity participation in domestic suppliers to be limited and the majority of crews on national flag vessels to be nationals of those countries.

Figure 6. Maritime services, 1998[a, b]

Source: McGuire and others, 2000.

[a] Insufficient information was available to calculate trade restrictiveness indices for Brunei Darussalam, China, Papua New Guinea, Peru, the Russian Federation, Taiwan Province of China and Viet Nam.

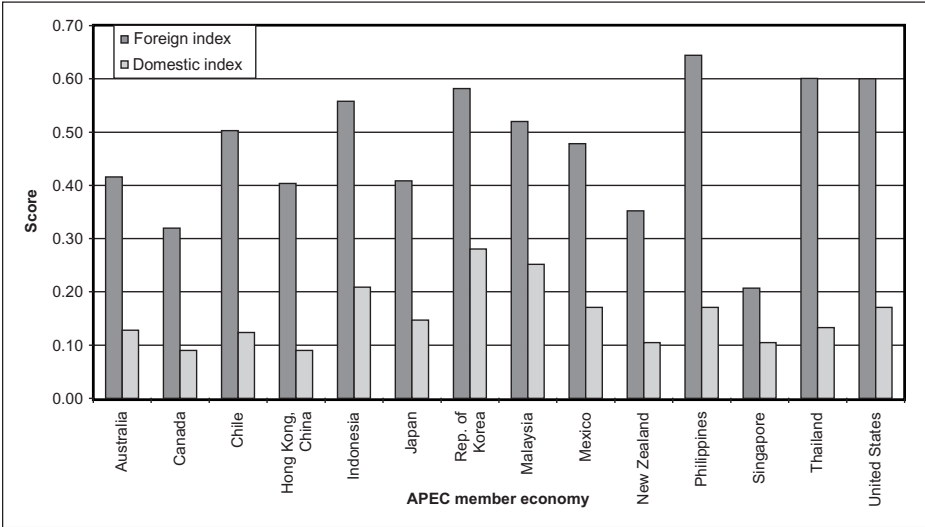[b] The trade restrictiveness indices are based on available information on restrictions in place as of 31 December 1998.

Australia, Canada, Japan, New Zealand, Singapore and Hong Kong, China have relatively open markets. These economies permit liner conferences, impose minor restrictions on foreign vessels and, in some cases, require the mandatory use of certain port services.

The Philippines, Thailand and the United States have the most discriminatory restrictions against foreigners for maritime services.

In the case of professional services, Indonesia, Malaysia, Mexico and the Philippines are the most restricted markets in the region with regard to professional services (figure 7). These economies require nationality and residency for the delivery of professional services, especially legal services. In some professional services, these economies require foreign firms to enter the market through joint ventures with local firms, apply economic needs tests to the number of professionals admitted to practice, limit the form of establishment and limit foreign investment in local firms.

Canada, Japan, the Republic of Korea, New Zealand and the United States are moderately restricted. These economies usually have moderate residency requirements, licensing of professionals, restrictions on the form of establishment and limits on non-professionals investing in professional services firms.

Figure 7. Professional services, 1999^{a, b, c}

Source: Nguyen-Hong, 2000.

[a] The results for professional services are the average results of the trade restrictiveness indices for accountancy, architectural, engineering and legal services.

[b] Insufficient information was available to calculate trade restrictiveness indices for Brunei Darussalam, China, Papua New Guinea, Peru, the Russian Federation, Taiwan Province of China and Viet Nam.

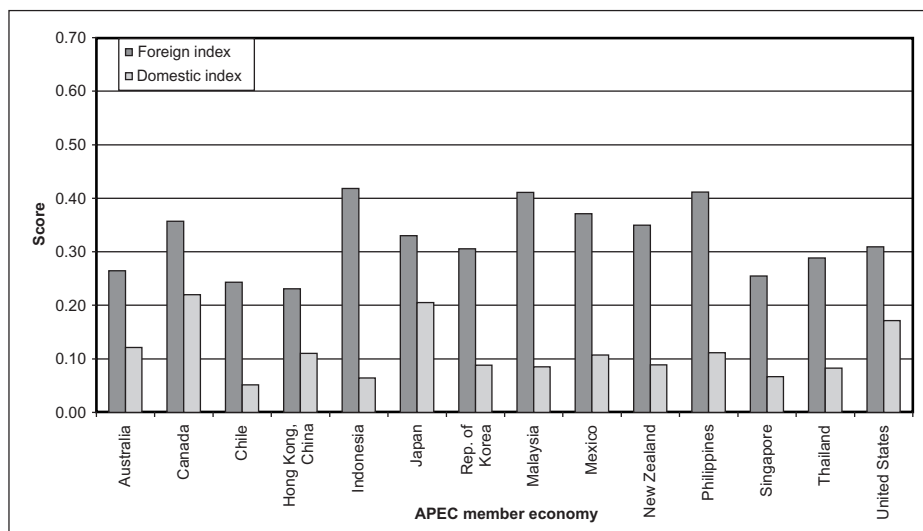[c] The trade restrictiveness indices are based on available information of restrictions in place as of 31 December 1999.

Australia, Chile, Singapore, Thailand and Hong Kong, China are the least restricted. These economies generally have liberal requirements on residency and foreign ownership, and recognize foreign qualifications.

Indonesia, Malaysia and the Philippines have the most discriminatory restrictions against foreigners for professional services.

In the case of telecommunications services, Brunei Darussalam, China, Indonesia, the Republic of Korea, Papua New Guinea, Thailand and Viet Nam are the most restricted in the region (figure 8). These economies are characterized by major limitations on FDI in fixed network and mobile phone services. They tend to have higher restrictions on FDI in fixed network services than mobile phone services. They also have varying levels of restrictions on access to leased lines and networks.

Canada, Malaysia, Mexico, Peru, the Philippines, the Russian Federation and Singapore are moderately restricted. These economies have moderate limitations on FDI in telecommunications service providers. They have similar restrictions on access to leased lines and networks to those economies that are the most restricted.

Figure 8. Telecommunications services, 1999[a, b]

Source: Results calculated from Warren, 2000a.

[a] Insufficient information was available to calculate trade restrictiveness indices for Taiwan Province of China.

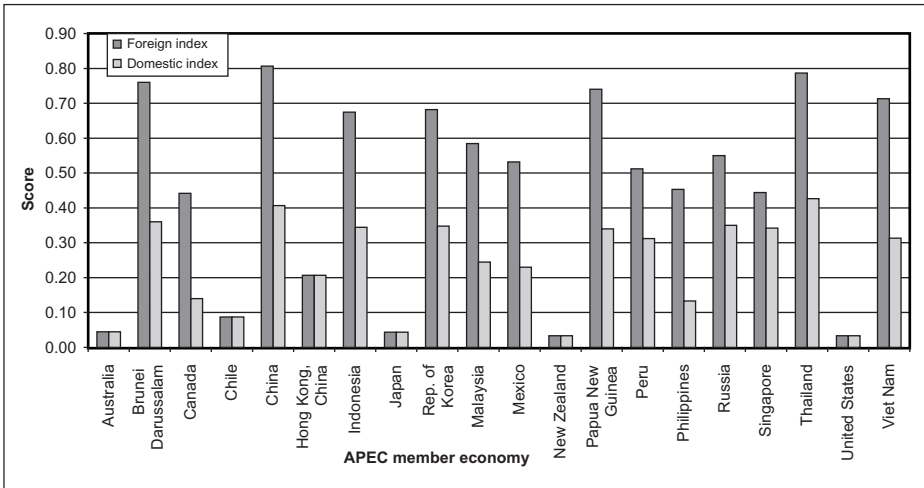[b] The trade restrictiveness indices are based on available information of restrictions in place as of 31 June 1998.

Australia, Chile, Japan, New Zealand, the United States and Hong Kong, China are the least restricted. These economies have few restrictions on FDI and cross-border trade of telecommunications services.   The Governments of Australia and Japan also have a shareholding in their major telecommunications companies.

Brunei Darussalam, China, Papua New Guinea and Viet Nam have the most discriminatory telecommunications services restrictions against foreigners.

From 1998 to 2002, substantial liberalizing reforms in telecommunications services were implemented in APEC member economies (Findlay and others, 2002) (figure 9). The most significant liberalization occurred in the supply of cross-border trade in services. Canada, China, Indonesia, Malaysia, the Philippines, Thailand and Hong Kong, China have generally liberalized access to their telecommunications networks. For example, in recent years, Canada has liberalized the facilities-based international telecommunications market and eliminated the monopoly on satellite telecommunications. Canada, China, the Republic of Korea, Singapore, Thailand, Viet Nam and Hong Kong, China have, to some extent, liberalized the ability of foreigners to supply fixed network services in a country.

Australia, Japan, New Zealand and the United States have, at the very least, maintained their already liberal trade policies for telecommunications. There have been virtually no major policy changes in Australia, Japan or the United States, and some liberalization of mobile telecommunications services in New Zealand.

Figure 9. Telecommunications services, 2001[a, b]
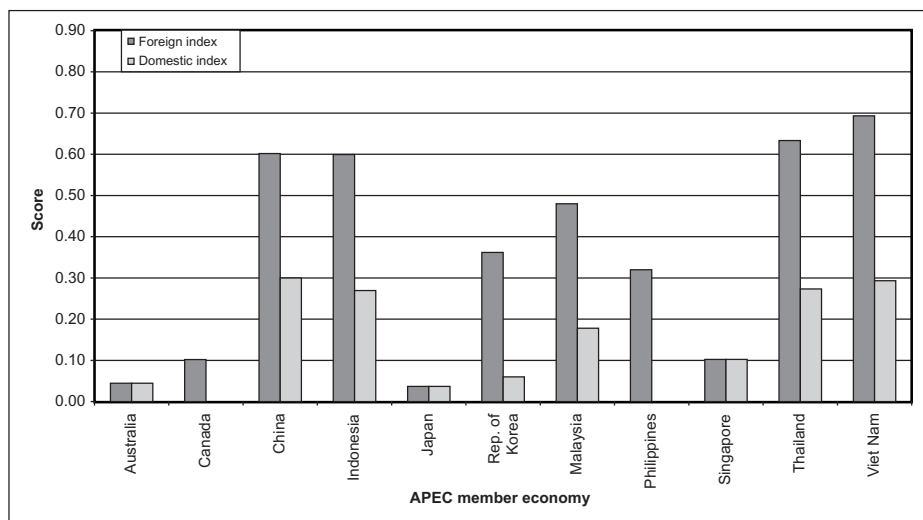
Source: Calculated from Findlay and others, 2002, and updating of the results from Warren, 2000a.

[a] Insufficient information was available to update the trade restrictiveness indices scores for Brunei Darussalam, Chile, Mexico, Papua New Guinea, Peru, the Russian Federation and Taiwan Province of China, New Zealand, the United States and Hong Kong, China, recorded foreign and domestic index scores in 2002 of zero.

[b] The trade restrictiveness indices are based on available information of restrictions in place 2002.

2. Effect of restrictions on the economic performance of services suppliers

The results from the trade restrictiveness indices are used to estimate the effect of these restrictions on the economic performance of firms — price, cost, price-cost margins and quantity. As mentioned above, for this purpose an econometric model has been developed and estimated; this model includes all the relevant industry and economy-wide determinants of economic performance of service firms in relevant service sector including the trade restrictiveness index as a measure of restrictions on trade in services.

In the same way as with the classification system used for the trade restrictiveness index, there is a foreign and domestic effect on price-cost margins.

The foreign price-cost margin effect shows the extent to which discriminatory and non-discriminatory restrictions on establishment and ongoing operations affect price-cost margins. This effect can be price-creating (a foreign price effect) or cost-creating (a foreign cost effect).

The domestic price-cost margin effect shows the extent to which non-discriminatory restrictions on establishment and ongoing operations affect price-cost margins. This effect can be price-creating (a domestic price effect) or cost-creating (a domestic cost effect).

The difference between the foreign price effect and the domestic price effect is a measure of discrimination for prices. The difference between the foreign cost effect and the domestic cost effect is a measure of discrimination for costs.

There are less price-cost margin effect measures by sector and country than trade restrictiveness measures. The estimation of the price-cost margin effect measures is limited by inadequate data, and further research is required in some sectors to develop and estimate econometric models such as for maritime services.

The Productivity Commission (2001) provides completely disaggregated data down to the effects on price-cost margins of specific types of restrictions such as FDI.

Results for APEC member economies

The results in table 2 show whether the restrictions are price-creating or cost-creating for a service sector in APEC member economies. Table 2 reports the aggregate effects of restrictions on all service suppliers in a services sector in an economy. These effects show the extent to which restrictions, as measured by the trade restrictiveness index, increase the price and/or cost of services. As expected, the results are similar to the trade restrictiveness index because they reflect the restrictions captured in the index.

The results from the research show that most restrictions are more price-creating than cost-creating for APEC member economies. This is likely to reflect the fact that many of the restrictions, such as those in banking and telecommunications, limit entry and competition, which in turn raise prices rather than impose minimum operational regulations that raise costs. The price-cost margin effect measures for most APEC member economies are up to 150 per cent. Restrictions on establishment contribute the most to increasing the price and cost of services. These include restrictions on the licensing of new firms, FDI, the requirement for foreigners to enter through joint ventures and requirements to enter as a specific type of legal entity.

The foreign price effect measures are up to 150 per cent. In banking, telecommunications and engineering services, China, Indonesia, Malaysia, Papua New Guinea, the Philippines, Thailand and Viet Nam generally have extremely high foreign price effects. Chile, the Republic of Korea, Mexico, Peru, the Russian Federation and Singapore have moderate foreign price effects while Australia, Brunei Darussalam, Canada, Japan, New Zealand, the United States and Hong Kong, China have low foreign price effects.

The domestic price effect measures are also up to 150 per cent. In banking and telecommunications services, China and Viet Nam generally have extremely high domestic price effects. Chile, Indonesia, Malaysia, Papua New Guinea, Peru, the Philippines, and Thailand have moderate domestic price effects while Australia, Brunei Darussalam, Canada, Japan, New Zealand, the Republic of Korea, Mexico, the Russian Federation, Singapore, the United States and Hong Kong, China have low domestic price effects.

Table 2. Price- and cost-effect measures[a-e]

Economy	Foreign effect						Domestic effect					
	Price effect Banking	Price effect Banking	Price effect Telecoms	Price effect Telecoms	Price effect Engineering	Cost effect Distribution	Price effect Banking	Price effect Banking	Price effect Telecoms	Price effect Telecoms	Cost effect Distribution	Cost effect Engineering
	1997	2001	1998	2002	1999	1999	1997	2001	1998	2002	1999	1999
Australia	9.3	9.3	0.3	0.3	2.8	0.6	0.0	0.0	0.3	0.3	0.0	2.1
Brunei Darussalam	na	na	6.9	na	na	na	na	na	3.3	na	na	na
Canada	5.3	17.7	3.4	0.7	5.3	3.1	0.0	0.0	1.1	0.0	1.0	2.7
Chile	34.0	34.0	1.7	na	na	1.3	23.2	23.2	1.7	na	1.9	na
China	na	na	>150.0	>150.0	na	na	na	na	>150.0	91.8	na	na
Taiwan Province of China	na	na	na	na	na	na	na	na	na	na	na	na
Hong Kong, China	6.9	4.0	1.3	0.0	5.1	0.1	2.7	0.0	1.3	0.0	0.0	2.3
Indonesia	49.3	40.5	138.4	91.8	10.2	3.7	5.4	5.7	70.7	41.3	0.0	3.2
Japan	15.3	9.4	0.3	0.2	6.6	2.3	10.0	4.4	0.3	0.2	6.8	2.2
Republic of Korea	36.7	36.7	8.4	4.1	na	na	14.9	14.9	4.3	0.7	na	na
Malaysia	60.6	60.6	16.1	12.4	12.0	8.2	22.1	24.7	6.7	4.6	4.0	5.3
Mexico	13.4	4.9	14.4	na	14.2	na	0.0	0.0	6.2	na	na	2.0
New Zealand	4.7	4.7	0.3	0.0	na	0.8	0.0	0.0	0.3	0.0	0.0	na
Papua New Guinea	na	na	45.5	na	na	na	na	na	20.9	na	na	na
Peru	na	na	21.3	na	na	na	na	na	13.	na	na	na
Philippines	47.4	47.4	72.9	35.0	na	na	11.0	10.0	21.4	0.0	na	na
Russian Federation	na	na	13.1	na	na	na	na	na	8.3	na	na	na
Singapore	31.5	6.1	2.7	0.6	5.0	0.0	8.2	0.0	2.1	0.6	0.0	0.8
Thailand	33.1	33.1	55.1	35.9	na	na	0.0	0.0	29.9	15.5	na	na
United States	4.6	4.8	0.2	0.0	7.4	2.3	0.0	0.0	0.2	0.0	0.0	3.8
Viet Nam	na	na	>150.0	>150.0	na	na	na	na	>150.0	>150.0	na	na

Sources: Findlay and others, 2002; Kalirajan, 2000; Kalirajan and others, 2000; Nguyen-Hong, 2000; Warren, 2000b; and results calculated as part of this paper.

  [a] na = not available. Insufficient data are available for estimating a price and/or cost effect for these economies.

  [b] Nguyen-Hong (2000) calculated price and cost effects for engineering services only. Insufficient data were available for calculating price and cost effects for accountancy, architectural and legal services.

  [c] These cost effects for distribution services are for restrictions on establishment.

  [d] Some economies have significantly large price effects that are greater than 150 per cent.

  [e] From 1997 to 2001, price effects decreased, increased or remained the same for banking services. A decrease indicates liberalization. An increase indicates greater restrictiveness or improved transparency on the restrictiveness of measures that could be more accurately measured. An unchanged price effect indicates that there appears to have been no liberalization or the liberalization has not been captured by the methodology.

In comparing the updated results for banking and telecommunications, the price effects have declined for those economies that have liberalized their services markets. For example, the liberalization in the Philippines telecommunication market from 1998 to 2002 resulted in an estimated fall in the foreign price effect from 73 to 35 per cent and a fall in the domestic price effect from 21 to zero per cent.

The foreign and domestic cost effect measures for distribution and engineering services are significantly lower than their corresponding price effects. Restrictions on these increase the costs of service suppliers but by a lesser extent than the corresponding price effects.

The price and cost effect measures can show the benefits of removing certain types of restrictions — discriminatory non-discriminatory, restrictions on establishment or restrictions on ongoing operations — for APEC member economies. For example, Malaysia s foreign price effect estimate shows that the price of banking services (or net interest margins) is 61 per cent higher than what it would be in the absence of these restrictions (table 2). Indonesia s domestic price effect for ongoing operations is estimated to have raised the price of its telecommunications services by 41 per cent more than what it would be in the absence of these restrictions.

It should be noted that there are implications in the sequence of removing certain restrictions. Dee and Hanslow, (2000) noted that some approaches to partial liberalization could worsen disparities in protection and real income by moving resources further away from a pattern under a world free of distortions.

3. Economic modelling of services trade liberalization

The above price- and cost-effect measures can be used to project the economy-wide and global effects of removing restrictions. This is best done with a global general equilibrium framework, which captures intersectoral effects for an economy and links between economies. This enables an assessment to be made of the impact of sector-specific policies on an economy as a whole.

Numerous general equilibrium studies analysing the economic impacts of policies affecting trade in goods are available, but relatively little work has been completed on assessing the potential gains from alternative trade liberalization scenarios in services (McGuire, 2002). The past difficulties arise from poor information on international service transactions and lack of comprehensive measures of restrictions on trade in services. The modelling of the services trade also requires developing a different modelling structure than that used for the goods trade in order to incorporate the various modes through which services are supplied, that is, to account for the movement of factors of production (OECD, 2000a and 2000b).

There is a significant amount of methodological thinking still required on modelling services trade liberalization, but a number of studies have analysed the effects —Benjamin and Diao (1998) and (2000), Brown and others (1996), Chadha (2000), Chadha and others

(2000), Dee and Hanslow (2000), Department of Foreign Affairs and Trade (1999), Hertel and others (1999), and Robinson and others (1999). The results are similar in a number of respects:

(a) There are always substantial global real income gains from services liberalization. In many studies, the gains in terms of real income are similar or greater than liberalization of trade in agriculture and manufacturing combined;

(b) Developing economies gain more than developed economies. Economies with higher restrictions or, mainly, developing economies reap the greatest benefits from liberalization;

(c) Liberalization of trade in services has powerful impacts on agriculture and manufacturing through intersectoral linkages in an economy for some studies. Services are essential inputs to other sectors and substantial productivity gains accrue to other sectors when liberalization improves the efficiency of the service sector.

Dee and Hanslow (2000) used one of the most sophisticated general equilibrium models to analyse the effects of liberalizing trade in services. It is a 19- region (covering Asia, North America and South America, and the European Union) by 3-sector (agriculture, manufacturing and services) computable general equilibrium model of the world economy, known as the FTAP model. The model was developed from the Global Trade Analysis Project (GTAP) model (Hertel, 1997), with the addition of the structure necessary to support the analysis of services trade liberalization.

By drawing on the price-cost margin effect measures outlined above, the Dee and Hanslow model has the capability to simulate the effect of removing certain types of restrictions. Where restrictions raise prices above costs, the price effect measures are incorporated as tax equivalents in FTAP to capture the direct effects of current services trade restrictions. Restrictions on establishment are incorporated as taxes on capital. Restrictions on ongoing operations are incorporated as taxes on the output of FDI firms and the exports of firms supplying via the other modes of delivery.

Different tax rates apply to domestic and foreign-owned industries. The model structure ensures that the revenues (or rents) from these taxes are divided appropriately between Government and private agents. In future work, the model will be expanded for more sophistication, including incorporating cost-creating restrictions, in order to examine the impact of full and partial multilateral liberalization of services trade.

One of the distinguishing features of FTAP is the inclusion of FDI. The treatment of FDI allows for the examination of the comprehensive removal of restrictions on all modes of service supply, including restrictions on services delivered via FDI. Hanslow and others (1999) fully documented the structure of the FTAP model.

Economic modelling results for APEC member economies

Dee and Hanslow used FTAP to find that the world as a whole is projected to be better off by more than US$ 260 billion annually as a result of eliminating all post-Uruguay Round trade restrictions. Some US$ 133 billion would come from liberalizing services trade while US$ 51 billion would come from liberalizing agriculture and US$ 83 billion from liberalizing manufactures (table 3). These are the projected gains in real income about 10 years after the liberalization has occurred and the associated resource adjustments have taken place.

Table 3. Effects from liberalizing trade in services[a, b]

(Unit: Percentage and US$ million)

Economy	Change in real GDP					
	Percentage change			Absolute change in United States dollars		
	Primary and secondary	Tertiary	Total	Primary and secondary	Tertiary	Total
Australia	0.2	0.0	0.2	1 994	2 098	4 092
Canada	0.1	-0.1	0.0	-539	-499	-1 038
Chile	0.7	0.4	1.1	45	330	375
China	3.4	14.6	18.0	14 088	90 869	104 957
Hong Kong, China	-0.2	1.0	0.9	916	5 896	6 812
Indonesia	0.7	5.1	5.9	1 451	2 470	3 921
Japan	0.3	0.0	0.3	20 964	4 130	25 094
Republic of Korea	1.5	0.1	1.6	8 784	1 886	10 670
Malaysia	3.7	0.7	4.5	3 532	1 015	4 547
Mexico	0.3	0.1	0.4	-83	357	274
New Zealand	1.2	-0.1	1.1	4 400	257	4 657
Philippines	5.1	0.4	5.5	1 601	1 236	2 837
Singapore	-0.3	-1.3	-1.5	7 421	-247	7 174
Taiwan Province of China	2.7	0.2	3.0	11 659	-142	11 517
Thailand	2.6	0.2	2.8	4 063	1 698	5 762
United States	0.2	-0.1	0.1	22 734	-1 809	20 925
APEC				**103 030**	**109 545**	**212 576**
European Union	0.1	0.0	0.1	6 394	-6 169	225
Rest of Cairns Group	1.2	0.1	1.3	12 766	6 970	19 736
Rest of the World	1.1	0.8	1.9	11 324	23 039	34 363
World				**133 515**	**133 386**	**266 901**

Source: Adapted from Dee and Hanslow, 2000.

[a] Figures may not add up to total due to rounding off.

[b] These are the projected gains in real income about 10 years after the liberalization has occurred and the associated resource adjustments have taken place.

APEC member economies are expected to be better off by US$ 110 billion. The service sectors in most Asian economies are projected to expand as their relatively large barriers to entry are removed. China is expected to benefit from the removal of particularly stringent restrictions by US$ 90 billion.

While Asian economies will receive a greater share of the expanding global services market, service sectors in economies with low restrictions will expand; however, their share of the global services markets in the long term will be smaller. Australia, Canada, New Zealand, the European Union and the United States are expected to gain, but relatively less than Asian economies. In part, this is because of increased competition via cross-border trade from the newly expanded Asian service sectors.

For some economies — Canada, the European Union, Singapore,Taiwan Province of China and the United States — the contribution of multilateral services trade liberalization is expected to be negative. There are a number of reasons that contribute to this result, but generally, after the restrictions on FDI in foreign economies are removed, the owners of the foreign capital receive a lower return.

Dee and Hanslow also projected the benefits of partially liberalizing services trade. The results show that the greatest global benefits will come from liberalizing non-discriminatory or, mainly, market access restrictions rather than discriminatory or, mainly, national treatment restrictions (table 4). Removing all restrictions on establishment would be better than removing all restrictions on ongoing operations.

Table 4. Effects of partial liberalization on world real income[a, b, c]

(Unit: US$ billion)

	Remove restrictions on market access	Remove restrictions on national treatment	Dynamic combined effects
Remove restrictions on establishment	56.8	3.7	64.2
Remove restrictions on ongoing operations	25.6	12.9	39.3
Dynamic combined effects	98.8	19.3	133.4

Source: Dee and Hanslow, 2000.

[a] Figures may not add up to total due to rounding off.

[b] These are the projected gains in real income about 10 years after the liberalization has occurred and the associated resource adjustments have taken place.

[c] Because of interaction effects between types of partial liberalization, the figures for Dynamic combined effects are not additive.

The results show, however, that it is difficult to find an outcome where at least some economies gain and none lose from partial liberalization, when it involves only removing one class of restriction (non-discriminatory, discriminatory, establishment or ongoing operations).

This suggests that the best strategy for liberalization may be to negotiate gradual reductions in all types of restrictions simultaneously. Non-discriminatory restrictions on all service suppliers should be reduced or eliminated before removing discriminatory restrictions on foreign service suppliers. Dee and others (2000b) argued that reducing non-discriminatory restrictions on service suppliers together was a better approach than only reducing discriminatory restrictions on foreign service suppliers. Reducing discriminatory restrictions on foreigners alone can have a negative impact on the level of services supplied by domestic firms. This will result in lower prices and higher total sales, but domestic service suppliers will end up with a smaller share of the service sector. However, if restrictions that affect foreign and domestic service suppliers equally are reduced, all service suppliers will have the same opportunities to increase the amount of services they supply in an expanding market.

Verikios and Zhang (2001) also used the FTAP model to analyse the sectoral impacts of removing all restrictions on trade in financial and communication services. They found that the total gain in world income from liberalizing both sectors was US$ 48 billion. Some US$ 24 billion of this would come from liberalizing communications services, with most of the gains coming from removing non-discriminatory restrictions. A further US$ 24 billion is likely to accrue to financial services, with almost all the gains coming from removing discriminatory restrictions. However, the gains from most regions are the highest when all restrictions are removed.

The global gains from liberalizing telecommunications are overwhelmingly derived from improvements in the allocation of resources. The scale of non-discriminatory restrictions to trade in telecommunications services causes a significant increase in domestic capital and labour as well as foreign capital in this service sector, at the expense of other sectors, when these trade barriers are removed. This is captured as an improvement in the allocation of resources. The global gains from liberalizing financial services are mainly due to an increase in the returns to the world capital stock. The importance of discriminatory restrictions to trade in financial services means that their reduction causes a significant increase in foreign-owned capital in this sector, at the expense of domestically owned capital. This is captured as an increase in the returns to the world capital stock.

The benefits from liberalizing trade in services these two sectors are distributed to almost all regions. The largest gains accrue to high-barrier developing regions while smaller gains accrue to low-barrier developed regions. The modelling indicates that developing regions have strong incentives to extend their liberalization commitments to liberalize in these sectors. The modelling also indicates that commercial presence of foreign firms via FDI is an important mode of delivering telecommunications and financial services.

Dee and others (2000a) looked at the question of which sectors could gain from multilateral services trade liberalization. A service sector may not lose from liberalization because the following competing forces are at work:

(a)   Not all services trade barriers discriminate against foreign services suppliers, so a service sector could expand because of new entries by domestic service suppliers;

(b)   Some services trade barriers restrict inward FDI, so a service sector could expand because of new foreign entries;

(c)   Some services barriers discriminate against foreign services delivered cross-border, so a service sector could contract in the face of additional import competition;

(d)   Services trade liberalization may benefit downstream using industries, and a service sector may lose out in the competition for domestic resources (for example, labour).

C. What does it mean for APEC member economies?

The Osaka Action Agenda objective is to achieve free and open trade and investment no later than 2010 in the case of industrialized economies and 2020 in the case of developing economies (APEC, 2001). APEC also has a number of specific objectives for liberalizing trade and investment in services as well as investment in general.

In services, APEC member economies will achieve free and open trade and investment in the Asian and Pacific region by:

(a)   Progressively reducing restrictions on market access for trade in services;

(b)   Progressively providing for, inter alia, MFN treatment and national treatment for trade in services.

In investment, APEC member economies will achieve free and open investment in the Asian and Pacific region by:

(a)   Liberalizing their respective investment regimes and the overall APEC investment environment by progressively providing for MFN treatment and national treatment and ensuring transparency;

(b)   Facilitating investment activities through technical assistance and cooperation.

The results of economic modelling highlight the value of comprehensive liberalization. For example, the gain from removing all restrictions on market access (those applying to establishment and those applying to ongoing operations) is significantly greater than the sum of gains from partial reform. Similarly, if the focus is on establishment, then it pays to tackle restrictions to both market access and national treatment. The partial approach of concentrating on either market access (for both establishment and ongoing

operations) or national treatment yields smaller gains compared to concentrating on all restrictions on establishment (market access and national treatment) or all restrictions on ongoing operations.

If a partial approach is to be adopted, the economic modelling results suggest that restrictions to market access (with respect to establishment or ongoing operations) are more important than restrictions on national treatment. The gains from removing restrictions on establishment are also greater than those from removing restrictions on ongoing operations. If the policymaker has to start somewhere, then the best bet is to tackle market access restrictions on establishment. The major market access restrictions are licensing requirements, direct investment and joint venture arrangements. As the banking and telecommunications sectors are larger than other sectors, and because these services are essential products for other firms, it may be advantageous to focus on liberalizing these service sectors first.

Services sector liberalization will face resistance from those who lose from the policy change. However, reform can have complex effects on the distribution of output even within the services sector. For example, liberalization could lead to an increase in domestic output due to higher levels of domestic and foreign entry. It is also possible that reform that removes restrictions on foreign entry will decrease the output of domestic service suppliers. A key point, however, is that services trade liberalization will benefit downstream activities, many of which are also services and many of whom are, or could be, services exporters. These features affect the political economy of reform and can be used in the design of reform packages to facilitate policy change.

These results suggest a number of areas for future work. The obvious task is to maintain the set of data on measurements, by updating the coverage to produce a time series of measures and to broaden the country coverage. This more substantial data set can then be used for more extensive exercises in modelling the effects of reform, assessing country strategies for liberalization and working on explanation of patterns of protection across sectors and across countries.

A further extension of the work is to widen the coverage of policy. For example, the focus of reform should not be restricted to liberalization at-the-border. The value of trade reform at-the-border is increased by policy reform behind-the-border, for example, through an appropriate competition policy. Applying effective competition policy in a form appropriate to an economy s stage of development in a way that complements trade liberalization can improve efficiency and orient firms to be outward looking. Assessments of the state of the behind-the-border policies, such as competition policy and other domestic regulatory matters that affect market access, are therefore valuable.

Annex

Trade restrictiveness index methodology

An index methodology quantifies the nature and extent of restrictions on international trade in services. An index uses available information on regulations to quantify the extent to which comparable economies have more or less restrictive trade regimes for international trade in services.

An index is developed by first grouping the restrictions identified into common restriction categories. Restrictions for different economies are divided into two groupings — those affecting establishment and ongoing operations. The reason for distinguishing restrictions on establishment from those on ongoing operations is so that the former can be modelled as restrictions on the movement of capital, while the latter can be modelled as restrictions on output.

Restrictions on establishment affect the ability of a service supplier to enter a services market in an economy and restrictions on ongoing operations affect a service supplier after it has entered the market. Within these two groupings are a number of restriction categories that cover specific restrictions. Annex tables 2 and 3 provide examples of restriction categories in each grouping for service sectors.

Within these common restriction categories, the degree of restrictiveness varies. An index has been developed by assessing the differing degrees of restrictions from most restrictive to least restrictive for most restriction categories. The greater the restriction on services, the higher or more restrictive the score. Scores range from zero to 1, with zero being least restrictive and 1 being most restrictive. A score is assigned for each restriction category that best reflects the type of restriction imposed by an economy.

Weightings are assigned to restriction categories. Hardin and Holmes, (1997), the Organisation for Economic Co-operation and Development (1997), and Claessens and Glaessener (1998) provide examples of weightings to apply to restriction categories. From those papers, a judgement is made about the cost to economic efficiency of different restrictions. Restrictions that are considered to impose a greater cost on economic efficiency are given a greater weighting. For example, restriction categories covering FDI are given a greater weighting than restriction categories covering the movement of people.

Annex table 1. Extract from the trade restrictiveness index for banking services[a]

(Unit: US$ billion)

Weight	Score	Restriction category
		Restrictions on establishment
0.10		Joint venture arrangements.
	1.00	No new banking licences issued and no entry is allowed through a joint venture with a domestic bank.
	0.50	Bank entry is only through a joint venture with a domestic bank.
	0.00	No requirement for a bank to enter through a joint venture with a domestic bank.
		Restrictions on ongoing operations
0.05		Expanding the number of banking outlets.
	1.00	One banking outlet, with no new banking outlets permitted.
	0.75	Banking outlets are limited in number and location.
	0.25	Expansion of banking outlets is subject to non-prudential regulatory approval.
	0.00	No restrictions on banks expanding operations.

Source: McGuire and Schuele, 2000.

[a] This table includes two restriction categories from the trade restrictiveness index for banking services.

The banking index has a number of restriction categories under restrictions on establishment and restrictions on ongoing operations groupings (annex tables 2 and 3). Annex table 1 provides an extract from the trade restrictiveness index for banking services. For restrictions on establishment, where an economy issues no new banking licences and prohibits the entry of foreign banks, the economy is assigned the most restricted score of 1 for the joint venture arrangements restriction category. Where there are no such requirements, an economy would receive the least restricted score of zero. This category has a weighting of 10 per cent, which contributes to the total score for an economy.

For restrictions on ongoing operations, where an economy only permits one banking outlet with no new banking outlets, the economy is assigned the most restricted score of 1 for expanding the number of banking outlets restriction category. Where there are no such requirements, an economy would receive the least restricted score of zero. This category has a weighting of 5 per cent.

McGuire and Schuele (2000), McGuire and others (2000) and Kalirajan (2000) also accounted for MFN exemptions in their trade restrictiveness indices. MFN exemptions permit an economy to discriminate between economies and to generally provide more favourable treatment to selected economies. Economies with MFN exemptions are considered less restrictive because such exemptions are more liberal for selected economies.

Annex table 2. Restriction categories for trade restrictiveness indices — establishment grouping[a] [b]

Banking	Distribution	Maritime	Professional	Telecom-munications
Licensing of banks	Restrictions on commercial land	Conditions on the right to fly the national flag	Form of establishment	Direct investment in fixed network services
Joint venture arrangements	Direct investment in distribution firms	Form of commercial presence	Foreign partnerships or joint venture	Direct investment in cellular mobile phone services
Permanent movement of people	Restrictions on large-scale stores	Direct investment in shipping service suppliers	Investment and ownership by foreign professionals	
	Factors affecting investment	Direct investment in onshore services	Investment and ownership by non-professional investors	
	Local government requirements	Permanent movement of people	Nationality or citizenship requirements	
	Permanent movement of people		Residency and local presence	
			Quotas or economic needs tests on the number of foreign professionals and firms	
			Licensing and accreditation of foreign professionals	
			Licensing and accreditation of local professionals	
			Permanent movement of people	

Sources: McGuire and Schuele, 2000; Kalirajan, 2000; McGuire and others, 2000; Nguyen-Hong, 2000; and Warren, 2000a and 2000b.

[a] Each restriction category generally contains varying degrees for restrictions that are scored from zero (least restricted) to 1 (most restricted)**.**

[b] The professional services trade restrictiveness index was calculated for accountancy, architectural, engineering and legal services.

**Annex table 3. Restriction categories for trade restrictiveness indices:
ongoing operations grouping[a, b]**

Banking	Distribution	Maritime	Professional	Telecom-munications
Raising funds by banks	Wholesale import licensing	Cabotage	Activities reserved by law to the profession	Cross-border trade
Lending funds by banks	Limits on the promotion of retail products	Transportation of non-commercial cargoes	Multi-disciplinary practices	
Other business of banks — insurance and securities services	Statutory Government monopolies	Port services	Advertising, marketing and solicitation	
Expanding the number of banking outlets	Protection of intellectual property rights	Discretionary imposition of restrictions	Fee setting	
Composition of the board of directors	Licensing requirements on management	United Nations Liner Code	Licensing requirements on management	
Temporary movement of people	Temporary movement of people	Government permits conferences	Other restrictions	
		Bilateral maritime agreements on cargo sharing	Temporary movement of people	
		Composition of the board of directors		
		Temporary movement of people		

Sources: McGuire and Schuele, 2000; Kalirajan, 2000; McGuire and others, 2000; Nguyen-Hong, 2000); and Warren, 2000a and 2000b.

[a] Each restriction category generally contains varying degrees for restrictions that are scored from zero (least restricted) to 1 (most restricted).

[b] The professional services trade restrictiveness index was calculated for accountancy, architectural, engineering and legal services.

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Part IV

Trade, poverty and inequality

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Chapter VI

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TRADE POLICY, POVERTY AND INCOME DISTRIBUTION IN COMPUTABLE GENERAL EQUILIBRIUM MODELS: AN APPLICATION TO THE SOUTH ASIA FREE TRADE AGREEMENT

By John Gilbert

Introduction

In line with trends in the other economies, South Asia has been actively engaged in trade liberalization during the past decade, both on a unilateral and a regional basis. On the regional side, the economies of South Asia have sought to promote intraregional trade as a group, in addition to pursuing agreements with economies outside the region (for example, India s interest in a possible Association of Southeast Asian Nations (ASEAN)+6 arrangement, and Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC) promoting trade cooperation among South Asia and South-East Asia as well as with larger economies of Asia such as Japan). The most comprehensive South Asian regional agreement is the South Asia Free Trade Agreement (SAFTA). This framework agreement, signed in 2004, is an extension of the earlier SAARC Preferential Trading Arrangement (SAPTA) established in 1995. It brings together Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, and requires a phase-out of all duties by 2012 for the developing economies and by 2016 for the least developed economies.

The empirical literature analysing the potential economic impact of SAFTA is still rather thin. Pigato and others (1997) compared SAPTA with unilateral reform options using the GTAP model, and concluded that the latter was preferable from a net welfare perspective, but that the benefits of regional liberalization outweighed the costs. Bandara and Yu (2003) also used the GTAP model to consider aggregate welfare changes, and found that the potential net benefits were generally positive but small.

An important but unanswered question is how SAFTA may affect broader socio-economic variables in the region, particularly with regard to income distribution and poverty. South Asia is one of the poorest regions in the world. This fact is a major trade policy concern, as illustrated by the recent collapse of negotiations on the Doha Development Agenda over the failure to agree on agricultural safeguard measures for developing economies, for example. Countries in the region (notably India) pushed strongly for these measures out of a strong desire to protect their large and poor rural populations.

Because of its ability to consistently track the effect of policies across an entire economic system, computable general equilibrium (CGE) analysis has become a mainstay

of the trade policy literature (see recent surveys by Scollay and Gilbert, 2000; Gilbert and Wahl, 2002; Robinson and Thierfelder, 2002; and Lloyd and MacLaren, 2004). There has been significant growth in the CGE literature on the effects of trade liberalization on poverty and income distribution (see Hertel and Reimer, 2005; Hertel and Winters, 2005; and Gilbert (forthcoming) for overviews of this literature). In the case of South Asia, there have been a number recent CGE studies of individual economies that feature multiple representative households as a means of quantifying the impact of trade policy changes on various groups in society (Cockburn, 2002; Naranpanawa, 2005; Annabi and others, 2006; Acharya and Cohen, 2008; Gilbert, 2007; Amed and O Donoghue, 2008; Panda and Ganesh-Kumar, 2008; and Polaski and others, 2008). To date, however, no multiregional models have been applied to SAFTA that allow for analysis of multiple household impacts.

The primary objective of this chapter is to describe a new CGE model of South Asia, and its application to understanding the socio-economic aspects of SAFTA. The model, which currently covers Bangladesh, India, Sri Lanka and the rest of South Asia, is being expanded to include Nepal and Pakistan. The model incorporates modifications to the household structure to capture implications of reform for intra-household income changes.

Section A of this chapter outlines the policy environment, including the pattern of trade among South Asian economies. Section B describes the regional model built for this study, and the results of the preliminary simulations and the policy implications are considered in section C. Section D provides the conclusion.

A. Trade and protection environment

As the latest development in a long line of regional trading efforts in South Asia — a more detailed description of the evolution of economic integration in the region is provided by Bandara and Yu (2003) — SAFTA will require the developing South Asian economies to reduce their tariffs to a maximum of 20 per cent initially, followed by annual cuts to zero over a five-year period for developing economies and an eight-year period for LDCs. In order to assess the potential impact of closer trading relations between the economies of SAFTA, it is useful to begin with an assessment of the current trade and protection pattern.

Regional trade (exports plus imports) shares from 1999 to 2006 are presented in annex table 1.[1] The first set of numbers (SAFTA as destination) shows the percentage of SAFTA member economy exports that are directed to other economies in SAFTA. The second set of numbers (SAFTA as source) shows the percentage of exports from SAFTA economies that are directed to the individual members of SAFTA. For most economies within SAFTA, the regional market is only a small proportion of their external trade. The only exception is Nepal, which is heavily dependent on the region. Intraregional trade has grown in importance over the period covered for Nepal, Pakistan and Sri Lanka, but has remained

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[1]   In this section all calculations are based on COMTRADE data from 1999-2006. However, where the reporter data is missing, the relevant flows have been reconstructed using the mirror data from partners.

constant for the other economies. Overall, the intraregional trade share for SAFTA has remained constant at roughly 4 per cent, a very low level compared with other regional trading groups.

A problem with trade shares is that they are not normalized by country size; thus, they may give a misleading picture of the relative importance of international trade flows. The trade intensity index, defined as the ratio of the intraregional trade share to the share of the region in world trade, provides an indication of the degree to which a particular trade linkage is stronger than might normally be expected, given the size of the economies in world trade. The results of calculating this index are presented in annex table 2. Values greater than unity indicate an intense trading relationship, while values of less than unity are interpreted as relatively weak. Normalized in this way, the trading relationships in the region actually appear quite strong. In part, this reflects geographical proximity, and the intensity index does not correct for this in the way that it would be done by a full gravity model. However, it is clear that smaller economies in the region are heavily reliant on trade with the larger economies, and that trade in the region is much higher than would be expected given the size of South Asia in world trade.

To further analyse the pattern of trade, it is useful to work with the sectoral profiles. The complementarity index is a measure of the degree of overlap between the export profile of one region and the import profile of another. In other words, it provides an index of the degree to which sales by one country (or region) on international markets match what another country tends to buy from international markets.[2] The index is often used, ex ante, to evaluate the potential for mutually beneficial inter-industry trade. The results of complementarity calculations for the member economies of SAFTA as a whole are presented in annex table 3. A value of 100 indicates a perfect match of the trade profiles, while an index of 0 indicates no overlap. Overall, it appears that the degree of complementarity has been increasing substantially over the period, although it remains at a relatively low level when compared to other regional groups.

Finally, consider the export similarity profiles in annex table 4. Constructed in much the same way as the complementarity index, export similarity is a measure of the degree of overlap between two competing economies. An index of 100 indicates that the two groups share identical export profiles, while an index of 0 indicates that the two groups compete in entirely separate markets. The calculations compare each country with SAFTA as a whole. Hence, the figures for India are inflated by its dominant role in the group.[3] Nonetheless, for Nepal, Pakistan and Sri Lanka, the similarity indices remain high. In other words, they tend to have a revealed comparative advantage in similar products. The values of the index are declining over time, however. In conjunction with the increase in complementarity, this does suggest production shifts are gradually aligning these economies.

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[2] The index has been calculated from COMTRADE data, using HS1996 2-digit classifications. Again, wherever possible, the gaps have been filled using the mirror data.

[3] A country s export similarity with itself is, by definition, 100 per cent.

Annex table 5 describes the state of protection in the countries of interest, using the bilateral applied tariff (trade weighted). Substantial progress has been made in lowering the average level of protection in the SAFTA economies over the past decade; however, applied tariffs remain moderately high on average, with a tendency towards high agricultural protection, especially in India. In many cases there is also a very substantial degree of binding overhang (cases where the bound tariff exceeds the applied tariff), especially in Bangladesh, but also in India and Sri Lanka. Overall, the protection levels in the SAFTA economies suggest that there is significant potential for efficiency gains from trade reform in general.

Annex table 6 reviews the poverty/income distribution statistics in the region. These have been drawn from the World Bank (2007), and data haven extracted for the latest year available for each economy in South Asia. The most basic measure of poverty is the head count ratio, that is, the proportion of the population that falls below a defined poverty line. Commonly used criteria are the international US$ 1.00/day standard and the US$ 2.00/day standard, with the higher standard more widely applied to countries with higher average incomes.[4] The overall percentage of the population under the poverty line in India has been falling since 1996. Poverty depth and severity has also fallen during the period. Nonetheless, the proportion of population in poverty in India remains high, and there is also considerable variation in poverty levels between urban and rural populations.   In Bangladesh, the poverty head count is even higher, at 35 per cent, while it is 25 per cent in Nepal. In Pakistan and Sri Lanka, the rates are much lower at 9 per cent and 6 per cent, respectively.   Nonetheless, poverty remains an issue, as at the US$ 2.00/day level the corresponding rates are 60 per cent and 41 per cent.

Two other measures are provided in annex table 1, both of which attempt to address the issue of poverty depth. The poverty gap measure is the mean distance below the poverty line as a proportion of the poverty line. The squared poverty gap weights individual poverty gaps by the gaps themselves, and provides a measure of inequality among the poor. The areas with the greatest poverty depth are again Bangladesh, rural India and Nepal. Finally, the Gini coefficient is a common measure of overall income inequality, with the greatest levels of inequality in Nepal and Sri Lanka.

B. Methodology

This section describes a new, custom-built CGE model of South Asia, with sub-economy models for key countries in the region, programmed using the GAMS system. The section outlines key characteristics of the model structure and experimental design. The model is a multiregional competitive CGE covering Bangladesh, India and Sri Lanka, and an aggregate region representing the remaining countries in the South Asia region as

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[4]   See Chen and Ravallion, 2004, for more in-depth discussion of poverty measures and trends in global poverty.

well as an incompletely modelled ROW region.[5] Overall, the structure of the model that we built for this study is a regional CGE similar in many respects GTAP and other global models. Hence, the description is kept brief.

1. Model

The model identifies 16 production sectors. Each sector produces a joint product for domestic and foreign markets, with the allocation between the two based on a constant elasticity of transformation (CET) function. The production functions are nested constant elasticity of substitution (CES) functions with intermediate goods used in fixed proportions, and all primary factors in variable proportions with a common elasticity. Intermediate inputs are composites of imported goods and domestic production, with proportions that are variable and specified independently by industry. Competitive conditions hold, so firms pay market prices for all inputs, and make zero (economic) profit. Primary endowments are fixed, and may be treated as specific or mobile. The dataset contains five primary factors. In the default medium run closure all factors except natural resources are treated as mobile across economic activities.

The model identifies several consumption agents, government, investment and multiple consumer households. The number of consumer households varies by region, depending on available data, with between 5 and 10 categories in the various regions. The final consumption of each household is modelled using Stone-Geary utility functions, which generate linear expenditure systems (LES) characterizing demand for each household category. Changes in household welfare are measured by equivalent variation (EV).[6] The parameters of the functions vary by household to capture differences in consumption patterns. The amount of government consumption and investment is held constant in the default closure. All agents consume composites of imported goods and domestic production, with proportions that are variable and specified independently by agent (sometime called the SALTER specification). On the income side, factors are owned in varying proportions by the households, and fixed proportions are maintained in household savings, taxation and government transfers.

The exportables produced by domestic firms are allocated over destination regions using a second level CET function, hence the aggregate exportable is a composite of exports to the various regions. (The elasticity on both CET functions is set such that export destinations are very close to perfect substitutability). Similarly, on the import side, the imports of each country are a CES composite of regional imports (that is, a second level Armington function). Unlike at the first level, this function is common across all agents in the domestic economy. Demand for regional exports is derived from the Armington import structure for all regions that are explicitly modelled. In the case of regions that are not

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[5]   The authors have a social accounting matrix for Nepal, with four household groups, which is currently being incorporating into the model, and for Pakistan, which will be incorporated at a later date.

[6]   Equivalent variation is the monetary value of the increment in income that would have to be given to (or taken away from) a household at today s prices, to make them as well off today as they would be under the proposed policy change.

explicitly modelled (in this instance, the ROW region), the computational complexity of the model is reduced by using constant elasticity of demand (CED) functions to represent ROW demand responses. The prices of imports from the ROW region are fixed.

An international transportation sector accounts for the difference between the FOB price of exports and the CIF price of imports. Transportation margins vary by commodity along all international routes. Unlike in the GTAP model, because the focus here is on a single relatively small (in global terms) region, the price of international transportation services is fixed.

The price normalization and closure rules are similar to those used in many single country models. The current account balance is fixed and the nominal exchange rate is allowed to vary in order to maintain a balance within each country. The numeraire in each country is the consumer price index. A numeraire region must also be defined for which the nominal exchange rate is fixed, which in this model is the ROW region.

The model includes a full range of distortions in the form of taxes and subsidies on economic activities at all levels to ensure that adequate account is taken of the second-best implications of the policy scenarios.

2. Data

The CGE model requires appropriate data in the form of a Social Accounting Matrix (SAM) for each country, trade flow matrices, and estimates of the model parameters and their distributions.[7] These have been compiled from various sources, and reconciled.

The base data on trade, production, aggregate consumption and employment is extracted from the GTAP6 database, and has a base year of 2001. Information on sources of household income (ownership of primary factors and transfers/taxes) and variation in consumption patterns across households were obtained from Pradhan and Sahoo (2006) for India, from Fontana and Wobst (2001) for Bangladesh, and from Naranpanawa (2005) for Sri Lanka.[8] The household categories are listed in annex table 2. The information in these studies was aggregated/disaggregated and rebalanced where necessary to match the GTAP data dimensions and ensure consistency with the aggregate GTAP6 household consumption data.[9] Model elasticity parameters were obtained from the existing estimates in GTAP6.

[7]   The SAM is an account of all of the flows between economic agents at a specific point in time.

[8]   A newer SAM from Saluja and Yadav (2006) has a base year of 2003/04, and 73 productive sectors and 10 household categories, defined by expenditure level. This SAM will be updated later.

[9]   The procedure used was to first split the factor income proportions across skilled and unskilled labour, using the aggregate level of factor use in GTAP and the allocation of labour to agricultural/ non-agricultural activities. Once this mapping was complete, household incomes could be constructed that were consistent with the GTAP6 data. These matched the proportions in the original data quite closely. The consumption categories were then matched to GTAP categories, and the overall GTAP consumption proportions were used to split the individual household proportions where necessary. Finally, the RAS method was used to ensure that the household consumption shares were consistent with the household incomes and total expenditures in GTAP6.

3. Experimental design

The model is quite general in purpose, and in principle can be useful in examining a variety of developments in South Asia. Hence, both a regional trade reform scenario and a unilateral reform benchmark have been considered. In the regional scenario, a reduction in tariff peaks is considered first, corresponding to the agreed initial reduction in bilateral tariffs to a maximum of 20 per cent. Next, a halving of the preferential tariffs is considered.[10] The unilateral benchmark chosen here is a 10 per cent reduction in all applied tariffs.

All of the simulations are run as a comparative static. Therefore, the results should be interpreted as representing how the economic system would have appeared in the base year, had the proposed changes been implemented and the economic system given sufficient time to adjust to the new equilibrium. As noted above, the factor market closure allows all factors except natural resources to be mobile across economic activities, implying that the simulation is medium run in nature.[11]

Sensitivity analysis was implemented within the simulations by using an unconditional approach adopted in Gilbert and Wahl (2003). This approach improves the policy value of the simulations by highlighting results that are unlikely to be robust, and by providing an estimate of the range of potential outcomes rather than a point estimate. To undertake the analysis, key parameters (the trade elasticities) were treated as normally and independently distributed random variables.[12] Each simulation was run as a Monte-Carlo experiment, with a series of pseudo-random parameter values chosen from the underlying distributions. With a large number of iterations (in these preliminary results 500 iterations have been used) of the simulation, the mean predictions of the variables of interest can be approximated, together with indicators of their susceptibility to parametric uncertainty (the standard deviations) and the accuracy of the simulation procedure (the standard errors).[13]

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[10] It is common to simulate an FTA with elimination of bilateral tariffs. However, given the limited success in the many developing country FTAs, the halving scenario may be more realistic.

[11] The implicit adjustment time frame in this type of simulation is roughly 10-12 years.

[12] In this chapter, the author has followed Gilbert and Wahl (2003) and used a default standard deviation of 7.5 per cent of the mean value from GTAP, implying that almost all variation will occur within 25 per cent of the mean. The results provide a measure of the underlying sensitivity of the results.

[13] This general technique is valid for any type of model structure and the computational complexity does not increase with the number of parameters that are allowed to vary. It is, however, computationally expensive. Variance reduction techniques can therefore be usefully applied here. The two techniques used here are to run alternative simulations using common random numbers, and to adopt antithetic variates in the sampling. The former technique ensures that the same pseudo-random numbers are drawn for alternative simulations, and therefore alternatives can be compared without the risk of a skewed draw. Antithetic variates use the mean of symmetric draws from the underlying distribution as the estimator for mean predictions. Since most of the variables of interest vary monotonically with the elasticities that are treated as random variables, this technique dramatically reduces the standard errors in the preliminary tests (that is, improves the accuracy of the mean estimates). In the preliminary simulations with 500 draws, the standard errors were roughly halved relative to 1,000 fully random draws, a reduction that would require quadrupling the number of iterations under fully random draws.

C. Preliminary results

Before turning to the estimated impact on household welfare, it is useful to review some basic data on the household categories presented in annex table 7. Unlike in the Sri Lankan data, which directly identify households by income level, the data for India and Bangladesh are grouped by archetype. In India, group H2 (rural agricultural labour) is the poorest group by a substantial margin, followed by H4 (other rural) and H3 (rural non-agricultural labour). The richest groups are H6 (urban self-employed) and H7 (urban salaried). The households differ substantially in their ownership of productive factors, with the richest rural group (H1, rural self-employed) being substantial owners of land and capital.

On the other hand, the poorer households, especially H2, receive income almost exclusively from selling their own labour (a large fraction of which is unskilled). Comparing the poorest two groups (H2 and H4) with the richest two (H6 and H7), significant differences are also observed in spending patterns, although the differences are not as great as in ownership of productive resources. In particular, the two poorest groups spend nearly 2.5 times as much of their income on basic food items (in particular, processed rice) as do the two richest groups. In textiles, the pattern is less dramatic, but the poor groups still spend about 30 per cent more than the rich groups.

In Bangladesh, the poorest groups are H1 and H2, rural groups with only limited or no holdings of land. They are followed by H7, H3 and, to a lesser extent, H8, that is, the urban illiterate and poorly educated, and rural households with small land holdings. The richest groups, by a substantial margin, are urban households with high or medium education (H9 and H10). The factor allocation pattern is similar to that of India, with the lower income groups having a much higher dependence on unskilled labour. Consumption differences are also similar, with the poorest households devoting more than double the proportion of their budget to processed rice than do the richest households.

Now consider the impact of SAFTAs reduction in tariff peaks. The welfare results, using the household EV measure, are presented in annex table 8. First consider the effect of eliminating tariff peaks by lowering to 20 per cent those tariffs that are higher than 20 per cent. The overall welfare effects of this move are very small, although all are robust to parametric uncertainty.[14] This may be a reflection of an aggregation bias in the model. By aggregating the data to 16 sectors, many tariff peaks in the disaggregate data are evened out and, hence, are likely to understate potential gains from tariff reform to a degree. In the simulations, the only region to gain significantly from this move appears to be the rest of South Asia aggregate region, which is dominated by Pakistan. The large gain directly reflects the benefits of reductions in the very high bilateral tariffs imposed by India.

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[14] A result can more or less be considered robust to the assumed underlying parametric uncertainty if it retains the same sign within two standard deviations of the mean.

The policy does tend to benefit groups H3 and H4 (the landowning groups) in Bangladesh, while other groups lose. This suggests that the reform would have a positive effect on land prices and on some rural households. The poorest rural groups (H1 and H2), however, lose under the proposal, as do the urban poor (H5), so the policy does not appear to be pro-poor in Bangladesh. In India, the welfare of all households except H1 and H3 (rural self-employed and non-agricultural labour) is estimated to rise. As the poorest groups in India are H2 and H4, the policy does appear to be pro-poor. However, the fall is very large in H1, the agricultural land owning group that, while not terribly poor, is politically highly influential. For Sri Lanka, the household impacts are negligible (and for H2 and H5, not robust).

Should SAFTA be successful in implementing more significant cuts beyond the peaks, the total potential welfare gains are significantly larger for both India and Sri Lanka, although still small as a proportional of GDP. In India, SAFTA would raise the income of the poorest groups and have only a moderate negative impact on landowners (a figure that is not robust to parameter changes, in any case). However, the biggest beneficiaries are in group H7 (urban salaried workers), which is among the richest. Hence, the policy would likely raise income inequality (slightly), even as the incomes of the poor rise. In Sri Lanka, the policy, while having positive impacts overall, would have a negative impact on the rural poor.

The impact on Bangladesh is interesting. The reform has a negative impact on overall welfare, but it is robustly pro-poor in both an absolute and a relative sense. The poorest groups (H1 and H2) gain from the policy while the richest groups (H9 and H10) lose substantially. All the changes are robust. Hence, the poorest in society would see their incomes rise in both absolute and relative terms, but at the cost of overall efficiency.

Finally, consider the unilateral benchmark as a comparison point for the regional scenarios. Recall that this is small unilateral tariff reform, a 10 per cent cut. However, the overall welfare impacts are of the same order of magnitude as the larger regional cuts, a reflection of the still limited trading relations among this group. In Bangladesh, such a reform would be pro-poor in both a relative and an absolute sense for much the same reason as the regional scenario, but the aggregate impact would be a modest improvement in efficiency. For India the gains are much larger in aggregate at US$ 241 million. However, while the policy would raise the absolute incomes of the poorest groups, relative poverty may rise given the large increase in the incomes of the urban salaried. Also, the large fall in the incomes of rural landowners may be problematic, as in the first scenario. In Sri Lanka the impacts are similar, both in magnitude and in pattern, to the regional scenario, with positive impacts overall but a negative impact on the rural poor.

D. Conclusion

The main contribution of this study relative to existing work is bringing the multiple representative household CGE approach to a model of the entire South Asian region, as opposed to the single country models examined earlier in the chapter, and the application to

changes in transportation infrastructure. However, the project at this stage is very much still a work in progress. Hence, this chapter concludes with some policy implications as well as a few notes on key areas for further refinement.

In terms of the overall policy message, the results of this study confirm those of Bandara and Yu (2003) in that the overall welfare effects of trade reform under the auspices of SAFTA are likely to be small. The economies of the region, while having relatively intense trading relations, tend to have similar export profiles and hence limited opportunity for mutually beneficial exchange. The impact of SAFTA is likely to be positive, if modest, for most member economies (Bangladesh, for which unilateral reform appears the superior option, being the possible exception). In terms of poverty and income inequality, the results are mixed. While regional integration is likely to be pro-poor in Bangladesh, in India it is pro-poor only in an absolute sense. Income inequality would rise. Also, in all scenarios, the impact on India s landowning class is negative, which is likely to be politically problematic.

It should be emphasized that the results in these scenarios represent business as usual in terms of government taxes and transfers. To the extent that the distribution of the gains from trade reform is under government control, it is feasible whenever the total gains are positive (that is, for all countries in the unilateral scenario and all, except Bangladesh, in the regional scenario) to redistribute those gains such that all groups in society gain. Nothing in the present modelling contradicts the basic proposition that a Government can, if it wishes, redistribute income as it sees fit.

In terms of improvements, the main issue is including more and newer data. The GTAP database is the most accessible and comprehensive source of data on bilateral trade, transport margins and protection. Once the GTAP7 data are released (later in 2008), pushing the base year to 2004 for all currently included countries will be a relatively straightforward exercise. It will also be easy to bring in Pakistan, using the GTAP7 trade maps and the available Pakistan household data (Roland-Holst, 2008). It should also be possible to improve the household data for India, based on Saluja and Yadav (2006). Once Nepal is added, the residual will effectively represent Maldives and Bhutan. This will represent an improvement both in regional coverage and in the timeliness of the underlying dataset.

Annex

Annex table 1. Intra-SAFTA trade shares, 1999-2006

Region	1999	2000	2001	2002	2003	2004	2005	2006
SAFTA as destination:								
Bangladesh	8.7	9.0	8.9	9.7	11.3	9.4	9.7	8.3
India	2.0	2.5	2.7	2.8	3.3	2.7	2.6	2.4
Sri Lanka	7.1	7.6	7.8	10.4	12.7	14.3	15.1	17.7
Nepal	45.3	40.0	39.7	46.9	53.6	56.2	61.5	59.5
Pakistan	3.3	3.7	2.8	2.8	2.6	3.3	3.5	4.3
SAFTA	3.8	4.3	4.1	4.3	5.0	4.3	4.1	3.9
SAFTA as source:								
Bangladesh	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
India	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.7
Myanmar	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Sri Lanka	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nepal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Thailand	2.7	2.8	3.0	3.2	3.4	3.6	3.8	3.5

Source: COMTRADE.

Annex table 2. Intra-SAFTA trade intensity, 1999-2006

Region	1999	2000	2001	2002	2003	2004	2005	2006
SAFTA as destination:								
Bangladesh	8.5	9.0	8.7	8.9	9.3	7.5	6.9	5.9
India	2.0	2.5	2.6	2.5	2.7	2.2	1.8	1.7
Sri Lanka	7.0	7.5	7.6	9.5	10.5	11.5	10.8	12.6
Nepal	44.6	39.9	38.8	43.0	44.3	45.2	43.9	42.4
Pakistan	3.3	3.7	2.8	2.5	2.2	2.7	2.5	3.1
SAFTA	3.8	4.2	4.0	3.9	4.2	3.5	2.9	2.8
SAFTA as source:								
Bangladesh	7.5	8.2	7.8	8.3	10.2	7.7	6.0	4.8
India	2.6	3.1	2.7	2.6	2.6	2.1	1.7	1.7
Sri Lanka	6.6	6.8	7.5	9.3	11.0	10.3	11.6	10.3
Nepal	25.0	24.2	34.9	37.6	41.5	39.8	37.8	34.4
Pakistan	3.8	4.2	4.0	3.9	4.2	3.5	2.9	2.8
SAFTA	2.9	3.3	2.5	2.2	2.0	2.4	2.4	3.3

Source: COMTRADE.

Annex table 3. Intra-SAFTA complementarity, 1999-2006

Region	1999	2000	2001	2002	2003	2004	2005	2006
SAFTA as destination:								
Bangladesh	40.0	44.6	46.0	52.8	49.5	48.2	44.9	44.5
India	39.3	40.3	42.0	43.7	44.5	47.8	49.7	54.4
Sri Lanka	42.8	47.9	50.2	50.8	51.8	52.3	53.9	57.5
Nepal	46.0	49.7	39.2	45.2	47.6	48.1	50.5	55.2
Pakistan	38.6	37.5	41.0	43.1	43.4	47.6	47.7	50.2
SAFTA	46.7	48.6	49.9	52.1	52.7	55.0	54.3	58.9
SAFTA as source:								
Bangladesh	5.9	6.4	5.9	7.2	7.0	8.8	6.4	6.2
India	52.5	56.2	58.2	56.5	57.8	59.5	59.2	63.9
Sri Lanka	19.2	23.2	19.5	23.7	20.4	21.0	24.0	23.7
Nepal	20.2	20.9	21.5	26.7	23.8	23.4	26.4	26.6
Pakistan	16.6	16.8	18.4	18.4	18.8	20.7	21.8	21.7
SAFTA	46.7	48.6	49.9	52.1	52.7	55.0	54.3	58.9

Source: COMTRADE.

Annex table 4. Intra-SAFTA export similarity, 1999-2006

Region	1999	2000	2001	2002	2003	2004	2005	2006
SAFTA as destination:								
Bangladesh	37.3	37.2	36.8	33.9	31.6	31.6	29.2	28.4
India	83.5	83.7	82.6	85.0	84.3	84.2	85.1	85.3
Sri Lanka	53.7	56.3	51.6	49.1	44.6	42.4	43.8	44.7
Nepal	38.7	41.5	44.2	48.2	44.5	45.2	44.4	44.2
Pakistan	51.0	51.9	54.0	52.2	52.4	48.7	51.5	50.4
SAFTA as source:								
Bangladesh	37.3	37.2	36.8	33.9	31.6	31.6	29.2	28.4
India	83.5	83.7	82.6	85.0	84.3	84.2	85.1	85.3
Sri Lanka	53.7	56.3	51.6	49.1	44.6	42.4	43.8	44.7
Nepal	38.7	41.5	44.2	48.2	44.5	45.2	44.4	44.2
Pakistan	51.0	51.9	54.0	52.2	52.4	48.7	51.5	50.4

Source: COMTRADE.

Annex table 5. Trade-weighted average applied tariffs in 2007

	World	Bangladesh	Sri Lanka	India	Nepal	Pakistan
Bangladesh	11.3	—	17.3	10.8	4.4	15.1
Sri Lanka	6.6	6.5	—	6.1	8.6	2.0
India	10.4	17.8	21.3	—	19.2	23.1
Nepal	13.1	8.7	11.6	13.6	—	8.6
Pakistan	11.9	6.6	4.4	8.4	8.7	—

Source: COMTRADE.

Annex table 6. Poverty/income inequality profiles in South Asia

(Unit: Percentage)

	Year	Head count	Poverty gap	Squared poverty gap	Gini
US$ 1.00/day					
Bangladesh	2005	35.3	7.9	2.4	33.2
India — Rural	2005	40.2	9.4	3.1	30.5
India — Urban	2005	19.6	4.2	1.3	37.6
Nepal	2004	24.7	5.6	1.7	47.3
Pakistan	2005	9.0	1.4	0.4	31.2
Sri Lanka	2002	5.8	0.7	0.1	40.2
US$ 2.00/day					
Bangladesh	2005	81.5	35.6	18.5	33.2
India — Rural	2005	87.7	39.8	21.0	30.5
India — Urban	2005	61.5	23.1	11.1	37.6
Nepal	2004	64.8	26.4	13.2	47.3
Pakistan	2005	59.5	18.3	7.4	31.2
Sri Lanka	2002	41.5	12.1	4.6	40.2

Source: World Bank, 2007.

Annex table 7. Household categories in the model by region

Category	Definition	Percentage of population	Percentage of income
India			
H1	Rural self-employed agricultural	24.2	24.2
H2	Rural agricultural labour	22.1	9.2
H3	Rural non-agricultural labour	13.9	12.8
H4	Other rural	14.8	11.5
H5	Urban agricultural	1.2	1.2
H6	Urban self-employed non-agricultural	5.4	11.4
H7	Urban salaried	12.9	20.9
H8	Urban casual labour	2.8	2.7
H9	Other urban	2.4	6.2
Bangladesh			
H1	Agricultural landless	1.5	0.7
H2	Agricultural marginal land	17.3	7.7
H3	Agricultural small land	17.4	10.2
H4	Agricultural large land	7.7	7.6
H5	Non-agricultural poor	16.3	14.6
H6	Non-agricultural rich	7.3	7.5
H7	Urban illiterate	10.6	5.8
H8	Urban low educated	7.2	5.4
H9	Urban medium educated	6.1	14.5
H10	Urban highly educated	8.6	26.2
Sri Lanka			
H1	Urban low income		20.4
H2	Rural low income		31.8
H3	Estate low income		7.2
H4	Urban high income		22.7
H5	Rural high income		17.9

*Source*s: Pradhan and Sahoo, 2006; Fontana and Wobst, 2001; and Naranpanawa, 2005.

Annex table 8. Estimated welfare impact of trade reform scenarios

(Unit: US$ million)

	Removing peaks				Regional tariff cut				Unilateral tariff cut			
	Bangladesh	India	Sri Lanka	Rest of South Asia	Bangladesh	India	Sri Lanka	Rest of South Asia	Bangladesh	India	Sri Lanka	Rest of South Asia
H1	-0.2	-145.7	1.2	147.7	0.5	-6.1	5.5	150.2	0.8	-168.9	3.8	22.3
H2	-1.8	21.2	-1.6		6.6	15.9	-12.9		10.4	29.5	-16.8	
H3	4.6	-3.5	0.9		10.1	19.7	2.7		13.4	10.8	1.6	
H4	10.9	20.6	-1.1		9.0	20.5	6.7		9.7	40.6	6.2	
H5	-3.3	0.5	-0.6		1.7	1.9	5.8		9.6	0.5	5.7	
H6	-2.0	27.8			-0.9	39.4			5.2	94.5		
H7	-1.7	41.9			-5.7	57.5			-1.8	197.4		
H8	-1.0	8.4			1.1	7.3			5.1	17.2		
H9	-5.4	12.5			-36.8	11.4			-22.4	10.0		
H10	-6.7				-33.6				-11.1			
Total	-6.6	-16.5	-1.2	147.7	-48.0	167.6	7.9	150.2	19.0	231.6	0.5	22.3

Source: Model simulations.

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Chapter VII

TRADE LIBERALIZATION AND POVERTY IN BANGLADESH

By Selim Raihan

Introduction

The impact of trade liberalization on growth and employment is a much debated and controversial issue. In theory, trade liberalization results in productivity gains through increased competition, efficiency, innovation and acquisition of new technology. Trade policy works by inducing substitution effects in the production and consumption of goods and services through changes in price. These factors, in turn, influence the level and composition of exports and imports. In particular, the changing relative price induced by trade liberalization causes a more efficient reallocation of resources. Trade liberalization is also seen as expanding economic opportunities by enlarging the market size and enhancing the impact of knowledge spillover. However, empirical evidence to support these propositions is far from conclusive. Both cross-country and country-specific studies have failed to suggest any conclusive evidence to support the claim that trade liberalization promotes economic growth and aids net employment generation.

Trade liberalization has been one of the major policy reforms carried out by Bangladesh. It has been implemented as part of the overall economic reform programme, that is, the structural adjustment programme (SAP) that was initiated in 1987 and which formed the component of the structural adjustment facility (SAF) and enhanced structural adjustment facility (ESAF) of the International Monetary Fund and the World Bank. This adjustment programme put forward a wide range of policy reforms including trade, industrial, monetary, fiscal and exchange rate policies, privatization of state-owned enterprises policy and the promotion of foreign direct investment.

After independence in 1971, Bangladesh followed a of a highly restricted trade regime strategy. This was characterized by high tariffs and non-tariff barriers to trade and an overvalued exchange rate system that was supported by the import-substitution industrialization strategy of the Government. This policy was pursued with the objectives of improving the balance of payment position of the country and creating a protected domestic market for manufacturing industries (Bhuyan and Rashid, 1993). The trade regime registered a major shift in the mid-1980s, when a policy of moderate liberalization was initiated. However, in the early 1990s, large-scale liberalization of trade was implemented. Since then, successive Governments have reaffirmed their commitment to the development of a more liberal trade regime.

There are fierce debates among economists and policymakers on the extent of trade liberalization. The World Bank and the International Monetary Fund have claimed that the pace and extent of liberalization in Bangladesh in the 1990s was not as rapid compared to other developing countries (World Bank, 1999). However, this is not endorsed by economists and private industrial entrepreneurs in Bangladesh, who argue that a much slower pace of liberalization is warranted (Mahmud, 1998). Rashid (2000) also pointed out that the views of the stakeholders had not been taken into consideration in the framing and implementation of trade liberalization policies.

In fact, there have been concerns over whether the impact of trade liberalization has been favourable to the domestic economy. In fact, there is a lack of consensus on the issue (World Bank, 1999). There is also continuing debate over the future direction of trade liberalization in Bangladesh. Questions have been raised over whether Bangladesh ought to undertake further drastic wholesale liberalization of trade or adopt a more gradual approach. Against this backdrop, this chapter assesses trade liberalization in Bangladesh and examines its impact on growth and employment in the country.

A. Trade liberalization, growth and employment

There are competing theories on trade and economic performance, while a large number of empirical studies have attempted to test those theories under different contexts. However, both the theoretical and empirical studies related to trade liberalization, growth and employment in the context of developing countries point to the fact that there is no unambiguous conclusion about the role of liberalization in boosting economic growth and employment.

Several standard trade theories have suggested links through which a more open trade regime could have positive impacts on poverty alleviation. The Heckscher-Ohlin-Samuelson theorem, extending the classical comparative advantage theory, points out that countries have different factor endowments and different factor intensities across goods; therefore, the country that has abundant labour will export labour-intensive commodities and the country with abundant capital will export capital-intensive commodities. As the low-income countries have abundant labour, the implication of this theorem is that low-income countries will export labour-intensive commodities.

In addition, the Stolper-Samuelson theorem argues that an increase in the relative price of labour-intensive goods will raise the real income for labour, although it will reduce the real returns to capital. Winters (2000), however, pointed out that the practical relevance of the Stolper-Samuelson theorem was negligible because it depended on many restrictive assumptions. He argued that the theorem was incapable of answering questions on trade and poverty in the real world. For example, it is less powerful in multi-commodity, multi-factor models, and the functional and personal distributions of income are loosely related.

The theoretical framework for linking trade reforms to poverty was probably best developed by Winters (2000) who explained how trade liberalization influenced poverty through three broad groups of institutions — price, enterprise and government.

The first impact of trade liberalization would be on the price of goods and services consumed and produced by the poor. Falling prices benefit consumers while rising prices benefit producers. Where price changes exist, reduction in poverty is dependant not only on the size of those price changes, but also on the products to which they relate, and the distribution of consumption and production. The rate at which poverty is reduced depends on the ability of household members to adjust their consumption and production in the appropriate direction in response to the price change.

The response of enterprises to liberalization is the second channel through which poverty is affected. Price changes due to trade liberalization may alter the production pattern. Rising prices provide incentive to increase production, while falling prices do the reverse. Where production increases, this may lead to an increase in wages or levels of employment. The extent of poverty reduction thus depends on the level of initial wages and magnitude of increase relative to the poverty line.

The third important link is through changes in government revenue and expenditure as a direct consequence of liberalization. When trade taxation is an important source of revenue, reduced public resources as a result of trade policy reform are most likely to affect households dependent on the provisioning of the public services.

The relationship between trade liberalization and employment has been a contentious issue for many decades. The complexity of establishing the linkage between trade liberalization and employment lies in the fact that there are many channels through which trade liberalization can influence the labour market directly and/or indirectly. In accordance with the traditional Heckscher-Ohlin model, trade liberalization increases demand for the commodity that uses the abundant factor intensively. Therefore, trade increases the demand for the abundant factor and hence creates employment opportunities. In other words, trade liberalization holds the possibility of job creation. This obvious link argues the ability of trade liberalization in reducing poverty, because employment is the ultimate way to fight poverty.

However, the opposite view is also prevalent; this view predicts the possibility of job destruction, relocation and associated adjustment cost due to the opening up of the economy. Analysing the various related literature, a general viewpoint has been derived, that is, trade liberalization is associated both with job destruction and with job creation. In the short term, the resulting net employment effects may be positive or negative, depending on country-specific factors such as the functioning of the labour and product markets. In the long term, however, the efficiency gains created by trade liberalization are expected to lead to positive overall employment effects in terms of the quantity of jobs, wages earned, or a combination of both.

However, the relationship between the opening up of the economy and the impact on employment are inconclusive, although there are noticeable differences in the result of the empirical investigation of the trade liberalization-employment nexus. According to Papageorgiou and others (1990), a comprehensive, retrospective World Bank study of trade reforms conducted in developing countries showed that eight out of nine countries had higher employment in the manufacturing sector during the liberalization period and a year later. The results given by Papageorgiou and others (1990) have been challenged by Collier (1993) on methodological grounds. According to Ernest (2005), the impact of trade liberalization in Argentina and Brazil was disappointing; however, in the case of Mexico, there was growth in productivity and employment in the manufacturing sector during the second half of the 1990s.

Fu and Balasubramanyam (2005) found a positive and significant impact of exports on employment in China. By using a panel data set for township and village enterprises (TVEs) in 29 provinces in China over 1987-1998, they suggested that a 1 per cent increase in export volume would raise employment by 0.17 per cent. However, other studies have found negative relationships between trade reform and employment. For example, Rama (1994) found trade liberalization had a negative effect on employment in Uruguay in the late 1970s and early 1980s. Greenway and others (1998) found that between 1979 and 1991, when industry in the United Kingdom of Great Britain and Northern Ireland had been integrated into the international economy through foreign direct investment (FDI) and trade, there were large-scale job losses in the manufacturing sector in the United Kingdom. They found that when United Kingdom trade volume increased, demand for labour decreased in the manufacturing sector because trade liberalization generated competition and a requirement for highly-skilled labour in delivering high output. However, this job loss situation was equalized by an increase in financial services as well as primary and extractive employment. Carneiro and Arbache (2003) found trade liberalization had a limited impact on macroeconomic variables and labour market indicators in Brazil.

B. Overview of trade liberalization in Bangladesh

Bangladesh pursued an import-substituting industrialization strategy in the 1970s, the key objectives of which were:

(a) To safeguard the country s infant industries;

(b) To reduce the balance of payments deficit;

(c) To use scarce foreign exchange efficiently;

(d) To ward off international capital market and exchange rate shocks;

(e) To lessen fiscal imbalance;

(f) To achieve higher economic growth and self-sufficiency.

The basic policy tools used under this policy regime included high import tariffs, quantitative restrictions, foreign exchange rationing and an overvalued exchange rate.

However, in the face of the failure of such inward-looking strategies to deliver the desired outcomes, together with rising internal and external imbalances, trade policy reforms were introduced in the early 1980s. Since then, trade liberalization has become an integral part of Bangladesh s trade policy.

Trade policy from 1972 to 1980 consisted of significant import controls. The major administrative instruments employed in implementing the import policy during that period were the foreign exchange allocation system and import policy orders (IPOs). Under IPOs, it was specified whether items could be imported, were prohibited or required special authorization. With the exception of a few cases, licences were required for all other imports. The argument behind the import-licensing system was that it would ensure the allocation of foreign exchange to priority areas as well as protect vulnerable local industries from import competition. However, the system was criticized for not being sufficiently flexible to ensure its smooth functioning under changing circumstances. Moreover, it was characterized by complexity, deficiency in administration, cumbersome foreign exchange budgeting procedures, poor interagency coordination, rigid allocation of licences and time-consuming procedures (Bhuyan and Rashid, 1993).

During the 1980s, moderate import liberalization took place. In 1984, a significant change was made in the import policy regime with the abolition of the import licensing system, and imports were permitted against letters of credit. From 1986, significant changes were made in the import procedures and IPOs with regard to their contents and structure. Whereas, prior to 1986, IPOs contained a lengthy Positive List of importable goods, in 1986 it was replaced by two lists — the Negative List (for banned items) and the Restricted List (for items importable on fulfilment of certain prescribed conditions). Imports of any items outside the lists were allowed. These changes may be considered as significant moves towards import liberalization, since no restrictions were imposed on imports of items that did not appear in IPOs. With the aim of increasing the elements of stability and certainty of trade policy, IPOs with relatively longer periods replaced the previous practice of framing annual import policies. In 1990, the Negative and Restricted Lists of importable items were consolidated into one list, that is, the Consolidated List (Ahmed, 2001).

Table 1 suggests that, at the HS-4 digit level, the range of products subject to an import ban or restriction has been curtailed substantially from as high as 752 in 1985-1986 to only 63 in 2003-2006. Import restrictions have been imposed on two grounds — either for trade-related reasons (that is, to protect domestic industries) or for non-trade reasons (for example, to protect the environment, public health and safety, and security). Therefore, only the trade-related restrictions should be of interest to policy reforms and liberalization. Table 1 shows that during the past two decades, the number of trade-related banned items has declined from 275 to 5. In a similar fashion, other restricted and mixed (a combination of banned and restricted) import categories fell quite rapidly. In 1987-1988, about 40 per cent of all import lines at the HS-4 digit level was subject to trade-related quantitative restrictions, but these restrictions have been drastically reduced to less than 2 per cent.

Table 1. Removal of quantitative restrictions at the 4-digit HS classification level

Years	Total	Restricted for trade reasons			Restricted for non-trade reasons
		Banned	Restricted	Mixed	
1985-1986	478	275	138	16	49
1986-1987	550	252	151	86	61
1987-1988	529	257	133	79	60
1988-1989	433	165	89	101	78
1989-1990	315	135	66	52	62
1990-1991	239	93	47	39	60
1991-1992	193	78	34	25	56
1992-1993	93	13	12	14	54
1993-1994	109	7	19	14	69
1994-1995	114	5	6	12	92
1995-1997	120	5	6	16	93
1997-2002	122	5	6	16	95
2003-2006	63	5	8	10	40

Sources: Compiled from Yilmaz and Varma, 1995; Bayes and others, 1995; Taslim, 2004.

Note: Figures for 2003-2006 are derived from Import Policy Orders 2003-2006.

Since the late 1980s, the tariff regime has become increasingly liberalized. Between 1991-1992 and 2004-2005 the unweighted average tariff rate fell from 70 per cent to 13.5 per cent (table 2). Much of this reduced protection was achieved through the reduction in the maximum rate. Table 2 suggests that in 1991-1992 the maximum tariff rate was 350 per cent, which came down to only 25 per cent in 2004-2005. The number of tariff bands was 24 in the 1980s, 18 in the early 1990s and only 4 at present. The percentage of duty-free tariff lines more than doubled between 1992-1993 and 1999-2000 (from 3.4 per cent to 8.4 per cent). Bangladesh has no tariff quotas, seasonal tariffs and variable import levies (WTO, 2000). All these measures have greatly simplified the tariff regime and helped streamline customs administration procedures.

A drastic reduction in unweighted tariff rates during the 1990s also resulted in a fall in import-weighted tariff rates. Table 3 shows that the import-weighted average tariff rate declined from 42.1 per cent in 1990/91 to 13.8 per cent in 1999/2000, and 11.48 per cent in 2003/04.

One important aspect of the tariff structure in Bangladesh is related to the use of import taxes that have a protective impact (also known as para-tariffs) over and above the protection provided by customs duty (World Bank, 2004). These taxes include the infrastructure development surcharge, supplementary duties and regulatory duties. Although these taxes have been primarily imposed for generating additional revenues, in the absence of equivalent taxes on domestic production, they have provided extra protection to

Table 2. Tariff structure in Bangladesh

Fiscal year	Number of tariff bands	Maximum rate (%)	Unweighted Tariff rate (%)
1991/92	18	350.0	70.0
1992/93	15	300.0	47.4
1993/94	12	300.0	36.0
1994/95	6	60.0	25.9
1995/96	7	50.0	22.3
1996/97	7	45.0	21.5
1997/98	7	42.5	20.7
1998/99	7	40.0	20.3
1999/00	5	37.5	19.5
2000/01	5	37.5	18.6
2001/02	5	37.5	17.1
2002/03	5	32.5	16.5
2003/04	5	30.0	15.6
2004/05	4	25.0	13.5

Source: *Bangladesh Economic Review*, 2004.

Table 3. Trend in the import-weighted average tariff

	1990/91	1991/92	1994/95	1998/99	1999/2000	2000/01	2001/02	2002/03	2003/04
Import-weighted tariff	42.1	24.1	20.9	14.7	13.8	15.1	9.73	12.45	11.48

Sources: WTO, 2000 and *Bangladesh Economic Review*, 2004.

local industries. Similarly, while the value added tax is supposed to be trade-neutral, exemptions for specified domestic products have also resulted in it having some protective content.

Some of these para-tariffs, such as the infrastructure development surcharge, are applied across-the-board to all or practically all imports, and can be considered as general or normally applied protective taxes that affect all or nearly all tariff lines. Others are selective protective taxes in that they are only applied to selected products (for example, the supplementary duties). The para-tariffs employed during the 1990s and early 2000s in Bangladesh are summarized in table 4. It appears that despite the lowering of customs duties, the presence of para-tariffs did not significantly lower the total protection rate.

Table 4. Average customs duties and para-tariffs in Bangladesh

Year	All tariff lines			Industrial tariff lines			Agriculture tariff lines		
	Customs duties	Para-tariffs	Total protection rate	Customs duties	Para-tariffs	Total protection rate	Customs duties	Para-tariffs	Total protection rate
1991/92	70.64	2.98	73.62	69.72	3.44	73.16	76.64	-0.01	76.63
1992/93	57.93	2.59	60.52	57.34	2.99	60.33	61.83	-0.03	61.80
1993/94	43.47	2.43	45.90	43.13	2.84	45.97	45.58	-0.17	45.41
1994/95	34.24	3.30	37.55	33.52	3.54	37.06	37.49	2.23	39.72
1995/96	28.70	3.26	31.96	28.40	3.47	31.87	30.07	2.28	32.36
1996/97	28.24	3.38	31.61	27.79	3.58	31.37	30.25	2.48	32.73
1997/98	27.27	5.88	33.15	26.80	5.98	32.78	29.42	5.42	34.83
1998/99	26.59	5.82	32.41	26.23	5.92	32.15	28.19	5.37	33.56
1999/00	22.40	6.99	29.39	21.86	7.33	29.19	24.87	5.41	30.28
2000/01	21.10	7.43	28.54	20.39	7.84	28.23	24.53	5.46	30.00
2001/02	21.02	8.41	29.43	20.28	8.47	28.75	24.60	8.15	32.74
2002/03	19.91	6.51	26.42	19.08	6.74	25.82	23.85	5.44	29.29
2003/04	18.82	10.29	29.11	18.02	8.81	26.82	22.56	17.22	39.77

Source: World Bank, 2004.

Until the mid-1980s, Bangladesh followed a strategy of import-substitution. The regime was also characterized by a high degree of anti-export bias. However, since 1985, export policy reforms have been implemented that have included trade, exchange rate, and monetary and fiscal policy incentives, aimed at increasing effective assistance to exports. A few sectors, especially ready-made garments, have been among the beneficiaries of these reforms. The reforms have also provided exporters with unrestricted and duty-free access to imported inputs, financial incentives in the form of easy access to credit and credit subsidies, and fiscal incentives such as rebates on income taxes and concessionary duties on imported capital machinery. They have also been aimed at strengthening the institutional framework for export promotion (Rahman, 2001).

C. Impact of trade liberalization in Bangladesh

1. Impacts on economic growth in Bangladesh

Following the rapid liberalization programme of the past few decades, the economy grew at a commendable rate. Above all, the fall in the incidence of poverty has also been impressive. Therefore, the impact of trade liberalization on poverty is a very interesting area of research. However, no ex post econometric study of Bangladesh has analysed the link between trade policy and poverty. The main constraint is the unavailability of data, as poverty estimates only become available intermittently. Apart from the scarcity of detailed household data, measuring the direct impact of trade liberalization on poverty is very complicated. In other words, it is often difficult to disentangle the impact of trade reform

from the impacts of other reforms, events and shocks that affect household poverty dynamics. All these constraints have prevented economists from undertaking sophisticated econometric exercises to investigate the relationship between openness and poverty. However, there have been a number of studies based on time series data that have tested the relationship between trade and economic growth in the context of Bangladesh.

A study by Begum and Shamsuddin (1998) investigated the effect of export growth in Bangladesh from 1961 to 1992. The authors concluded that the growth of exports had a significant and positive impact on economic growth through an increase in the total factor productivity of the economy. However, the study can be criticized for its weak methodology, as it considered only the short-term impact of export growth. On the other hand, using updated and revised data for 1980-2000, and by examining the long-term impact of exports on economic growth, Razzaque and others (2003) found no evidence of a long-term relationship between exports and economic growth in the context of the Bangladesh economy.

Ahmed and Sattar (2004) demonstrated that the higher average growth experienced by Bangladesh in the 1990s than in the 1980s should be attributed to the success of trade liberalization. This simple approach is, however, seriously flawed as it does not take into account various other events that occurred simultaneously during that period. Therefore, it is not clear whether, after controlling for traditional sources of growth, liberalization would have any distinct impact on growth. In the absence of such analysis, sceptics, taking an extreme view, could argue that the increased rate of growth in the post-liberalization period arose despite rather than because of liberalization .

To overcome the above problems, Razzaque and others (2003) and Raihan (2007) employed regression methods to explain the output/growth performance, using time-varying indicators of trade liberalization measures and controlling for factors of production. In the first study, Razzaque and others (2003) extended the traditional neoclassical and endogenous growth models by incorporating three widely accepted trade liberalization measures, that is, the trade to GDP ratio, the ratio of consumers goods imports to GDP and the implicit nominal tariff rate. While the estimated model turned out to be satisfactory, none of the indicators of trade liberalization, quite surprisingly, achieved statistical significance in any of the regression results (table 5). The same study also found no significant effects of trade liberalization on the export-growth relationship.

On the other hand, Raihan (2007) contributed to the empirical understanding of the trade liberalization — growth nexus in the context of the manufacturing industries in Bangladesh. He used a panel database for the manufacturing sector at the 3-digit ISIC code level for 27 sectors, with a time span of 22 years (1977-1998). Five indicators of trade liberalization were used: (a) the import penetration of consumer goods; (b) the implicit nominal tariff rate; (c) the sectoral import penetration ratio; (d) the sectoral export-orientation ratio; and (e) a year dummy variable. The study employed a production function framework for the analysis and used a variety of the panel regression analysis. The regression results found no evidence of any statistically significant positive trade liberalization — growth nexus in the context of manufacturing industries in Bangladesh (table 6).

Table 5. Trade liberalization measure in growth models

Explanatory variables	Coeff. (standard error)	Coeff. (standard error)	Coeff. (standard error)	Coeff. (standard error)	Coeff. (standard error)	Coeff. (standard error)
Constant	6.08*** (1.61)	6.35*** (0.61)	6.23*** (0.69)	3.53*** (0.43)	3.40*** (0.28)	3.31*** (0.39)
Ln (capital stock)	0.23** (0.08)	0.22** (0.09)	0.23** (0.09)	0.50*** (0.07)	0.53*** (0.05)	0.53*** (0.08)
Ln (labour)	1.13** (0.15)	1.15*** (0.18)	1.12*** (0.18)			
Ln (human capital)				0.90*** (0.19)	0.80*** (0.19)	0.84*** (0.22)
Ln (trade-GDP ratio)	-0.014 (0.012)			0.008 (0.02)		
Ln (consumers goods-GDP ratio)		0.008 (0.01)			0.005 (0.01)	
Ln (import duties /imports)			0.006 (0.01)			-0.001 (0.02)

Source: Razzaque and others, 2003.

Note: ***, ** and * indicate statistical significance at the 1, 5 and 10 per cent levels respectively.

Table 6. Trade liberalization measures in panel data models of manufacturing output

Explanatory variables	Coeff. (standard error)	Coeff. (standard error)	Coeff. (standard error)	Coeff. (standard error)	Coeff. (standard error)
Ln (capital)	0.356*** (0.074)	0.339*** (0.07)	0.286*** (0.06)	0.362*** (0.074)	0.359*** (0.07)
Ln (labour)	0.492*** (0.05)	0.493*** (0.05)	0.498*** (0.04)	0.488*** (0.05)	0.491*** (0.05)
Ln (import penetration ratio of consumer goods)	-0.041* (0.015)				
Ln (implicit nominal tariff rate)		-0.1465 (0.28)			
Ln (sectoral import penetration ratio)			-0.129*** (0.04)		
Ln (sectoral export-orientation ratio)				0.086 (-0.124)	
Liberalization year dummy					-0.105** (-0.05)
R^2	0.64	0.74	0.77	0.75	0.63
Observations	594	594	594	594	594

Source: Raihan, 2007.

Note:˚   ***, ** and * indicate statistical significance at the 1, 5 and 10 per cent levels respectively.

It appears from the aforementioned analysis that the econometric investigations using historical data fail to depict a conclusive relationship between trade liberalization and growth in the context of the Bangladesh economy. There are studies that have undertaken simulation exercises based on applied general equilibrium models to find out, ex ante, the positive effects of further liberalization. Khondker and Raihan (2004), in a static CGE framework, examined the impact of different policy reforms in Bangladesh in a general equilibrium framework, and found that full trade liberalization would generate negative consequences for the macro-economy as well as for the welfare and poverty status of households. The most influential study in this regard was the one carried out by Annabi and others (2006). Working with a dynamic sequential CGE model, the authors found that if all tariffs of Bangladesh were set to zero (that is, the case when all policy-induced ex ante bias is removed), the effect on GDP is actually negative in the short term, (defined as 1-2 years), but positive for a long-term horizon of 15 years. Interestingly however, the long-term positive impact was found to be just 1.4 per cent higher than the base scenario. This suggests that the growth dividend from further liberalization of tariffs is very low.

2. Trade liberalization and employment: An econometric investigation

In order to investigate the impact of trade liberalization on employment, a sectoral analysis was undertaken in this study, using disaggregated data on output, employment, total wage, and sectoral exports and imports. Labour demand functions for each industry were estimated and trade liberalization measures were then augmented into the function to study the impact of trade liberalization on demand for labour in each sector. Before running the formal regressions, the time series properties of the variable were checked to avoid the problem of spurious regression. All variables were found to be integrated in their levels and stationary with their first difference. The summary of the regression results are provided in tables 7 and 8, and the detailed regression results are given in the annex.

It is, however, important to note that trade openness is difficult to measure and the outcome variables such as export-output ratio and import ratio are not without flaws. In this analysis, the sectoral export-output ratio and sectoral import-output ratio have been used as the imperfect proxy of trade liberalization.

At first, industries can be categorized into two groups: (a) industries in which the labour demand functions are co-integrated when the labour demand function is augmented with the sectoral export-output ratio; and (b) industries in which the labour demand functions are co-integrated when the import-output ratio is added.

The labour demand functions are co-integrated when export-output ratio is added as the explanatory variable for the industries listed in table 7. Among these industries, trade openness (as defined by the sectoral export-output ratio) proved to be helpful in boosting employment for the following: beverages, wearing apparel, petroleum refining, miscellaneous petroleum products, plastic products, footwear except rubber, and wood and cork products. On the other hand, there was decreased demand for labour in the textile and paper industries when the export-output ratio is taken as the proxy of trade openness. In the remaining industries, there was no significant impact on employment due to trade liberalization.

**Table 7. Summary result from estimated labour demand function — industries
co-integrated with sectoral export-output ratio as the explanatory variable**

2-digit ISIC Code	Industry co-integrated with export-output ratio	Impact on employment
02	Beverage industry	Positive significant
05	Wearing apparel	Positive significant
14	Petroleum refining	Positive significant
15	Miscellaneous petroleum products	Positive significant
17	Plastic products	Positive significant
07	Footwear except rubber	Positive significant
10	Paper and its products	Negative significant
04	Textile industry	Negative significant
03	Tobacco manufacturing	Negative insignificant
11	Printing and publishing	Negative insignificant
21	Iron and steel basic industries	Negative insignificant
24	Non-electrical machinery	Negative insignificant
26	Transport machinery	Negative insignificant
06	Leather and its products	Positive insignificant
09	Furniture manufacturing	Positive insignificant
12	Drugs and pharmaceuticals, and other chemical products	Positive insignificant
13	Industrial chemicals	Positive insignificant
16	Rubber products	Positive insignificant
18	Pottery and chinaware	Positive insignificant
19	Glass and its products	Positive insignificant
20	Non-metallic mineral products	Positive insignificant
23	Fabricated metal products	Positive insignificant
08	Wood and cork products	Positive insignificant
27	Scientific, precision, etc. plus photographic/optical goods	Positive Insignificant

Note: Data are derived from the Census of Manufacturing Industries (1978 to 2000).

The labour demand functions are co-integrated when the import-output ratio is augmented into the labour demand function for the industries listed in table 8. In this category, leather and its products appear to be the only industry in which trade openness has a positive and significant impact on labour demand. However, trade liberalization has a negative impact on the labour demand for a number of industries including drugs and pharmaceuticals and other chemicals, miscellaneous petroleum products, non-electrical machinery and electrical machinery manufacturing. The remainder do not exhibit any significant impact on employment due to trade liberalization.

**Table 8. Summary results from estimated labour demand function — industries
co-integrated with sectoral import-output ratio as the explanatory variable**

2-digit ISIC Code	Industry co-integrated with import-output ratio	Long-term impact
06	Leather and its products	Positive significant
12	Drugs and pharmaceuticals and other chemical products	Negative significant
15	Miscellaneous petroleum products	Negative significant
24	Non-electrical machinery	Negative significant
25	Electrical machinery	Negative significant
02	Beverage industry	Negative insignificant
01	Food manufacturing	Negative insignificant
10	Paper and its products	Negative insignificant
11	Printing and publishing	Negative insignificant
14	Petroleum refining	Negative insignificant
19	Glass and its products	Negative insignificant
20	Non-metallic mineral products	Negative insignificant
22	Non-ferrous metal industry	Negative insignificant
23	Fabricated metal products	Negative insignificant
05	Wearing apparel	Negative insignificant
13	Industrial chemicals	Positive insignificant
16	Rubber products	Positive insignificant
17	Plastic products	Positive insignificant
18	Pottery and chinaware	Positive insignificant
21	Iron and steel basic industries	Positive insignificant
03	Tobacco manufacturing	Positive insignificant
09	Furniture manufacturing	Positive insignificant

Note: Data are derived from the Census of Manufacturing Industries (1978 to 2000).

D. Conclusion

Bangladesh has, by now, liberalized its economy considerably; during the 1990s, in particular, the pace of liberalization was very rapid. The liberalization measured contributed to reducing policy-induced anti-export bias at a moderate level.   Currently, the price incentive structure, as measured by average effective exchange rates, is between 10 per cent and 13 per cent skewed in favour of (against) the import-competing (export) sector. More liberalization and rationalization of the tariff regime could be another way of further reducing the anti-export bias.   However, the evidence provided in this study calls for undertaking a more careful approach to future liberalization.

Although liberalization should encompass many factors affecting trade and business practices, in Bangladesh overwhelming attention has been given to trade-related instruments. In fact, policymakers are so inclined towards measures related to tariffs and quantitative restrictions that most of the time reform measures are used interchangeably with trade liberalization measures. Reform of institutions has largely been overlooked. Embarking on such trade reforms as tariff cuts and elimination of quantitative restrictions is relatively easy. However, significant growth-enhancing effects perhaps require reforms in other difficult areas. In this regard, there are suggestions that institutional reforms should be considered the key to Bangladesh s growth-supporting strategy. Perhaps it is high time for trade policy reform to be considered as institutional reform, as emphasized by Rodrik (2002).

There is no denying the need for further liberalization and the removal of anti-export bias. However, this will have to be supported by other, more difficult reform measures. It is understood that, since the 1990s, Bangladesh has embarked on a fast-paced tariff reform programme, and that it may not be possible to continue further liberalization at a comparable rate. Nevertheless, it would be unwise to reverse the process of liberalization and, thus, the progress achieved in that decade.

Finally, the estimated labour demand functions in the context of the manufacturing industries suggests that, in general, trade liberalization in Bangladesh has generated employment in the major export-oriented industries whereas major import-substituting industries such as textile and paper products have suffered. However, for most of the sectors, there are insignificant associations between trade liberalization and employment generation.

Annex

Estimates of the labour demand function

Industry	Constant (standard error)	LY (standard error)	LW (standard error)	LXO (standard error)	LMO (standard error)
Food manufacturing	2.06 (1.48)	0.78*** (0.17)	-0.73*** (0.12)	-0.11 (0.15)	
	1.48* (0.51)	0.65*** (0.06)	-0.74*** (0.11)		0.08 (0.15)
Beverage industry	1.22 (1.62)	0.74*** (0.13)	-0.59* (0.21)	0.15 (0.09)	
	-1.22 (0.85)	0.80*** (0.12)	-.85*** (0.14)		-0.02 (0.02)
Tobacco manufacturing	0.68 (1.08)	0.31** (0.13)	-1.21*** (0.11)	-0.09 (0.06)	
	1.02 (1.16)	0.40*** (0.13)	-1.12 (0.09)		0.009 (0.03)
Textile manufacturing	3.25* (1.57)	0.63*** (0.16)	-0.69*** (0.07)	0.31* (0.09)	
	3.19 (2.11)	0.65** (0.21)	-0.72*** (0.09)		-0.001 (0.01)
Wearing apparel	-1.21*** (0.45)	0.99*** (0.02)	-0.82*** (0.08)	0.03*** (0.01)	
	1.61** (0.51)	0.99*** (0.02)	-0.87*** (0.11)		-0.002 (0.02)
Leather and leather products	-7.85*** (1.64)	0.91*** (0.18)	-1.96*** (0.21)	0.08 (0.18)	
	-6.71*** (1.05)	0.83*** (0.14)	-1.90*** (0.16)		0.04* (0.02)
Footwear except rubber	0.22 (0.49)	0.85*** (0.06)	-0.79*** (0.11)	0.16*** (0.02)	
	-1.88*** (0.61)	1.03*** (0.08)	-0.82*** (0.18)		0.004 (0.03)
Wood and cork products	-2.46*** (1.09)	0.75*** (0.18)	-1.41*** (0.31)	0.03 (0.07)	
	-2.51*** (0.83)	0.88*** (0.17)	-1.29*** (0.24)		0.07** (0.03)

Industry	Constant (standard error)	LY (standard error)	LW (standard error)	LXO (standard error)	LMO (standard error)
Furniture manufacturing	1.31** (0.70)	0.36*** (0.08)	-0.94*** (0.16)	0.005 (0.03)	
	1.29* (0.68)	0.36*** (0.07)	-0.95*** (0.16)		0.01 (0.02)
Paper and its product	2.58** (1.25)	0.74*** (0.14)	-0.25** (0.10)	-0.03** (0.01)	
	1.69 (1.38)	0.83*** (0.15)	-0.34*** (0.11)		-0.006 (0.016)
Printing and publishing	-0.50 (0.59)	0.90*** (0.06)	-0.86*** (0.11)	-0.02 (0.03)	
	-0.42 (0.59)	0.93*** (0.04)	-0.82*** (0.11)		-0.007 (0.01)
Drugs and pharmaceuticals and other chemical products	-1.29 (1.01)	1.08*** (0.09)	-0.46** (0.19)	0.006 (0.01)	
	0.85 (0.93)	0.74*** (0.12)	-0.49** (0.14)		-0.72*** (0.18)
Industrial chemicals	1.58 (1.05)	0.69*** (0.13)	-0.77*** (0.21)	0.07 (0.06)	
	2.26* (1.12)	0.52*** (0.12)	-0.87*** (0.19)		0.02 (0.016)
Petroleum refining	7.17*** (0.23)	-0.08*** (0.02)	0.03 (0.04)	0.02* (0.01)	
	7.34*** (0.23)	-0.12*** (0.02)	0.02 (0.03)		-0.015 (0.02)
Miscellaneous petroleum products	-5.36*** (1.85)	0.47* (0.26)	-1.81*** (0.21)	0.09 (0.06)	
	-4.39** (1.83)	0.23 (0.26)	-1.66 (0.20)		-0.10** (0.04)
Rubber products	0.53 (0.59)	0.79*** (0.08)	-0.69*** (0.06)	0.03 (0.02)	
	0.79 (0.61)	0.73*** (0.08)	-0.67*** (0.07)		0.02 (0.01)
Plastic products	0.99 (1.34)	0.58*** (0.05)	-0.78*** (0.25)	0.06** (0.03)	
	-1.26* (0.73)	0.59*** (0.05)	-1.16*** (0.17)		0.02 (0.02)

Industry	Constant (standard error)	LY (standard error)	LW (standard error)	LXO (standard error)	LMO (standard error)
Pottery and chinaware	2.98** (1.22)	1.01*** (0.12)	0.048 (0.21)	0.0003 (0.03)	
	2.86** (1.03)	1.02*** (0.07)	0.02 (0.22)		0.02 (0.03)
Glass and its products	2.78** (1.12)	0.64*** (0.13)	-0.40** (0.14)	0.04 (0.03)	
	2.35** (1.14)	0.64*** (0.14)	-0.43** (0.15)		-0.007 (0.02)
Non-metallic mineral products	-2.77** (1.20)	0.99*** (0.19)	-1.05*** (0.17)	0.027 (0.07)	
	-3.05** (1.23)	0.99*** (0.18)	-1.07*** (0.17)		-0.02 (0.04)
Iron and steel basic industries	5.71*** (0.94)	0.17 (0.12)	-0.50*** (0.09)	-0.01 (0.027)	
	5.63*** (0.97)	0.21 (0.13)	-0.49*** (0.09)		0.03 (0.19)
Non-ferrous metal industry	4.34*** (1.12)	0.52*** (0.12)	-0.49 (0.23)	0.05 (0.06)	
	3.59*** (0.72)	0.49*** (0.12)	-0.63*** (0.16)		-0.002 (0.02)
Fabricated metal products	9.69*** (1.14)	-0.25* (0.14)	-0.15 (0.11)	0.02 (0.03)	
	8.89*** (0.99)	-0.18 (0.14)	-0.19 (0.10)		-0.014* (0.02)
Non-electrical machinery	5.88*** (1.99)	-0.21 (0.22)	-0.99*** (0.21)	-0.03 (0.08)	
	5.17*** (1.58)	-0.11 (0.17)	-0.88*** (0.17)		-1.18*** (0.358)
Electrical machinery	0.28 (1.04)	0.41** (0.17)	-1.27*** (0.19)	-0.04 (0.05)	
	1.96 (0.74)	0.50*** (0.11)	-0.65*** (0.18)		-0.92*** (0.18)
Transport equipment	1.11 (1.92)	0.44 (0.31)	-0.31** (0.17)	-0.03 (0.04)	
	0.82 (2.08)	0.51 (0.33)	-0.26** (0.13)		-0.005 (0.04)

Industry	Constant (standard error)	LY (standard error)	LW (standard error)	LXO (standard error)	LMO (standard error)
Scientific, precision, etc. plus photographic and optical goods	2.52 (2.34)	0.15 (0.36)	-1.02*** (0.06)	0.053 (0.035)	
	2.31 (2.44)	0.14 (0.38)	-1.03*** (0.06)		0.02 (0.02)

Data source: Census of Manufacturing Industries in Bangladesh, 1978-2000.

Note: LY, LW, LXO and LMO are the natural logs of output, wage, export-output ratio and import-output ratio, respectively. The depended variable is the log of employment. ***, ** and * indicate statistical significance at the 1, 5 and 10 per cent levels, respectively.

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Chapter VIII

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IS INDIA S SERVICES TRADE PRO-POOR?
A SIMULTANEOUS APPROACH

*By Prabir De and Ajitava Raychaudhuri**

Introduction

Trade in services in India has been growing rapidly since beginning of the last decade, following significant domestic liberalization on one hand, and access to a growing overseas market for services, on the other. By not only growing more rapidly than the country s merchandise exports, India s services export grew much faster than that recorded by the world during the past decade and a half. India s services trade currently constitutes about 32 per cent of the country s total trade.[1]

Due to such rapid growth in services exports, India has succeeded in raising its penetration in global markets more rapidly for services than for goods. In 2006, its share in world services trade was around 2.52 per cent compared with a 0.9 per cent share in world merchandise trade.[2] Today, the services sector is the single largest sector in India, accounting for more than 50 per cent of domestic production, 32 per cent of international trade, and some 33 per cent of employment in the organized sector (2006). Yet, a large part of India s services sector is untapped and rarely explored in the international market.

The expansion of India s services sector has been attributed to demand as well as supply factors. Demand for many services has become highly income elastic; that is, as people grow richer, their consumption of services such as education and health expands more rapidly than their demand for manufactures and agricultural products. To a certain degree, the growing share of services in gross domestic product (GDP) and the rising services trade also reflect the dynamism of the Indian economy, where an efficient services sector is not only crucial to the country s economic growth but also crucial to its competitiveness in the current era of globalization. Therefore, the liberalization of the services trade is quite appealing as it is likely to exert an economy-wide influence in providing strong inputs to all other economic activities, including poverty reduction.

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[1] This corresponds to the year 2006, sourced from the International Monetary Fund, 2008.

[2] Annex table 1 shows the trends in India s share of the world services trade.

The crucial role of international trade in fostering economic growth, personal and social development as well as reducing poverty and inequality is well recognized. Cross-country studies on the implications of services trade on social sector development indicate that broad-based growth in services trade is critical to accelerating poverty reduction.[3] However, despite India s success in services exports in recent years, little is known about the empirical relationship between services trade, poverty and inequality in India. In fact, the services trade contribution to pro-poor growth in the context of India is less debated. While much of the effort has gone into identifying India s opportunities and constraints in services trade, little attention has been paid to understanding the impact of services trade on poverty and inequality in India.

This chapter attempts to provide some insights into the actual nature and extent of exports of services from India, and examines the underlying factors and broader implications for poverty reduction. Section A provides an overview of India s services trade, including its composition and export competitiveness. Section B discusses the role of the services trade in delivering pro-poor growth as well as how services exports affect poverty and inequality in India with the help of the two-stage least squares (TSLS) regression. Section C concludes the chapter.

A. Overview of India s services trade

Despite the significant rise in the contribution of services to India s GDP, there has not been a parallel rise in the share of India s services trade in the country s GDP. Table 1 shows that the contribution of services trade to GDP was only 8.89 per cent in 2005/06, increased from 3.38 per cent in 1990/91, whereas more than half of the country s GDP comes from the services sector (53.2 per cent in 2005/06). While this distribution indicates trade component of India s services sector is at present not very substantial, this also suggests India s services trade has a large potential.

Nevertheless, the performance of India s services trade sector so far is very impressive. An increase of only one percentage point in the services sector contribution to GDP from 2000/01 to 2005/06 was associated with about a four-fold rise in services exports, about a three-fold increase in services imports and about a 13-fold rise in the country s balance of services trade (table 1). With an average growth of 38.22 per cent per annum, services exports as a proportion of world exports of services increased from 0.56 per cent to 1.28 per cent between 1990/91 and 2005/06. Indeed, the growth of India s services exports (at 17.33 per cent) during 2000/01 to 2005/06 not only outstripped the corresponding import growth but was also higher than that of world exports. With this impressive growth and positive services trade balance all through the past decade and a half (except 1995/96),[4] India has been successful in contributing more than 2.52 per cent of global trade in services.

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[3]   See, for example, Stoler and others, 2009

[4]   Recorded as US$ -0.20 billion in 1995/96.

Table 1. India s services trade volume

Year	Services trade share in GDP (%)	Exports		Imports		Balance of trade (US$ billion)
		Volume (US$ billion)	Share of world (%)	Volume (US$ billion)	Share of world (%)	
1990/91	3.381	4.551	0.557	3.571	0.708	0.98
1995/96	4.799	7.344	0.547	7.544	0.827	-0.20
2000/01	7.843	16.268	1.092	14.576	1.265	1.69
2001/02	7.859	17.140	1.128	13.816	1.316	3.32
2002/03	7.962	20.763	1.195	17.120	1.299	3.64
2003/04	8.176	26.868	1.256	16.724	1.393	10.14
2004/05	8.460	46.031	1.230	31.832	1.332	14.20
2005/06	8.894	60.610	1.281	38.345	1.355	22.27
Annual growth rate (%)						
1990/91 to 1999/2000		27.75 (8.27)		20.40 (7.32)		
2000/01 to 2005/06		17.33 (11.81)		13.86 (11.60)		
1990/91 to 2005/06		38.22 (12.84)		28.90 (11.890)		

Source: Calculated based on Reserve Bank of India, 2007 and Central Statistical Organisation, 2007.

Notes: Taken at current prices. Numbers in parentheses are world growth in corresponding period.

This phenomenal rise underlines the country s strong competitive edge in the sphere of production and trade.[5]

1. Composition of India s services trade

India s emerging services trade sectors are no more traditional sectors like transport, travel and tourism services. It is financial services, information and communication technology services presently dominating India s services export basket. This is reflected in table 2. Despite the rise in absolute volume of exports during 2001 and 2005, shares of transport and travel services in country s total services exports have fallen over time. Earnings from software services (US$ 23.98 billion), communication services (US$ 2.18 billion), financial services (US$ 1.70 billion) and insurance services (US$ 1.05 billion) in 2005/06 were the most remarkable achievements witnessed by India in recent years. In general, export from all the major services sectors has seen steep rise from 2001 to 2005.

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[5]   In some cases (for example, World Bank, 2004), this has been termed as India s Services Revolution .

Table 2. Composition of India s services exports

Major components	Volume 2001 (US$ million)	Share* 2001 (%)	Volume 2005 (US$ million)	Share* 2005 (%)
Transport services	2 050.05	11.82	6 291.00	10.25
Travel and tourism services	3 198.07	18.45	7 853.00	12.79
Communication services	1 103.90	6.37	2 182.00	3.55
Construction services	65.05	0.38	403.00	0.66
Insurance services	281.99	1.63	1 050.00	1.71
Financial services	306.10	1.77	1 704.00	2.78
Computer and information services, of which:	7 407.38	42.73	23 980.00	38.81
Software services	6 341.00	36.26	23 600.00	36.45
Miscellaneous services	2 924.06	16.87	18 321.00	29.84
Total services	17 336.60	100.00	61 404.00	100.00

Sources: Calculated based on Reserve Bank of India, 2007 and International Monetary Fund, 2008.
        * Share in total services exports.

Table 3. Composition of India s services imports

Major components	Volume 2001 US$ million	Share* 2001 (%)	Volume 2005 US$ million	Share* 2005 (%)
Transport services	8 498.08	42.28	7 841.00	20.90
Travel and tourism services	3 005.90	14.96	6 464.00	17.23
Communication services	266.78	1.33	808.00	2.15
Construction services	470.25	2.34	1 756.00	4.68
Insurance services	810.85	4.03	1 028.00	2.74
Financial services	1 780.06	8.86	1 308.00	3.49
Computer and information services, of which:	910.90	4.53	1 454.00	3.89
Software services	476.00	2.37	1 338.00	3.57
Miscellaneous services	4 356.48	21.67	16 980.00	45.25
Total services	20 099.30	100.00	37 523.00	100.00

Sources: Calculated based on Reserve Bank of India, 2007 and International Monetary Fund, 2008.
        * Share in total services exports.

On the other hand, growth in India s services imports was equally high (table 3), particularly from 2000/01 to 2005/06, which was mostly driven by communication, construction and insurance services. Even though the decline in transport services imports was quite steep, transport and travel services together still share about one third of the country s services imports.

What is interesting is that with rising imports and exports (US$ 1.39 billion and US$ 23.6 billion, respectively) of software services in 2005, intra-sector trade in services is fast emerging in software services, thus showing substantial growth potential in the global services trade.

FDI is a key source of financing for service sector projects and has positively affected India s growth, employment and technology transfer (Joshi, 2006). FDI in the service sectors in India in the post-liberalization period grew much faster than that in manufacturing and the country total. During 1991-2006, FDI in services increased by about 69 per cent per annum, whereas in manufacturing and country total it was about 29 per cent and 31 per cent, respectively. Due to this high growth rate, the services sector shares about 18.35 per cent of the country s FDI stock,[6] with information technology and telecommunications, energy and financial services having become the major beneficiaries by attracting significant FDI, and enjoying faster growth and the creation of more employment opportunities.

2. India s export competitiveness in services trade

Services exports in country s GDP in general are associated with higher levels of development, but not all developing countries — including India — are yet in a position to be large-scale exporters (De, 2006). Developing countries successfully export a variety of services to both developed and developing countries, whereas a relatively limited number of developing countries appear to be heavily involved in services exports across a range of sectors. At the same time, developed countries are increasingly outsourcing their services to developing countries, thereby showing some services trade complementarities between the two income groups as well as reflecting their rising trade competitiveness.

As in manufacturing, the most important potential contribution of competitiveness in the services sector lies in the level and scale of technology. Services industries differ greatly in their hard and soft technology mix. Sectors such as air and rail transport, communications, broadcasting, electricity, gas and water are highly capital-intensive, whereas the construction services sector is relatively labour-intensive. Nevertheless, most of the developing countries have registered a considerable expansion of total services trade in recent years; however, very few of them have been able to sustain their services trade specialization and not all are experiencing rising competitiveness in services trade (De, 2006). In general, as in trade in goods, developing countries as service exporters benefit from labour and natural resource abundance. Therefore, in their initial years of development, those countries gain comparative advantage in labour-intensive services

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[6] From 1991 to December 2006 (calculated based on Reserve Bank of India, 2007).

(construction services, tourism, data processing, and so forth) and, as they grow, their production and trade specialization patterns also evolve towards higher-skilled and technologically advanced services.

The aforesaid argument was further exemplified by Banga (2006) who indicating India s export basket in services remained non-diversified. In addition, despite India s near double-digit growth and comparative advantage in areas such as commercial services, it is losing revealed comparative advantage in traditional areas such as travel and tourism. A plethora of studies have indicated that India has been gaining revealed comparative advantage in emerging areas such as financial services, and information and communication technology, but losing advantages in traditional areas such as transport, travel and tourism services.[7]

Nevertheless, the rising services trade competitiveness relies more on substantial liberalization carried out through the removal of trade and investment barriers. The removal of barriers to trade in services is likely to result in lower prices, improved quality and higher competitiveness. As with trade in goods, restrictions on trade in services reduce welfare because they create a wedge between domestic and foreign prices, thereby squeezing the consumer surplus.[8] While dealing with barriers to India s trade in higher education services, Raychaudhuri and De (2007 and 2008) found the higher cost of living to be a negative element in the movement of students for studying abroad.[9] At the same time, non-price factors, such as the quality of services, play a pivotal role in determining the bilateral trade in services.[10] A competitive and well-regulated financial or telecom sector leads to the efficient transformation of savings to investment, ensuring that resources are deployed wherever they have the highest returns while facilitating better risk-sharing in the economy.[11]

To understand the pattern of India s services trade specialization, and to find whether or not the sector (in India) is globally competitive, the relative competitiveness of services trade can be reviewed with the help of the Revealed Comparative Advantage

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[7]   See, for example, Chanda (2006)

[8]   See Fink and others, 2002 and 2005, and Clark and others, 2004, which are among the relevant studies.

[9]   For a detailed commentary on the barriers affecting South Asia s services trade see Chanda, 2005 and 2006.

[10]   For example, Rahman (2000) concluded that relative cost differentials together with differences in quality and the satisfaction of services seekers were the prime factors for rising services trade between India and Bangladesh.

[11]   While dealing with India s telecommunication sector in context of its international and national commitments, Narsalay (2006) commented that India s successive domestic reforms had already enticed a healthy competition and recommended the adoption of consistent services negotiations at WTO in order to make India a vibrant knowledge-driven society. See also Kumar and Joseph, 2005.

(RCA)[12] of different services trade sectors (table 4). This index shows the country s specialization in individual services subsectors and therefore their comparative advantage.

The results reported in table 4[13] show that the estimated RCA scores of India s services exports are favourable and are constantly rising, thereby indicating India s strong comparative advantage in services trade.[14] To a great extent, it can be said that India has achieved revealed comparative advantage in financial, and computer and information services, whereas the country is losing the advantage in traditional sectors such as transport and travel services. In the case of India, in particular, the emerging services trade sectors such as financial, telecommunications and information technology services clearly possess growth-generating characteristics. In other words, compared to other sectors, India s comparative advantage and specialization has been transformed from labour-intensive services trade to technology and knowledge intensive services trade (such as financial, and computer and information services), where Mode 1 (cross-border trade) and Mode 4 (movement of natural persons) are the two key modes of service delivery. India s liberalization in services trade in GATS has thus been devoted to Mode 1 and Mode 4 liberalization, since these two modes are fast emerging as important modes of delivery of a wide range of services from India.

Table 4. Estimated RCA scores of services exports from India

Sector	1991	2001	2005
Transport services	0.78	0.58	0.59
Travel services	1.24	0.69	0.92
Communications services	—	0.37	0.39
Construction services	—	0.56	0.57
Computer and information services*	—	28.19	29.89
Financial services	0.79	1.01	1.09
Total services	1.14	1.44	1.97

Sources: Calculated based on World Trade Organization, 2008, and Reserve Bank of India, 2007.
* Includes software services.

[12]   The RCA has been calculated based on following equation: RCA = $(X_{iw}^{k} / X_{iw}^{\Sigma k}) / (X_{w}^{k} / X_{w}^{\Sigma k})$, where X_{iw}^{k} is country i s world exports of services k, $X_{iw}^{\Sigma k}$ is country i s total exports, X_{w}^{k} is world exports of services k, and $X_{w}^{\Sigma k}$ is world s total exports. If the estimated RCA index of a sector is found to be greater than one, then it is considered as globally competitive (Balassa, 1965).

[13]   It should be noted that these results need to be interpreted with care, given the numerous inconsistencies in the underlying statistical databases.

[14]   According to Rakshit (2007), India s comparative (revealed) advantage in services exports in fact was higher than industry and agriculture and also merchandise exports during the period 1991 to 2005.

B. Services trade and pro-poor growth in India

Generally speaking, India has been relatively successful in delivering pro-poor growth in the past few decades.[15] Due to higher growth, India witnessed a continuous rise in per capita income (PCI) from US$ 470.04 in 1981 to US$ 2,468.90 in 2006. This PCI rise is also associated with a rise in per capita income from services exports (PCISE), which increased from US$ 3.93 in 1981 to US$ 67.90 in 2006 (table 5).

Table 5. Income, poverty, inequality and employment trends

Year	PCI (US$)	PCISE (US$)	Poverty rate (%)		Inequality rate (%)		Unemployment rate (%)	
			Rural	Urban	Rural	Urban	Rural	Urban
1981	470.04	3.93	45.31	35.65	30.10	34.08	1.75	6.40
1991	892.17	5.80	37.42	33.23	29.91	37.98	3.15	7.30
1992	944.96	5.36						
1993	994.17	5.85	37.27	32.36	28.60	34.30	1.70	6.85
1994	1 063.30	6.70	43.47	33.73	29.88	35.51	1.73	6.89
1995	1 146.50	7.88						
1996	1 234.70	7.88						
1997	1 283.60	9.77						
1998	1 354.80	13.43						
1999	1 451.00	15.72	27.09	23.62	26.30	34.70	1.80	5.95
2000	1 516.80	16.01						
2001	1 608.10	16.60						
2002	1 671.00	19.80						
2003	1 822.50	25.24						
2004	2 001.40	40.06	21.80	21.70	26.20	34.94	2.60	6.75
2005	2 221.70	55.89						
2006	2 468.90	67.90						

Sources: PCI was drawn from the World Bank, 2008; PCSE was estimated based on services exports, collected from the International Monetary Fund, 2008; the poverty rate (HCR) was drawn from various rounds of the National Sample Survey (NSS); the inequality rate (Gini) was taken from Bhalla, 2002 and 2003, based on NSS; and the unemployment rate was taken from the National Sample Survey Organization, 2006.

Notes: Poverty, inequality and unemployment rates correspond to financial years. PCI stands for Per Capita Income in PPP terms, taken at the current US$ 3.00. Poverty is represented by the Head-Count Ratio. The poverty rate for 2004/05 is taken on the Mixed Recall Period (MRP) basis. Inequality is represented by the estimated Gini coefficient. The unemployment rate average is taken in terms of the country s labour force.

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[15]   However, India s success (or failure) in reducing poverty is widely debated and challenged. For an interesting discussion, one can refer, Ahluwalia (1977), Jha (2000), Ravallion (2000), Deaton and Dreze (2002), Bhalla (2002, 2003), Banerjee and Piketty (2003), Bhanumurthy and Mitra (2004), Tendulkar and Jain (1995), among others.

Higher income has helped India to deliver a successful pro-poor growth.[16] For example, India has done relatively well in reducing rural and urban poverty (measured by Head-Count Ratio) from 1981 to 2004, when poverty ratios declined from 45.31 per cent to 21.80 per cent in case of rural India, and from 35.65 per cent to 21.70 per cent in case of urban India (table 5). However, when income inequality is considered (measured by the Gini coefficient), the result is mixed. While rural inequality declined from 30.10 per cent in 1981 to 26.20 per cent in 2004, urban inequality showed neither a declining nor a rising trend; in fact, the latter increased marginally during the past two years.

Income inequality evolves in response to a host of forces, with economic growth being only one of them (Helpman, 2004). Growth changes the distribution of income over the long term; in the short term, trade generates an unfavourable income distribution where wage inequality (or unemployment) plays a major role in the distribution of income.

However, explaining poverty and inequality from the angle of services exports is the most daunting task. This issue is important and has received considerable attention at a time when India has been facing the jobless growth syndrome and rising income inequality. Theoretically, services exports lead to increase per capita income, thereby reducing poverty and income inequality, *ceteris paribus*. Most obviously, the relationships between services export, poverty and inequality are certainly not linear. Thus, a relevant question is whether such non-linearities in services exports do exist and, given the simultaneous causality bias, how services exports affect poverty and inequality in India. In order to test the hypothesis, the TSLS method, which endogenizes services export, is employed here.

We relate poverty and inequality with PCISE, where PCISE is an endogenous regressor (potentially correlated with the error term). We have a set of exogenous (included) regressors, which are uncorrelated with the error term such as an economic liberalization dummy (ELD) (1 for the years from 1991 onwards, and 0 otherwise), and an exogenous time trend (t).[17] To solve the potential simultaneity bias, four instrumental variables (IVs) are employed: that are exogenous variables and uncorrelated with the error term, namely, services export infrastructure, represented by two variables — telephone mainline (TM) and personal computers (PC); tax on international trade (TIT); and the official exchange rate (ER). Annex table 3 provides variable description and data sources. The instrumental variables detect movements in exogenous regressors which are uncorrelated with the error term, and use them to estimate the regression parameters. We presume the IVs are strictly uncorrelated with the error term (exogenous), but are correlated with relevant regressors. To check relative robustness, we replace PCISE with services trade as percentage of GDP (STGDP) in the model. The long time series of 32 years (1975 to 2006) is sufficient to understand the evolving relationship between poverty, inequality and services exports in India. We use the Durbin-Wu-Hausman test to check the suspected

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[16] There are a good number of studies to justify why and how higher income helped India to deliver pro-poor growth. See, for example, Ravallion and Dutt (2001).

[17] See annex table 2 for the correlation matrix.

measurement error between OLS and TSLS, and the Hansen s J-test to solve the over-identification restriction. Therefore, the final estimable TSLS regression takes the following form:

$$Ln(Y_{it}) = \beta_0 + \beta_1 Ln(PCISE_t) + \beta_2 ELD_t + \beta_3 t + e_i \qquad (1)$$

where Y_{it} stands for head count (HC) ratio (to represent poverty) and Gini ratio (to represent income inequality) interchangeably, t is the time period (1975 to 2006), and e is the error term. Here, instrumental variables are TM, PC, ITI and ER, all taken in logarithmic scale.

Table 6 presents the estimated coefficients of TSLS. Variables being natural logarithms, the estimated coefficients show elasticity. The elasticity is useful as an indicator of the effect of services trade exports on poverty and inequality. The models perform well as most of the variables do have expected signs. The estimated models explain about 97 per cent of the variations in poverty (models 1 and 2) and about 53 per cent of the variations in inequality (models 3 and 4). The econometric evidence presented here appears to strengthen the existing trade and poverty linkage. Although the impact of services exports on poverty and inequality appears marginal, the empirical estimations do not raise any doubt that poverty reduction has benefited from services exports.

The estimated coefficients in table 6 indicate that poverty is influenced significantly by most of the explanatory variables, whereas that is not the case for inequality. Also, the time trend shows declining poverty, whereas the reverse is true for inequality. It appears that poverty has responded effectively to growth and services exports over time, but the same result does not hold in the case of inequality. This points to the knowledge and skill-intensive nature of services exports, which promotes growth and a rise in income level, but at the same time favours the skilled workforce over the unskilled. Hence, the growth of services exports (which is a major source of demand for the entire service sector in India) has alleviated poverty through expansion of income, and which presumably has led to expanded inequality (that is, urban inequality).

It must be noted, however, that the above TSLS regression method does not conclusively show the role of services exports in rising urban inequality, although it points to the possible impact of a subset of infrastructure in exacerbating this inequality in the urban areas, where the services-related industries are located.

Contrary to popular belief, the economic liberalization dummy (ELD) does not show the correct sign and is statistically insignificant in all the models, thereby showing that poverty and inequality have yet, by far, to be influenced by India s economic liberalization programmes adopted since 1991. However, we should not read much into this result. Rather, the significance of the time dummy in the first two models with correct sign clearly indicates that poverty reduction in India is perhaps a mere natural discourse. The usual caveat is that perhaps the time dummy and economic liberalization dummy were both worked in same direction in TSLS, thereby reducing ELD s significance in TSLS.

Table 6. Two-stage least squares estimates

	Model 1		Model 2	
	Dependent variable: Poverty rate			
	Coefficient	t-value	Coefficient	t-value
Constant	4.193[a]	89.890	4.115[a]	158.550
PCISE			-0.074[b]	-2.210
STGDP	-0.167[b]	-2.630		
ELD	0.096	1.130	0.065	1.020
t	-0.034[c]	-7.452	-0.033[c]	-6.523
Instrumental variables	Telephone mainline (TM); personal computer (PC); tax on international trade (TIT); exchange rate (ER)			
First Stage F	229.35		421.00	—
Adj. R^2	0.964		0.961	—
No. of observations	32		32	—
	Model 3		Model 4	
	Dependent variable: Inequality rate			
	Coefficient	t-value	Coefficient	t-value
Constant	3.485[a]	97.880	3.447[a]	144.200
PCISE			-0.045	-1.430
STGDP	-0.086	-1.560		
ELD	0.067	1.070	0.048	1.350
t	0.004	1.090	0.005	1.090
Instrumental variables	Telephone mainline (TM); personal computer (PC); tax on international trade (TIT); exchange rate (ER)			
First Stage F	229.35		421.00	—
Adj. R^2	0.531		0.528	—
No. of observations	32		32	—

Notes: Individual coefficients are significant at:
[a] 1 per cent level
[b] 5 per cent level
[c] 10 per cent level
Values are taken in log scale.

The estimates also show that the extent of the effects does not vary widely in models 3 and 4. The Adj. R^2 in models 3 and 4 explain only half of the variation in the observations. Perhaps the inappropriateness of the structural model or omitted variable bias could be the plausible reason for such a fit. Although the effects of growth on inequality cannot be isolated, rising inequality (in urban India) presumably offsets the gains arising from services exports. To a great extent, the majority of services suppliers (for export) are,

in the present context, concentrated in urban India, where inequality has increased disproportionately over time (table 4).

Finally, from the estimated elasticities and their significance level it can be concluded that India s services exports have been positively influencing poverty reduction, but are not particularly effective in inequality (urban) reduction. Most obviously, infrastructure related to services — mainly software and Business Process Outsourcing (BPO) exports — as well as depreciated currency and disappearing tax on trade have been instrumental in enhancing India s services exports.

The above-mentioned observations also corroborate the findings of Raychaudhuri and De (forthcoming, 2009). They argue that accelerated growth in the IT services sector in India has played an important role in reducing overall poverty, particularly among women, which has come at a cost of widening inequality as mainly educated, higher skilled and selected urban labour benefit from IT services growth.

From the above, a possible hypothesis can be developed about trade in services, specially the IT sector in India, and its impact on poverty and inequality. We have three ingredients for this hypothesis. The rapidly growing services sector in India, led by software and BPO, are concentrated in certain cities in India having excellent research and development facilities, plus complementary educational facilities in the neighbourhood. This sector is clearly biased towards high- and medium-skilled labour.   Trade in services, including outsourcing activities — especially for the IT sector — provide a boost to the expansion of these sectors. This certainly helps in the reduction of poverty, but at the same time creates more inequality in urban India as well as between rural and urban regions in the country.

C. Conclusion

Trade in services in India has witnessed rapid growth in the past decade and a half. India s emerging services trade sectors are no more traditional sectors such as transport, travel and tourism. They now provide the bulk of employment for the skilled and unskilled workforce, both in the organized and unorganized sectors. In contrast, financial services as well as information and communication technology services, which currently dominate India s services exports basket, offer employment only to the skilled workforce. Therefore, the most challenging task is how to balance this structural shift in order to minimize the short-term maladies of globalization.

The econometric evidence presented in this chapter appears to strengthen the existing linkage between trade and poverty. The findings detailed in this chapter show that India has been relatively successful in delivering pro-poor growth in the past few decades. Although the impact of services exports on poverty and inequality appears to have been marginal, the empirical estimations do not raise any doubt that poverty reduction has benefited from services exports. Therefore, higher income from services exports has been helping India to deliver a successful pro-poor growth.

Although poverty has responded effectively to growth and services exports over time, the same does not hold true in the case of inequality. This particularly points to the knowledge and skills-intensive nature of services exports, which promote growth and rising income levels, but which at the same time favour the skilled workforce more than the unskilled workforce. Hence, the growth of services exports has alleviated poverty through the expansion of income, although it has not been particularly effective in reducing (urban) income inequality. It must be added that although the econometric results do not conclusively show the role of services exports in rising urban inequality, they do point out that some of the infrastructural variables (for example, personal computers or telephone mainlines) have selectively benefited the urban workforce. Nonetheless, infrastructure related to services (mainly software and BPO) exports, depreciated currency and disappearing tax on trade have been instrumental in enhancing India s services exports.

Declining urban poverty and increasing urban income inequality are associated with growth in services exports. The change in skills composition and the rising wage inequality in services sector employment offer a plausible explanation of the rise of income inequality in urban India, from where the majority, if not 100 per cent, of India s software and BPO services exports are sourced. The issue is, therefore, how far the rise in India s software and BPO exports, which together currently share about one-third of India s services exports, can be attributed in delivering pro-poor growth.

As India continues to expand its services sector, both for domestic consumption and international trade, the challenge facing industry and the Government is how to put in place policy measures to that address the inequality gaps. Therefore, the key message is that services trade may tend to aggravate inequalities in the absence of policies and programmes for guaranteeing inclusive economic growth. By effective pro-poor targeting, the Government can make services exports better for the poor, and reduce the divide between them and the richer segments of society.

Finally, further research that explores causality and linkage between services sector growth and poverty reduction is needed, possibly at both the micro and the sectoral levels. This can only be done on the basis of primary surveys of the composition, the workforce and its dimensions, output and its sales markets, wage structure, and so forth, of service providers. Combining the findings of such surveys with secondary data can then further establish the hypotheses framed in this chapter on services trade and poverty alleviation.

Annex

Annex table 1. India s share in world services trade

Year	Exports	Imports	Total
	(%)		
1981	0.675	0.693	0.684
1991	0.540	0.629	0.585
2001	1.108	1.286	1.197
2002	1.175	1.285	1.229
2003	1.253	1.334	1.293
2004	1.665	1.610	1.638
2005	2.181	1.966	2.076
2006	2.662	2.375	2.523

Source: Calculated based on World Bank, 2008.

Annex table 2. Correlation matrix

	PCISE	STGDP	TM	ER	PC	TIT	Gini	HC
PCISE	1.000							
STGDP	0.9642*	1.000						
TM	0.8055*	0.9143*	1.000					
ER	0.6698*	0.8298*	0.9200*	1.000				
PC	0.9662*	0.9653*	0.9017*	0.7381*	1.000			
TIT	-0.7065*	-0.8436*	-0.9037*	-0.9738*	-0.7657*	1.000		
Gini	-0.025	0.137	0.241	0.4416*	-0.005	-0.3780*	1.000	
HC	-0.7104*	-0.8497*	-0.9070*	-0.9485*	-0.7599*	0.9576*	-0.3881*	1.000

* Significant at the 5 per cent level.

Annex table 3. Variable description and data sources

Variable	Description	Sources
Gini ratio	National aggregate inequality rate, time series 1975-2006. Missing data filled through simple averages of close years.	Bhalla, 2002 and 2003, based on National Sample Survey Organization, 2006.
Head-Count (HC) ratio	National aggregate poverty rate, time series 1975-2006.	National Sample Survey Organization, 2006, National Sample Survey (various rounds), United Nations University-WIDER, 2007.
PCISE	Per capita income from services exports in United States dollars.	World Bank, 2008.
STGDP	Services trade s share in GDP in percentage.	World Bank, 2008.
TM	Telephone mainline per 100 people.	World Bank, 2008.
ER	Official exchange rate (rupees per United States dollar, period average).	World Bank, 2008.
PC	Personal computers (per 100 people).	World Bank, 2008.
TIT	Taxes on international trade (percentage of revenue).	World Bank, 2008.

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Part V

Managing regionalism

Chapter IX

ASSESSING THE IMPACTS OF PREFERENTIAL TRADE AGREEMENTS IN THE ASIAN AND PACIFIC REGION

By Anna Strutt and Allan N. Rae*

Introduction

The negotiation and implementation of preferential trade agreements has gained momentum in recent years. Given the range of agreements being simultaneously negotiated and implemented, there is potential for significant, and perhaps unanticipated, interactions between them. In this chapter, a dynamic global trade model is used to focus on illustrative examples from Asia and the Pacific, a region that has been particularly active in pursuing preferential trade agreements. First, the focus is on a number of bilateral hub-and-spoke agreements, with China as the hub. Then the implications of the spokes being joined are considered and the outcomes are compared to a broader Asia-Pacific Economic Cooperation (APEC) liberalization.

The proliferation of bilateral and regional preferential or free trade agreements (PTAs/FTAs)[1] since the 1980s is a phenomenon described as the new regionalism (Ethier, 1998; Majluf, 2004). As of 15 September 2008, 222 regional trade agreements[2] had been notified to the World Trade Organization (WTO) and were in force, with close to 400 scheduled to be implemented by 2010.[3] Many Pacific Rim countries have been particularly active in the new regionalism (Lloyd, 2002) including China, which has emerged from its earlier preoccupation with WTO accession and is looking to achieve further gains through regional arrangements. With continuing difficulties at the multilateral level, Asia-Pacific bilateralism and regional integration may well become an even more important avenue for continuing trade negotiations in the region. Menon (2006) indicated that the number of bilateral and preferential agreements in the Asia-Pacific region (involving at least one Asia-Pacific country) had increased from 57 in 2002 to 176 by October 2006, each with its distinctive product coverage, time lines and varying rules of origin.

[1]   This term is used to cover all bilateral or regional preferential or free trade arrangements.

[2]   See www.wto.org/english/tratop_e/region_e/a_z_e.xls.

[3]   See www.wto.org/english/tratop_e/region_e/region_e.htm.

What are some of the reasons for the emergence of the new regionalism? The list of reasons given by Sagar (1997) for the establishment of PTAs included: (a) recognition of the political needs of member nations; (b) geographic proximity of the partners; (c) dissatisfaction with the GATT/WTO process for trade liberalization; (d) the opportunity to address issues not addressed by WTO or not effectively addressed, such as barriers to services trade, foreign investment flows, various non-tariff barriers and labour, and environmental standards; and (e) a response to regional trade agreements formed or forming elsewhere, including a reflection of the fear of exclusion from major markets. This domino effect (Baldwin, 1996) is clearly evident in the Asian and Pacific region, with the Association of Southeast Asian Nations (ASEAN), Japan, the Republic of Korea, Singapore, Chile and New Zealand showing initial interest in PTAs in the 1990s. By 2000, the United States of America, Australia, individual ASEAN members such as Thailand, and China had joined the trend, and the momentum has since continued.

In addition to these broad factors, Menon (2006) listed an additional three specific factors. Apart from the well-known economic reasons (market or sectoral expansion and access), strategic factors include some developed countries engaging with others to pursue their objectives regarding labour and environmental standards, or anti-terrorism objectives. Event-driven factors include individual countries desires to form closer links with an existing regional agreement (such as India and others currently pursuing agreements with individual members of ASEAN), linking with an existing WTO member so as to facilitate eventual accession, and strengthening political integration such as the China-Hong Kong, China, and China-Macao, China, agreements.

1. Some concerns associated with PTAs

Various concerns can be mentioned in association with PTAs, including the well-known possibilities of trade diversion rather than creation, concentration on regional arrangements diverting scarce negotiating resources away from multilateral negotiations, and the administrative costs and confusion that could result from a plethora of overlapping trade agreements (Hilaire and Yang, 2003). The likelihood of PTAs excluding sensitive sectors and the possible one-sided nature of the agreements can be added to these concerns.

A comprehensive analysis of potential trade creation and diversion effects within Asian and Pacific region PTAs is that of Gilbert and others (2001). They found evidence of both, but importantly demonstrated that larger regional trade groupings were economically preferable to a spaghetti bowl of smaller and overlapping agreements. Given the current activities of larger economies in the region — including China, the United States, Japan and India — in undertaking PTA studies and negotiations, there is clearly the risk that a hub-and-spoke system will dominate, with these leading economies as the hubs. Zhai (2006) considered the possibility of China or Japan being regional hubs. While ASEAN may also be a hub contender, this is complicated because individual ASEAN members are also pursuing PTAs, especially with the United States and Japan. The resulting spaghetti bowl of agreements and rules could enormously complicate the life of international traders. When

an exporter can enter another market under different sets of preferences where multiple agreements exist, information and other costs may prohibit preferences being realized and MFN entry may appear the least costly option.

While the negotiation of bilateral agreements is often politically easier than multilateral or regional approaches, is it possible that such agreements may eventually be aggregated to a wider grouping? A danger is that (apart from the exhaustion of negotiating resources) trade diversion costs imposed on non-members may lead to political frictions that impede wider integration, rather than act as the driving force. Regionalism is advanced as an alternative to the hub-and-spoke system, which essentially requires the spokes also to be connected under PTA arrangements. The likelihood of trade creation is thereby enhanced and that of trade diversion reduced. A further advance on this approach is the open regionalism approach such as that taken by APEC in its 1994 Bogor Declaration, in which the PTAs preferences would be extended to non-members (Scollay and others, 2003). This has the advantages of simplifying administrative procedures (for example, the rules of origin would not be necessary) and the non-existence of trade diversion costs.

Levy (2006) took a positive view of experiences in the Asian and Pacific region with smaller bilateral or regional groupings which could successfully take on new members. Smaller steps are often easier from a political view; adjustment costs may be less problematic, while a momentum in favour of regional integration is developed. The process of progressive expansion may also serve to desensitize entrenched domestic interests to the benefits of regional liberalization, and may also provide an incubator to enable domestic firms to adjust to new competitive pressures and learn to trade regionally while being shielded from the full forces of international competition.

Agriculture, of course, is the problematic sensitive sector in many of the completed agreements as well as in ongoing negotiations. Asia-Pacific PTAs have followed a variety of approaches in incorporating agricultural preferences, and the agreements range from quite comprehensive to very restrictive coverage. Within the ASEAN Free Trade Area (AFTA), for example, a step-by-step approach to agricultural inclusivity is adopted using temporary exclusion, sensitive and highly-sensitive product lists. These products are being liberalized according to an agreed timetable and end-of period tariffs, and as a result very few products will be excluded from the common preferential tariff scheme (ESCAP, 2007).

The Early Harvest Programme of the China-ASEAN agreement presents another case where substantial agricultural inclusion is being achieved. Several ASEAN countries, including Thailand, have not excluded any such products and China will exactly match those concessions. The Republic of Korea-Chile FTA also provides wide coverage of agricultural liberalization despite opposition from Korean farmers, albeit using tariff rate quotas to limit access and exclusion lists. There are, therefore, some encouraging experiences from the region that suggest sensitive sectors can be addressed in regional agreements despite long transitional periods.

2. Motivation and methodology

This study is motivated by the many PTAs that are being simultaneously negotiated and implemented in the Asian and Pacific region with potential to interact and change outcomes, perhaps in ways that may not have been anticipated. For example, China is involved in a range of agreements; those already in force include agreements with ASEAN, Chile, New Zealand, Pakistan, Hong Kong, China, and Macao, China (from 1 October 2008), while other partner countries now at the study, consultation, negotiation or ratification stage include Australia and the Republic of Korea. ASEAN has agreements or negotiations with Australia and New Zealand, Japan, the Republic of Korea and the European Union. The web of agreements becomes even more tangled when considering those agreements involving individual ASEAN member countries.[4]

In the current study, the Global Trade Analysis Project (GTAP) dynamic model is applied to bilateral and regional trade analyses in the Asian and Pacific region. In particular, a number of China s possible preferential agreements are examined, the implications of these trading partners also liberalizing among themselves are considered. Finally, these outcomes are compared to a full APEC liberalization.

A. Modelling regional agreements

1. Model and baseline

In analysing some of the potential impacts of several different Asia-Pacific preferential agreements this study uses GTAP-Dyn, a recursive dynamic version of the GTAP model. The GTAP model and database are widely used internationally, and are fully documented and publicly available.[5] Using a global computable general equilibrium (CGE) model such as GTAP enables interactions between regions and sectors to be modelled within a fully consistent framework.

The GTAP-Dyn model permits capital accumulation, together with international mobility and foreign ownership of capital (Ianchovichina and McDougall, 2001). Other features of the standard version of the GTAP model are retained (Hertel, 1997). For example, consumers maximize welfare, subject to their budget constraints, and a relatively sophisticated representation of consumer demand allows for regional differences in the price and income elasticities of demand. Firms maximize profits, using the limited resources available in the economy. Five primary factors of production (land, natural resources, physical capital, and unskilled and skilled labour) combine with intermediate inputs, including imports, to produce final output. Armington elasticities specify the extent to which substitution is possible between imports from various sources as well as between imports and domestic production. Markets are assumed to be perfectly competitive, with constant returns to scale. When a policy change is simulated, prices and quantities of commodities,

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[4]   See www.unescap.org/tid/aptiad for an excellent database of agreements.

[5]   See www.gtap.agecon.purdue.edu for detailed information on the GTAP model and database.

together with other impacts including on welfare and incomes, are endogenously determined within the model.[6]

The current study uses version 6 of the GTAP database, comprising 87 economic regions, and 57 sectors (Dimaranan, 2006), extended to facilitate analysis of dynamic capital accumulation. The database is aggregated to the 26 regions detailed in annex table 1, maintaining a high level of disaggregation of the Asian and Pacific region, although with some results presented at a more aggregate level. The 57 commodities in the GTAP database are aggregated to 24 sectors, with the aggregation designed to capture sectors that are of particular significance to Asian and Pacific economies, including agricultural products and labour-intensive manufactures.

First, a baseline business as usual is developed, up to 2020, from the benchmark GTAP 6 dynamic database projection. To project the baseline global economy forward in time, exogenous projections of each region s GDP growth as well as endowments of population, skilled and unskilled labour are applied to each region (Walmsley, 2006). Total factor productivity and capital stock growth are endogenous in the baseline, accommodating the combination of these exogenous shocks. (Details of the macroeconomic assumptions are provided in annex table 2.) The initial baseline tariffs are estimates developed by CEPII,[7] with the 2005 baseline also including European Union enlargement and WTO commitments,[8] together with elimination of Multi-Fibre Arrangement (MFA) quotas. The baseline is aimed at capturing the underlying structures of the economies at the time they liberalize, with simulations that include implementation of the various PTAs that can be compared with this baseline.

The baseline simulation captures some of the significant ways in which the structure of the world economy is anticipated to change by 2020. Changes in the structure of production for each region are driven by differences in the relative rates of factor accumulation, including endogenous capital growth. These combine with different factor intensities in each sector, as well as price and income elasticities. Given the differential that is typical between the growth rates of developed and developing countries, the regions comprising predominantly developing regions tend to increase their share of global GDP most significantly, with relatively large changes in the structure of output in these economies (Anderson and others, 2001).

Table 1 shows the changes in contributions to global GDP, exports and imports in the baseline scenario to 2020. Over time, the share of global GDP that is contributed by relatively high income regions tends to decrease, while developing countries are projected to gain in significance. While the economies of New Zealand and Australia are projected to

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[6]   The model is solved using GEMPACK software (Harrison and Pearson, 1996), using the RunGDYN interface.

[7]   Tariffs between Australia and New Zealand are also eliminated to reflect the CER agreement that is in place. These adjustments to the initial database tariff levels are done in such a way as to maintain the integrity of the initial database, following Malcolm (1998).

[8]   See www.gtap.agecon.purdue.edu/databases/v6/V6_dohascen.asp.

Table 1. Regional contributions to global GDP, exports and imports

(Unit: Per cent)

Country/region	Proportion of world GDP		Proportion of world exports		Proportion of world imports	
	2001	**2020**	**2001**	**2020**	**2001**	**2020**
Australia and New Zealand	1.3	1.4	1.3	0.9	1.2	1.5
China	3.7	7.4	5.5	11.6	3.9	5.9
Republic of Korea	1.4	1.8	2.5	3.5	2.2	2.6
ASEAN	2.0	2.6	6.5	8.5	5.4	7.0
APEC	60.7	63.3	46.6	57.2	46.4	51.5
Europe	30.0	25.9	45.0	33.6	44.4	39.4
Rest of the world	10.0	11.6	9.8	9.8	10.2	11.7

Note: Regional contributions add up to more than 100 per cent as some countries are duplicated in APEC.

increase their share of global output by less than 0.1 per cent from the initial contribution of 1.3 per cent, China s share increases from 3.7 per cent of global GDP in 2001 to 7.4 per cent in 2020. ASEAN economies increase their share of global GDP from just under 2 per cent in 2001 to 2.6 per cent in 2020.

2. Liberalization scenarios

From the baseline described above, the current study models four scenarios. First, a hub-and-spoke set of agreements is modelled with China as the spoke. As noted above, China is engaged in bilateral negotiations and agreement with a number of different trading partners. Only bilateral agreements with Australia, New Zealand,[9] the Republic of Korea and the implementation of a China-ASEAN agreement are modelled, all of which are signed or relatively advanced in the negotiating process. It is assumed that the bilateral agreements have been progressively implemented by 2020.

There is potential for the spokes around the hub of China to be joined to form a regional FTA, since the regions are also in the process of negotiating agreements that may be implemented with one another. Therefore the second scenario examines the impact of joining the spokes into a regional FTA incorporating China, Australia, New Zealand, the Republic of Korea and ASEAN. Third, we consider the impact of allowing a small number of sectors to be classified as sensitive , with no liberalization of these sectors during the time period under consideration. Most regions are likely to have sensitive sectors that they will be reluctant to reform, and the model uses a relatively simple set of assumptions that the products deemed to be sensitive are imports of rice, meat and dairy products for China and ASEAN, while textiles, wearing apparel and leather products assumed to be sensitive imports for New Zealand and Australia.

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[9]   This agreement was signed in April 2008 and is the first bilateral agreement that China has signed with a developed country. See www.chinafta.govt.nz for details.

The final simulation considered is APEC liberalization with the full elimination of tariffs imposed by APEC members.[10] Details of each scenario are summarized in table 2.

Table 2. Summary of scenarios modelled

1.	**Bilateral agreements (hub-and-spoke)**
	All bilateral tariffs are removed between China (the hub) and three regions: Australia and New Zealand in 2009; ASEAN countries in 2010 (new ASEAN countries in 2015);* and the Republic of Korea in 2012.
2.	**Regional free trade area (RFTA)**
	All bilateral tariffs are removed within an FTA comprising China, ASEAN, the Republic of Korea, Australia and New Zealand. The timing of liberalization is as for scenario 1, but now also liberalizing trade between ASEAN, Australia and New Zealand, and the Republic of Korea in 2013 (extended to 2017 for tariffs imposed by new ASEAN countries).
3.	**Regional free trade area with sensitive products (RFTA-Sensitive)**
	As for scenario 2, but with sensitive sectors not liberalized. For Asian countries, sensitive products are assumed to be the rice, cattle and sheep meat, and dairy product sectors. For Australia and New Zealand, the sectors assumed to be sensitive are textiles, wearing apparel and leather products.
4.	**APEC**
	Developed APEC countries are assumed to fully liberalize their tariffs by 2010, and developing countries by 2020.

* Intra-ASEAN tariffs are also eliminated.

B. Results and discussion

What are the likely impacts of bilateral agreements with China acting as a hub? How will these impacts change if the spokes are joined and a regional FTA encompassing all of these economies is formed? What will be the impact of sensitive products not being liberalized? Finally, how would the impacts of these agreements compare with a much more comprehensive APEC liberalization? In this section, the authors use results from their simulations to explore some of these issues, given the assumptions and scenarios outlined above.   The focus here is on aggregate results for the economies engaged in the arrangements, particularly changes in welfare, real output and total exports.

Figure 1 shows the estimated impact on real GDP in each region for each scenario modelled. The impacts are shown as deviations from the baseline level of real output for China, the Republic of Korea, Australia and New Zealand, and ASEAN.[11] For China, positive

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[10]   Assumed to be on an MFN basis.

[11]   For the regional aggregations of Australia and New Zealand and ASEAN, projected percentage changes in real output are weighted by the share of real GDP for each country in the corresponding year of the baseline.

changes in real output are projected under each scenario. However, once the spokes of the bilateral agreements start to join in 2013, the annual changes in real output projected fall to slightly lower levels than would have been the case with only the bilateral agreements implemented. By 2020, the increase in real output is almost 0.1 per cent per annum lower than with just the hub-and-spoke agreement. However, if the regional FTA is expanded to cover the whole of APEC, the gains in terms of real GDP rise to 0.55 per cent per annum, which is more than double that projected for even the hub-and-spoke agreement. It is notable that a significant proportion of these gains come in 2020, that is, when the developing APEC economies (including China) liberalize.

In the bilateral agreements scenario, Australia and New Zealand are assumed to be first off the mark in implementing a bilateral FTA with China. There are some (relatively small) increases in real output projected initially for Australia and New Zealand. However, once China implements agreements with ASEAN and the Republic of Korea, these appear to cut into the real output gains for Australia and New Zealand. By 2014, real output is projected to fall below the baseline level; with this decline continuing over time, by 2020 real output is projected to be 0.08 per cent per annum lower than in the baseline. However, if the spokes can be joined into a regional FTA, Australia and New Zealand are able to maintain and even increase the initial increases in real output. By 2020, real output is projected to be higher than the baseline by 0.17 per cent per annum. APEC liberalization in scenario 4 leads to still larger gains, with real output increases well over three times higher than under the regional FTA scenario.

For the Republic of Korea, significant increases in real output are projected in the first three scenarios. The regional FTA is expected to lead to the highest gains in real GDP — more than 6.8 per cent per annum, compared with 5.5 per cent when there is no joining of the spokes. Non-liberalization of sensitive products, however, appears to have quite an adverse impact on the economic growth of the Republic of Korea, with results in scenario 3 even lower than under the bilateral agreements alone. Surprisingly, perhaps, APEC liberalization is projected to bring gains in terms of real output that are less than 40 per cent of those projected for the regional FTA. This appears to be largely due to differences in Republic of Korea exports under the different scenarios. In particular, there is an almost 8 per cent increase in total export volume in scenario 2, but a reduction of 0.8 per cent under the APEC scenario. Exports in a number of manufacturing sectors are much lower in scenario 4 than in scenario 2, particularly from the other machinery and the textile sectors. It appears that, for the Republic of Korea, the gain from more market access offered by APEC liberalization does not offset the lost benefits of preferential access to the four-region FTA considered in scenario 2.

The ASEAN region appears to have some similarities with the Republic of Korea in terms of the impact on real output. There are strong gains from the bilateral agreements, further accentuated if the spokes can be joined into a regional FTA. In the case of ASEAN, unlike the Republic of Korea, non-liberalization of the products assumed to be sensitive does not appear to greatly affect the overall level of economic output. As with the Republic of Korea, gains from APEC liberalization are significantly lower than gains from the

four-region FTA. However, the gains from APEC liberalization are still significant, particularly by 2020, when developing APEC regions implement their liberalization.

Figure 1. Change in real GDP under each scenario (in percentages)
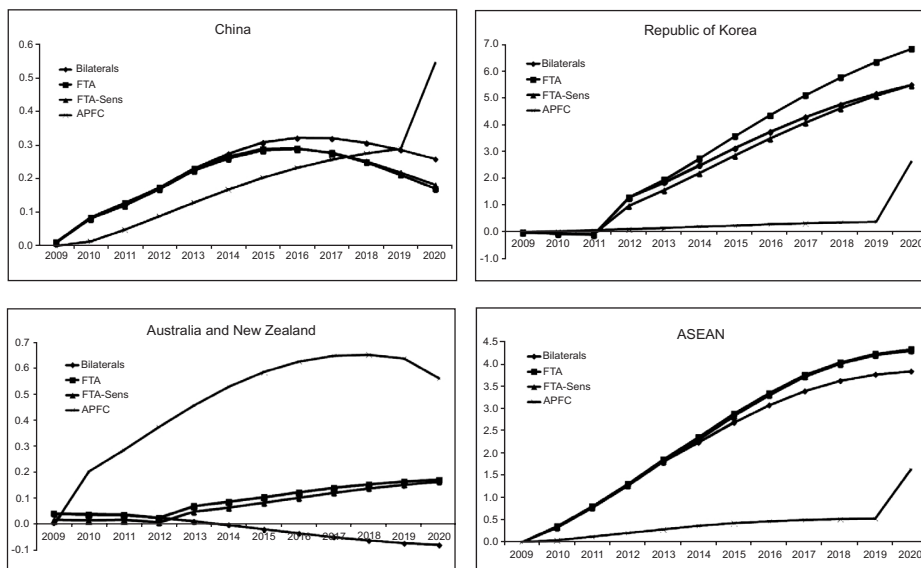
We now turn to the changes in welfare implied by these four alternative scenarios. Welfare in the GTAP model is measured by an equivalent variation in income (Hertel, 1997). However, in the dynamic version of the model, welfare results are complicated by the lack of an inter-temporal utility function and the path dependence of the welfare decomposition used in the comparative static version of GTAP (Ianchovichina and McDougall, 2001; Huff and Hertel, 2001). Therefore, the approach of Walmsley and Hertel (2001) and Walmsley and others (2006) is followed in using a comparative static simulation which repeats the dynamic simulation but removes the impact of time-dependent variables. This enables determination of the difference in welfare at a given point in time, with and without implementation of the preferential trade agreements described above.

Figure 2 shows the overall impact on welfare in 2020 of each scenario, for each of the regions under focus. These results suggest that, in general, more ambitious liberalization that encompasses more regions is likely to lead to higher welfare gains for the liberalizing regions. In particular, Australia and New Zealand, the Republic of Korea and ASEAN all benefit from the spokes of their bilateral agreements when joined into a regional FTA. For Australia and New Zealand, the gains from the regional FTA are 65 per cent higher than from only the bilateral agreements. For the Republic of Korea, the increase is 44 per cent while for ASEAN it is a 15 per cent gain. However, for China, an approximate 30 per cent reduction in welfare projected if the spokes are joined. When sensitive products

are not liberalized in the third scenario, all of the regions experience diminished gains in welfare.

The impact of the sensitive sectors modelled here lowers welfare for Australia and New Zealand by 13 per cent, China by 15 per cent, the Republic of Korea by 9 per cent and ASEAN by 2.6 per cent. However, if the liberalization is instead a much more ambitious full APEC removal of tariffs, welfare gains for most of the regions under focus are much higher. Unsurprisingly, the gains for the whole APEC region increase significantly if the whole region liberalizes. The overall welfare gain projected for the APEC region in the fourth scenario is more than 3.5 times as large as even the gains from the regional FTA scenario. For China, there is approximately a 250 per cent welfare gain from moving to APEC rather than just the regional FTA modelled here. For the Republic of Korea, the estimate is a more than 60 per cent further improvement and for ASEAN a more than 30 per cent gain. However, for Australia and New Zealand, the welfare gains from the earlier scenarios appear largely wiped out by adverse terms of trade movements.

Figure 2. Welfare impacts of alternative scenarios for selected regions, 2020

(Unit: US$ billion)
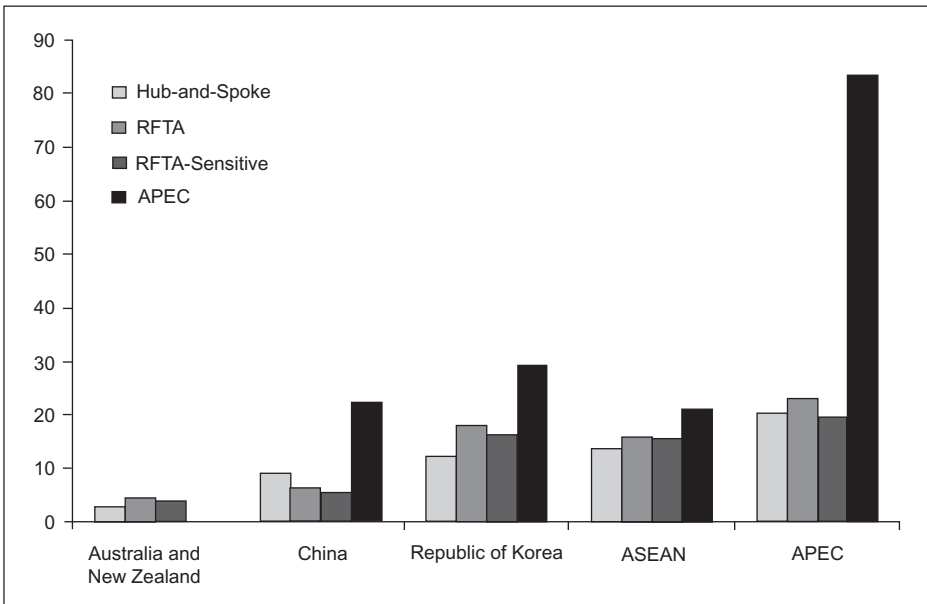
Further insights into these projected changes in welfare may be gained by decomposing the overall changes in welfare into four determinants: the allocative efficiency; terms of trade; capital; and equity effects (Huff and Hertel, 2001; McDougall, 2002). Table 3 presents the full welfare results and decomposition for 2020 for each region under focus. An overall allocative efficiency improvement is found for all regions under each of the four

scenarios (table 3). This improvement in allocative efficiency is an impact typically expected when tariffs are eliminated, if resources are able to move into more efficient sectors. It is this improved efficiency in the allocation of resources that drives much of the overall welfare gain in all of the scenarios modelled.

All of these allocative efficiency effects can be decomposed to find the driving forces, but here only a small sample of some of the strongest effects is presented. The Republic of Korea has rather striking increases in allocative efficiency in all scenarios, and further investigation suggests these are largely due to the food and agricultural sectors. Liberalization leads to particularly strong allocative efficiency gains in the other crops sector and also strong gains in the rice sector (with the exception of the third scenario, when rice is

Table 3. Welfare projections and decomposition, 2020

(Unit: US$ million)

	Total welfare	Contribution of:			
		Allocative efficiency	Terms of trade	Capital	Equity
Scenario 1: Hub-and-spoke					
Australia and New Zealand	**2 739**	276	2 365	169	-71
China	**9 359**	4 291	2 544	-645	3 169
Republic of Korea	**12 575**	14 898	-2 272	-226	175
ASEAN	**13 953**	10 209	-47	734	3 058
APEC	**20 528**	26 920	-12 040	-3 495	9 144
Scenario 2: RFTA					
Australia and New Zealand	**4 504**	1 037	3 245	568	-346
China	**6 499**	3 484	1 016	-345	2 344
Republic of Korea	**18 083**	17 104	574	-324	730
ASEAN	**16 032**	11 950	-50	1 019	3 113
APEC	**23 255**	30 188	-12 748	-3 430	9 245
Scenario 3: RFTA-Sensitive					
Australia and New Zealand	**3 947**	789	2 917	635	-394
China	**5 517**	3 747	-68	-46	1 883
Republic of Korea	**16 458**	13 416	2 625	-392	808
ASEAN	**15 618**	11 838	-336	948	3 168
APEC	**20 333**	26 519	-11 708	-3 058	8 581
Scenario 4: APEC					
Australia and New Zealand	**-6**	1 521	-1 798	-1 042	1 313
China	**22 442**	8 656	-381	-2 019	16 186
Republic of Korea	**29 369**	16 361	12 517	-226	716
ASEAN	**20 977**	11 854	12 484	236	-3 597
APEC	**83 591**	90 964	-10 601	-8 794	12 022

not liberalized). Significant gains are also found in the other processed foods and electrical equipment sectors.

Terms of trade effects are more mixed, with only China, Australia and New Zealand seeing improved terms of trade and therefore positive contributions to welfare in the first scenario. Terms of trade in the GTAP model may be decomposed into the contribution of three effects: changes in world prices of traded products; changes in regional export prices; and changes in regional import prices (McDougall, 1993).[12] For Australia and New Zealand, the terms of trade effect appears particularly important, dominating the overall welfare effect. The terms of trade improvement accrues mainly to Australia, and is driven primarily by an increase in the world prices as well as Australia s export prices in the coal-oil-gas-minerals sector. While these effects are significant and positive in the first three scenarios, the world price and Australia s export prices fall for this same sector in the APEC scenario, driving a fall in the terms of trade for Australia and New Zealand.

However, this same sector is an important import sector for the Republic of Korea, and the negative terms of trade impact in the first scenario is largely due to the increased world prices in the coal-oil-gas-minerals sector. While this world price effect remains negative in the second RFTA scenario, it is more than offset by improvements in the Republic of Korea s regional export prices, particularly in some of the manufacturing and services sectors.

How will each of the scenarios modelled have an impact on exports from each economy? Table 4 shows the projected percentage change in total exports from each country/region.[13] For China, annual exports increase by 5.2 per cent per annum in 2020, with implementation of the bilateral agreements. This increase is slightly more than 5 per cent when the spokes are joined, falling to 4.9 per cent if sensitive products remain unliberalized. However with APEC reform, exports are projected to increase by almost 6.7 per cent per annum in 2020. The increase in exports of Australia and new Zealand with the bilateral and regional FTA agreements is more moderate, increasing by slightly more than 0.6 per cent in 2020 in the first scenario. When the spokes are joined, the increase in exports rises to 2.5 per cent, but slipping back to 1.85 per cent with sensitive products. The most striking result in terms of export growth for Australia and New Zealand is with APEC liberalization, when exports increase by more than 8.5 per cent per annum.

The Republic of Korea is expected to increase exports significantly in the first three scenarios — by 6.5 per cent in 2020 for the first scenario, almost 8 per cent in the second scenario, and slipping back to 6.3 per cent in the third scenario that includes sensitive products. While the Republic of Korea appears to benefit greatly from preferential access to regional markets, once APEC fully reforms exports are projected to reduce slightly relative to the baseline for the reasons discussed above. ASEAN exports are anticipated to increase by even more than those of China and the Republic of Korea in the first three

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[12] The latter two effects are due to the bilaterally differentiated products; these would not arise in a perfect substitutes model.

[13] Weighted by the value of exports in the corresponding year of the baseline.

Table 4. Change in real exports under each scenario, 2020

(Unit: Per cent)

Country/region	Hub-and-spoke	RFTA	RFTA-Sensitive	APEC
Australia and New Zealand	0.62	2.50	1.85	3.98
China	5.19	5.06	4.90	6.67
Republic of Korea	6.49	7.97	6.34	-0.80
ASEAN	8.53	9.75	9.61	1.96
APEC	2.47	2.77	2.60	4.15

scenarios. In the first bilateral agreement scenario, they increase by more than 8.5 per cent, although much of this will be due to liberalization of intra-ASEAN trade in addition to liberalization of trade with China. When the bilateral agreements are extended into a regional FTA, exports increase by 9.75 per cent, falling back to 9.6 per cent with sensitive products. However, with full APEC liberalization, exports are projected to increase by less than 2 per cent per annum in 2020.

Discussion

The quantitative results shown above clearly demonstrate the economic advantages of connecting the spokes within the illustrative hub-and-spoke system of five Asia-Pacific PTAs. However, the incentives are a little mixed, with the gains to China (the hub) somewhat eroded once a regional FTA is formed with the spokes joined. The increased gains available to the spoke regions more than offset China s loss, leading to significantly higher overall gains when the spokes are connected, particularly if sensitive products are also liberalized. If the liberalization were an even more ambitious full APEC reform, the overall gains would be even higher. However, the results for individual countries are rather mixed, with some regions indicators suggesting greater benefits from preferential access to regional markets than if there is a full liberalization of APEC markets.

If the overall gains from enlarging preferential agreements are as significant as suggested above, this begs the question of how, in practice, this outcome might be realized (Baldwin, 2004 and 2006)? Where existing individual agreements differ widely in (a) product coverage, (b) the depth of preferences and (c) the rules of the game , amalgamation of such disparate trade agreements will clearly be a challenge. It is therefore suggested that harmonization of approaches can facilitate the extension and amalgamation of PTAs through the adoption of what Harrigan and others (2006) called good practices .[14] Examples have been given above of regional experiences in achieving wider product coverage through the inclusion of sensitive sectors. In addition, the selected use of safeguards, which may be harmonized if based on WTO rules, could also be valuable in

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[14]   Good practices include product coverage, rules of origin, customs procedures, intellectual property protection, foreign direct investment, anti-dumping and dispute resolution, government procurement, competition and technical barriers to trade.

achieving inclusivity for sensitive products if applied over a strict transitional period. Where the depth of preferences varies widely across agreements, transitional safeguards and differential national treatments according to stage of economic development (as in WTO agreements) may be useful.

The rules of origin are used in PTAs to determine preference eligibility (Krishna and Krueger, 1995; Augier and others, 2005). However, inefficiencies in production may occur when imported raw materials are diverted from the lowest-cost source in order to meet the rules of origin. Should a country belong to two or more agreements, other problems arise since the relevant rules are determined by the intended trade destination. The rules of origin may permit only limited or no cumulation, and may also divert purchases away from lowest-cost sources. The rules of origin may also be used as a protective device where they are more severe for sensitive products. The amalgamation of PTAs can be facilitated if such rules of origin problems can be overcome through (a) appropriate simplification and harmonization, (b) recognition of the technical capacity of exporters and (c) adoption of a harmonized set of rules such as may eventually be adopted by WTO.

Some progress on regional harmonization of sanitary and phytosanitary (SPS) and technical barriers to trade (TBT) issues is found in some of the existing regional trade agreements. Adoption of relevant WTO agreements in these areas, and the use of recognized international standards where they exist, should further encourage such harmonization, thus facilitating the expansion and amalgamation of preferential trade agreements. Developed country partners in PTAs can, and do, play a role in assisting developing country members in improving their SPS and TBT regulations and inspection procedures — while, in some cases, this assistance may be provided to facilitate imports from foreign-based subsidiaries, the institutions and processes created will be available to all traders.

C. Conclusion and future challenges

The current study is aimed at contributing to the evolving literature on the new regionalism . In particular, it focuses on illustrative examples to show how a range of different agreements may interact with each other in the Asian and Pacific region. It finds that there are significant overall gains from forming regional rather than bilateral free trade agreements, and that the overall gains tend to increase as the product and country coverage increases. However, at the individual economy and even sectoral level, the results are somewhat varied, with rather mixed incentives arising for some countries. This highlights the importance of countries considering the implications not only of the agreement they are currently negotiating but also of other agreements that they and their negotiating partner may implement, as those agreements may significantly change the expected outcomes. This is not an argument against implementing trade reform; indeed, if attention were to be focused on the regions not engaging in reform, their gains would be typically much smaller or even negative with a clear danger of being left out in the cold.

There are a number of important areas to which this type of study can be extended in the future. Data issues remain problematic. The above simulations are somewhat exploratory, but future work can incorporate more appropriate levels of tariff reduction and timing as further information becomes available. Tariff data should recognize any excluded products or those on temporary exclusion lists as well as special preferences offered to less-developed countries within the agreement, while MFN tariffs need to be accurate since these are critical in determining the achieved levels of preferences. Can safeguard components of agreements be usefully modelled, say, based on results of preliminary baseline simulations that may be suggestive of where and how safeguards might be applied? While the devil is in the details, the authors recognize that these data intentions will always be compromised by necessary product aggregation in the international databases that CGE models access. A further issue is whether adequate data are available for modelling of services liberalization in PTAs.

The rules of origin are typically excluded from CGE analyses. Yet, these rules may be important in determining whether or not preferences are realized and therefore will have an impact on modelled welfare outcomes. While this raises issues regarding complex modelling and data, it could be a fruitful area for innovative research. Trade data will show, at least at the country level, the sources of imported raw material purchases; this will enable investigation of whether or not these sources are members of the regional trade agreement under study and whether they fall under the umbrella of any relevant cumulation rules. That may assist in making subsequent decisions as to whether or not preferential tariffs ought to be applied to that industry s exports to partner countries within the trade agreement. Modelling approaches may be devised (e.g., imposition of prohibitive tariffs on raw material imports from non-member countries) for achieving diversion of raw material imports from non-member countries to member countries, in order for preferences to be realized on subsequent exports to partner countries. Indeed, this could open up a rich field of investigation into the trade diversion costs of the rules of origin. A pioneering attempt was made in this direction by Gasiorek and others (2003) in a CGE analysis of the European Union and southern Mediterranean countries, where rules of origin constraints are measured as tariff-equivalents.

Trade facilitation costs such as those due to SPS and TBT rules and practices and other behind the border barriers have been shown to be substantial in some cases (ESCAP, 2006), and somewhat more progress appears to have been made in this area, compared to representation of the rules of origin, in CGE modelling. Lowering of these barriers, together with the development of appropriate institutions and infrastructure, has the potential to increase trade and allow trade preferences to be realized. Some recent examples of CGE studies have attempted to model the impact of trade liberalization on transaction costs. Philippidis and Sanjuan (2007) made use of gravity models to estimate tariff equivalents of non-tariff barriers, and adopted the iceberg approach (longer transit periods are associated with higher costs and a melting down of the value of the good) of Hertel and others (2001) in order to incorporate these into the GTAP model. Decreux and Fontagne (2006) used an iceberg variable in their CGE model through the imposition of an additional variable cost to producers aiming at acceding to foreign markets.

While the iceberg representation appears appropriate for indirect costs such as border clearance times, it does not capture directly incurred trade transaction costs such as the provision of documentation (OECD, 2003). Consequently, OECD (2003), Fox and others (2003), and Dennis (2006) incorporated trade facilitation into the GTAP model through splitting the costs into the indirect iceberg component and a tax component, to capture the direct transaction costs. A considerable data problem is the measurement of exiting transaction costs, and a related issue is the estimation of the impact of some degree of liberalization on the level of those costs. Some of these studies demonstrated substantial gains from reductions in transaction costs and trade margins, perhaps in excess of potential gains from tariff liberalization. An additional question is whether the investment flows generated within dynamic CGE models could be linked to such cost reductions, through their role in institution and infrastructure building, in cases where trade agreements extend to services and foreign investment.

Finally, the competitive effects of regional trade integration may lead to productivity improvements over time, and further thought may be given to how these effects may be captured. There is a vast theoretical and empirical pool of literature on this subject; one issue is how such technological gains might be estimated in relation to CGE analysis of regional trade agreements where liberalization may be less complete regionally, but perhaps deeper sectorally than in multilateral liberalizations. Given econometric estimates of productivity gains, these can, of course, be imposed exogenously. However, at least with dynamic CGE models, thought might be given to endogenizing the link between liberalization, openness and productivity growth.

Annex

Annex table 1. Regional aggregation

Grouping	Aggregation modelled	Description
Australia and New Zealand*	Australia	Australia
	New Zealand	New Zealand
China*	China	China
Republic of Korea*	Republic of Korea	Republic of Korea
ASEAN-5*	Singapore	Singapore
	Thailand	Thailand
	Philippines	Philippines
	Malaysia	Malaysia
	Indonesia	Indonesia
New ASEAN	Viet Nam*	Viet Nam
	Other ASEAN (R_ASEAN)	Cambodia, Lao People s Democratic Republic, Myanmar (also Brunei Darussalam, Timor-Leste)
High-income Asian*	Japan	Japan
	Hong Kong, China; Taiwan Province of China	Hong Kong, China; Taiwan Province of China
NAFTA*	United States	United States
	Canada	Canada
	Mexico	Mexico
Central and Latin America*	Chile and Peru	Chile, Peru
	Rest of Central and Latin America	Rest of North America; Colombia; Venezuela; rest of Andean Pact; Argentina; Brazil; Uruguay; rest of South America; Central America; rest of FTAA; rest of the Caribbean
Europe	Russian Federation*	Russian Federation
	European Union 25	Austria; Belgium; Denmark; Finland; France; Germany; United Kingdom; Greece; Ireland; Italy; Luxembourg; Netherlands; Portugal; Spain; Sweden
		Cyprus; Czech Republic; Hungary; Malta; Poland; Slovakia; Slovenia; Estonia; Latvia; Lithuania
	Rest of Europe	Switzerland; rest of EFTA; rest of Europe; Albania; Bulgaria; Croatia; Romania; rest of former Soviet Union; Turkey
South Asia	India	India

Annex table 1 *(continued)*

Grouping	Aggregation modelled	Description
	Sri Lanka	Sri Lanka
	Bangladesh	Bangladesh
	Rest of South Asia	Rest of South Asia
ROW	ROW	Rest of Oceania; rest of East Asia; rest of Middle East; Morocco; Tunisia; rest of North Africa; Botswana; South Africa; rest of Southern African Customs Union; Malawi; Mozambique; United Republic of Tanzania; Zambia; Zimbabwe; rest of Southern African Development Community; Madagascar; Uganda; rest of sub-Saharan Africa

* Included in APEC (Brunei Darussalam and Papua New Guinea cannot be modelled separately).

Annex table 2. Projection assumptions — cumulative changes in GDP and factor endowments for selected countries, 2001-2020

(Unit: Per cent)

Country/area*	GDP	Population	Unskilled labour	Skilled labour
Australia	90.9	15.0	39.3	19.8
New Zealand	84.4	15.3	10.5	-4.9
China	262.8	12.4	16.6	101.8
Hong Kong, China; and Taiwan Province of China	122.3	7.6	15.4	76.9
Japan	39.2	-3.4	3.1	-11.6
Republic of Korea	142.2	7.0	22.0	160.5
Singapore	142.3	21.3	16.0	28.3
Thailand	150.8	11.1	0.0	88.6
Philippines	104.2	34.3	37.3	138.2
Malaysia	183.2	32.4	-16.7	146.1
Indonesia	152.9	24.2	67.3	266.0
Viet Nam	172.9	22.8	30.7	44.5
United States	82.5	15.6	31.5	18.3
Mexico	92.8	29.6	57.8	133.6
Canada	64.1	9.5	34.2	20.7
Chile and Peru	108.3	24.7	34.3	143.3
Russian Federation	103.3	-10.0	-1.4	8.9

Source: Walmsley, personal communication, 2007, based on Walmsley, 2006.

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Chapter X

MULTILATERAL RULES FOR REGIONAL TRADE AGREEMENTS: PAST, PRESENT AND FUTURE[1]

By Mia Mikic

Introduction

Multilateral rules for international trade were created with the objectives of securing market access for the post-war recovering economies and supporting their continued growth. Following the introduction of these rules in 1947 as the General Agreement on Tariffs and Trade (GATT), it became clear that those countries with easier access to other countries markets were able to grow faster. This was probably the main reason why more and more of independent States accepted the trade disciplines, despite the fact that the rules limited their freedom to make unilateral decisions about trade (thus leaving them with narrower policymaking space).

During the past six decades, these countries have relied on regular multilateral trade negotiation rounds to further trade liberalization. Each one of the eight trade rounds held during that period contributed to the extension of the coverage of original rules and added new ones. In short, the multilateral trading system (MTS) evolved from the set of rules now known as GATT 1947 to a more complex system, including the establishment of the World Trade Organization (WTO) in 1995. The ninth round, entitled the Doha Development Agenda, began in 2001 but encountered progressively more complex problems; it struggled through a temporary suspension lasting several months in 2006-2007 to reach its current status, described as an impasse of uncertain duration .

Meantime, those MTS members who were keen to embark on faster and/or deeper trade liberalization moved both unilaterally and regionally to achieve that goal. While unilateral liberalization might have gradually lost its appeal, bilateral and regional trade agreements drew the most attention by trade policymakers in many countries (figure 1). In turn, the proliferation of regional trade agreements (RTAs)[2] has been blamed for problems

[2] To prevent confusion in terminology, the author has followed the terminology used in GATT/WTO texts, that is, regional trade agreements, to describe all trade agreements deviating from the most-favoured nation principle. However, the author agrees with those commentators who argue that most of today s trade agreements are not regional in their geographical scope, and that a more fitting term for these agreements would be preferential trade agreements (cf Bhagwati, 2008).

in ongoing negotiations under the Doha Development Agenda and for the weakening of the multilateral trading system. This argument has roots in the old debate on whether RTAs play a role as stumbling blocks or stepping stones to multilateral trade liberalization and MTS.[3] From the debate and more recent anecdotal evidence, RTAs appear to be undermining the two fundamental components necessary for a survival of multilateralism in trade — reciprocity and non-discrimination.

Figure 1. Proliferation of RTAs
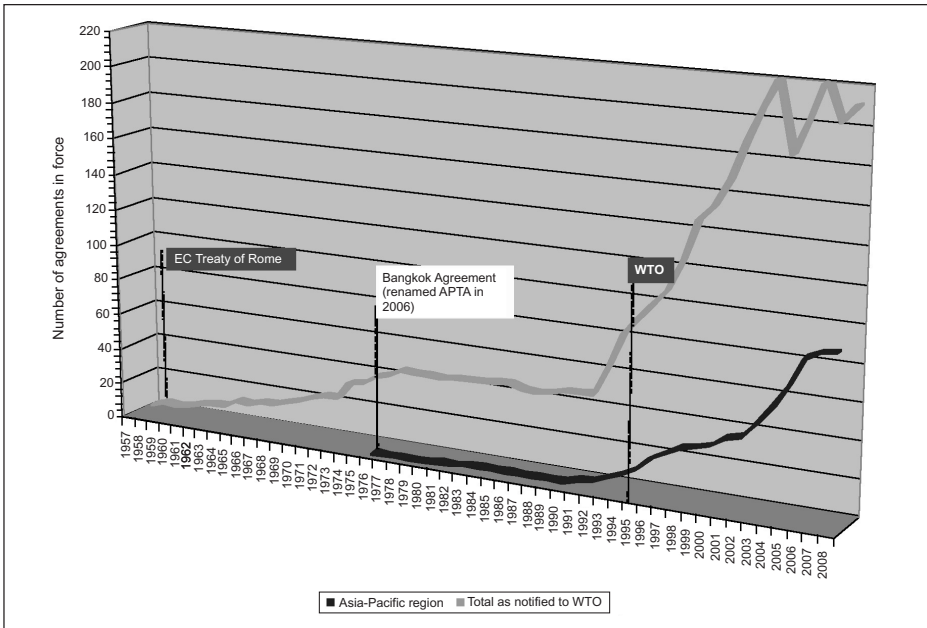
The potential of RTAs to adversely affect multilateral liberalization did not escape the attention of the drafters of the original rules on MTS. Given the non-discrimination principle, one would expect that any form of the discriminative extension of preferences (which is what RTAs do) would have been explicitly outlawed by MTS. Instead, the GATT 1947 text allowed for discriminative liberalization by including the rules on RTAs.[4]

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[3] See Bhagwati, 1992 and 2008, for early discussions and for his most recent views. See also Baldwin, 2008, for a synthesis and critique of theoretical literature.

[4] Sample of literature elaborating on theoretical and historical context for this outcome includes Mathis, 2002, Chase, 2006, and Jackson, 1997. See also section A of this chapter.

This chapter explores how the former (GATT) and current (WTO) multilateral trading system have been handling the rules on RTAs over time and with the change of the multilateral liberalization agendas, and how the monitoring and evaluation set by those rules have been working. The chapter is structured as follows. Section A reviews the ideas of reciprocity and non-discrimination as the two fundamental principles of MTS. Section B explores the rules on RTAs that were originally set and that evolved in the pre-WTO period. The implementation of those rules is also reviewed through available data. Section C covers the period of the Doha Development Agenda as well as the intended and achieved negotiations on rules on RTAs based on Doha declaration. The new Transparency Mechanism on RTAs, one of the rare tangible outputs of the Round so far, is analysed in detail in terms of its characteristics and experience with its application is summarized ahead of the formal review due in the WTO in October 2008. Section D looks into the situation in the Asian and the Pacific region with regard to notification and the WTO consideration process. Section E looks into reasons for reliance on RTAs and recommends persisting with the achieved improvements through the Transparency Mechanism even if the Doha Round remains in a longer or permanent impasse.

A. On reciprocity and non-discrimination

While unilateral trade liberalization has occupied a pedestal in orthodox trade theory, political economy literature on trade has been pointing to reasons why this path would be difficult to pursue in practice. As with any trade reform, unilateral trade liberalization creates losers and winners. However, in unilateral cases these losers cannot be compensated through gains captured by reciprocal liberalization taking place in a country s trading partners, but only by transfers from domestic winners. Another obvious reason for reluctance is a loss of tariff revenue for small and developing countries and, again, in unilateral liberalization there is no external source for compensation of that loss.[5]

Consequently, trade liberalization that is based on contingent and equivalent exchange of trade concessions (that is, full reciprocity) is seen as necessary to break any political economy type of resistance. Obviously, there are situations in which the reciprocity condition may be satisfied without an equivalent exchange of direct trade concessions when benefits in other than trade areas are to be achieved through agreements. It is also possible for reciprocity to be waived and concessions to be extended in a non-reciprocal way as demonstrated through various schemes extended to a number of developing and least developed countries.

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[5]   Notwithstanding those theoretical arguments (and received wisdom), the World Bank (2007) claimed that some 65 per cent of applied tariff liberalization on manufactures in developing countries between 1983 and 2003 were associated with unilateral liberalization while only about 25 per cent was the outcome of multilateral agreements, leaving about 10 per cent for RTAs. However, during the observed period, developing countries were hardly involved in RTAs; a number of them joined MTS during the latter part of that period and gained a longer transition period. For these and other reasons related to measurement problems, perhaps the role of unilateral liberalization has been overestimated. See also Evenett (2008).

When reciprocity is the basis for the exchange of trade concessions, it matters if they are extended (fully or otherwise) to all or only some of the trading partners. Countries receiving lesser or no preferences tend to feel discriminated against. Unequal exchange of preferences among trading partners may often result in repeated renegotiations of tariffs to remove perceived discrimination, or even in trade (and other) wars. It is for this reason that the founders of GATT installed the most-favoured nation (MFN) treatment as the fundamental principle of the multilateral trading system. MFN ensures that concessions given by any member of the then GATT to any country are extended to other members.[6] Obviously, MFN treatment could still be seen as having a discriminatory impact since it allows less favourable treatment of non-members. However, with the six-fold increase in MTS membership, trade concessions under MFN today theoretically apply to all countries that feature in world trade, as some members also unilaterally and on a non-reciprocal basis extend MFN treatment to selected non-members. The fact, however, is that the parallel rise in a number of trade agreements and other preferential arrangements in effect have made MFN an exception,[7] and most of the world trade today appears to be preferential trade of one type or another.[8]

B. From GATT to WTO — evolution of rules on RTAs

The existence of the MFN clause meant that RTAs would constitute a straightforward violation of non-discrimination principle if it were not for other rules allowing this derogation. As mentioned above, these rules embodied in Article XXIV of GATT (1947) were an inherent part of the original MTS.

The value of both the MFN principle and discriminatory preferences were recognized during the drafting of the Havana Charter (which was turned into the GATT 1947 text) by then participating States. According to WTO (2007), GATT Article I:2 was to provide assurances that only the existing preferences (that is, the British imperial system) would be continued under the condition that no new preferences would be extended, thereby ensuring non-discrimination. However, the text also included Article XXIV that provided an exception from the MFN principle. Before discussing the contents of this Article, a quick reference to its coming into being reveals some interesting details on the negotiating interests of the MTS founders.

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[6] (...) any advantage, favour, privilege, or immunity granted by such country to any product originating in any other country shall be accorded immediately and unconditionally to a like product originating in the territories of all other contracting parties , GATT Article I. Note that contracting parties in the original (1947) text of GATT is replaced by Members in the 1994 version.

[7] The Sutherland Report (WTO, 2004) suggests that MFN could be ...defined as LFN (least-favoured nation treatment) , p. 19.

[8] According to Grether and Olarreaga (1998), 42 per cent of world trade in 1993-1997 was preferential; the share is as high as 70 per cent for Western Europe, and as low as 4 per cent for Asia and Oceania. Crawford and Fiorentino (2005) estimated that preferential trade comprised 90 per cent of some countries trade.

There are at least three complementary explanations for the appearance of Article XXIV. One explanation is that in order to ensure support for the Havana Charter from a wider group of developing countries (and not only those covered by the British imperial system), the rules needed to allow the possibility of establishing free trade areas (ibid, 305). Another explanation is that the United States of America, despite its reluctance to allow for exceptions to MFN, accepted Article XXIV in order to promote the European integration, which was deemed essential for future stability and peace in Europe (Bhagwati, 1991). Finally, the third explanation was provided by Chase (2006), who argued that the United States, a seemingly strong defendant of non-discrimination, introduced Article XXIV to accommodate a possible United States-Canada free trade agreement, which was at that time negotiated secretly (and never ratified, as was not the Havana Charter).[9] Obviously, various parties were interested in preserving a carve out in MFN treatment of the future multilateral trading system by allowing regional liberalization in the interests of free trade being used as an engine of growth.[10]

1. Article XXIV of GATT 1947

Article XXIV exempted countries that are forming agreements, such as customs unions, free trade areas and interim agreements, from applying the MFN clause if those countries met the following conditions:

(a)   A neutrality requirement by which regional integration should not result in barriers towards third parties being raised relative to those prevailing before the formation of the RTA (Article XXIV:5 (a) and (b));[11]

(b)   A transparency requirement by which the information on the formation of regional integration was required to be promptly notified to other parties to enable them to make such reports and recommendations to contracting parties as they may deem appropriate (Article XIX:7 (a));

(c)   A requirement of commitment to deep integration by which regional integration should eliminate duties and other restrictive regulations of commerce in substantially all trade within a reasonable length of time (Article XXIV:8);

(d)   A compensation requirement in the case of an increase in duties due to the formation of regional integration and which is inconsistent with Article II In such cases, the compensatory adjustment set in Article XXVIII would apply (Article XXIV:6).

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[9]   WTO 2007, page 305, footnote 300 reports that Canada rejected the proposed agreement of 1948 .

[10]   According to Article XXIV:4 The contracting parties recognize the desirability of increasing freedom of trade by the development, through voluntary agreements, of closer integration between the economies of the countries parties to such agreements. They also recognize that the purpose of a customs union or of a free-trade area should be to facilitate trade between the constituent territories and not to raise barriers to the trade of other contracting parties with such territories.

[11]   In addition to XXIV:5 (a) for customs unions and (b) for free trade areas, (c) prescribed that interim agreements shall include a plan and schedule for the formation of such customs union or of such free trade areas within a reasonable length of time.

While Article XXIV did not include specific clauses on surveillance and enforcement of the above listed requirements, it did envisage parties having an opportunity to influence the process of formation and development of RTAs. Subparagraph 7(b) states that:

> If, after having studied the plan and schedule included in an interim agreement referred to in paragraph 5 in consultation with the parties to that agreement, and taking due account of the information made available in accordance with the provisions of subparagraph (*a*), the CONTRACTING PARTIES find that such agreement is not likely to result in the formation of a customs union or of a free-trade area within the period contemplated by the parties to the agreement or that such period is not a reasonable one, the CONTRACTING PARTIES shall make recommendations to the parties to the agreement. The parties shall not maintain or put into force, as the case may be, such agreement if they are not prepared to modify it in accordance with these recommendations.

However, perhaps confirming the interest of parties in engaging in regional integration in future, paragraph 10 allows that:

> The CONTRACTING PARTIES may, by a two-thirds majority, approve proposals which do not fully comply with the requirements of paragraphs 5 to 9 inclusive, provided that such proposals lead to the formation of a customs union or a free-trade area in the sense of this Article.

2. Enabling Clause 1979

The view that coexistence of discriminatory and MFN tracks to trade liberalization positively contributes to global free trade, and the realization that developing countries need to be integrated into the global trade in the spirit of less than full reciprocity, led to broadening of the disciplines on RTAs in GATT.

During the Tokyo Round (1973-1979), the GATT Council Decision on Differential and More Favourable Treatment, Reciprocity and Fuller Participation of Developing Countries (known as the Enabling Clause) was adopted. This clause legalized partial trade preferences among developing countries and non-reciprocal partial preferences by developed to developing countries. Onguglo (2000) and WTO (2007)[12] explained that the Enabling Clause expected an RTA:

(a)   To be designed to facilitate and promote trade for members and not increase barriers or create undue difficulties for trade of third countries;

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[12]   See footnote 301, page 305.

(b)   To not constitute an impediment to the reduction or elimination of tariffs and other restrictions to trade on a MFN basis;[13]

(c)   Between a developed and a developing country to be designed so as to respond positively to the development, financial and trade needs of developing countries.

The only real requirement from Article XXIV remained in terms of notification (paragraphs 4a and 4b), including a provision of adequate opportunity for prompt consultations at the request of any interested party.

3. Article V of GATS 1995

Uruguay Round agreements (negotiated from 1986 to 1994) that broadened the MTS coverage to, inter alia, services trade also added another dimension of exemption from the non-discrimination principle —Article V of the General Agreement on Trade in Services (GATS). According to this Article, member countries can form RTAs in services provided that:

(a)   They have substantial sectoral coverage (GATS Article V.1 (a));

(b)   No provisions a priori exclude any mode of supply (footnote to GATS Article V.1 (a));

(c)   They eliminate substantially all discrimination in the sense of providing national treatment within a reasonable time frame (as defined by GATS Article V.1 (b)).

The first of these conditions is to be met in terms of the number of sectors, volume of trade affected and modes of supply. In order to meet this condition, the agreement should not provide for a priori exclusion of any of four modes of supply. The third condition is to be met by removing existing measures that discriminate against trade agreement partners and prohibiting any new discriminatory measures except those related to short-term balance of payments difficulties (Article XII), general exceptions related to public morals, human, animal or plant life or health, and so on (Article XIV) and security exceptions (Article XIV bis). Notification requirements are given in GATS Article V:7.

4. Waiver clause

In addition to the three derogation avenues explored above, GATT Article XXV:5 allows, under exceptional circumstances, members while acting jointly to waive an obligation, including MFN, imposed upon another member. In other words, if some members are unable to meet criteria stipulated in GATT Article XXIV or the Enabling Clause,

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[13]   Lim o (2006) provided a comparison of the Enabling Clause and Article XXIV on requirements on preferences. According to Lim o, the Enabling Clause was more restrictive as it required that preferences shall not constitute an impediment to the reduction of elimination of tariffs and other restrictions to trade on a MFN basis . Lim o showed that the United States and European Union GSP impede their multilateral liberalization under MFN.

they are able to invoke this Article to be granted a special waiver. Onguglo (2000) provided examples from early and later GATT history when this waiver was used.[14] Of 28 waivers granted, the majority were related to non-reciprocal preferences granted to developing countries by a developed one.[15] The scope for seeking waivers was significantly reduced with the Uruguay Round Agreements (see next section for further details).

5. Examination process and lessons learnt

As discussed above, the deviations and waivers from MFN treatment were conditional. Requirements to be met by RTAs meant that there was an implied intention to test or examine whether members policies complied with the rules. Presumably this was to prevent harmful impact of RTA policies on other parties in the MTS (Article XXIV:7(b) and 10; as discussed above). As one of the MTS principles, parties have been required to be transparent about their policies that might adversely affect their trading partners. Transparency has required notification about changes of market access policies, including the preferential concessions under RTAs. However, Article XXIV and other non-discrimination principle waivers were not very precise in terms of the requirements to meet, either in terms of consequences in the case of non-compliance or in terms of the examination process. In fact, within GATT 1947, no provisions specifically talked about examination of the notified RTAs.

As discussed above, Article XXIV:7(a) implied that information supplied by members would be to enable them to make such reports and recommendations to contracting parties as they deem appropriate , thus making provision of this information mandatory. This intention was probably why a practice was established to form working parties (groups) with mandates to examine every notified RTA and to report on their compliance with the relevant provision of GATT.

However working groups that operated during the GATT 1947 era faced many problems. WTO (2007) revealed that the first test of the RTA rules arrived early in GATT history, with the notification of the EEC-Association of Overseas Countries and Territories (p. 305) when the Working Group established to consider it was unable to unambiguously decide on its consistency with Article XXIV. Problems with unclear language in Article XXIV (and later waivers) were encountered by the Working Group; in particular, substantially all trade or other restrictive regulation of commerce with regard to the extent of preferences within the RTA continued to rule this area of MTS. As a result, no decision was made on subsequently notified/examined RTAs with regard to their compliance with the disciplines. Despite a relatively steady flow of notifications to GATT, there were no clear-cut decisions on an RTA passing the consistency test or being in breach of the rules. In fact, only the

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[14] For example, a waiver for the European Coal and Steel Community for the free trade agreement on coal and steel in 1952, and Canada-United States automotive pact in 1965.

[15] For example, granted to Papua New Guinea by Australia in 1953, the Caribbean Basis by Canada in 1968 and the United States in 1985, and the most controversial waiver sought by the European Union for the Fourth Lom Convention.

Czech Republic-Slovak Republic Customs Union was declared as being consistent with the provisions of Article XXIV (WTO, 2007[16]).

Srinivasan (2007), citing WTO (1995), reported that during the period of GATT 1947 (from 1947 to 1994), 98 agreements were notified under Article XXIV, and an additional 11 under the Enabling Clause. Working parties were established for these notified agreements. By end of 1994, 15 working parties had not completed their examination and another five had not produced a report for other reasons, leaving only 69 that had submitted reports. Of those 69, only six reports explicitly acknowledged conformity of RTAs with Article XXIV.[17] In 1995, only two of those six agreements were still active.

As part of the Uruguay Round negotiations, an attempt was made to eliminate ambiguity in the language of Article XXIV of GATT and the Enabling Clause (as well as Article V of GATS designed in the Round). An Understanding on the Interpretation of Article XXIV of GATT 1994 was an attempt to explain key obligations such as reasonable length of time and barriers towards third parties .

The Understanding thus introduced the following clarifications in relation to those two requirements:[18]

(a) Regarding reasonable time, the period should exceed 10 years only in exceptional cases ;

(b) Weighted average applied tariffs were to be used to determine whether an RTA raised barriers to third-country trade.

However, despite its name, the Understanding did not contribute much to the clarification of requirements on substantially all trade or on the interpretation of other non-procedural rules.

As figure 1 shows, the second wave of RTA proliferation coincided with the end of Uruguay Round, which was somewhat ironic as expectations were that the establishment of WTO would lead to more, rather than less, convergence in the global trading system. As the existent consistency examination mechanism had proven inadequate, the WTO General Council established the Committee on Regional Trade Agreements (CRTA) in 1996. The main purpose of CRTA is twofold: (a) to ensure transparency of RTAs; and (b) to provide an opportunity for WTO members to evaluate the consistency of RTAs with the WTO rules.[19]

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[16] See footnote 304, page 306.

[17] However, of the six RTAs reported to be in conformity with Article XXIV, there was only one agreement, the Czech-Slovak Customs Union, on which members were able to build a consensus on the conformity of the RTA with the GATT provisions.

[18] In addition to the Understanding on Article XXIV, clarifications of rules relevant to RTAs were issued on anti-dumping (Article 4.3), subsidies (Article 16.4), safeguards (Article 2.1, footnote) and rules of origin (Annex II).

[19] See www.wto.org/english/tratop_e/region_e/regcom_e.htm for more details about the examination process.

More structure was introduced by CRTA into the examination process of notified RTAs. Agreements to be notified under Article XXIV to the Council for Trade in Goods include free trade agreements and customs unions. (Such agreements are typically made between developed countries or have at least one developed country as a member.) These agreements are directed to CRTA for examination.

Agreements that are negotiated between developing countries and are to be notified under the Enabling Clause are labelled as partial scope agreements and notification is directed to the Committee on Trade and Development (CTD). It is accepted that, in principle, the examination process of these agreements will not go through the same scrutiny as the ones going through CRTA.

Finally, agreements on trade in services are called economic integration agreements and are notified under Article V of GATS to the Council for Trade in Services for all members. The notification process may involve an examination process by CRTA, but in the case of services an examination is not mandatory.

It was envisaged that after the examination of an RTA by CRTA, a report and recommendations would be submitted to the Council for Trade in Goods/Services after which a positive concluding report would hopefully be forthcoming. After this initial report, the RTA members were expected to submit biennial reports. According to the WTO online database on these reports, during 2000-2006 a total of 47 reports were submitted. Inspection of the records shows that the same group of members had been submitting these reports during that period.[20] Members expressed concern in connection with costs, possible duplication and overlap with the TPRM reporting, confusion with the objectives of transparency versus examination, and linkages to the dispute settlement mechanism.

In the end, little improvement was achieved and many of the agreements subsequently negotiated still included important sector exceptions (for example, agriculture) instead of covering substantially all trade . Many of the RTAs continued to embody rules of origin that served as a protectionist shield against third countries trade and investment (in contrast to the requirement of Article XXIV). Moreover, while examinations were extensive, no examination process was completed after CRTA was put in place due to a lack of consensus. WTO (2001) describes the situation at the time:

> However, WTO does not have rules and procedures for examining RTAs that function adequately. To date, 220 RTAs have been notified to GATT/WTO, and the Committee on Regional Trade Agreements has proceeded to the examination of notified agreements, with a total of 86 RTAs still under examination at the end of 2000. The Committee has completed the factual examination of 60 RTAs, whose draft examination reports are in various stages of consultation and finalization. In addition to facing a heavy backlog of agreements under examination, the Committee has been unable to finalize

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[20] For example, ANZCERTA, EFTA, EC cooperation and association agreements, the Czech-Slovak Customs Union, Central American Economic Integration, and the United States-Israel agreement.

any reports due to a lack of consensus among the WTO members, demonstrating that the unsatisfactory experience of the GATT process on examining RTAs continues to be the same in WTO .

In summary, the rules on RTAs that existed in GATT and after the establishment of WTO did not bring much discipline into the area, and thus were unable to slow down or reverse the proliferation of RTAs. One agreement after another was negotiated outside the scope of intended rules and contrary to the spirit of the non-discrimination principle, but no action was taken. The examination process had no enforcement muscle. In practice, the examination process was never linked to dispute settlement,[21] but a theoretical possibility that the opinion from an examination could be used to build a dispute case had an adverse impact on the ability to eliminate political and legal difficulties, and on reaching unanimous decisions in the process. The peer pressure that CRTA was intended to build to influence changes in the dynamics and form of RTAs did not amount to much.

C. Doha Development Agenda and rules on RTAs

In the Doha Ministerial Declaration, 2001, paragraph 29 refers to the need for clarifying and improving disciplines and procedures under existing WTO provisions applying to regional trade agreements while emphasizing the developmental aspects of RTAs. The objective for including RTA provisions in the Doha Development Agenda (DDA) agenda was not only to improve the weak operation of CRTA, but also to obtain better control over proliferation and their systemic implication for MTS.

The Negotiating Group on Rules (NGR) set a two-track programme for its work on the DDA:

(a)   Issues of systemic (substantive) nature;

(b)   Issues of a procedural nature with a focus on:

   (i)   Improving transparency with respect to RTAs; and

   (ii)   Improving procedures for the consideration/surveillance of RTAs by WTO.

1. Systemic issues

Given the long history of what many consider to be weak global governance over RTAs as well as the clear willingness of members to continue, even enhance, the use of a regional track of liberalization, the systemic issues presented themselves as crucial for both MTS and its development aspects. Work on these issues was divided into several categories:

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[21]   However, there were a few dispute settlement cases involving RTAs. Examples include the Turkey Restrictions on Imports of Textile and Clothing Products in connection with Turkey joining a Customs Union with the European Union (DS34), and the more widely-known case in connection with the Fourth Lom Convention and European Union restrictions on banana imports (DS27).

(a)   Issues related to the interpretation of the existent disciplines under Article XXIV of GATT and Article V of GATS;

(b)   Issues related to coherence between the existent RTAs rules, and between those rules and other disciplines in the WTO agreements;

(c)   Issues related to potential institutional tensions and potential conflict between RTAs and MTS;

(d)   Identification of the developmental aspects of RTAs and how to best reflect these aspects in RTAs rules in WTO.

Negotiation proposals were submitted, both by developed and developing country members, which covered a wide and complex set of issues (table 1). Discussions of these issues were additionally complicated by the fact that progress in some other areas of DDA negotiations were required to move on some of these issues. Proposals dealing with the interpretation of existing substantive disciplines were more focused on goods trade than on services trade.   Much effort was directed towards a provision defining substantially all trade , major sectors and other restrictive regulations of commerce (in particular , their relationship to rules of origin in the RTAs). Some proposals (for example, from Japan and the European Union) were aimed at developing methodologies for assessing the concept of substantially all trade .

Another aspect of RTA rules of great importance refers to the issue of transition period . Members were unable to reach a common position on (a) the maximum length of transition to be allowed and for which RTAs, (b) what should be the relationship between transition period and provisions on substantially all trade , or (c) exceptional cases to be used in connection with invoking transition period .

Finally, with regard to the developmental aspects stressed in the Doha Declaration, members considered Special and Differential Treatment within Article XXIV of GATT (1994) as well as on the scope of the application of such treatment. As reported in WTO (2004), the NGR also considered the question of grandfathering existing RTAs and retroactive application of any new rules, but it has been generally held that no useful outcome could be achieved on that issue until the negotiations had progressed significantly. At the Ministerial meeting in 2005, ministers requested the NGR to intensify its efforts to reach appropriate outcomes on RTA systemic questions by the end of 2006 . During the course of 2006, discussions continued to consider proposals submitted by participants on, among other matters, substantially all the trade , length of RTA transition periods and RTA development dimensions . Notwithstanding the highly technical discussions held on these issues, the debate has remained exploratory in nature and severe differences persist on the scope and substance of these specific negotiations. To date, no text-based submissions to advance the process have been made (WTO, 2007).

Table 1. List of proposals on systemic rules on RTAs

Proposal by	Document TN/RL/W/-	Year
WTO Secretariat	8/Rev. 1	
Australia	2,15	2002
European Communities	14	2002
Chile	16	2002
Turkey	32	2002
Least developed countries	TN/TD/W/4 & Add. 1	2002
African Group	TN/CTD/W/3/Rev. 2	2002
India	114	2003
Republic of Korea	116	2003
Australia, New Zealand, Republic of Korea, Chile and Hong Kong, China	117	2003
Chile	151, 152, 163	2004
ACP Group	155	2004
Turkey	167	2004
Australia	173/Rev. 1, 180	2005
European Communities	179	205
Taiwan Province of China	182, 186	2005
China	185	2005
Chile, Republic of Korea	187	2005
Japan	190	2005

Source: Compiled from Boonekamp, 2007 and the WTO website.

2. Transparency Mechanism on RTAs

In contrast to attempts to negotiate on new interpretation or new multilateral disciplines on RTAs, negotiations on procedural issues under the Doha Round surprisingly produced a tangible result. On 14 December 2006, the WTO General Council established a Transparency Mechanism for Regional Trade Agreements (hereafter TM), which is being implemented on a provisional basis (pending completion of the DDA as requested by single undertaking).

The main features of TM, agreed upon in the NGR, include (see also Agency for International Trade Information and Cooperation, 2007):

¥   The early announcement of any RTA;

¥   Guidelines regarding the notification of RTAs;

¥   Responsibility of the Secretariat, in full consultation with the parties, for preparing a factual presentation of RTAs to assist members in their consideration of a notified RTA;

¥   Timeframes associated with the consideration of RTAs (see figure 2);

¥   Provisions regarding subsequent notification and reporting of notified RTAs;

¥   Technical support for developing countries;

¥   The distribution of work between CRTA (which is entrusted to implement the mechanism vis- -vis R TAs falling under Article XXIV of GATT 1994 and Article V of GATS) and CTD (which is entrusted to do the same for RTAs falling under the Enabling Clause).
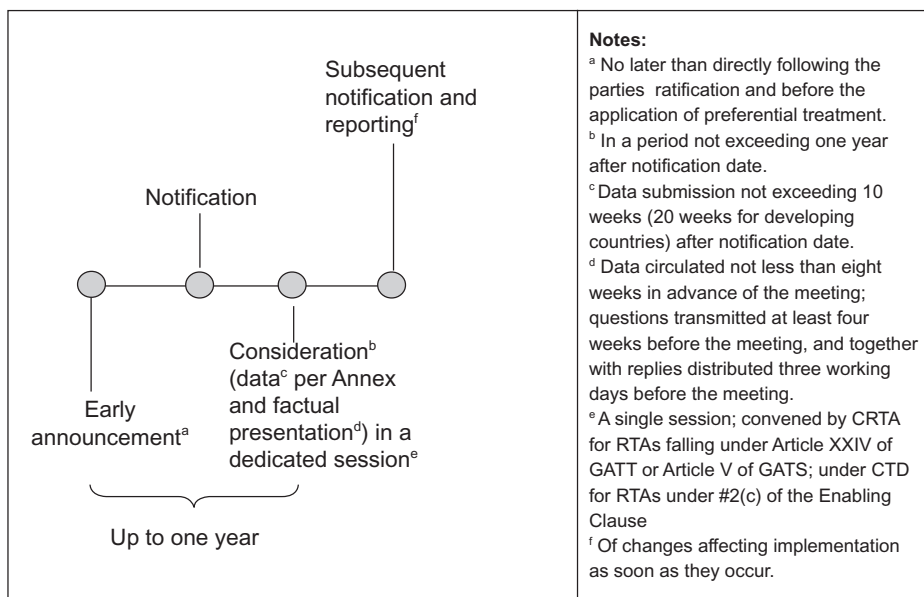
Given its provisional basis, the Decision foresees that members are to review, and if necessary modify, the decision and replace it with a permanent mechanism adopted as part of the overall results of the Doha Round. The first review was scheduled for December 2007 but at the WTO General Council meeting in 2007 it was concluded that the initial review was not possible due to limited experience with the mechanism. Instead, it was proposed that an informal meeting of the NGR was to be organized in early October 2008 to kick-start consultation on the functioning of TM.

Some commentators view the Decision on TM as too little, too late , because [I]t by no means addresses the fundamental concerns about the CRTA process expressed in the annual reports to WTO (Srinivasan, 2007). Even as a modest step, given the importance of transparency in the totality of MTS, by facilitating more order in the RTA notification and consideration process, TM should be seen as a welcome addition to the WTO disciplines. In particular, it shifts some of the responsibility in this process to the WTO Secretariat, thus enhancing, albeit in a small way, its surveillance role. The Secretariat is now tasked with providing information (only facts and no opinions) on RTAs via factual abstracts and reports.[22] Furthermore, the Secretariat has a mandate to build an electronic database with tariffs and other information on notified agreements (paragraph 21 of the Decision). While no part of the information can be used in building dispute settlement cases, it is hoped that these improvements in the transparency on RTAs will serve as moral persuasion towards making future RTAs more consistent with all WTO disciplines. Most importantly, time consistent, homogeneous and objective information on the RTAs notified to WTO (WTO, 2006) will contribute to the provision of public information on RTAs.[23] Such access is the first step towards understanding the drive for continued proliferation of RTAs, their systemic linkages with MTS and, hopefully, will provide an insight into how lessons from RTAs can be used in revisions of MTS.

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[22]   This role of the Secretariat has been undertaken on a provisional and voluntary basis since September 2004 (WTO, 2006).

[23]   Through, for example, the Asia-Pacific Trade and Investment Agreements Database at www.unescap.org/tid/aptiad.

Figure 2. Transparency mechanism for RTA — timeline

Notes:
[a] No later than directly following the parties ratification and before the application of preferential treatment.
[b] In a period not exceeding one year after notification date.
[c] Data submission not exceeding 10 weeks (20 weeks for developing countries) after notification date.
[d] Data circulated not less than eight weeks in advance of the meeting; questions transmitted at least four weeks before the meeting, and together with replies distributed three working days before the meeting.
[e] A single session; convened by CRTA for RTAs falling under Article XXIV of GATT or Article V of GATS; under CTD for RTAs under #2(c) of the Enabling Clause
[f] Of changes affecting implementation as soon as they occur.

Source: Author s representation of TM.

3. Experience with notification and consideration process

TM is being implemented by CRTA and CTD. Tables 2 to 4 summarize the status of notification and implementation of TM. As of mid-July 2008,[24] CRTA had considered 17 RTAs while CTD[25] had not had considered any RTAs because no new RTAs had been notified under the Enabling Clause.

During 2007-2008, 24 RTAs have been notified but 35 RTAs have become inactive (mostly due to European Union expansion), resulting in a decline in the overall total from 224 to 213 of all notified RTAs now in force (table 2).[26] TM introduces a novel idea of early announcement as an incentive to members to submit advance information on RTAs they have yet to conclude or ratify, in order to allow other members to react if necessary. Table 3 shows the achievements in that area up to August 2008. Members of six agreements that were already signed and of 25 RTAs under negotiation provided advance information (most

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[24] As indicated in the Chairman s Report to the Trade Negotiations Committee (TN/RL/22), WTO, 17 July 2008.

[25] As indicated in the Note on the Sixty-Ninth Session of CTD on 5 May 2008 (WT/COMTD/M/69), WTO, 17 June 2008, the first two RTAs to be considered after being notified under the Enabling Clause were the Egypt-Turkey Agreement and the Gulf Cooperation Council Customs Union. The Pakistan-Malaysia Agreement part on goods, already notified under the Enabling Clause, is supposed to be considered in March 2009.

[26] As discussed in section D, RTAs are in force that have not yet been notified to WTO.

of them in electronic format with a relevant URL) on their intentions in these preferential negotiations. However, none of them would qualify for notification under the Enabling Clause.

Table 2. Notifications to WTO (as of 10 August 2008)

Notifications to GATT/WTO of RTAs in force			
	˚Accessions	New RTAs	Total
GATT Art. XXIV (FTA)	2	116	**118**
GATT Art. XXIV (CU)	6	7	**13**
Enabling Clause	1	25	**26**
GATS Art. V	3	53	**56**
Total	**12**	**201**	**213**

Source: WTO data accessed at www.wto.org/english/tratop_e/region_e/regfac_e.htm.

Notes: FTA = free trade area; CU = customs union.

Table 3. Early announcements (as of 1 August 2008)

Signed	Date
Canada-EFTA	26 January 2008
United States-Peru Trade Promotion Agreement	12 April 2006
United States-Panama	28 June 2007
United States-Oman	19 January 2006
Republic of Korea-United States	30 June 2007
Japan-Philippines	9 September 2006
Under negotiation	**Date**
Canada-Jordan	20 February 2008
Australia-Malaysia	19 May 2005
Australia-Gulf Cooperation Council	30 July 2007
Australia-China	23 May 2005
Australia-Chile	7 August 2007
European Community-India	28 June 2007
Canada-CARICOM	19 July 2007
Canada-Dominican Republic	7 June 2007
Canada-Colombia-Peru	7 June 2007
Canada-El Salvador-Guatemala-Honduras-Nicaragua	21 November 2001
Canada-Singapore	21 October 2001
Republic of Korea-Mexico	7 February 2006

Table 3 *(continued)*

Under negotiation	Date
Republic of Korea-India	7 February 2006
Republic of Korea-European Communities	6 May 2007
Republic of Korea-Canada	15 July 2005
Republic of Korea-ASEAN	30 November 2004
Japan-Viet Nam	1 January 2007
Japan-Republic of Korea	1 December 2003
Japan-India	1 January 2007
Japan-GCC	1 September 2006
Japan-Australia	1 April 2007
Japan-ASEAN	1 April 2005
EFTA-Colombia	4 June 2007
EFTA-Peru	4 June 2007
Japan-Switzerland	14 May 2007

Table 4 records the progress in terms of the consideration or review process. Eight RTAs that have been notified under the Enabling Clause are not included in the review process, while others are at different stages of that process; the review of 18 RTAs (less than 9 per cent of RTAs to be reviewed) was completed as reports for those RTAs were adopted (between 1957 and 1993). The remaining RTAs fall into two categories: (a) one for which factual abstracts are to be prepared (75 RTAs; 36 per cent), and (b) the other for which the WTO Secretariat is due to prepare factual presentations (112 RTAs; 55 per cent). The difference between factual abstract and factual presentation concerns the date by

Table 4. Record of consideration process (as of August 2008)

Status	Enabling Clause	GATS Article V	GATT Article XXIV	Total
FP to be done	4	20	29	**53**
FP on hold	2	5	27	**34**
FP distributed	0	10	15	**25**
FA in preparation	11	21	24	**56**
FA distributed	0	0	19	**19**
Report adopted	1	0	17	**18**
No report	8	0	0	**8**
Grand Total	**26**	**56**	**131**	**213**

Source: Online WTO data accessed at www.wto.org/english/tratop_e/region_e/regfac_e.htm.

Note: FP = factual presentation; FA = factual abstract.

which a respective RTA was to be examined and the notification category. Factual abstracts (FA) were to be prepared for all RTAs notified under the Enabling Clause and those RTAs for which CRTA had completed a factual examination by 31 December 2006 (Article 22(b)). In the case of notified RTAs for which factual examinations had not been completed by that date, the WTO Secretariat was mandated to prepare factual presentations (FP) as per TM.

D. Asia-Pacific RTAs: Notification and consideration

As shown in figure, economies in the Asian and the Pacific region are not lagging behind the rest of the world in pursuing RTAs as the avenue for expanding trade and other relations with other economies. According to APTIAD (the ESCAP database that tracks RTAs in the Asian and Pacific region), there were 97 RTAs in force and another 37 under formal negotiation as of August 2008.[27] Table 5 and figure 3 show some additional details on notifications and the consideration process for the Asia-Pacific agreements.

Table 5. Status of notification and consideration of RTAs from the Asian and Pacific region

| Category	Total	BTA	Plurilateral	Global
In force	**97**	**67**	**29**	**1**
Memo: FA and/or FP done	19	17	2	0
Under negotiation	**30**	**26**	**4**	**0**
Memo: EA	18	12	6	0
Pending ratification	10	7	3	0
Memo: EA	2	2	0	0
Total notified	**71**	**54**	**16**	**1**
Notified as GATT XXIV	37	32	5	0
Notified as GATS V (and GATT XXIV)*	22	19	3	0
Notified as Enabling Clause	12	3	8	1
Not notified (but in force)	**26**	**13**	**13**	**0**

Source: APTIAD, 2008 (www.unescap.org/tid/aptiad) for number and notification of the agreements; WTO, 2008 for the number of FAs and FPs.

Note: FP = factual presentation; FA = factual abstract.

   * Including one bilateral agreement notified under GATS V and Enabling Clause.

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[27] A caveat is needed here in terms of counting RTAs. The WTO database counts notifications and thus ends up counting agreements between the same two countries notified under GATT Article XXIV and GATS Article V as **two** agreements, whereas APTIAD counts it as one agreement. In other words, of the 213 notified agreements in the WTO database, 99 would be attributed to the Asian and Pacific region (as defined by ESCAP).

Figure 3. Notification and type of agreements: Asia and the Pacific
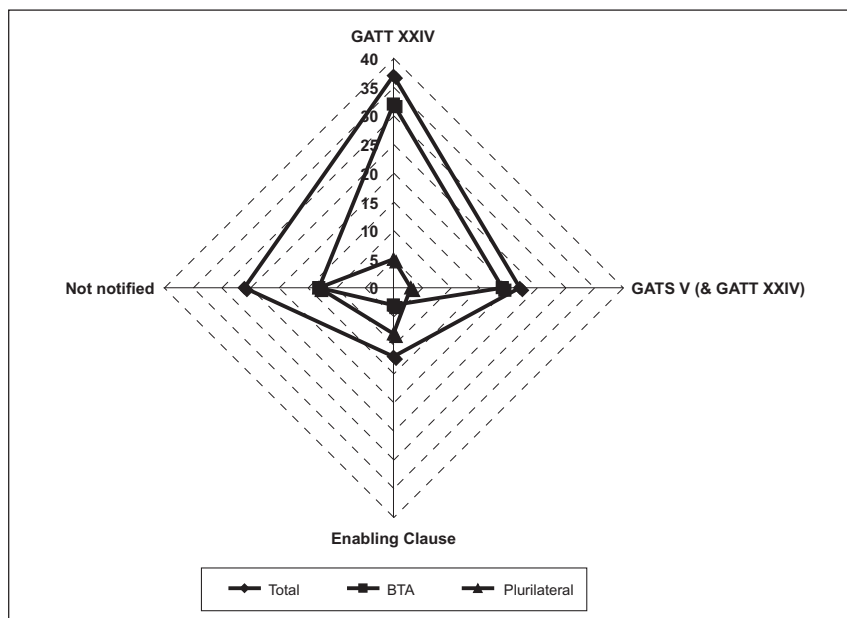
Almost three quarters of the active Asia-Pacific RTAs have been notified to WTO, and a clear majority of those RTAs were notified under GATT Article XXIV and/or GATS Article V. Less than one fifth of all the notified agreements, the majority of which were between more than two countries, were notified under the Enabling Clause.

Even though a quarter of all agreements in force have still to be notified, it is important to note that only six of those 26 agreements are dated prior to 2000 and that 10 have been in force since 2005. In addition, of 30 agreements under active negotiation, already 17 have submitted advance information for use by other members through CRTA.[28]

For completeness in reporting on the implementation of TM by economies in the Asian and Pacific region, it should be noted that by August 2008 there were seven notifications of changes made to currently active RTAs (see also footnote f in figure 2). All seven were made for the RTAs in the Asian and Pacific region. One involves just a change of the agreement name, from Bangkok Agreement to Asia-Pacific Trade Agreement (APTA), while the other six notifications concern changes in the content of the respective RTAs.

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[28]   According to WTO website accessed on 24 September 2008 at http://www.wto.org/english/tratop_e/region_e/early_announc_e.xls

E. Looking to the future

One of the often posed questions in the area of multilateral versus regional trade liberalization is that which Pascal Lamy recently repeated: Why are so many countries ready to accept rules and disciplines at the bilateral level that they are not prepared to accept at the multilateral level? (Lamy, 2007). He also offered three standard explanations: (a) RTAs are quicker to negotiate and conclude; (b) RTAs allow WTO-plus deals that are not covered by multilateral disciplines, which is attractive to members wanting to proceed deeper than the WTO level of integration; and (c) RTAs extend themselves to political and geopolitical considerations.

However, empirical evidence from the Asian and the Pacific does not provide much support for these explanations. The RTAs in this region that are WTO-plus take a relatively long time to negotiate and ratify, even when they are just between two willing partners. Many of the agreements that are signed have no significant WTO-plus features and/or have relatively long transition periods. Then again, saying that RTAs are WTO-plus is just repeating the question, not answering it, because if some of the RTAs are WTO-plus they then cut into policy space that is the prime objective of what is supposed to be enhanced in the current DDA. Therefore, increasingly, we rationalize pursuit by countries of RTAs by geopolitical benefits, which of course must be classed as second-best . The geopolitical objectives should be pursued by foreign policies, not trade policies. Notwithstanding that, experience from the region shows that it is indeed a combination of geopolitical and economic reasons that appears to be winning this popularity contest for RTAs.

The truth also is that, in many cases, RTAs do not lead to significant increases in mutual exports, at least not under the negotiated preferences and not symmetrically across members. For example, it is estimated that in arguably the most advanced trade agreement in the Asian and the Pacific region, the ASEAN Free Trade Area (AFTA), no more than 30 per cent of exports among the members used AFTA CEPT. In the case of the bilateral free trade agreement between India and Sri Lanka, India has increased its exports to Sri Lanka much more than its imports from Sri Lanka. This leads to considering the other obstacles to increasing exports by countries; often these obstacles are related not to trade policies but to domestic constraints, macroeconomic policies, the functioning of various markets, the availability of necessary resources or the quality of governance and institutions. Evenett (2006) showed that even in the case of the European Union, there were key domestic constraints that prevented European firms from being competitive enough to export to various Asian partners. By removing these domestic obstacles and by increasing competitiveness, Evenett showed that European Union exports would increase by 40-240 per cent without any changes in import policies of the partners.

Obviously, RTAs will not disappear nor most probably will the reliance of countries on them weaken. Thus work on strengthening the rules, including transparency, needs to be continued. The Transparency Mechanism, discussed in this chapter as being the best improvement in transparency and procedural issues achieved under the MTS in its long history, will hopefully remain as the operational rule despite the final outcome of the DDA. It

would be disappointing if members waste this opportunity to clear the backlog in providing minimum but comparable information across all the RTAs. Once there is open access, comparable information and data on RTAs, they can be used for more and better analyses of the effects of those agreements on their members, third countries and the MTS itself. The results of such analyses should lead to the reconsideration of national policies on RTAs and thus, hopefully, inspire better multilateral rules for RTAs.

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Chapter XI

REVIVING THE DOHA ROUND: THE AGENDA FOR DEVELOPING COUNTRIES

By Alan Deardorff, Robert Stern and John Whalley[1]

Introduction

If the Doha Round of multilateral trade negotiations fails, the biggest losers will be developing countries. This chapter explains why, and goes on to examine various options for the developing countries either to avert or to deal with this potential failure.

Section A looks at the history of trade negotiations that led to the current impasse, while section B explores the commonalities and differences in the interests of developing countries in the negotiations. These depend mostly on the sectors from which they export, either to developed countries or to each other. Their interests in reducing trade barriers and subsidies in developed countries are mostly either coincident or non-conflicting, but their interests in reducing barriers among themselves sometimes put them at odds.

Nonetheless, it is encouraging that developing countries are making efforts to negotiate collectively, for example, through the Group of Twenty (G20), a bloc including Brazil, China and India that came together at the Canc n ministerial conference in 2003. But it is important that the G20 and other such groups do not limit their cooperation to pushing developed countries to liberalize; they should also work among their members to secure their own liberalization. Without that, the Doha Round cannot succeed.

At the same time, there is a confounding factor in the trade preferences that some developing countries already enjoy from developed countries. They are well aware that multilateral liberalization will erode these preferences, giving them incentives to stand in the way of successful negotiations.

Section C examines the role of developing countries in the structure of past and current negotiations. In the past, that role was limited largely because they were exempt from making concessions and because the developed countries were willing to provide special and differential treatment . Special treatment is still needed, but not in the form that

has sidelined developing countries from the benefits of previous liberalizations. Instead, their liberalization needs to be met by resources from developed countries and international institutions to assist them in opening their markets.

Section D evaluates several options that may be available to developing countries, both within and outside the context of multilateral negotiations. The first and most promising option is for developing countries to act collectively to reinvigorate the World Trade Organization (WTO) and the Doha Round negotiations. However, for this purpose, it is essential that they declare themselves willing to open their markets significantly in return for liberalization by developed countries. Not only is this necessary for the Doha Round to succeed, it is crucial for developing countries to recognize that it is they, not the developed countries, that stand to gain the most from a successful round.

If the Doha Round does not succeed, and perhaps even if it does, developing countries have the option of establishing regional and/or bilateral trading arrangements, either among themselves or with large developed counties. However, there is little benefit in such arrangements among themselves, and there are dangers in arrangements with large developed countries because of asymmetries in their influence over the many non-trade issues that routinely enter such agreements.

Nonetheless, regional agreements are making small but positive steps in the direction of multilateral free trade. These steps could be improved if they were designed to permit easier expansion to include more countries, as well as rules of origin (the criteria used to define where a product was made) that are more all-encompassing.

Other options include aid for trade , a small but obviously desirable initiative that is being encouraged both within the Doha Round and by the international financial institutions.

Another option is negotiation of focused initiatives in sub-areas, such as a single industry or category of trade. However, these are of doubtful benefit to developing countries since they are likely to lack the potential for trade-offs that would expand their benefits beyond the immediate gains from trade.

For the same reason, unilateral liberalization by developing countries with trade barriers that are already low or moderate should not be encouraged. High-barrier countries could gain from unilateral liberalization, of course. But once barriers are low, the benefits from further unilateral liberalization are outweighed by the benefits of using those barriers as bargaining chips to secure greater market access abroad.

Section E provides a concluding summary of the various options for the way ahead.

A. How the Doha Round reached its current impasse

The Doha Round of multilateral trade negotiations began in 2001, with high hopes that real progress would be made both by and for developing countries, for the first time in the history of trade rounds. Although many issues were on the table, the two central ones were the most difficult to address:

(a) Developed country protection and subsidies in industries of interest to developing countries, especially agriculture;

(b) Developing countries tariffs on non-agricultural products and other restrictions on market access, including in services.

In the event, these issues have proved to be so difficult that the negotiations have been characterized by their lack of progress. The Canc n ministerial conference in September 2003 ended without even the beginnings of a negotiating text having been agreed upon. A text was achieved the following year; however, the subsequent ministerial conference, which was held in Hong Kong, China, in 2005, ended in success only because the criteria for success were much reduced and almost meaningless.

In July 2006, WTO Director-General Pascal Lamy finally acknowledged that the negotiations were getting nowhere and would fail to meet the deadline imposed by the mid-2007 expiration of the fast track authority of the President of the United States of America from Congress for a full mandate of negotiations. Lamy therefore suspended the negotiations.

Today, although various efforts are being made to revive the negotiations, they remain in a state of suspended animation. Developing countries must therefore ask themselves whether their interests still lie in the uncertain future of the multilateral initiatives, or whether they should instead look at alternative approaches to integration with international markets.

The Doha Round was never really about development per se, even though it may have been marketed as such. Nonetheless, it is true that developing countries as a group may be the biggest losers from the failure of the round. The Doha Round was christened the Doha Development Agenda not because its purpose was to achieve policies that would stimulate development, but because it was intended to pursue the usual objective of trade liberalization with the unusual proviso that developing countries would not be sidelined or put at a disadvantage.

Trade liberalization may well be necessary for economic development, but it is hardly sufficient. The best that could have been expected from the Doha Round was therefore to remove barriers to development. Those barriers exist — and may continue to exist as a result of the Doha Round s failure — because developing countries have failed to participate in previous negotiating rounds where they might have pushed to open markets to their exports.

Instead, first because they were late to sign the General Agreement on Tariffs and Trade (GATT), and then later because they sought and were granted special and differential treatment that exempted them from the negotiations, they sat on the sidelines while developed countries negotiated downwards those trade barriers that it was in their mutual interest to eliminate. Developing countries benefited from these negotiations to some extent, as their most favoured nation (MFN) status allowed them the same market

access granted to others. However, this was usually not in the sectors where developing countries themselves were most able to make exports.

As a result, developed countries now have their highest tariffs on goods exported by developing countries, both labour-intensive manufactures, such as textiles and apparel, and various agricultural products. The latter are also subject to significant subsidies provided by developed countries Governments to their agricultural interests.

In addition, because they did not participate actively in previous rounds, many developing countries also have high tariffs on numerous imports. If the Doha Round is not revived, this unsatisfactory state of affairs will persist and the developing countries will continue to be hobbled in their efforts to escape poverty.

By remaining exempt from the negotiations, developing countries not only failed to secure the benefits of other countries liberalization for their exports. They also failed to secure the benefits from their own liberalization, although some countries did, eventually, see these benefits and opted to liberalize unilaterally. However, by avoiding the negotiated commitment to liberalize, they also avoided the international discipline that might have assisted them in achieving reforms of internal policies as well.

B. Trade interests of developing countries

1. Developing countries have a shared interest in exporting

The principal interest of any developing country in the context of trade negotiations is market access for its exports. Tariffs and other barriers to developing countries exports have always been very restrictive and have prevented those countries from harnessing their comparative advantages to the cause of economic growth.

Indeed, it has been common for developing countries to seek to exploit a newly-found source of comparative advantage, only to be met by new barriers to their exports as soon as these exports become large enough to be noticed by competitors abroad. In that sense, therefore, developing countries share a common interest — reducing trade barriers in the rest of the world, both developed and developing, against their exports.

However, this shared interest is often illusory since developing countries are themselves diverse and export many different products, sometimes to each other. In addition, when they export to each other, their interest in exporting conflicts with a second major goal that many developing countries profess (even though it is contrary to what economists view as being in their interest), that is, restricting imports.

Very much like in the developed countries, where protectionist instincts have to some extent been whittled down through earlier rounds of trade negotiations, developing countries seek to protect their domestic industries even in sectors where other developing countries may have an advantage. When that happens, the export interests of the developing world come into conflict.

Fortunately, this divergence of interests is not as severe as it might be. In the realm of manufacturing, many developing countries tend, by definition, to be abundant in labour and to have their comparative advantage in labour-intensive goods such as textiles and apparel. This means that they compete with one another as exporters — a fact that may pose its own problems — but at least they have a shared interest in reducing barriers to importing such products in the developed world.

Developing countries export interests are much more likely to diverge when based on something other than an abundance of labour, most obviously in agriculture or other natural resource-based industries. Here their interests tend not to be in direct conflict, in the sense that some import what others export, but rather that they care about different things. Thailand s rice exporters are unlikely to care very much about the barriers that Argentina s beef exporters face in the developed world.

Furthermore, some natural resource products face little competition in the developed world, and therefore face low trade barriers, while others are heavily protected. Getting oil-exporting developing countries to cooperate with exporters of both beef and rice may be difficult. However, it may not be impossible, especially in the context of multilateral negotiations where broad reductions in trade barriers on many products are being considered simultaneously.

2. Competition among developing countries does not justify protection

A more serious conflict may arise not over what the developing countries are able to export, but over how much. The asymmetry in size between many small developing countries, on the one hand, and China and India on the other, leads the former to fear the effects of international competition in precisely the labour-intensive sectors where all of them export. The perception is that China, particularly, has so much cheap labour that other countries that are abundant in labour cannot possibly compete, especially now that China is a member of WTO and is getting MFN treatment.

In fact, of course, China was already getting MFN treatment before it joined WTO, and the increase in competition with China is more a by-product of its remarkable growth since making the transition to a market economy. Also, like other fears of international competition that have existed for two centuries, the fear of China is largely misguided and certainly overblown.

Small countries are already beginning to find that they can compete successfully in some products even as they may have to move out of others. The process of adjustment as comparative advantages evolve can of course be painful, but the view that countries cannot compete at all with China and India is surely false.

3. Some developing countries face erosion of preferences

Another conflict that may arise among the interests of developing country stems from asymmetries in the policies they have faced in the past. In the presence of generally

high barriers to their exports, some developing countries have prospered from special treatment by particular developed countries as markets for their exports. This preferential access has often been based on former colonial relationships.

As multilateral trade barriers have been reduced, and as negotiations proceed towards reducing them further, those countries see themselves losing their markets to other developed countries that were previously not favoured. Unlike competition with China, which may be more a problem of perception than reality, this problem is real. The trade preferences enjoyed by members of the Lom Convention, for example, have allowed high-cost industries to survive, and the extent of the preference is a measure of the cost disadvantage that they will experience when the preferences are removed.

This does not mean that these countries have no comparative advantage or ability to gain from trade. However, it does mean that they are likely to have to transfer resources from the artificially favoured sectors to ones in which they can compete without the preferences, and that they will lose the benefits that the preferences provided.

In some cases, the benefits from the preferences may have been wisely invested in the physical and human capital needed for these countries to move into other industries without preferences. Undoubtedly, however, that there are other countries where this has not happened. For those countries, the failure of the Doha Round may be their only hope of continuing to live in the style to which they have become accustomed.

4. Developing countries can gain by cooperating

In sum, although the trade interests of developing countries are not by any means coincident, it does seem that many of them share sufficiently common interests in reducing trade barriers — at least in the developed world — that they should be able to cooperate to pursue that end. It is encouraging, therefore, that many of those countries were able to come together in what is now called the G20 at the Canc n ministerial conference in 2003, and that they have continued to maintain that coherence.

It is, of course, discouraging that they are resisting liberalization of their own trade barriers, but that is also understandable. Also, it is perhaps too much to expect them to concede on this before they get a clearer signal from the European Union and the United States that their trade barriers and subsidies will be given up.

An alternative that has to be considered, especially if the Doha Round fails to restart, is for developing countries to pursue trade liberalization by other means, most obviously via bilateral and regional trade agreements. The problem is that if such agreements attempt to harness common interests simply by the developing countries negotiating among themselves, they will fail to address the most severe impediment that they all face in international trade, that is, protection by developed countries.

Alternatively, if they want to negotiate directly with particular developed countries, it is unlikely that the latter will willingly negotiate with them as a group. For example, although

the Free Trade Area of the Americas was conceived by the United States as precisely such an arrangement, it has never made much progress; most recently, the United States has appeared to prefer negotiating with individual developing countries (or with small groups, when the countries themselves are very small, as in Central America). That preference may be explained by the desire of the United States for greater advantage in the negotiations so as to achieve objectives other than trade liberalization.

It might well be very much in the interests of significant regional groups of developing countries to insist on negotiating with the European Union and the United States en masse, precisely in order to undermine this advantage that the larger players wish to exert. However, it seems unlikely that they will get agreement to do this, even among themselves, since the larger developed countries can offer incentives for them to negotiate separately.[2]

C. Structure of trade negotiations

1. Developing countries have played only a small role in past negotiations

In the past, trade negotiations within GATT and WTO have been conducted primarily between the largest negotiating blocs — the European Union and the United States — with the eventual agreement then sold with minor modifications to the other participants.

Smaller countries might press for particular concessions, either for themselves or for a like-minded group such as the Cairns Group of agricultural exporting countries, but in practice that has not usually achieved much. A smaller country might also play a larger role by acting as an intermediary between the European Union and the United States, but that too has provided only limited benefit. Whatever the deal the European Union and the United States reached, most countries had to take-it-or-leave-it and the pressure to take it became extreme.

Nonetheless, this somewhat understates the role of developing countries. Each of the many issues that enter a round of negotiations is considered within a negotiating group, which includes delegates from many more countries than just the European Union and the United States. Developing countries do sit at the table in these groups, as they do in the green room discussions that attempt to reach final agreement on particular issues.

These groups are assembled on a somewhat ad hoc basis by the WTO director-general, and some have viewed this process as inadequately representing the interests of developing countries. However, the fact remains that a selection of them are at the table, expressing their views, and they certainly have had a non-trivial affect on the outcomes of the negotiations, if not a major one.

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[2]   See Evenett, 2005, for a model of how dominant countries can get smaller countries to compete for access to their markets.

2. The Development Agenda should provide assistance
to liberalization, not exemption from it

The official development orientation of the Doha Round might be thought to represent an example of the developing countries interests. In fact, however, it seems likely that the stress on development in the Doha Declaration in November 2001 was more a reaction to the post-9/11 need by developed countries to accommodate others than any particular push by the developing countries themselves.

In any case, there is a real question about the extent to which trade negotiations should have such an orientation. Previous rounds had created impediments to development by leaving developing countries on the periphery of the negotiations, and it is important that this be corrected.

However, it is neither within the purview nor the expertise of trade negotiators to implement many of the changes that are necessary for poverty reduction and economic growth in developing countries. The best that they can do is to seek removal of impediments. That is an important objective, but if it is advertised as solving the manifold problems of developing countries it can only raise expectations that will be disappointed.

Having said that, it is worth asking whether the Doha Round should include a bias in favour of developing countries. The fact that previous rounds have arguably been biased against them, mostly by exclusion, may suggest that this would be appropriate. Unfortunately, such a bias would undoubtedly be interpreted as meaning that developed countries should make greater concessions than developing countries, by lowering their own trade barriers and removing subsidies while developing countries do little themselves.

Economists know that such a bias is actually against the interests of developing countries and is really a bias in the opposite direction. Trade negotiations are about giving countries external incentives to implement painful but desirable policy changes that they would otherwise be unable, politically, to achieve. Appearing to favour developing countries by exempting them from this process is not a favour at all.

The trick, therefore, is to find additional ways to address developing countries interests without exempting them from trade liberalization. This was the intent of the Doha Declaration, which repeatedly identified developing countries for special assistance in implementing whatever agreements might be achieved. Unfortunately, WTO lacks any mechanism to provide such assistance, and it is unclear how a completed Doha Round that included such promises would actually deliver on them.

From this perspective, renewed progress in the Doha Round may depend on initiatives outside WTO to mobilize resources for assistance. A credible commitment by the European Union, the United States and other developed countries as well as by international financial institutions, to provide greater resources for implementing liberalization in developing countries, might be just the incentive to get them to be more forthcoming in the negotiations. The aid for trade initiative is a step in that direction.

D. Options for the developing countries

1. Developing countries should act collectively to reinvigorate the World Trade Organization

Given that a successful conclusion to the Doha Round would offer great benefits to developing countries, the first option that must be considered is whether they can play a role in getting it back on track. The answer is surely yes, in that it has been their refusal to offer meaningful trade liberalization that has led (along with stubbornness on the part of the European Union and the United States) to the current impasse. To reverse that situation, it will first be necessary for a number of major developing countries to recognize that trade liberalization is in their interest. Economists arguments to that end have largely fallen on deaf ears, or at least on ones that are not very influential. The likelihood in the near term of greater understanding of the benefits, and not just the costs, of reducing trade barriers is probably too small to count on.

Somewhat more likely would be a greater appreciation of the benefits to be had from liberalization abroad, making it appear worth the cost of their own liberalization. Indeed, the emphasis by the G20 and other developing country groups (such as the cotton-exporting African countries) on the need to change developed countries policies suggests that the costs of these policies are becoming better understood. It may even be that the costs of these policies are being overstated; agricultural subsidies, after all, harm only those countries that are net exporters of the subsidized products while they benefit those that are net importers.

However, if exaggeration of the costs can help to enhance the perceived benefits of liberalization, perhaps to the point that the developing world is ready to pay something to achieve it, then it may serve as a tool to unite those countries in a willingness to participate in the negotiations more constructively.

A final possibility is to rebalance the developing world s understanding of the relative gains from liberalization for developed and developing countries. Understandably, the perception right now is that the greatest beneficiaries from liberalization are the developed countries, especially their large corporations that are seeking to extend their reach into developing countries markets. This perception is enhanced every time someone harangues the developing world for its failure to cooperate.

In fact, the developed countries already enjoy most of the benefits from trade that they will ever achieve, and extending trade liberalization to new markets will provide them with relatively little benefit. By the same token, the multinational corporations do indeed seek to profit from selling in new markets, but the size of their operations in the developed world suggests that these benefits too, important as they may be, are relatively small.

In contrast, the developing world stands to gain far more from liberalization, including their own. Their markets are small and seriously distorted in ways that international competition can readily correct. The trade barriers that they impose on

themselves as well as face from others cover a much larger part of their trade than these same barriers account for in the developed world. For example, research on the North American Free Trade Agreement (NAFTA) shows that the economic gains to Mexico, as a share of its gross domestic product (GDP), were an order of magnitude larger than the gains to Canada and the United States (Brown and others, 1992). So the perception that trade liberalization is mostly of benefit to the developed world is simply wrong.

This matters, because in developing countries many are suspicious of entreaties from developed country Governments for them to go along with trade negotiations, thinking that the motive is to benefit the rich, not the poor. They may even be correct about the motive; many in developed countries probably do believe that their constituents will reap the lion s share of the benefits from liberalization.

However, that belief is incorrect. In fact, if the Doha Round never recovers and if trade liberalization comes to a halt indefinitely around the world, the harm to the developed countries will be minimal. They have already achieved most of their gains from trade, and unless the process of liberalization is actually reversed, they will be just fine. It is the developing countries that stand to lose by far the most from this impasse.

This message needs to be conveyed to opinion leaders in developing countries. They must come to understand that the Doha Round is not primarily a game played by and for the people and corporations of developed countries. Rather, after half a century of trade liberalization that has sidelined developing countries, it is now a game that must include, and will primarily benefit them. Indeed, if the round fails, there will be plenty of people in the developed world who will breathe a sigh of relief.

2. All countries should encourage and cooperate in aid for trade initiatives

In recent years, there has been a growing awareness that developing countries participation in international trade is hindered not just by the barriers put in their way by countries with which they might trade, but also by physical and institutional deficiencies within their own economies that make it difficult to export and import. Thus, recognition has grown that assistance to those countries should include aid for trade .

As stated in a report from the International Monetary Fund and World Bank (2005), aid for trade is provision of assistance by the international community to help countries address supply-side constraints to their participation in international markets and to cope with transitional adjustment costs from liberalization .[3] Aid for trade is an explicit part of the Doha Round negotiations; however, if the Doha Round does not proceed, it is even more essential that aid for trade initiatives are pursued. The World Bank and the International

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[3] The report goes on to list the following elements of aid for trade: technical assistance; capacity-building; institutional reform; investments in trade related infrastructure; and assistance to offset adjustment costs, such as fiscal support to help countries make the transition from tariffs to other sources of revenue.

Monetary Fund committed to providing such assistance; however, as always, developing countries themselves need to play an active role in seeking this assistance and making sure that it is tailored appropriately to their needs.

Fortunately, this is one area where resistance to change ought to be minimal, since the benefits to developing countries are much easier to see than the benefits from trade itself. In addition, even though aid for trade will lower the costs of trade if it succeeds (and thus have many of the same effects as tariff reductions), that fact may be less apparent to import-competing interests and thus not excite the same degree of opposition.

The bottleneck is instead likely to come from the aid providers, who bear its budgetary cost. Fortunately, there appear to be plenty of funded initiatives available, both from the international financial institutions and from developed countries. What is needed now is for developing countries to submit well-conceived proposals for the use of these funds, and then to make sure that the projects are carried through.

3. Regional and/or bilateral arrangements — not optimal but often worth pursuing

The obvious alternative to multilateral trade liberalization is for individual developing countries to enter into trade agreements with other countries or groups of countries. The current wave of regional trade agreements, which began with negotiations by the United States first with Canada and then with Mexico to form NAFTA, was itself in part a response to the failure of multilateral negotiations, progress on which was then stalled in the Uruguay Round.

Even though the Uruguay Round ultimately finished successfully, subsequent difficulties first in starting a new round at Seattle in 1999, and later in pursuing the negotiations of the Doha Round, have undoubtedly contributed to the willingness and often eagerness of almost every country in the world to enter into such agreements. Today, more than 200 of them have been notified to WTO.

Economists are largely in agreement that such preferential trading arrangements are, at best, inferior to multilateral liberalization and that they have the potential to be distinctly harmful, even to their participants and certainly to outsiders. That makes it difficult to provide guidance on the form that such agreements should take. Nonetheless, if multilateral liberalization turns out not to be an option, then many developing countries will undoubtedly take the preferential route.

4. Developing countries should choose their partners carefully

If developing countries do pursue preferential trading arrangements, they must decide on the types of potential partner with whom to negotiate. An obvious choice is to form free trade agreements (FTAs) with their neighbours. The economic case for doing so is not clear, but given the desirability of making and/or maintaining peace with one s neighbours, then such regional trade agreements probably make the most sense.

Another choice of partner for some countries is between developed countries on the one hand, and other developing countries on the other. The problem with FTAs among developing countries is that they are likely to involve competing exporters of many of the same products. This means that the potential for trade among them is either minimal or likely to be particularly disruptive.

It is true that there are also similarities in trade patterns among developed countries that have successfully pursued economic integration, especially in the European Union. However, what appear to be common industries in fact often produce differentiated products, and there is ample scope for intra-industry trade. Such trade appears much less likely within FTAs among developing countries, which tend to find their comparative advantages in more standardized products.

This suggests that developing countries might be better advised to seek trade agreements with developed countries, such as the European Union or the United States, as indeed a great many of them are currently doing. In terms of the economics of trade alone, this appears to be a fruitful approach, since it opens import-competing industries in both parties to competition from comparative advantage-based exports, but does so in a smaller way than might be feared from multilateral liberalization. Indeed, such agreements may lead these import-competing industries gradually to shrink, thus over time reducing the resistance to broader liberalization.

The downside of such arrangements is the extreme asymmetry between the two sides that negotiate them, one rich and the other poor. This would not matter if FTAs consisted simply of reducing all tariffs to zero among themselves and nothing else. However, FTAs are never that simple. In addition to troublesome rules of origin, they typically carry all sorts of other baggage to protect labour and environmental standards, intellectual property rights, investment and much else.

These additional features of an FTA are not necessarily undesirable, but sometimes they can be. Also, whether desirable or not, they usually operate in only one direction, constraining or requiring change in the policies of the developing country partner without any extra expectations at all of the developed country partner. Thus, even though in principle trade agreements should be able to yield substantial net positive benefits for both parties, this asymmetry is likely to mean that the developing country partner is pushed to the lower limit of the benefits that it will accept, with the larger share going to the developed country.

While developing countries often fear that multilateral trade liberalization will primarily benefit the developed world, for tariff liberalization at least, that fear is unfounded. However, when agreements extend well beyond the setting of tariffs into many other issues — as they do in FTAs even more than in the multilateral system — that fear may well be justified. Indeed, it might be suspected that some of the recalcitrance on the part of developed country negotiators in the Doha Round may be intended to assure exactly that outcome.

5. Free trade areas should be structured to approximate multilateral free trade

FTAs will continue to be negotiated between developed and developing countries. So how they can be constructed so as to be most beneficial, or least harmful, to the developing country partners? The answer is to approximate, as closely as is possible within an FTA, the benefits of multilateral free trade. This means that:

(a) First, when overlapping FTAs are formed, with countries A and B both forming FTAs with country C, then they should more or less automatically form an FTA between A and B as well. Without that, country C — which is often a developed country — gets to play the other two countries off against each other while being immune to such gaming itself;

(b) Next, when A, B and C form FTAs between A and B, A and C, and B and C, they should specify the rules of origin of each bilateral FTA to allow the accumulation of content from each of the three countries. Thus, if each of the bilateral FTAs requires, say, 30 per cent local content to qualify for tariff-free access, then that 30 per cent should be calculated to include content from all three countries;

(c) Once that is done, if the FTA is no more than a trade agreement, it would make most sense to redefine it as a single FTA encompassing all three countries. Unfortunately, trade agreements are never that simple, and their other features may provide impediments to merging them, and even incentives not to do so. Developing countries should vigorously resist such features that cannot be easily extended to new members, as these are likely to be used as leverage against their interests by the more dominant partner.

All of this advice is intended not just to allow FTAs to approximate multilateral free trade as far as possible, but also to smooth the transition towards that ideal over time. It is likely to be a vain hope, but GATT Article XXIV should be revised to require FTAs to always permit new entrants under the same conditions as existing members. That would ensure that FTAs make it easier, not harder, for regions of free trade to expand.

Unfortunately, such a requirement would not be on the table for discussion even if the Doha negotiations were proceeding. Also, those who negotiate FTAs are unlikely to impose it themselves, since members of FTAs always value the exclusivity of market access that their arrangement provides.

All is not lost, however, even if bilateral and regional trade initiatives do become the dominant form of liberalization at the expense of further multilateral negotiations in WTO. A lively debate has raged between economists who see regional liberalization efforts as stepping stones towards multilateral free trade and those who see them as stumbling blocks (Bhagwati, 1991). This debate has merits on both sides, but it does seem clear that even though regionalism is distinctly inferior to multilateralism if it fails to lead to multilateral free trade, it is apparently moving the world in the right direction.

Brown and others (2006) as well as other research cited calculations of the effects of a considerable variety of FTAs, almost all of which yield net benefits to the world as a whole. The following table shows a sample of the calculated welfare effects of FTAs, formed by the United States and Japan with various trading partners, on the participants, the rest of world and the world as a whole. In all cases, the global effects are positive because the benefits to the participating countries far outweigh the (often negative) effects on outside countries.

Welfare effects of bilateral negotiating options for the United States and Japan

(Unit: US$ billion)

United States and:	United States	Partner	Other	Global
Australia	19.4	5.4	-1.7	23.1
Central America and the Caribbean	17.3	5.3	-6.9	15.7
Chile	6.9	1.2	-0.2	7.9
Morocco	6.0	0.9	0.6	7.5
Singapore	15.8	2.5	4.2	22.5
Southern African Customs Union	9.6	2.2	0.0	11.8
Thailand	17.1	5.6	-0.8	21.9
Free Trade Area of the Americas	67.6	45.4	-3.6	109.4
Japan and:	**Japan**	**Partner**	**Other**	**Global**
Chile	2.8	0.9	-0.2	3.5
Indonesia	10.7	1.7	-1.3	11.1
Republic of Korea	18.7	2.2	-1.2	19.7
Malaysia	10.5	0.3	-0.7	10.1
Mexico	8.2	3.3	-0.9	10.6
Philippines	2.2	0.5	0.3	3.0
Singapore	5.0	0.6	1.1	6.7
Thailand	19.5	-0.5	-5.5	13.5

Source:° Brown and others, 2006.

6. Initiatives in particular industries are of limited benefit to developing countries

An alternative to negotiating broadly over many categories of trade, but with a single country or a small group, is to negotiate narrowly over trade in a single industry, perhaps with a larger group. Developed countries have pursued this strategy, often successfully, as they have struck agreements over such industries as aircraft, finance and telecommunications. Developing countries could conceivably do the same.

Certainly, if developed countries do initiate such discussions, it may well be in the interests of developing countries to participate. However, for most industries, it appears

unlikely that developing countries themselves could initiate such negotiations, except perhaps if an industry were of interest only to developing countries, both as exporters and as importers. However, it seems doubtful that many such industries may exist. There is therefore not much potential for a sectoral approach initiated by developing countries.

This leaves the question of whether developing countries should participate in sectoral negotiations initiated by developed countries. This idea should be treated sceptically. Such negotiations are bound to occur only in sectors where the developed countries have interests as exporters. This works well among themselves, where with intra-industry trade they often can strive to open each other s markets within the same sector. However, developing countries seldom are in this position. If they participate in such negotiations, unless they merely act to block agreement, they will be pushed to open their own markets without getting anything in return.

This is not to deny the benefits to developing countries of opening their markets to foreign exports in any sector. Nevertheless, if such sectoral negotiations proceed outside more comprehensive multilateral negotiations such as the Doha Round, they will inevitably lead to access for the developed world to the markets of developing countries, but not the reverse. That is too close to the current situation, in which after 50 years of trade rounds, developing countries still have little role to play. It would be better, therefore, if they limited their negotiations to ones where trade-offs across sectors are possible, either multilaterally or bilaterally.

7. Developing countries with high protection will gain from unilateral liberalization

For the same reason, unilateral liberalization should be treated with scepticism in some cases and by some countries. It is not that unilateral liberalization is without benefits; it surely is beneficial, as two centuries of international trade theory have convincingly established. However, if implemented alone, unilateral liberalization generates only the benefits from itself, not from any foreign liberalization that could have been secured in exchange through negotiation.

For small countries, that does not matter. Their markets are not large enough for anyone (except possibly a close neighbour) to be willing to pay anything for market access. Even for large but very poor countries, that may also be true. However, since some of the larger developing countries have made economic progress, and especially since they have begun to join together for negotiating purposes, their levels of protection have become bargaining chips for which they should be able to get something in return.

Of course, if their tariffs are very high, then the harm that they do before those tariffs are negotiated downwards is too costly to justify retaining them. Countries with very high tariffs certainly should reduce them substantially and unilaterally, especially if negotiations for reciprocal liberalization do not appear to be forthcoming.

However, once their tariffs are down to a modest level, there is a case for keeping them in place as long as their exports face protection abroad. Without that, they may never be able to get those foreign tariffs removed.

E. Conclusion

Looking at the various options, it is clear that the most desirable alternative from the perspective of developing countries would definitely be for the Doha Round to be restarted and for it to proceed to a successful conclusion. However, as time passes, this option appears less and less likely to happen, unless the negotiating authority of the President of the United States is extended beyond mid-2007.

However, no progress will be made as long as developing countries continue to insist on offering nothing in exchange for the policy changes that they seek in the developed world. They simply must accept that substantial trade liberalization is in their own interest, if not for the sake of the gains from trade that economists universally tout, then for the sake of the policy changes that they seek abroad.

If they were to come to the negotiating table offering significant market access to developed countries exporters, that might mobilize those exporters to push their own Governments to be more forthcoming in the ways that everyone agrees would benefit developing countries — reducing subsidies and tariffs on developing countries exports. Without such an offer on the table, it is only the protected and subsidized interests in the developed world that are paying attention to the negotiations, and they are successfully blocking any progress.

Of the other options, the provision of aid for trade should certainly be favoured, whether or not it is done within the context of the Doha Round. However, as useful as aid for trade certainly is, it will never even begin to serve as a substitute for real liberalization of policies that distort trade both in the developed and the developing worlds.

If the Doha Round does not restart, then bilateral and regional initiatives are often worth pursuing. Although not guaranteed to be beneficial, these initiatives do, by and large, seem to have moved the world in a positive, albeit very messy, direction. However, their terms should be better designed so that they are more, rather than less, likely to lead down a path towards more liberalization.

Finally, with or without the Doha Round, very small countries and those with high tariffs should reduce them unilaterally. The harm they are causing to their own economies exceeds whatever benefits they may perceive for the beneficiaries within their countries. This is also too high a cost to pay for negotiating chips that may, some day, buy them concessions abroad.

However, large developing countries with tariffs that are already low or moderate should postpone reducing them further. They should also join together as far as possible, and they should then offer to eliminate these tariffs in exchange for whatever liberalization they can elicit from developed countries, either individually or en masse.

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