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Intra-Regional Trade in East Asia: The Decoupling Fallacy, Crisis, and Policy Challenges

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Abstract

This paper examines the export experience of East Asian economies in the aftermaths of the crisis against the backdrop of a systematic analysis of precrisis trade patterns. The analysis is motivated by the "decoupling" thesis, which was a popular theme in Asian policy circles in the lead-up to the onset of the recent financial crisis, and aims to probe three key issues: Was the East Asian trade integration story that underpinned the decoupling thesis simply a statistical artifact or the massive export contraction caused by an overreaction of traders to the global economic crisis and/or by the drying up of trade credit, which overpowered the cushion provided by intra-regional trade? What are the new policy challenges faced by the East Asian economies? Is there room for an integrated policy response that marks a clear departure from the precrisis policy stance favoring export-oriented growth? The findings serve to caution against a possible costly backlash against openness to foreign trade arising from the newfound enthusiasm for rebalancing growth (redressing the strong bias for exports in development policy), and make a strong case for a well-coordinated strategy to fight new protectionism, as part of a long-term commitment to nondiscriminatory multilateral and unilateral trade liberalization.

JEL Classification: F14, F15, O19

Contents

1. INTRODUCTION

The "decoupling" thesis, the notion that the East Asian region has become a self-contained economic entity with potential to maintain its own growth dynamism independent of the economic outlook for the traditional developed market economies, was a popular theme in the Asian policy circles in the first decade of the new millennium until the onset of the recent financial crisis.[1]

The empirical basis for the decoupling thesis was provided by studies of trade patterns based on the readily available trade data which revealed a continuous increase in trade among the countries in the region (intra-regional trade) since the late 1980s, a process which received added impetus from the subsequent emergence of the PRC as a world export powerhouse. A few studies questioned the validity of this thesis in a context where international production fragmentation and the related network trade had been rapidly expanding with East Asia as its center of gravity (Athukorala 2005, Garnaut 2003, Bergsten et al. 2006). However the decoupling thesis continued to dominate the policy scene, presumably because it fitted well with the East Asian growth euphoria of the day.

The onset of the global financial crisis in late 2007 and its global spread has served to reveal the fragility of the decoupling thesis: All major East Asian countries, including The People's Republic of China (PRC) which was expected to cushion the rest of East Asia against a global economic collapse, have experienced precipitous trade contraction from about the last quarter of 2007. Consequently, the policy debate in East Asia has made a U-turn from the decoupling complacency to rebalancing of East Asian growth—promoting domestic demand with a view to reducing excessive reliance on exports as the engine of growth (Asian Development Bank [ADB] 2009).

What has gone wrong with the decoupling thesis? Was the trade integration story that underpinned the decoupling thesis simply a statistical artifact, resulting from a failure to incorporate realities in an era of network trade? Alternatively, was the massive export contraction caused by an overreaction of traders to the global economic crisis and/or by the drying up of trade credit, which overpowered the cushion provided by intra-regional trade? What are the new policy challenges faced by the East Asian economies? Is there room for an integrated policy response that marks a clear departure from the precrisis policy stance favoring export-oriented growth? This paper aims to probe these and related issues through a comparative analysis of the export experience of East Asian economies in the aftermaths of the crisis against the backdrop of a systematic analysis of precrisis trade patterns.

For the purpose of this study East Asia is defined to include Japan, and developing East Asia, which covers the newly industrialized economies (NIEs) of North Asia (the Republic of Korea (hereafter Korea); Taipei,China; and Hong Kong, China), the PRC and members of the Association of Southeast Asian Nations (ASEAN). Among the ASEAN countries, Myanmar is not covered because of a lack of data and Brunei Darussalam, Cambodia and the Lao People's Democratic Republic (Lao PDR) are treated as a residual group because of data gaps. The East Asian experience is examined in the wider global context, focusing specifically on the comparative experiences of the North American Free Trade Agreement (NAFTA) and the European Union (EU).

In a context where trade within global production networks is growing rapidly, a meaningful analysis of trade patterns requires systematic separation of parts and components from final (assembled) products in reported trade data. We do this through a careful disaggregation of trade data based on the Revision 3 of the Standard International Trade Classification (SITC Rev 3) extracted from the United Nations (UN) trade data reporting system (UN Comtrade database). It is important to note that the UN Comtrade database does not provide for the

[1] See Yoshitomi (2007) and Park and Shin (2009) and the works cited therein.

construction of data series covering the entire range of fragmentation-based trade. Data on trade in components are separately listed under the commodity classes of machinery and transport equipment (SITC 7) and miscellaneous manufacturing (SITC 8). Even for these two commodity classes, the database does not provide a comprehensive coverage of trade in parts and components. For instance, production of some products within SITC 7 requires tailor-made inputs belonging to other product categories such as wafer fabrication (SITC 5) and high-precision metallic parts (SITC 6). The problem of under coverage of components is perhaps even greater for some products belonging to SITC 8, such as clothing, furniture and leather products. Some components used in the production of these goods are (for example, designer/tailor-made fabrics, parts of furniture, parts of leather soles) presumably recorded under SITC 6. Moreover, there is evidence that production fragmentation has been spreading beyond SITC 7 and 8 to other product categories such as pharmaceutical and chemical products (falling under SITC 5) and machine tools and various metal products (SITC 6). Assembly activities in computer software industry, too, have recorded impressive expansion in recent years. These are lumped together with "special transactions" under SITC 9. As a result, our estimation of the magnitude of components trade is downward biased.

The paper is structured as follows. Section 2 examines trade patterns in East Asia in the global context, paying attention to the nature and extent of production sharing and network-based trade, East Asia's role in this new form of international exchange and its implications for regional versus global economic integration. In Section 3 the latest available data are pieced together to examine the impact of the global crisis on export performance of East Asian economies. Section 3 deals with postcrisis policy challenges, focusing on the emerging debate on rebalancing (or, reshaping) development strategy. The final section summarizes the key findings and draws out some general inferences.

2. PRECRISIS TRADE PATTERNS

The decoupling thesis is based on the traditional notion of horizontal specialization according to which international trade is an exchange of goods that are produced from start to finish in just one country. It ignores the implications for trade flow analysis of the ongoing process of international production fragmentation—the breakup of the production processes into geographically separated stages—and the increasingly important role played by the PRC and other East Asian countries in the resultant global production network. In a context where fragmentation-based trade is growing rapidly, trade flow analysis based on the assumption of horizontal specialisation can lead to misleading inferences about the nature and extent of trade integration among countries for three reasons.

First, in the presence of production fragmentation, trade data are double-counted because goods in process (components) cross multiple international borders before becoming embodied in the final product. Thus, the total amount of recorded trade could be a multiple of the value of final goods. Second, and perhaps more importantly, trade share calculated using reported data can lead to wrong inferences as to the relative importance of the "region" and the rest of the world in terms of dynamic growth, even controlling for double counting in trade. This is because trade in components ("fragmentation trade") and trade in related final goods ("final trade") are unlikely to follow the same patterns. Third, the intra-regional trade ratio, estimated by lumping together imports and exports, tends to hide a significant asymmetry in regional trade patterns for imports and exports, where trade in components is growing rapidly. These considerations are far more important for trade flow analysis in East Asia compared with total global trade or the trade patterns of NAFTA, EU, or any other region in the world. While fragmentation-based specialization is growing and now a global phenomenon, such trade is both far more important and growing more rapidly in East Asia

than elsewhere in the world (Athukorala 2005, Athukorala and Yamashita 2009, Ng and Yeats 2003).

Rapid export growth in Asia over the past half a century has been underpinned by a pronounced shift in the structure of exports, away from primary commodities and toward manufactures (Table 1). By 2007 manufactures accounted for 87.4% of total exports from Asia, up from 78.3% three decades ago. Within manufacturing, machinery and transport equipment (SITC 7) (henceforth referred to as 'machinery') has played a pivotal role in this structural shift. Within machinery, there has been a heavy concentration of exports in information and communication technology (ICT) products and electrical goods which together accounted for nearly three fourths of total exports from the region in 2007.[2] Export dynamism in these product lines has been driven by the ongoing process of global production sharing and the increasingly deep integration of East Asian countries into the global production networks. As can be seen in Table 2, trade in parts and components accounts for a much larger share of manufacturing exports from East Asia compared with the rest of the world.[3]

[2] For a detailed discussion on export patterns in East Asia, see Athukorala and Kohpaiboon (2008).

[3] For a discussion, with a detailed listing of the relevant literature, of the causes of the continued preeminence of East Asia in this new form of international exchange see Athukorala and Yamashita (2009).

Table 1: Manufacturing Share in East Asian Non-oil Trade[a], 1986/7, 1994/5, and 2006/7 (%)

	Intra-regional trade				World trade			
	East Asia	Developing East Asia	ASEAN+3	ASEAN	East Asia	Developing East Asia	ASEAN+3	ASEAN
Exports								
1986/7	83.7	79.6	71.4	56.7	86.5	76.2	86.3	56.2
1994/5	87.3	87.5	84.6	82.5	90.6	87.1	90.3	78.6
2006/7	90.5	90.7	87.5	80.9	95.1	95.2	91.8	81.2
Imports								
1986/7	83.7	79.6	71.4	74.4	71.4	86.0	62.1	78.6
1994/5	87.3	87.5	84.6	82.5	89.7	88.6	80.3	89.0
2006/7	89.3	89.6	87.5	80.9	94.1	90.5	86.1	88.9

Note: [a]. two-year averages.

Country groupings: ASEAN: Nine ASEAN member countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand and Viet Nam (data for Myanmar are not available); ASEAN+ 3: ASEAN9, plus PRC, Republic of Korea (Korea) and Japan; Developing East Asia: ASEAN9, Korea, Taipei,China, PRC, Hong Kong, China; East Asia: Developing East Asia and Japan

Source: Compiled from UN Comtrade database, and Trade Data CD-ROM, Council for Economic Planning and Development, Taipei,China (for data on Taipei,China)

2.1 Intra regional trade patterns

Intra-regional trade shares of East Asia, and its major subregions, as measured using the standard trade data (that is, trade data which does not make a distinction between parts and components and final trade) are reported in Table 3. Intra-regional shares are given separately for exports and imports in order to illustrate possible asymmetry in trade patters resulting from East Asia's increased engagement in fragmentation-based international exchange. The series for the entire East Asian region[4] are plotted for Figure 1.

[4] The patterns are strikingly similar for Developing East Asia, ASEAN+ 3 and ASEAN.

Table 2: Share of Parts and Components in Manufacturing (Mfg) Trade, 2006/7 (%)

	Exports						Imports					
Economy/ country group			**Machinery & transport equipment**			**Misc. Mfg.**		**Machinery & transport equipment**				**Misc. mfg**
	Total mfg.	**Total**	**ICT product**	**Electrical goods**	**Road vehicles**		**Total mfg**	**Total**	**ICT product**	**Electrical goods**	**Road vehicles**	
East Asia	26.9	43.3	55.4	26.6	24.6	4.9	35.9	59.3	76.6	31.2	46.2	8.4
Japan	29.4	39.5	70.4	40.0	20.1	14.7	24.6	48.3	58.6	34.1	32.6	5.8
Developing East Asia	26.2	44.6	52.9	23.2	33.3	3.7	37.9	60.9	78.7	30.6	50.6	9.4
Taipei,China	32.7	56.2	75.2	15.8	64.5	15.4	34.3	57.6	84.3	26.2	55.1	12.3
Korea	31.4	46.1	65.1	26.2	17.4	4.8	28.3	51.6	76.9	28.7	54.3	9.7
PRC	18.1	34.2	38.3	22.1	51.5	2.5	37.6	60.2	81.3	34.4	56.1	10.2
Hong Kong, China	24.6	50.4	58.2	23.3	44.1	4.1	36.8	61.4	70.5	26.6	17.4	5.3
ASEAN 10	38.3	57.3	63.5	30.6	39.0	4.2	43.8	65.0	81.0	31.7	49.0	13.6
Indonesia	18.6	46.8	47.9	41.8	74.2	1.6	16.9	34.1	31.3	47.7	52.4	11.7
Malaysia	46.8	59.2	62.5	20.5	76	7.2	51.1	68.8	84.9	30.2	37.7	20.6
Philippines	65.8	76.5	81.2	43.6	77.5	5.9	64.1	83.0	94.2	33.9	33.2	29.7
Singapore	41.6	60.7	67.1	22.8	54.3	7.3	52.7	69.5	79.4	34.8	40.9	12.5
Thailand	25.3	39.3	48.1	23.0	25.4	5.9	30.0	53.8	74.7	25.4	75.6	8.1
Viet Nam	8.0	41.2	36.2	63.1	47.6	0.8	11.5	30.3	52.9	25.6	34.9	7.6
Other ASEAN	0.7	31.2	73.9	44.6	1.4	0.1	11.5	25.4	27.6	16.5	4.9	1.8
South Asia	5.1	42.2	65.2	41.9	43.2	0.7	13.3	26.7	32.3	33.9	43.8	6.4
India	6.5	41.4	63.8	42.2	43.7	1.3	14.4	28.9	35.5	34.6	83.6	6.7
NAFTA	27	43.4	59.7	35.3	30.2	10.1	27.4	54.5	60.9	35.8	66.8	6.2
EU15	17.4	34.4	47.5	32.2	26.6	6.1	18.4	35.9	40.4	32.0	28.4	5.1
World	22.3	40.7	55.5	30.6	27.9	5.9	22.3	40.7	55.5	31.2	27.6	5.8

Note: 1. Country groupings: ASEAN: Nine ASEAN member countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand and Viet Nam (data for Myanmar are not available); ASEAN+ 3: ASEAN9, plus PRC, Republic of Korea (Korea) and Japan; Developing East Asia: ASEAN9,Korea, Taipei,China, PRC, Hong Kong, China; East Asia: Developing East Asia and Japan; South Asia : India, Pakistan, Bangladesh, Sri Lanka and Nepal; NAFTA: United States (US), Canada, Mexico; EU15: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Luxembourg, Netherlands, Italy, Portugal, Spain, Sweden and United Kingdom.

Source: Compiled from UN Comtrade database, and Trade Data CD-ROM, Council for Economic Planning and Development, Taipei,China (for data on Taipei,China)

Table 3: Intra-regional shares of Non–oil Trade (%), 1986/7, 1994/5 and 2006/07[a]

Item	East Asia	Developing East Asia	ASEAN+3	ASEAN	NAFTA	EU-15
Total non–oil trade[b]						
Exports						
1986/7	29.3	24.1	20.9	9.8	45.1	66.6
1994/95	49.0	38.0	32.6	20.8	44.2	64.8
2006/7	44.5	34.4	31.5	18.9	48.4	59.5
Imports						
1986/7	41.5	24.6	29.8	8.6	31.8	66.3
1994/95	55.7	36.4	39.9	16.6	38.0	63.9
2006/7	62.7	47.2	47.9	22.8	34.1	58.0
Total trade (exports +imports)						
1986/7	34.4	24.3	24.5	9.2	37.3	66.5
1994/95	52.1	37.2	35.9	18.4	40.8	64.3
2006/7	52.1	40.2	38.7	21.2	40.0	58.7
Primary products[c]						
1986/7	41.2	18.4	42.9	15.9	34.9	71.6
1994/95	64.0	40.5	51.9	17.0	38.4	75.1
2006/7	56.0	43.0	48.1	19.3	48.2	70.1
Imports						
1986/7	30.2	23.8	19.7	26.5	41.5	55.8
1994/95	38.5	36.2	20.8	26.3	61.4	64.5
2006/7	53.7	51.7	30.0	42.4	55.2	58.0
Total trade (exports +imports)						
1986/7	34.4	21.6	27.6	19.9	37.9	62.8
1994/95	48.7	35.8	32.5	20.6	47.2	69.4
2006/7	55.9	44.4	38.7	26.6	51.4	63.5
Manufacturing[d]						
1986/7	28.4	25.1	17.3	17.4	49.1	65.5
1994/95	47.2	38.2	30.6	21.8	45.9	62.5
2006/7	43.3	34.1	30.1	18.8	48.8	57.0
Imports						
1986/7	48.6	22.9	34.2	11.0	29.9	69.7
1994/95	54.2	32.4	42.0	15.4	34.8	63.7
2006/7	58.9	42.8	48.6	20.9	31.5	57.3
Total trade (exports +imports)						
1986/7	35.8	24.0	22.9	13.5	37.1	67.5
1994/95	50.5	35.1	35.4	18.0	39.6	63.1
2006/7	51.0	38.6	37.5	20.7	38.3	57.2

Notes: SITC = Standard International Trade Classification.

a Two-year averages;

b Total merchandise trade excluding oil and gas (SITC 3);

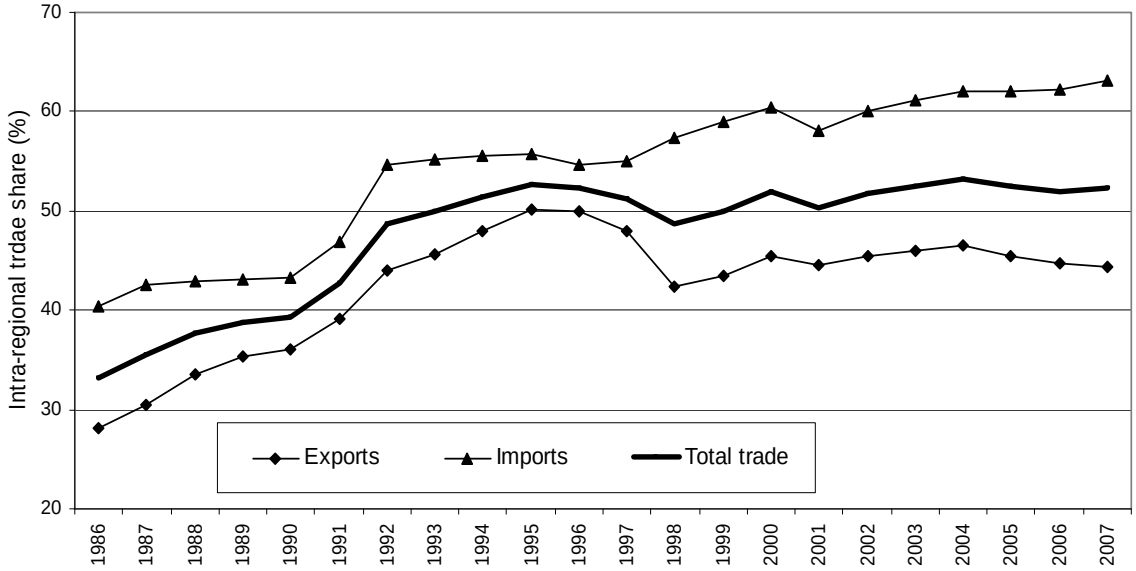
c Primary products excluding oil and gas (SITC 3);

d Products belong to SITC 5 to 8 less SITC 68.

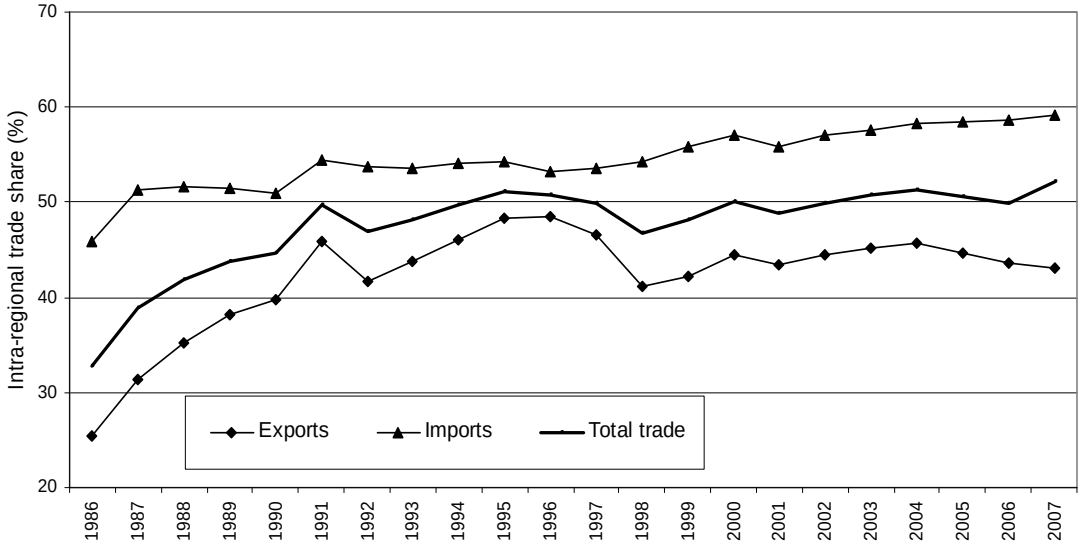
Source: Compiled from UN Comtrade database (SITC Rev 3).

Figure 1: Intra-regional share of East Asian Trade (in %)

a. Non–oil trade[a]



b. Manufacturing trade[b]



Notes:

[a] Total merchandise trade less oil and gas.

[b] Memorandum item: manufacturing share in East Asian non–oil trade

	Exports		Imports	
	Total	Intra-regional	Total	Intra-regional
1986/87	90.4	79.4	65.9	74.3
1994/5	90.2	87.0	83.1	87.0
2006/7	91.1	91.4	88.3	88.6

Source: Based on data compiled from the UN Comtrade database.

It is common in the available studies on trade patterns in the region to use the intra-regional share of total trade as a measure of regional trade integration5. The time pattern of this indicator is of course consistent with the view that East Asia has become increasingly integrated through merchandise trade. During the two decades from 1986/7 to 2006/7 the share of intra-regional trade (the total of imports and exports) as a percentage of the total non-oil trade in East Asia increased from 34.4% to 52.1%. The level of intra-regional trade in East Asia was higher than that of NAFTA throughout this period and was rapidly approaching the level of EU-15)6. For developing East Asia (East Asia excluding Japan) and ASEAN +37, the ratios are lower than the aggregate regional figure, but those ratios have increased at a much faster rate. The share of total trade for intra-regional trade of ASEAN has been much lower compared with the other two subregions. When East Asia's total trade in disaggregated into primary products and manufacturing, primary trade seems to have a greater intra-regional bias compared to manufacturing trade. However, the pattern of intra-regional shares of manufacturing trade is stinking similar to that of total trade given the rapidly diminishing share of primary products in total trade.

The intra-regional shares calculated separately for imports and exports clearly illustrate the risk of making inferences about regional trade integration based on total trade (imports plus exports) data. There is a notable asymmetry in the degree of regional trade integration in East Asia. Unlike in the EU and NAFTA, in East Asia the increase over time in the intraregional trade ratio has emanated largely from rapid increases in intra-regional imports; the expansion of intra-regional exports have been consistently slower. The dependence of East Asia (and its individual countries) on extra-regional markets (in particular those in NAFTA and the EU) for export-led growth is far greater than is revealed by the standard intra-regional trade ratios commonly used in the debate of regional economic integration. For instance, in 2006/7 only 44.5% of total East Asian non-oil exports were absorbed within the region, compared to an intra-regional share of 62.7% in total non-oil imports. For developing East Asia the comparable figures were 34.4% and 47.0% respectively. This asymmetry is clearly seen across all sub-regions within East Asia. In sum, the region is much more heavily dependent on extra-regional trade for its growth dynamism than what is suggested by the total regional trade share.

This asymmetry in intra-regional trade in East Asia reflects the unique nature of the involvement of Japan and the PRC in regional production networks. From about the late 1980s Japan's relations in manufacturing trade with the rest of East Asia has been predominantly in the form of using the region as an assembly base for meeting demand in the region and, more importantly for exporting to the rest of the world (Athukorala and Yamashita 2008). The emergence of China as a leading assembly center within regional production networks since the early 1990s further amplified this trade asymmetry; the PRC is importing parts and components from the other East Asia countries to assemble final products which are predominantly destined to markets in the rest of the world (Athukorala 2009).

So far we have examined the asymmetry in export and import trade patterns resulting from the growing importance of regional production networks. Now we turn to examining implications of growing network trade for both the asymmetry and the actual magnitude of trade integration, focusing on manufacturing trade. For this purpose, intra-regional trade shares calculated separately for component trade and

5 See for example Lee and Roland-Holst (1998); Urata (2006); Yoshitomi (2007); and Kawai and Wignaraja (2008).

6 The 15 initial member countries of the EU (Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxemburg, Netherlands, Norway, Portugal, Spain, Sweden, United Kingdom.)

7 Member countries of the ASEAN, the PRC, Japan, and Korea.

final trade (total trade –component trade) are reported together with the standard intra regional trade share (for total trade) in Table 4. The tables cover total manufacturing trade, machinery trade (further disaggregated into three major product categories therein, ICT products, electrical goods and motor vehicles) and textiles and clothing. For total manufacturing trade each of the sub-categories, intra-regional trade shares are given separately for total trade, and trade in parts and components and final trade are given separately. The three alternative series for total manufacturing exports from East Asia[8] are plotted for Figure 1.

[8] The patterns are strikingly similar for developing East Asia, ASEAN+ 3 and ASEAN.

Table 4: Intra-regional shares of Manufacturing Trade: Total, Parts and Components, and Final Trade (%), 1994/5 and 2006/07[1]

Item	East Asia[2]	Developing East Asia[2]	ASEAN+3[2]	ASEAN	NAFTA	EU15
4.1: Total manufacturing[3]						
4.1a: Total						
Exports	47.2	38.2	15.3	20.7	44.4	61.2
1994-95	43.9	33.4	21.9	18.4	48.1	56.9
2006-07						
Imports						
1994-95	58.2	34.9	43.0	15.5	36.3	64.1
2006-07	64.4	46.7	49.3	20.8	32.0	57.9
Trade (exports + imports)						
1994-95	53.2	36.5	27.0	17.8	39.9	62.6
2006-07	55.1	40.0	30.4	20,155.0	38.4	57.4
4.1b: Parts and components						
Exports						
1994-95	50.2	42.6	33.7	30.3	43.5	62.3
2006-07	61.1	53.9	35.3	25.4	46.9	55.9
Imports						
1994-95	65.9	35.3	39.6	20.2	39.5	58.0
2006-07	66.9	50.9	47.8	22.9	39.9	55.2
Trade						
1994-95	57.0	38.7	35.4	24.2	41.4	60.1
2006-07	62.9	52.1	40.2	23.2	43.25	60.1
4.1c: Final goods [4]						
Exports						
1994-95	46.0	36.8	11.4	16.1	44.7	60.9
2006-07	36.9	28.3	17.0	15.9	48.65	57.0
Imports						
1994-95	55.4	34.7	43.4	12.9	35.3	65.6
2006-07	63.0	42.8	50.2	20.6	30.2	58.5
Trade						
1994-95	50.3	35.7	25.4	14.3	39.4	63.2
2006-07	46.4	34.0	29.1	17.9	37.3	57.7
4.2. Machinery (SITC 7)						
4.2a: Total						
Exports						
1994-95	41.5	34.2	37.4	25.3	47.3	60.5
2006-07	42.7	34.7	46.2	21.5	52.7	56.7
Imports						
1994-95	58.3	28.6	63.0	24.2	42.7	69.0
2006-07	62.3	41.5	67.3	32.8	43.4	63.2
Trade (exports + imports)						
1994-95	48.6	31.0	52.0	24.6	44.8	64.6
2006-07	50.1	37.6	55.8	26.6	47.4	59.9
4.2b: Parts and components						
Exports						
1994-95	49.1	39.6	43.6	32.6	45.3	63.4
2006-07	60.3	51.9	54.7	26.2	47.0	57.0

Item	East Asia[2]	Developing East Asia[2]	ASEAN+3[2]	ASEAN	NAFTA	EU15
Imports						
1994-95	63.8	34.3	64.8	27.2	43.5	64.8
2006-07	65.4	46.2	67.0	36.2	48.1	59.7
Trade						
1994-95	55.5	36.6	56.3	29.3	44.3	64.1
2006-07	62.6	49.0	60.5	30.9	47.6	58.3
4.2 c. Final trade[4]						
Exports						
1994-95	35.7	28.7	31.9	18.9	48.7	59.0
2006-07	29.4	21.1	35.2	15.3	57.3	56.6
Imports						
1994-95	53.5	23.5	61.0	20.7	42.2	71.3
2006-07	58.2	34.7	67.8	27.5	40.6	65.1
Trade						
1994-95	42.9	25.7	47.6	19.8	45.2	64.9
2006-07	38.5	25.9	49.0	20.5	47.2	60.8
4.3: ICT products[5]						
4.3a: Total trade						
Exports						
1994-95	64.0	37.3	66.2	32.6	29.5	55.4
2006-07	65.0	48.2	69.4	38.2	34.1	51.2
Imports						
1994-95	41.8	32.1	34.3	23.3	31.5	63.7
2006-07	48.7	38.9	45.1	20.0	37.6	59.3
Trade (Export +Imports)						
1994-95	50.5	34.6	48.5	27.5	30.4	58.9
2006-07	55.0	42.6	54.2	26.7	35.5	54.6
4.3b: Parts and components						
Exports						
1994-95	67.3	39.3	66.3	31.4	30.8	53.1
2006-07	71.0	52.5	67.8	37.9	38.7	51.6
Imports						
1994-95	53.8	42.2	43.5	32.9	30.7	59.6
2005-07	66.5	56.8	54.4	25.5	29.7	49.7
Trade (Export +Imports)						
1994-95	59.8	40.6	56.1	32.1	30.7	56.0
2006-07	68.5	54.8	60.1	30.8	34.4	50.7
4.3c: Final[4]						
Exports						
1994-95	26.7	19.4	24.7	13.3	32.6	67.9
2006-07	26.6	18.9	29.5	10.7	50.4	68.3
Imports						
1994-95	57.0	32.7	65.8	36.9	28.0	57.4
2006-07	51.9	38.0	75.2	39.1	30.5	51.0
Trade (Export +Imports)						
1994-95	36.4	24.5	35.7	19.6	29.9	61.7
2006-07	34.4	24.6	41.2	18.0	36.7	57.8
4.4: Electrical goods[6]						
4.4a: Total						
Total exports						

Item	East Asia[2]	Developing East Asia[2]	ASEAN+3[2]	ASEAN	NAFTA	EU15
1994-95	63.1	37.3	66.2	32.6	29.5	56.4
2006-07	64.5	47.2	70.4	38.2	34.1	51.5
Total imports						
1994-95	41.8	32.1	34.3	23.3	31.5	63.5
2006-07	48.7	38.9	44.1	20.2	37.6	59.7
Total trade (Export +Imports)						
1994-95	51.5	34.5	49.5	27.5	30.4	58.9
2006-07	58.0	42.6	55.2	27.7	35.4	53.5
4.4b: Parts and components Exports						
1994-95	67.5	39.3	65.9	31.3	30.8	53.1
2006-07	72.0	52.4	67.5	38.2	38.7	51.6
Imports						
1994-95	53.8	42.2	43.5	32.9	30.7	59.6
2006-07	66.5	56.8	54.4	25.5	29.7	49.7
Trade (Export +Imports)						
1994-95	60.1	40.6	56.1	32.1	31.6	56.2
2006-07	68.4	54.3	61.1	30.8	34.2	51.7
4.4c: Final trade[4]						
Exports						
1994-95	67.4	39.8	67.o	31.4	31.0	53.1
2006-07	72.0	53.9	68.8	37.9	38.6	51.6
Imports						
1994-95	54.8	42.2	43.5	32.9	30.7	59.6
2006-07	68.5	56.8	54.4	25.5	29.7	49.7
Trade (Export +Imports)						
1994-95	58.8	40.6	57.0	30.1	30.7	56.0
2006-07	67.4	55.5	62.1	31.8	34.4	50.7
4.5 Motor vehicles[7]						
4.5a: Total						
Exports						
1994-95	21.9	22.1	49.3	32.5	67	69.3
2006-07	15.7	15.2	40.9	32.7	69.3	65.1
Imports						
1994-95	36.6	12.9	56.7	9.4	56.8	79.4
2006-07	43.8	24.5	63.4	21.1	51.3	72.9
Trade (Export +Imports)						
1994-95	27.6	15.3	55.8	11.9	61.4	74.1
2006-07	24.4	19.9	56.7	24.5	59.0	68.8
4.5b: Parts and components Exports						
1994-95	35.3	26.2	47.3	33.4	70.6	74.1
2006-07	33.2	27.7	59.8	41.6	72.7	69.7
Imports						
1994-95	53.7	14.9	70.9	13.6	62.6	77.0
2006-07	59.9	34.0	73.1	31.7	59.6	70.0
Trade (Export +Imports)						
1994-95	42.5	18.0	67.4	16.6	66.1	75.5

Item	East Asia[2]	Developing East Asia[2]	ASEAN+3[2]	ASEAN	NAFTA	EU15
2006-07	44.0	31.2	69.0	34.8	65.4	69.8
4.5c: Final trade[4]						
Exports						
1994-95	17.5	20.3	50.8	31.8	65.5	67.6
2006-07	10.1	10.2	29.6	27.4	67.8	63.4
Imports						
1994-95	30.8	12.1	50.9	7.6	54.3	80.3
2006-07	34.6	19.1	57.9	15.1	48.1	73.9
Trade (Export +Imports)						
1994-95	22.5	14.2	50.8	9.9	59.3	73.5
2006-07	16.9	14.4	49.6	18.7	56.3	68.4
4.6: Textiles and apparels [4]						
Exports						
1994-95	36.5	19.0	22.0	9.2	57.2	67.7
2006-07	28.2	13.8	16.4	6.5	76.5	
Imports						
1994-95	63	46.7	68.1	29.7	20.9	59.6
2005-07	61.7	43.3	71.3	17.8	22.6	48.9
Trade (Export +Imports)						
1994-95	46.2	27.4	37.3	16.0	31.1	63.2
2006-07	38.6	21.3	33.6	10.0	34.7	53.3

Notes:

1. See notes to Table 1 for details on country classification. SITC classification numbers are given in brackets.

2 Intra-regional trade shares have been calculated excluding bilateral flows between the PRC and Hong Kong, China**.**

3 SITC 5 to 8 less 68

4 Total (reported) trade – parts and components.

5 Defined as the sum of office machines and automatic data processing machines (SITC 75), telecommunication and sound recording equipment (SITC 76) and semiconductors and semiconductor devices (772+776).

6. Electrical machinery (SITC 77) net of semiconductors and semiconductor devices (772+776)

7. SITC 78 +79

8. Parts and component trade is negligible in this product category

Source: Compiled from UN Comtrade database, and Trade Data CD-ROM, Council for Economic Planning and Development, Taipei,China (for data on Taipei,China).

Let us begin with total manufacturing trade. When manufacturing trade data are systematically decomposed into parts and components and final goods, we clearly see a heavy "component bias" in Asian intra-regional trade. Intra-regional imports and exports shares of parts and components have grown in tandem and these synchronized patterns have become much clearer from about the late 1990s. This reflects multiple border-crossings of parts and components within regional production networks. The asymmetry between intra-regional shares of imports and exports is, therefore, much sharper when the parts and components are netted out. For exports, the intra-regional share of final goods declined continuously from 46% in 1994–05 to 37% in 2006–07, whereas the intra-regional imports share increased from 55.4% to 63.4% between these two time points (Table 4.1c). Clearly, the region's dependence on the rest of the world for its economic dynamism has increased over time.

Turning to the disaggregated data, electrical goods (SITC 77-772-776) are the only notable major product category in which intra-regional final trade has increased

between 1994–5 and 2006–07 (Table 4.4). The share of intra-regional final trade of East Asia in this product category increased from 58.8% between these two time points. It seems that there is significant potential for a rapid increase in final goods trade in this product category as domestic demand in countries in the region grows. In all other products listed in the Table, the intra-regional shares of final trade have declined, pointing to the growing importance of global markets. For final trade in ICT products, the intra-East Asian trade share declined from 36.4% in 1994-05 to 34.4% in 200607 (Table 4.3c). The intra-regional share of final trade is the lowest for motor vehicles; it was 16.5% in 2006/7, down from 22.5% in 1994/5 (Table 4.5). This reflects the fact that carmakers in Japan and Korea serve extra-regional markets from their home countries and while serving markets in most of the countries in the regions through local assembly.

2.2 The PRC in East Asian Trade

As mentioned at the outset of this paper, the PRC's role in regional production networks is central to the decoupling thesis and the more recent emphasis on rebalancing growth. In this section we, therefore, examine the PRC's trade patterns with emphasis on its trade links with the rest of East Asia.

The commodity profile of the PRC-East Asia trade in the wider global context is illustrated by Table 5 and Figure 2. Manufacturing products dominates PRC-East Asian trade flows, accounting for over 80% of both imports and exports. Among the PRC's total manufacturing imports from East Asia, the share of parts and components increased from 18% in 1994/5 to over 44% in 2006/7. Within manufacturing, the share of parts and components is much larger in machinery and transport equipment imports; nearly three fourths in 2006/7. The ratio of parts and components to total manufacturing imports, as well as the subcategories listed in Table 5 as a share of total manufacturing imports, also increased, but the levels are significantly lower than those in imports. Overall, these patterns reflect the importance of the PRC as the main final assembly center in the region. Interestingly, although the PRC's importance as a market for final goods for the rest of East Asia has increased during the period under study, the importance of the region for the PRC's export expansion has declined notably (Table 5.3). For instance, only 32% of the PRC's total manufacturing exports were destined to the regional markets in 2006/7, compared to 53.3% in 1994/5. By contrast, on the import side the regional share increased from 20% to 32.7% between these time points.

Table 5: the PRC's Trade with Rest of East Asia

Item	Exports			Imports		
5.1: Commodity composition	1994-1995	1999-2000	2006-2007	1994-1995	1999-2000	2006-2007
5.1a: Total trade	100	100	100	100	100	100
Primary products	16.2	12.5	10.4	23.5	19.8	13.5
Of which oil and gas	3.5	2.9	3.0	10.0	9.0	5.6
Manufacturing	83.4	87.1	89.2	76.1	79.9	86.3
Chemicals (SITC 5)	3.6	3.0	4.2	12.5	17.2	15.1
Resource based products (SITC 6 - SITC 68)	15.8	12.5	13.0	29.5	21.3	8.9
Of which textiles (SITC 65)	8.4	5.8	4.1	14.2	8.7	2.8
Machinery and transport equipment (SITC 7)	20.8	31.4	46.6	26.4	35.6	49.7
Power generating machines (71)	1.2	1.5	1.2	0.9	1.2	0.8
Specialized industrial machine (72)	0.4	0.5	0.9	5.1	2.0	1.7
Metal working machine (73)	0.2	0.2	0.3	0.9	0.5	0.9
General industrial machinery (74)	1.3	1.4	2.5	2.8	2.1	2.0
Electronics and electrical goods	16.7	26.7	40.6	15.0	29.4	43.0
Transport equipment	0.9	1.1	1.1	1.7	0.5	1.2
Miscellaneous manufacturing (SITC 8)	43.3	40.2	25.5	7.7	5.7	12.5
Apparel and clothing accessories (84)	18.5	17.2	10.3	1.3	1.4	0.4
5.1b: Parts and components	100	100	100	100	100	100
Machinery and transport equipment (SITC 7)	90.2	94.6	95.5	92.1	95.7	95.1
Electronic and electrical goods (75+76+77)	81.0	87.2	87.7	74.6	84.8	85.7
Transport equipment	3.7	2.8	2.3	0.7	0.7	1.8
Miscellaneous manufacturing (SITC 8)	9.8	5.4	4.5	3.8	1.5	3.3
5.2: Parts and component share in manufacturing trade						
Total manufacturing	7.5	14.8	25.6	17.9	30.5	44.4
Machinery and transport equipment (SITC 7)	6.8	14.0	24.4	46.1	66.2	73.3
Electronic and electrical goods (75+76+77)	30.3	42.1	49.3	73.1	77.4	82.5
Transport equipment	25.4	33.6	50.1	16.3	67.1	79.0
Miscellaneous manufacturing (SITC 8)	1.4	1.7	4.0	18.0	13.0	14.4
5.3: East Asia's share in the PRC's world trade						
5.3a: Total trade	55.8	45.4	33.7	21.3	25.0	28.4
Primary products	74.6	68.0	59.2	27.9	23.5	15.5
Of which oil and gas	78.4	73.1	71.8	58.0	32.8	16.2
Manufacturing	53.3	43.4	32.2	19.9	25.6	32.7
Chemicals (SITC 5)	53.5	41.3	38.4	22.6	30.3	36.2
Resource based products (SITC 6 - SITC 68)	63.6	46.3	34.4	29.4	31.9	27.9
Of which textiles (SITC 65)	71.6	58.4	39.6	36.8	35.0	34.0
Machinery and transport equipment (SITC 7)	53.7	44.4	33.1	13.4	21.5	32.0
Power generating machines (71)	69.4	60.1	40.9	7.7	11.8	13.2
Specialized industrial machine (72)	54.5	42.2	31.7	10.4	10.2	15.0
Metal working machine (73)	49.2	44.5	44.0	7.1	8.0	17.4
General industrial machinery (74)	50.0	34.5	27.8	11.3	14.0	16.3

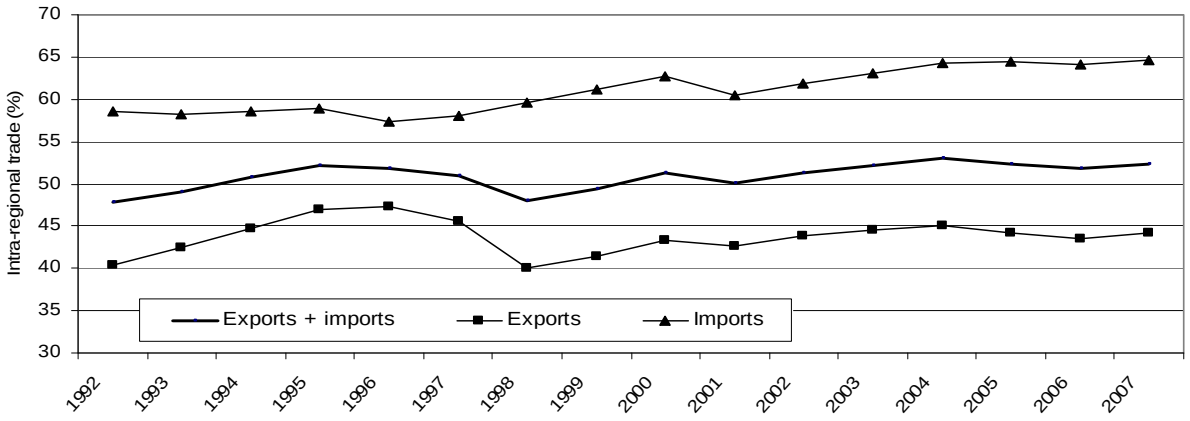
Item	Exports			Imports		
Electronic and electrical goods (75+76+77)	60.4	42.5	34.6	53.0	51.7	52.0
Transport equipment	55.6	36.9	21.6	7.3	4.0	11.1
Miscellaneous manufacturing (SITC 8)	50.1	42.0	29.1	27.2	25.0	36.0
Apparel and clothing accessories (84)	59.1	57.0	38.1	45.1	59.1	52.9
5.3b: Parts and component	60.1	53.5	44.7	22.4	27.1	38.7
Machinery and transport equipment (SITC 7)	59.8	53.8	44.6	21.7	27.3	38.6
Electronic and electrical goods (75+76+77)	61.2	55.6	46.0	68.9	58.0	56.2
Transport equipment	44.2	33.7	23.2	5.6	6.1	21.7
Miscellaneous manufacturing (SITC 8)	62.2	48.6	45.7	30.3	22.2	40.7

Note: East Asia: Developing East Asia and Japan

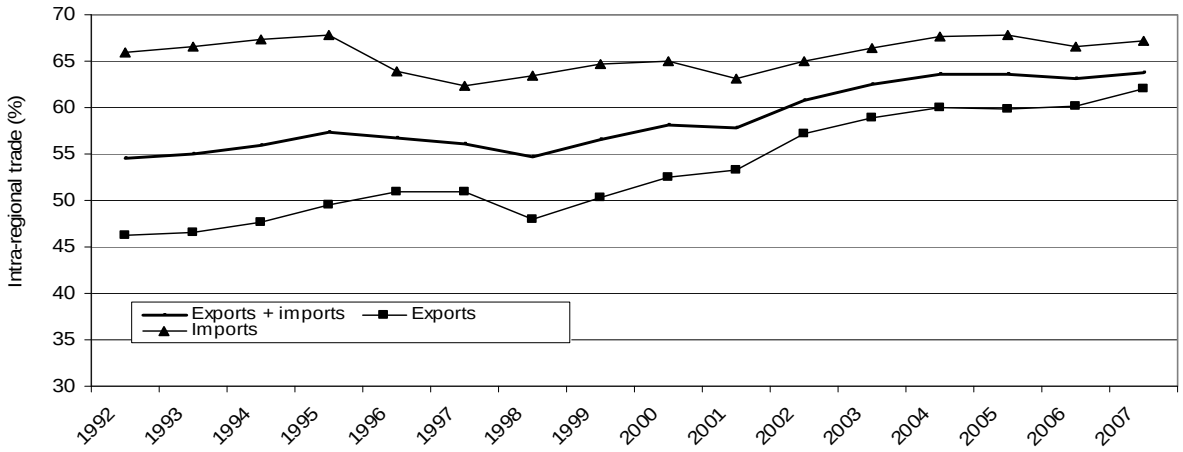
Source: Source: Compiled from the CEIC database. Available at http://www.ceicdata.com/

Figure 2: Intra-regional share in East Asian manufacturing trade, 1992-2007 (%)

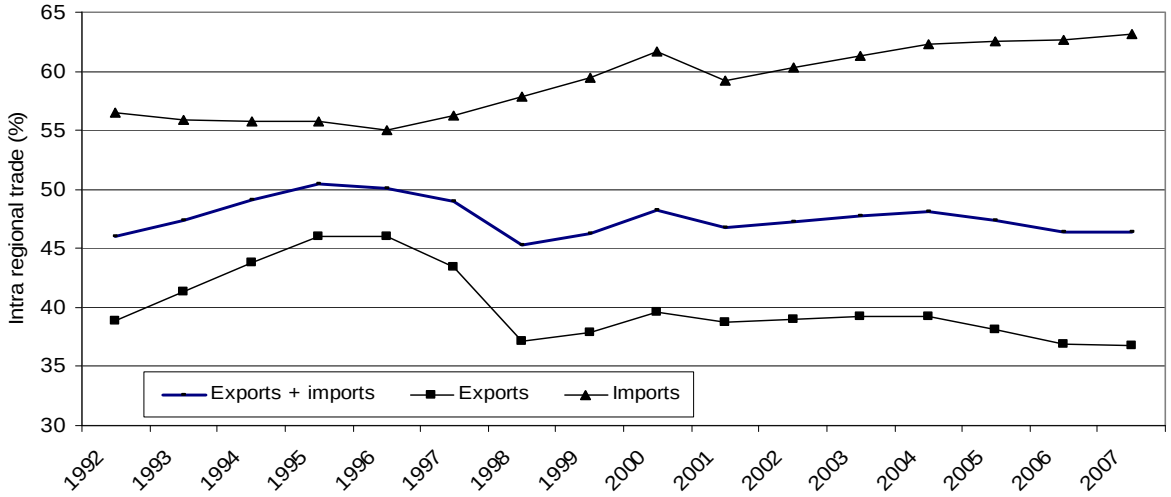
a. Total (parts and component + final) Trade



b. Parts and Components



c. Final (total – parts and components)



Note: Country grouping: East Asia: ASEAN 9; Korea; Taipei,China; PRC; Hong Kong, China; and Japan.

Source: Compiled from UN Comtrade database, and Trade Data CD-ROM, Council for Economic Planning and Development, Taipei,China (for data on Taipei,China).

Table 6 summarizes data on the geographic profile of the PRC-East Asia trade relations at the country level. Data on the geographic profile of the PRC's manufacturing imports from the region are in Panel A. Panel B gives data on the relative importance of the PRC as export destination of East Asia economies. Nearly 60% of the PRC's manufacturing imports originate in East Asia. However, the PRC's regional import trade is heavily concentrated among Japan, Korea and Taipei,China. The share of imports coming from the other East Asian countries is small, although growing past. In 2006/7 the PRC accounted for only 21.2% of total manufacturing exports from the rest of East Asia. At the individual country level, the PRC accounted for 33% and 27% of exports from Japan and Taipei,China respectively. For all other ASEAN countries, the figures are much smaller, varying from 8% to 14%. Clearly, although the aggregate data hide significant differences among East Asian countries in trade links with the PRC; the PRC's intra-regional trade is largely concentrated in trade with Japan, Korea, and Taipei,China.

Table 6: East Asia – the PRC manufacturing trade (%)

Economy	**Geographic profile of the PRC's imports**		**Exports to the PRC relative to total exports by country/region**	
	1994/5	2005/7	1994/5	2005/7
East Asia	58.2	58.6	7.6	21.2
Japan	20.9	16.4	5.5	17.3
Developing East Asia	37.1	42.2	8.2	21.6
Hong Kong, China	17.3	2.0	29.6	19.5
Korea	4.3	13.4	5.8	27.2
Taipei,China	10.7	14.0	10.3	32.6
ASEAN	3.7	13.8	2.5	13.7
Indonesia	1.0	1.1	3.3	8.4
Malaysia	1.1	3.4	3.2	13.5
Philippines	0.2	2.1	1.5	21.3
Singapore	0.8	2.3	1.8	12.2
Thailand	0.7	2.3	1.8	11.2
Viet Nam	0.1	0.1	2.5	4.1
Other countries	41.8	41.4	1.5	3.7
World	100	100	2.7	6.7

Source: Compiled from UN Comtrade database, and Trade Data CD-ROM, Council for Economic Planning and Development, Taipei (for data on Taipei,China).

3. TRADE PERFORMANCE IN THE AFTERMATH OF THE CRISIS

Exports from all major East Asian economies have declined shapely from the fourth quarter of 2008 (Table 7, Figures 3 and 4). The absolute degree of export contraction experienced by all countries in the region in the region in the last quarter of 2008 and the first three (or four) months of 2009 was far greater than the contraction in world income during this period. The degree of export contraction (on average about 20%) is remarkably synchronous among the countries regardless of the well-documented differences among these countries in the degree of export orientation, or the degree of dependence on the US, and other developed country, market. These patterns suggest that the drying up of trade credit and traders' overreaction to a possible

collapse in demand would have played a role in the total decline in trade**.** It is, therefore, too early to make any definitive analysis of the importance of the dependence on network trade and other related structural features of trade patterns evolved during the precrisis era for export performance following the on-set of the crisis. However a close look at data for individual countries does reveal some interesting patterns.

Table 7: Growth of total merchandise exports and imports, 2007Q1–2009Q1 (Year-on-year % change)[1]

Exports	2008Q1	2008Q2	2008Q3	2008Q4	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	April 09	May 09
East Asia (EA)	20.6	21.0	19.3	-5.6	7.0	-9.1	-14.6	-29.4	-30.8	—	—	—
Developing EA	19.0	21.3	19.9	-4.7	8.2	-9.3	-13.2	-27.3	-25.8	—	—	—
ASEAN+3	21.1	21.9	21.5	-4.3	9.0	-8.5	-13.4	-29.9	-32.3	—	—	—
ASEAN	18.9	26.9	22.9	-10.3	-1.4	-10.3	-19.2	-42.4	-31.1	—	—	—
Japan	22.9	16.4	15.2	-8.1	6.6	-8.2	-22.6	-35.3	-46.1	- 44.9	41.1	—
Hong Kong, China	10.5	8.3	5.7	-2.1	9.4	-4.9	-10.8	-21.3	-22.6	-19.2	—	—
PRC	21.1	22.4	23.0	4.6	19.0	-2.3	-2.9	-17.5	-25.7	-17.1	-22.6[2]	-26.4[2*]
Korea	17.4	23.2	27.1	-9.9	7.8	-19.5	-17.9	-34.2	-18.3	-21.1	-19.6	—
Taipei,China	17.4	18.2	7.6	-24.6	-8.5	-23.3	-41.9	-44.0	-28.2	-35.5	-27.9	—
Indonesia	31.9	29.4	27.9	-5.3	4.7	-1.8	-18.7	-36.1	-32.4	-28.9	—	—
Malaysia	19.4	28.5	21.6	-12.6	-6.7	-11.0	-20.2	-33.9	-25.5	-23.5	—	—
Philippines	-2.0	-0.6	2.0	-22.3	-14.1	-12.3	-40.6	-40.7	-30.0	-30.9	—	—
Singapore	21.7	26.4	21.2	-12.9	-4.8	-15.3	-18.6	-37.8	-33.7	-20.5	—	—
Thailand	25.5	25.5	27.2	-10.2	3.5	-21.2	-13.0	-28.7	-13.7	-26.7	—	—
Viet Nam	27.7	31.8	37.5	6.0	20.1	-6.3	4.3	-25.5	-32.3	13.4	-11.8	—
India	37.9	37.4	24.7	-8.0	-13.1	-9.9	-1.1	-15.9	-21.7	—	—	—

Imports												
	2008Q1	2008Q2	2008Q3	2008Q4	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	April 09	May 09
East Asia (EA)	29.6	29.0	29.8	-4.1	12.7	-8.5	-16.5	-35.2	-31.2	—	—	—
Developing EA	29.0	28.9	26.6	-8.0	10.4	-13.4	-20.9	-38.6	-28.9	—	—	—
ASEAN+3	30.6	32.0	32.0	-3.5	15.2	-9.5	-16.1	-36.0	-33.4	—	—	—
ASEAN	37.9	36.2	32.6	-5.0	9.5	-9.4	-15.1	-36.9	-37.4	—	—	—
Japan	25.6	26.8	35.8	8.3	24.3	7.3	-6.5	-18.9	-32.9	-35.1	—	—
Hong Kong, China	12.0	9.6	7.0	-4.0	11.2	-7.6	-15.7	-26.6	-17.1	-18.7	—	—
PRC	29.4	32.9	25.9	-8.0	15.3	-18.0	-21.3	-43.1	-24.1	-25.1	—	—
Korea	29.0	30.5	42.9	-8.8	10.3	-15.0	-21.6	-31.5	-30.9	-35.9	-35.6	—
Taipei,China	26.1	19.2	20.3	-21.9	-7.4	-13.7	-44.6	-56.5	-31.6	-49.5	—	—
Indonesia	91.6	96.1	82.3	33.3	70.7	16.1	13.2	-31.3	-40.0	-36.5	—	—
Malaysia	16.1	17.3	14.5	-17.1	-9.3	-14.4	-27.6	-36.2	-35.6	-38.6	—	—
Philippines	22.1	8.4	4.5	-23.4	-9.4	-29.2	-31.6	-25.3	-34.5	-31.0	—	—
Singapore	32.1	35.4	32.9	-9.3	3.5	-12.9	-18.4	-35.8	-33.8	-20.3	-28.1	—
Thailand	39.6	25.7	37.8	3.8	17.8	-1.4	-5.1	-39.1	-41.9	-38.2	—	—
Viet Nam	69.0	61.0	22.8	-8.2	8.7	-19.1	-14.3	-53.8	-27.8	-28.0	-33.8	—
India	52.2	36.8	53.5	6.9	5.8	6.1	8.8	-18.2	-23.3	—	—	—

Notes:

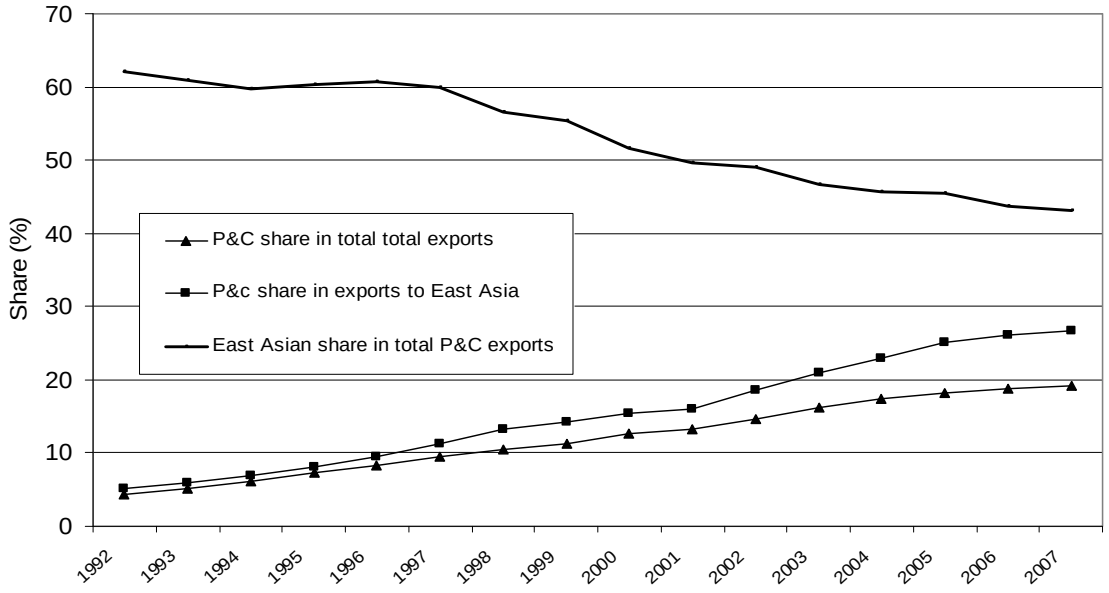
[1] Growth rates calculated using current US$ values.

[2] These figures are from Batson and Miller (2009).

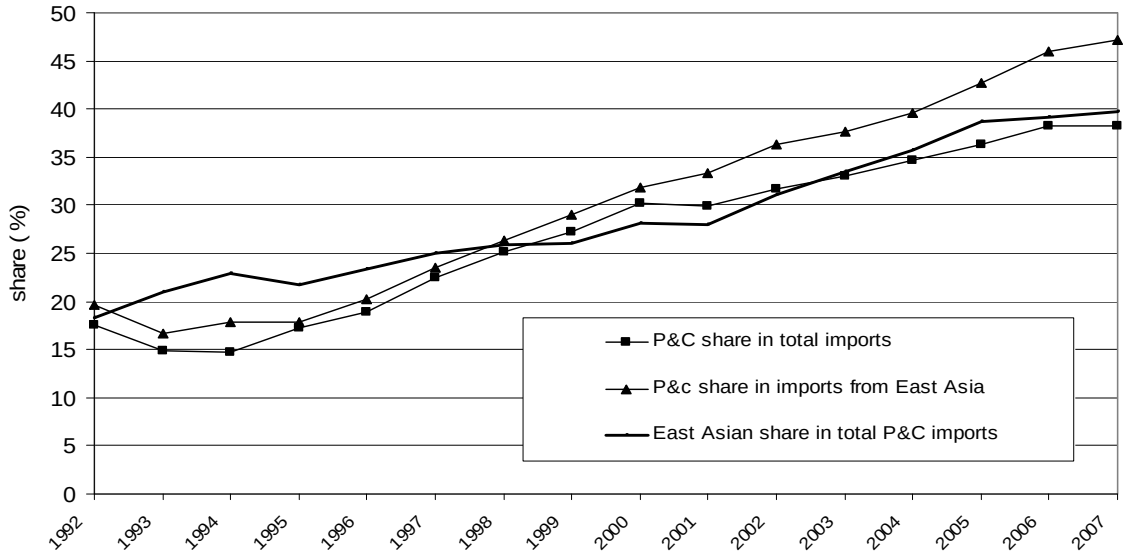
Source: Compiled from the CEIC database. Available at http://www.ceicdata.com/

Figure 3: Parts and Components in the PRC's Manufacturing Trade 1992–2007 (%)

a. Manufacturing Exports



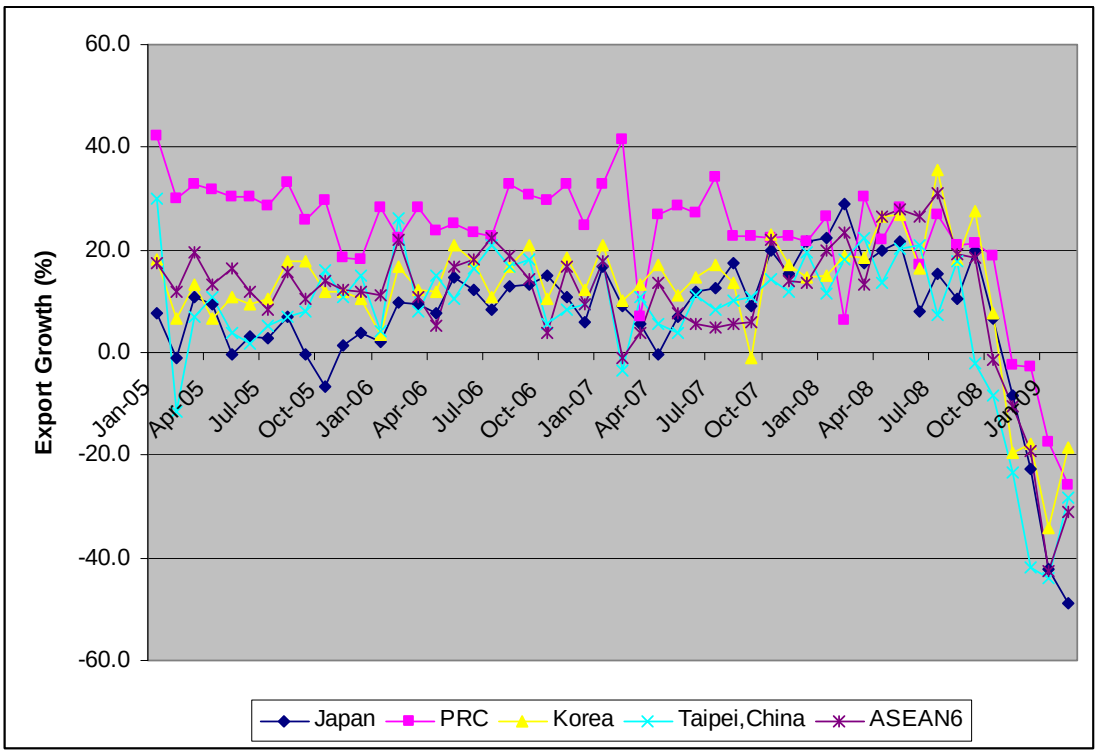
b. Manufacturing Imports



Source: Based on data compiled from CEIC database. Available at http://www.ceicdata.com/

Figure 4: Trade Growth: Japan; the PRC; Korea; Taipei,China; and ASEAN6, Jan 2005–March 2009 (%)

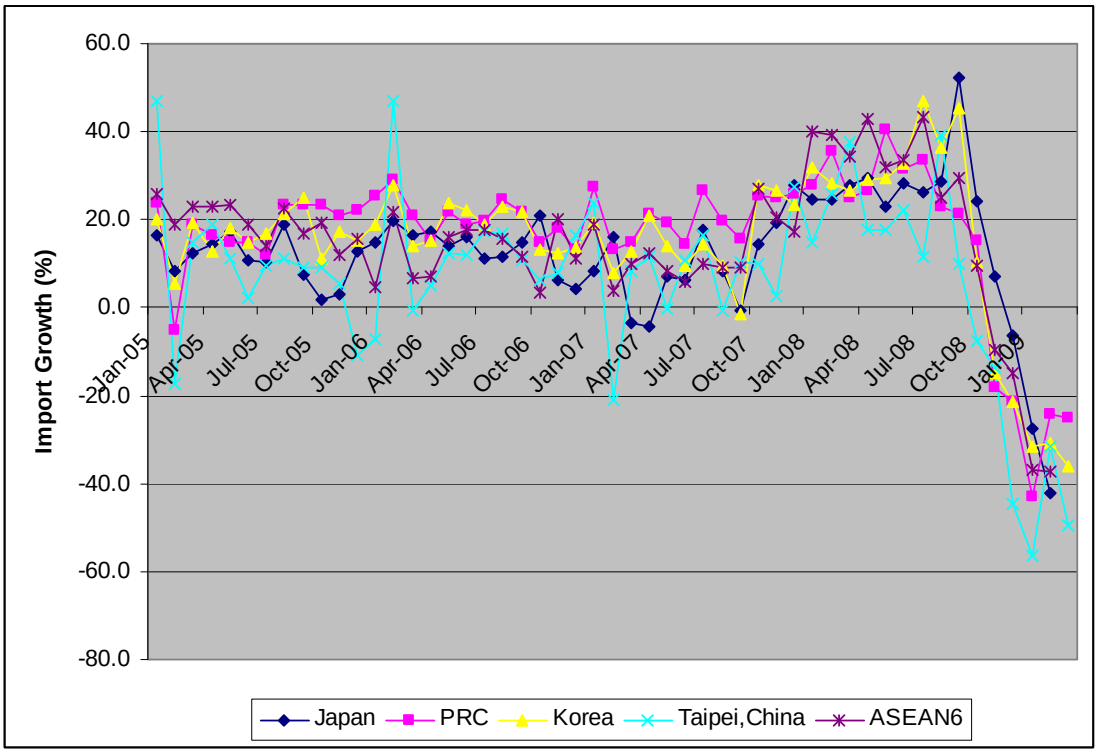
a. Exports



Note: ASEAN 6: Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam

Source: Based on data compiled from CEIC database. Available at http://www.ceicdata.com/

b. Imports



Note: ASEAN 6: Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam.

Source: Based on data compiled from CEIC database. Available at http://www.ceicdata.com/

Among the East Asian countries Japan is by far the worst hit. Japan's exports consist of two broader product categories: capital goods and high-end durable consumer goods (mostly motor vehicles) directly exported predominantly to the US and other developed countries, and components of electronics and electrical goods exported to the PRC and other East Asian countries to be used in final assembly. Exports to the developed countries are directly exposed to the global economic decline. On the other hand, contrary to the predictions of the decoupling enthusiasts, Japan's growing exports in the latter category have been indirectly affected by a decline in final (assembled) exports from the PRC (Fukao and Yuan 2009). The degree of export contraction suffered by Taipei,China and Korea has been much smaller compared with Japan, but, on average, notable higher compared with the other East Asian countries. As in the case of Japan, growing exports to the PRC does not seem to have provided a cushion against collapse in world demand for these two countries. The relatively lower degree of export contraction experienced by Korea, Taipei,China and the second-tier exporting countries in the region compared with Japan could possibly reflect consumer preference for price-competitive low-end products during this crisis.

Table 8 compares growth rates of intra-regional exports of East Asian countries with that of these countries exports to the US and EU. There is no evidence here to suggest that the regional dynamic growth of East Asia has made its economies less susceptible to the world-wide trade contraction Naturally, for East Asia and also for all individual countries, the rate of contraction in exports to the US has been much sharper compared with exports to all other destinations. Exports to the PRC too, however, have recorded a significant contraction, more than 10% in most cases. The PRC's imports from Japan, Korea, and Taipei,China have shrunk more rapidly than imports from other countries. This is not surprising, given the dominant role played by the former countries in the supply of parts and components to ICT assembly activities in the PRC, which are heavily exposed to contraction in import demand in the US and other developed countries.

The data on export and import growth of the PRC (Table 9 and Figure 5), provide further evidence of the synchronous nature of the trade shock of the global economic crisis. In the first quarter of 2009 the PRC's exports to the US contracted by 15.4% accompanied by a contraction in exports to East Asia and the three sub-regions even at slightly higher rates (over 20%). PRC imports from most countries in the region have generally contracted at a much faster rate compared with exports, perhaps an indication of liquidation of imported parts and components by PRC firms given the gloomy market outlook for exports. Overall the PRC's intra-regional imports have contracted at a much faster rate compared to her imports from the US and EU.

Table 8: Export growth by destination region/country, 2007Q1- February 2009 (Year-on-year %)[1]

Region/country	Destination region/economy										
	Total	East Asia	Japan	DEA[2]	ASEAN+3	PRC	Korea	Taipei,China	ASEAN6	US	EU
East Asia											
2008Q1	20.6	18.1	15.0	18.8	20.3	17.8	25.6	7.6	23.8	16.8	-1.5
2008Q2	21.0	19.6	16.0	20.8	22.5	22.8	24.8	11.0	25.1	15.8	5.4
2008Q3	19.3	16.5	18.4	17.4	19.4	14.5	29.1	15.3	21.5	14.3	5.8
2008Q4	-5.6	-9.6	5.9	-12.6	-9.0	-17.0	-8.9	-13.3	-10.1	-5.9	-8.0
2009J	-29.4	—	—	—	—	—	—	—	—	—	—
2009F	-30.8	—	—	—	—	—	—	—	—	—	—
Developing East Asia (DEA)											
2008Q1	19.0	17.2	14.6	16.7	19.2	17.2	26.0	2.5	21.8	15.2	-1.9
2008Q2	21.3	20.6	16.8	20.2	23.0	23.5	29.8	7.7	24.5	16.9	5.1
2008Q3	19.9	17.4	19.6	16.7	19.7	13.5	37.3	10.2	21.4	15.5	5.7
2008Q4	-4.7	-9.2	9.2	-13.6	-8.5	-16.3	-5.9	-17.8	-11.8	-3.8	-7.7
2009J	-27.3	—	—	—	—	—	—	—	—	—	—
2009F	-25.8	—	—	—	—	—	—	—	—	—	—
ASEAN+3											
2008Q1	21.1	18.8	16.8	18.2	20.6	18.4	24.7	10.3	22.4	14.0	3.0
2008Q2	21.9	21.8	17.9	21.5	24.8	29.9	26.4	8.2	24.7	14.0	7.0
2008Q3	21.5	20.5	20.4	20.2	23.7	22.2	35.7	9.1	22.8	11.5	6.8
2008Q4	-4.3	-8.1	9.9	-11.7	-6.6	-14.6	-7.1	-19.3	-9.1	-6.6	-8.9
2009J	-29.9	—	—	—	—	—	—	—	—	—	—
2009F	-32.3	—	—	—	—	—	—	—	—	—	—

ASEAN	Total	East Asia	Japan	DEA[2]	ASEAN+3	PRC	Korea	Taipei,China	ASEAN6	US	EU
2008Q1	21.7	15.9	21.9	13.6	16.8	12.4	22.0	-2.3	15.9	4.4	-10.3
2008Q2	25.5	22.2	19.0	22.4	23.6	31.0	25.5	1.5	22.8	3.4	-1.2
2008Q3	22.1	19.2	23.5	18.4	21.1	23.5	26.5	12.2	18.8	3.9	-6.6
2008Q4	-11.9	-10.4	16.3	-16.2	-10.0	-17.0	-15.1	-18.4	-15.8	-12.4	-18.5
2009J	-36.2	—	—	—	—	—	—	—	—	—	—
2009F	-29.9	—	—	—	—	—	—	—	—	—	—
Japan											
2008Q1	22.9	24.9		24.4	25.8	24.5	19.6	24.1	31.9	7.9	23.9
2008Q2	16.4	20.5		19.8	23.2	26.0	15.3	9.0	24.9	1.4	10.2
2008Q3	15.2	19.7		19.7	23.4	21.4	26.2	6.6	24.2	-4.6	8.3
2008Q4	-8.1	-7.1		-7.3	-4.0	-4.7	-14.7	-19.1	3.6	-16.2	-16.1
2009J	-42.1	-43.2		-43.5	-39.5	-41.5	-38.6	-57.5	-37.7	-49.8	-43.9
2009F	-48.9	-45.8		-45.8	-44.9	-39.0	-45.1	-51.4	-51.5	-58.0	-54.2
Hong Kong, China											
2008Q1	10.5	12.7	-1.4	13.7	12.8	11.6	5.4	3.5	36.6	8.4	-0.9
2008Q2	8.3	9.0	-0.4	9.6	8.9	8.0	-2.4	7.4	27.6	8.2	-1.4
2008Q3	5.7	4.6	3.4	4.6	4.6	3.9	-3.6	4.6	12.6	10.0	0.6
2008Q4	-2.1	0.1	4.0	-2.4	-2.1	-2.4	-22.3	0.4	2.3	-0.6	-7.8
2009J	-21.3	-30.6	3.3	-32.7	-30.2	-34.5	-30.9	-36.6	-19.8	-2.0	-7.0
2009F	-22.6	-16.5	-24.4	-15.5	-16.0	-14.1	-27.8	-21.3	-19.3	-36.1	-36.7

PRC	Total	East Asia	Japan	DEA[2]	ASEAN+3	PRC	Korea	Taipei,China	ASEAN6	US	EU
2008Q1	21.1	19.4	12.1	20.2	24.3		33.1	15.4	34.0	25.0	5.4
2008Q2	22.4	19.5	18.0	17.7	25.6		38.3	21.1	26.3	29.7	12.2
2008Q3	23.0	21.5	18.1	21.9	29.1		52.9	17.3	27.0	23.5	15.3
2008Q4	4.6	-1.2	7.9	-3.9	5.9		7.5	-10.4	3.0	4.1	0.7
2009J	-17.5	-25.7	-9.0	-31.2	-18.6		-29.1	-43.9	-22.3	-17.5	-9.8
2009F	-25.7	-22.8	-27.4	-22.2	-27.6		-27.2	-32.1	-28.1	-30.2	-23.9
2009M	-17.1	—	—	—	—		—	—	—	—	—
Korea											
2008Q1	17.4	19.0	12.3	19.9	22.9	20.5		-1.8	35.5	18.4	-2.7
2008Q2	23.2	29.4	16.8	30.7	32.0	33.7		1.4	38.8	10.1	5.6
2008Q3	27.1	24.9	14.5	25.6	26.9	21.5		-5.0	48.5	17.4	9.9
2008Q4	-9.9	-17.4	-11.5	-20.1	-17.0	-24.1		-39.7	-5.6	-15.4	-6.2
2009J	-34.2	-37.1	-34.3	-38.1	-37.6	-38.6		-61.7	-37.7	-40.3	-27.9
2009F	-18.3	-20.8	-31.3	-19.2	-23.1	-13.4		-44.5	-33.8	-26.0	-18.2
2009M	-21.2	—	—	—	—	—		—	—	—	—
Taipei,China											
2008Q1	17.4	22.3	-0.7	25.0	30.4	41.5	26.4		30.7	12.1	-0.6
2008Q2	18.2	21.7	18.3	21.4	29.4	38.3	27.1		19.8	14.8	-1.4
2008Q3	7.6	6.4	21.5	4.9	12.6	8.9	31.8		12.2	9.2	3.4
2008Q4	-24.6	-29.7	4.9	-33.6	-29.1	-39.6	-28.3		-23.7	-14.8	-16.4
2009J	-44.0	-51.9	-17.8	-55.8	-53.2	-63.5	-45.3		-51.1	-32.7	-26.5
2009F	-28.2	-26.8	-10.5	-29.2	-31.4	-32.6	-38.7		-36.6	-34.7	-24.7
2009M	-35.5	—	—	—	—	—	—		—	—	—

Indonesia	Total	East Asia	Japan	DEA[2]	ASEAN+3	PRC	Korea	Taipei,China	ASEAN6	US	EU
2008Q1	31.9	40.1	32.2	40.8	40.0	44.4	59.7	0.9	39.9	17.4	13.3
2008Q2	29.4	27.3	11.9	36.7	27.1	29.6	59.8	22.6	38.6	18.2	20.4
2008Q3	27.9	28.7	35.7	20.1	25.4	32.5	9.0	28.8	18.9	18.3	20.6
2008Q4	-5.3	-6.1	-3.6	-9.0	-8.7	-19.5	-27.3	39.5	-2.5	-4.5	-3.3
2009J	-36.1	—	—	—	—	—	—	—	—	—	—
2009F	-32.9	—	—	—	—	—	—	—	—	—	—
Malaysia											
2007Q1	8.0	1.1	-4.4	1.8	1.7	35.4	7.4	15.4	-4.4	10.3	-2.8
2007Q2	7.8	5.1	19.4	1.9	6.2	35.9	14.3	5.6	-5.0	9.5	-18.6
2007Q3	6.9	2.2	2.7	1.7	2.8	14.7	1.1	-7.5	-0.7	0.9	-18.6
2007Q4	16.4	14.4	6.6	17.1	16.3	33.0	14.9	2.3	15.1	-3.0	-15.7
2008Q1	19.4	12.9	25.2	9.7	15.5	13.8	9.8	-1.1	13.9	2.9	-17.6
2008Q2	28.5	28.2	23.9	28.6	28.4	55.2	20.3	5.4	23.4	-3.7	-0.3
2008Q3	21.6	23.9	27.2	23.6	26.3	38.0	38.4	14.2	21.0	1.2	-9.5
2008Q4	-12.6	-5.8	43.6	-16.7	-4.3	-18.3	-13.1	-22.5	-15.2	-14.2	-22.1
2009J	-33.9	-27.8	-3.6	-34.8	-28.6	-33.3	-13.7	-46.7	-38.5	-29.3	-33.1
2009F	-25.5	-11.1	-1.0	-12.5	-12.0	6.9	-19.2	-9.7	-21.1	-35.5	-31.5
Philippines											
2008Q1	-2.0	0.8	12.4	-2.6	6.3	1.5	33.7	-16.8	-0.9		3.3
2008Q2	-0.6	5.9	13.5	3.9	13.5	14.1	93.3	-14.5	-6.8		3.8
2008Q3	2.0	6.4	8.5	5.8	8.4	3.5	47.0	13.3	3.6		-4.6
2008Q4	-22.3	-24.5	-12.0	-28.6	-26.8	-35.3	0.3	11.0	-39.8		-18.3
2009J	-42.4	-50.4	-38.3	-54.4	-49.8	-67.6	-18.9	1.2	-53.6		-33.6

Singapore	Total	East Asia	Japan	DEA[2]	ASEAN+3	PRC	Korea	Taipei,China	ASEAN6	US	EU
2008Q1	21.7	23.4	28.8	21.4	21.3	8.7	38.0	14.2	22.6	9.7	-3.3
2008Q2	26.4	27.4	31.8	26.6	29.3	23.4	28.9	11.4	31.0	25.1	-5.0
2008Q3	21.2	21.0	14.8	22.0	22.3	21.0	23.5	20.0	23.8	12.6	-10.6
2008Q4	-12.9	-16.8	-8.3	-17.8	-17.4	-19.3	-19.7	-24.0	-17.8	-12.8	-19.3
2009J	-40.2	-45.2	-35.1	-46.9	-46.6	-53.4	-37.6	-46.2	-47.4	-22.4	-47.3
2009F	-29.1	-29.3	-37.8	-27.6	-30.1	-19.2	-20.3	-40.2	-33.2	-34.8	-46.5
Thailand											
2008Q1	25.5	23.7	9.5	27.9	23.4	26.0	19.7	-23.3	32.6	19.0	10.2
2008Q2	25.5	27.9	18.8	30.5	29.3	22.9	12.9	-14.2	42.9	11.6	7.6
2008Q3	27.2	24.8	23.3	25.4	27.6	15.8	61.4	-4.6	37.5	15.0	14.3
2008Q4	-10.2	-12.3	-6.4	-15.1	-12.2	-5.6	-0.9	-31.1	-20.5	-9.0	-11.7
2009J	-28.7	-37.1	-20.9	-41.3	-37.2	-47.7	-27.8	-54.2	-39.2	-29.5	-29.5
India											
2008Q1	37.9	44.6	39.3	45.6	46.6	34.1	45.2	76.0	73.3	—	11.1
2008Q2	37.4	42.4	-0.2	49.0	51.6	38.6	97.6	16.0	87.5	—	13.6
2008Q3	24.7	21.6	3.4	23.8	21.1	-0.7	74.1	106.5	37.8	—	8.8
2008Q4	-8.0	-30.3	-26.8	-30.6	-31.9	-59.3	38.5	-48.3	-14.8	—	-16.0

Notes:

[1] Growth rates calculated using current US$ values.

[2] DEA = Developing East Asia (East Asia excluding Japan)

Source: Compiled from the CEIC database. Available at http://www.ceicdata.com/

Table 9: PRC: Growth of total merchandise exports and imports by trading partner countries

2007Q1 – 2009Q1 (Year-on-year % change, current US$)

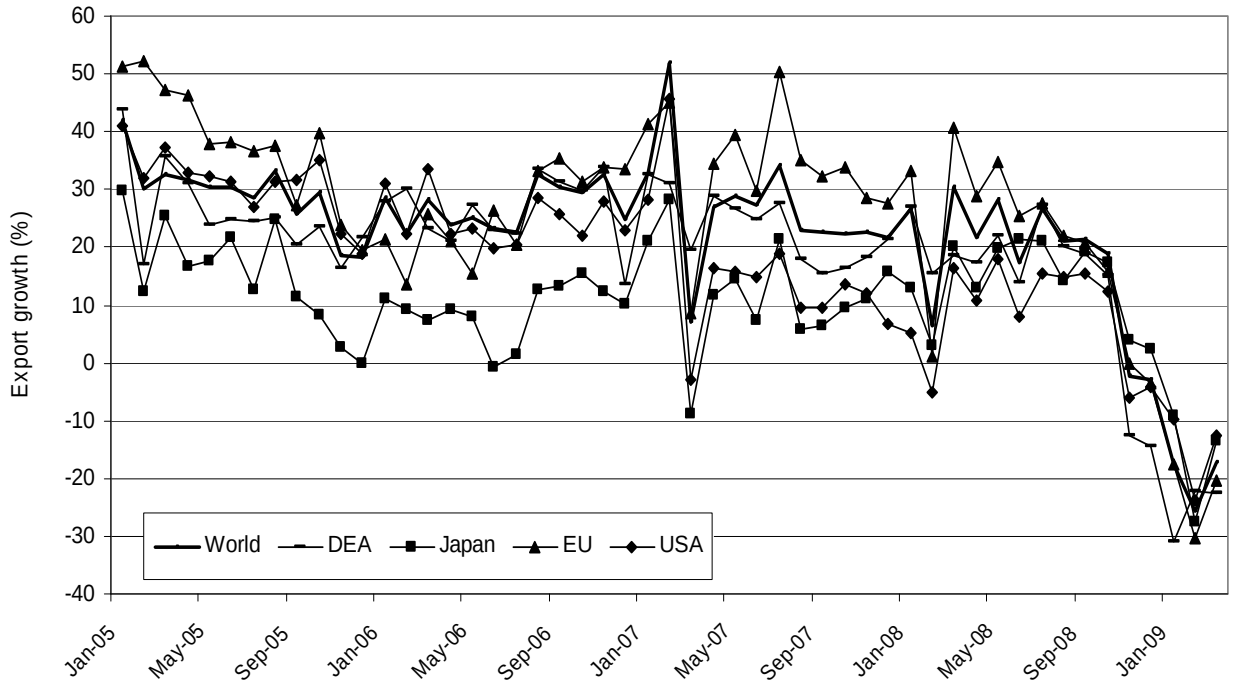
Item	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09
A: Exports											
Total	21.1	22.4	23.0	4.6	-20.1	19.0	-2.3	-2.9	-17.5	-25.7	-17.1
East Asia	19.5	19.5	21.6	-1.2	-22.8	15.6	-8.8	-10.3	-25.6	-22.8	-20.0
Dev. East Asia	20.3	17.7	22.1	-3.9	-25.3	15.2	-12.5	-14.4	-31.1	-22.2	-22.7
ASEAN+3	24.5	25.4	29.2	5.8	-21.9	23.5	0.0	-6.0	-18.6	-27.5	-19.7
ASEAN	34.2	26.0	27.4	2.8	-22.6	21.5	-2.4	-10.6	-22.0	-27.7	-18.1
Japan	12.1	18.0	18.1	7.9	-16.7	17.3	4.0	2.4	-9.0	-27.4	-13.6
Korea	33.1	38.3	52.9	7.5	-29.2	38.3	-3.3	-12.6	-29.1	-27.2	-31.3
Taipei,China	15.4	21.1	17.3	-10.4	-34.5	9.1	-13.1	-27.1	-43.9	-32.1	-27.5
Hong Kong, China	10.8	6.5	11.0	-9.9	-24.0	5.9	-20.1	-15.4	-35.5	-15.2	-21.4
Indonesia	33.2	41.5	54.8	20.2	-26.4	57.7	15.0	-12.1	-20.9	-36.7	-21.6
Malaysia	33.3	28.2	20.8	7.1	-23.9	17.1	-1.7	5.8	-23.8	-34.7	-13.1
Philippines	30.4	22.8	34.5	1.3	-11.8	11.1	-8.3	1.1	-5.5	-21.0	-9.1
Singapore	15.3	5.9	17.1	-0.6	-17.1	15.8	-2.2	-15.4	-10.6	-21.3	-19.4
Thailand	37.2	42.1	38.3	5.9	-27.3	35.4	0.4	-18.1	-29.9	-31.3	-20.8
Viet Nam	88.8	45.1	16.0	-11.1	-30.0	8.7	-21.1	-20.9	-42.7	-24.3	-23.0
India	48.2	56.6	28.5	2.3	-12.6	14.0	-5.8	-1.5	-17.7	-11.9	-8.1
EU	25.0	29.7	23.5	4.1	-22.6	15.7	0.0	-3.5	-17.5	-30.2	-20.2
US	5.4	12.2	15.3	0.7	-15.4	12.4	-6.1	-4.1	-9.8	-23.9	-12.6

B: Imports	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09
Total	29.4	32.9	25.9	-8.0	-30.8	15.3	-18.0	-21.3	-43.1	-24.1	-25.1
	21.0	25.9	13.7	-18.9	-34.4	1.9	-28.6	-30.0	-50.0	-26.4	-26.9
Asia											
Dev EA	19.8	23.2	10.8	-23.5	-35.3	-2.7	-33.0	-34.8	-51.6	-27.5	-26.7
ASEAN+3	17.2	24.1	15.6	-13.5	-30.2	7.3	-22.9	-24.8	-46.5	-20.5	-23.7
ASEAN	19.9	23.8	12.7	-18.9	-33.8	-0.1	-25.4	-31.4	-49.7	-26.3	-25.5
Japan	17.0	23.7	18.7	-5.0	-29.8	15.3	-14.8	-15.4	-43.6	-20.4	-25.5
Korea	14.9	25.0	14.8	-18.5	-26.6	4.9	-30.2	-30.0	-46.4	-14.1	-19.4
Taipei,China	24.5	24.2	5.0	-33.3	-43.9	-13.4	-42.3	-44.3	-58.1	-40.1	-33.4
Hong Kong, China	26.0	-2.5	11.0	-21.4	-49.1	3.3	-41.1	-26.5	-57.9	-45.7	-43.8
Indonesia	31.7	30.3	17.3	-13.5	-38.0	3.1	-18.1	-25.6	-42.8	-32.7	-38.6
Malaysia	18.4	29.5	22.4	-16.1	-25.0	5.6	-21.9	-31.9	-44.4	-16.1	-14.4
Philippines	12.7	5.7	-23.2	-48.6	-61.3	-34.9	-52.0	-59.0	-71.3	-57.9	-54.5
Singapore	6.7	35.5	27.4	-9.3	-23.7	5.8	-21.3	-12.5	-41.2	-12.5	-17.3
Thailand	26.0	22.9	15.8	-5.6	-29.2	21.2	-13.0	-25.1	-47.7	-21.5	-18.5
Viet Nam	64.3	19.0	69.4	6.8	-7.9	36.0	-16.5	0.8	-50.4	14.9	11.8
India	80.8	107.7	35.3	-37.9	-47.7	-12.7	-51.8	-49.3	-59.9	-43.9	-39.1
EU	25.9	33.0	22.7	2.3	-14.7	21.6	-8.6	-6.0	-21.7	-4.9	-17.4
US	29.7	23.0	15.7	3.7	-17.7	10.2	-5.5	6.5	-29.9	-10.6	-12.7

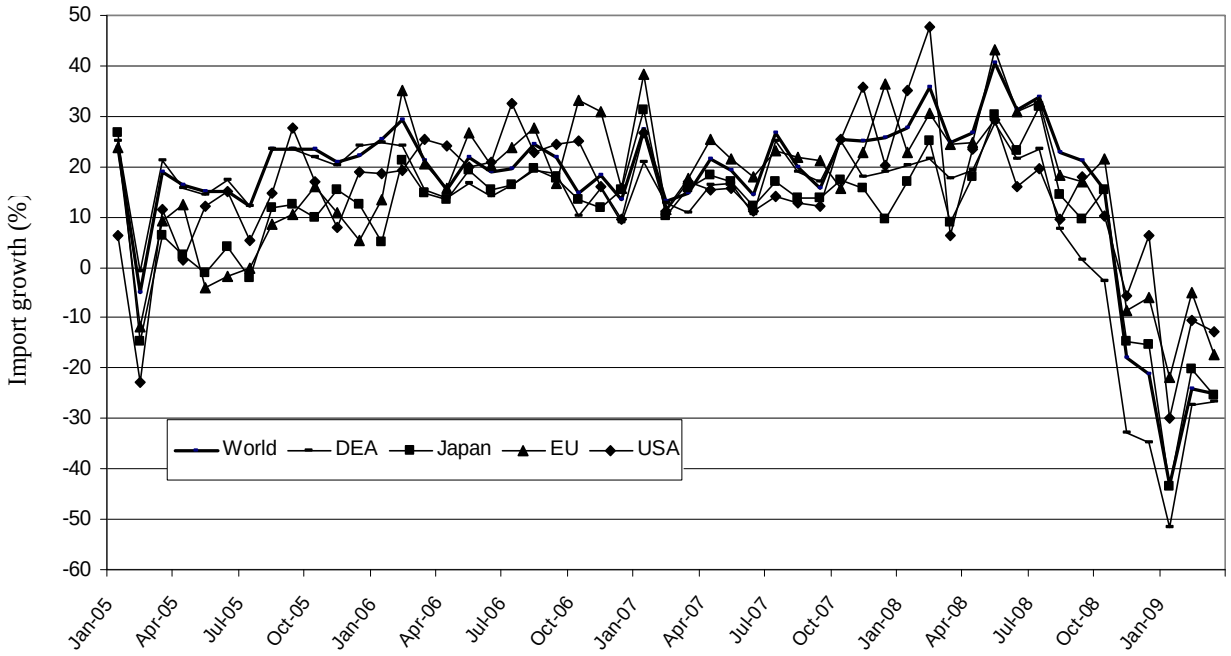
Source: Compiled from CEIC database. Available at http://www.ceicdata.com/

Figure 5: the PRC: Growth of Merchandise Trade, Jan 2005–March 2009 (in %)

a. Exports



b. Imports



Source: Compiled from CEIC database. Available at http://www.ceicdata.com/

Data on export growth by major commodity category for import and export trade of China, and export trade of Malaysia and Thailand are summarized in Tables 10 and 11 respectively. A notable patterns observable for manufacturing exports across all three countries is the relatively sharper contraction in the category of machinery exports (in which network trade is heavily concentrated) compared with other product categories, in particular traditional labor-intensive products (textiles and garments, footwear and other miscellaneous manufactures). Products belonging to the category of machinery and transport equipment, in particular ICT products and

electronics, are predominantly consumer durables. Demand for these products is generally more susceptible than other categories to income contraction. For traditional labor intensive products, developing country producers have the ability to compete on cost and so perform better than developed-country counterparts even in a context of depressed demand.

Table 10: PRC: Growth of total merchandise exports and imports by commodity category

2008Q1– 2009Q1 (Year-on-year % change, current US$)

	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	2009J	2009F	2009M
Exports								
Total exports	21.07	22.40	23.04	4.61	-20.10	-17.48	-25.69	-17.12
Primary	16.27	24.94	29.94	8.62	-17.91	-15.90	-24.33	-13.51
Live Animals and Animal Products	10.88	17.89	25.91	5.65	4.90	-0.95	-17.78	33.44
Vegetable Products	6.08	9.57	6.91	-7.17	-7.91	-11.76	-5.86	-6.10
Animal or Vegetable Fats and Oils etc	60.00	135.05	109.44	40.83	-42.89	-33.13	-48.65	-46.89
Prepared Foodstuffs; Beverages, Spirits etc	9.35	13.50	21.65	0.85	-14.25	-19.91	-21.68	-1.16
Mineral Products	41.31	69.01	82.90	24.52	-31.92	-28.20	-27.40	-40.16
Agro-based raw material	10.57	7.46	8.54	7.48	-16.33	-10.25	-31.50	-7.23
Manufacturing	21.21	23.80	21.95	2.55	-20.68	-19.28	-24.64	-18.12
Products of the Chemical or Allied Industries	48.50	54.01	42.15	3.13	-25.23	-28.76	-21.27	-25.66
Plastics and Articles thereof, Rubber and Articles	13.84	10.14	16.11	10.71	-21.09	-17.22	-28.99	-17.06
Textiles and Textile Articles	22.48	5.28	4.07	8.01	-11.43	-1.18	-35.76	2.64
Footwear, Headgear, Umbrellas, etc	14.69	14.42	19.71	21.25	-1.32	10.33	-21.50	7.22
Base Metals & Articles Of Base Metal	23.29	18.52	26.38	21.98	-9.01	-3.83	-21.69	-1.49
Machinery and Mechanical Appliances, etc (ME)	15.86	-15.74	20.92	4.25	-31.58	-28.51	-27.42	-38.80
Electronics	6.20	12.54	61.54	17.16	-33.53	-27.63	-36.80	-36.15
Electrical Machinery and Equipment	20.32	27.01	20.41	-1.06	-21.50	-22.87	-22.16	-19.47
Vehicles, Aircraft, Vessels etc	18.75	26.45	22.87	5.06	-18.38	-16.07	-22.54	-16.54
Optical, Photographic, Cinematographic, etc	21.64	27.47	18.58	-5.41	-23.99	-28.31	-21.82	-21.85
Miscellaneous Manufactured Articles	41.54	39.01	31.72	9.08	-16.97	-14.08	-16.89	-19.94
Unclassified goods	-23.75	-30.98	-23.87	4.01	-2.10	0.79	1.68	-8.79

Imports	2008Q1	2008Q2	2008Q3	2008Q4	2009Q1	2009J	2009F	2009M
Total imports	29.42	32.93	25.90	-8.01	-30.79	-43.11	-24.12	-25.13
Primary	73.54	74.93	72.46	5.22	-40.70	-47.16	-39.12	-35.82
Live Animals and Animal Products	37.83	27.25	10.71	11.21	-12.24	-25.31	-4.48	-6.93
Vegetable Products	101.79	92.06	131.80	11.63	-2.79	-31.57	8.68	14.51
Animal or Vegetable Fats and Oils etc	89.55	96.01	35.57	-6.86	-54.36	-64.78	-56.23	-42.08
Prepared Foodstuffs; Beverages, Spirits etc	24.56	32.48	54.23	29.56	0.56	-14.19	20.61	-4.74
Mineral Products	84.69	88.74	83.60	4.93	-46.46	-51.92	-44.60	-42.84
Agro-based raw material	12.69	9.34	9.80	-3.35	-29.74	-46.15	-15.46	-27.61
Manufacturing	16.33	19.07	11.43	-12.13	-26.24	-40.99	-17.69	-20.06
Products of the Chemical or Allied Industries	19.64	23.51	19.61	-10.54	-23.86	-38.25	-14.16	-19.16
Plastics and Articles thereof, Rubber and Articles	16.30	22.51	22.70	-15.55	-29.21	-50.96	-16.90	-19.76
Textiles and Textile Articles	6.25	2.66	-3.41	-9.21	-22.81	-39.67	-5.96	-22.78
Footwear, Headgear, Umbrellas, etc	47.48	47.65	24.78	12.63	-2.83	-28.41	37.83	-17.90
Base Metals & Articles Of Base Metal	14.08	5.79	8.27	-15.01	-26.26	-43.60	-19.29	-15.88
Machinery and Mechanical Appliances, etc (ME)	11.72	18.04	9.83	-10.68	-24.11	-39.31	-15.14	-17.89
Electronics	16.29	19.94	15.04	-1.02	-19.83	-29.43	-10.72	-19.34
Electrical Machinery and Equipment	9.47	17.09	7.38	-15.15	-26.31	-44.49	-17.36	-17.10
Vehicles, Aircraft, Vessels etc	20.02	28.45	14.38	-1.32	-17.14	-10.58	-19.36	-21.47
Optical, Photographic, Cinematographic, etc	42.34	35.07	9.77	-21.39	-40.22	-52.65	-34.45	-33.55
Miscellaneous Manufactured Articles	11.56	20.82	1.36	-8.12	-5.43	-28.27	10.05	1.91
Unclassified goods	91.60	136.24	54.52	77.18	-14.58	12.79	-25.90	-30.62

Source: Compiled from CEIC database. Available at http://www.ceicdata.com/

Table 11: Growth of Exports from Malaysia and Thailand

2008Q1–2009Q1 (Year-on-year % change,)1

	2008Q1	2008Q2	2008Q3	2008Q4	2009J1	2009F
Malaysia						
Primary products	65.3	61.2	51.5	0.4	-29.0	-28.4
Food and Live Animals	39.2	45.7	45.2	6.6	-16.6	-4.8
Exports: Beverages and Tobacco	22.7	59.4	29.0	-6.4	-21.2	2.7
Crude Materials Inedible	33.5	24.8	19.6	-17.6	-44.2	-53.6
Mineral Fuels	61.4	56.9	59.8	10.3	-28.9	-25.5
Animal, Vegetable Oils and Fats	109.4	93.5	54.1	-15.0	-28.3	-33.1
Manufactures	5.9	19.8	13.2	-17.3	-35.2	-24.8
Chemicals	15.5	35.2	27.5	-21.2	-37.7	-33.9
Manufactured Goods	30.4	21.8	28.5	-11.1	-35.5	-22.3
Machinery and Transport Equipment	-1.2	16.9	7.3	-21.4	-37.8	-24.2
Misc. Manufactured Articles	8.4	13.4	13.1	6.3	-16.5	-15.8
Others	5.7	-38.3	-32.0	-54.8	-74.0	-33.2
Total exports	16.1	17.3	14.5	-17.1	-36.2	-35.9
Thailand						
	2008Q1	2008Q2	2008Q3	2008Q4	2009J1	2009F
Primary products	38.9	51.2	47.8	-15.8	-42.5	-40.3
Food and Live Animals	29.3	38.2	30.0	-0.4	-10.0	-22.9
Beverages and Tobacco	43.6	31.8	15.8	30.4	-45.5	-16.0
Crude Materials Inedible	28.1	26.1	35.5	-15.0	-47.8	-55.5
Mineral Fuels	38.9	65.3	65.2	-27.0	-54.5	-45.2
Animal, Vegetable Oils and Fats	230.8	102.2	54.4	10.0	-63.8	-47.8
Manufactures	12.1	11.7	9.7	-17.3	-37.7	-34.5
Chemicals	19.3	25.4	32.1	-15.3	-48.8	-34.7
Manufactured Goods	15.1	10.0	17.0	-5.5	-31.0	-30.7
Machinery and Transport Equipment	9.3	8.3	0.8	-20.6	-35.4	-35.2
Misc. Manufactured Articles	17.4	28.5	35.1	-7.4	-18.8	-24.9
Others	1.6	-16.7	-18.7	-31.5	-64.6	-53.3
Total exports	19.5	28.9	21.6	-12.6	-33.9	-25.6

Notes: [1] Growth rates calculated using current US$ values.

Source: Compiled from CEIC database. Available at http://www.ceicdata.com/

4. POLICY OPTIONS

At the end of June 2009, some signs of the global economic contraction bottoming appeared. The economic forces unleashed by the crisis, however, will probably run rampant for years. Although the frequency of 'green shoots' reported in the news media has been increasing recent weeks, it is still hard to paint a reasonable growth trajectory extending beyond even few months (the IMF has been revising its growth forecasts almost every month since the onset of the crisis!). There could even be a "lost decade" for the US economy (and even for a few countries in Europe) like that suffered by Mexico in the 1980s or by Japan in the 1990s (Shiller 2008). The current economic downturn mainly reflects balance-sheet adjustments by both firms and households in the US, precipitated by a financial crisis. It is also unusually synchronized around the globe. These characteristics, when interpreted in the context of the accumulated evidence on recessions in developed countries since the 1960s, point to a process of a slow recovery and a subsequent longer

period of slow growth (IMF 2009). After the recovery process sets in, the US and other crisis-affected developed countries will have to save more and import less in order to wind down their massive accumulated debts.

In the current global economic setting, there has been a growing emphasis in Asian policy circles on the need for rebalancing growth—engineering a structural shift in aggregate domestic demand away from exports and toward domestic production (ADB 2009). The policy measures under consideration to achieve this include both measures to redress export bias in the incentive structure and various measures to reduce the propensity for high savings, with a view to boosting domestic demand (ADB 2009). The major focus of this policy advocacy is on the PRC.

The PRC's degree of export dependence is unusually high for a continental economy of its size. The PRC's export to GDP ratio (around 40%) grossly exaggerates its export dependence: assembly exports (or processed exports) which rely heavily on imported components accounts for over two thirds of total merchandise exports. .Even the available 'net' trade decency estimates (around 20%), however, seem too high for the PRC's potential economic size. Moreover the unusually high domestic saving rate, the vast population base, and highly controlled domestic financial system, all indicate the vast potential for domestic demand-led growth in the PRC. However, the PRC faces a formidable political constraint in shifting policy emphasis away from export-oriented growth and toward domestic market-oriented growth: there is strong domestic pressure to maintain the momentum of employment-intensive growth through export orientation (Yu 2008, Gan 2008).

About half of the PRC's massive labor force is still engaged in agriculture, where productivity is, on average, barely one eighth of that in industry and about a quarter of that in the service sector. Agriculture still accounts for over 45% of total employment in the country even though agriculture's share in GDP is only 13%. GDP per capital in PRC is three times the value added per worker in agriculture. The country still remains very rural, with a rate of urbanization of about 40% of the total population, much lower than a 'normal' level of 60% consistent with the PRC's income level. These features, coupled with the high skilled-unskilled wage differential (which, according to some estimates, has risen from 1.3x to 2.1x over the past decade) suggest that the PRC still has much potential for moving unskilled workers out of agriculture and into manufacturing and other productive urban sector activities. Given that there is ample availability of unskilled and semi-skilled labor, and that capital involved in export-production is internationally mobile, export-orientation and import-substitution (without imposing policy barriers to imports) are not mutually exclusive policy priorities for the PRC.

The pressure for maintaining export competition in a context of shrinking world demand could provide a fertile setting for mercantilist Trade policies. There are already some signs of such tendencies (Bradsher 2009). For instance, in late December 2008, PRC officials announced a series of measures to help exporters, including a new directive to state banks to expand lending, more particularly, to small- and medium-size exporters, setting up new government research funds to help exporters, and export tax rebates for the textile and garments sector. The latter initiative is a clear reversal of a government policy stance, declared a few years ago, to encourage textile and garments exporters to move away from those labor intensive product lines in an effort to set the stage for the PRC economy to climb the ladder of economic development. Municipal governments in the PRC have also stopped raising the minimum wage in an attempt to reduce pressure on costs for exporting firms.

These initiatives by the PRC are starting to cause concern in other Asian countries. For instance, Indonesia has already imposed a series of administrative measures to make it harder for PRC products to enter the Indonesian markets. Starting in 2010, PRC exports of garments, electronics, shoes, toys and food from slated for import into Indonesia are only allowed to be shipped from designated ports. Indonesian importers are also required to arrange for a detailed inspection of goods by the Indonesian Customs before they are

loaded on ships or planes bound for Indonesia, and then have every single container inspected on arrival. There are also signs of political concern about unfair import competition from the PRC in other countries in the region such as Cambodia and Viet Nam.

This emerging trade policy reaction is not an isolated Asian development. Rather it is a manifestation of a wider global trend toward resurgence of "new protectionism" in the wake of the global economic contraction triggered by the financial crisis, which is reminiscent of the rise of "new protectionism" in developed countries in the slow growth period following the first oil crisis in the early 1970s (Bhagwati 1988, Erixon and Razeen 2009). The protectionist threat is perhaps greater this time, given the severity of the global economic downturn. There are already signs of countries increasingly resorting to disguising the means of protection, such as filing anti-dumping complaints and stringent implementation of technical, sanitary, and phytosanitary standards, in addition, of course, to the massive financial support to automobile manufacturers extended by the US and some other countries (Gamberoni and Newfarmer 2009).

What are the policy options available to governments in East Asian countries to avert the threat of new protectionism? One option under consideration is to form a region-wide free trade association (FTA), encompassing ASEAN, the PRC, Japan and Korea, and possibly India (Kawai and Wignaraja 2009, ADB 2009).

Trade within global production networks is generally more sensitive to tariff changes than is final trade (or total trade as captured in published trade data) (Yi 2003). Normally a tariff is incurred each time a good-in-process crosses a border. Consequently, a given reduction in tariffs on components imports leads to a decline in the cost of production of a vertically integrated good by a multiple of the initial reduction; this is not the case for a regularly traded good. Tariff reduction may also make it more profitable for goods that were previously produced entirely in one country to become vertically specialized. Consequently, in theory, the trade-stimulating effect of FTAs would be higher for network trade than for normal trade, other things remaining unchanged. In many East Asian countries (particularly in Indonesia, Malaysia, Thailand, Philippines and Korea and the PRC) tariff rates are high, particularly on electrical machinery and transport equipment (although rates on electronics have been notably reduced under the Information Technology Agreement (ITC) agreement in all these countries other than in Indonesia which is not yet a signatory to this agreement) (Table 9). At first blush, this appears to be an area where FTAs can potentially play a role in promoting trade in finished goods among economies in the region. As we have already noted, there is potential for growth in intra-regional trade in this dynamic product category under a duty free regime as income levels increase.

Even though rates on electronics have been notably reduced under the ITC agreement in all major East Asia countries other than in Indonesia which is not yet a signatory to this agreement, electrical appliances have not been included in the agreement. (ADB 2009: Box I.1) (Table 12). At first blush, this appears to be an area where FTAs can potentially play a role in promoting trade in finished goods among economies in the region.

Table 12: Tariff Rates on Manufacturing Imports 2006

(unweighted average in %)

	All manufactures[1]			***Electronics***[2]		**Electrical Appliances**[3]	
	Total	Parts and components	Final Goods	Parts and components	Finished Goods	Parts and components	Final goods
Thailand	7.5	7.6	7.5	1.5	**1.8**	9.7	16.3
PRC	9.6	8.2	9.8	1.4	**3.2**	9.6	15.7
India	11.1	10.6	11.2	1.6	**2.7**	11.4	11.1
Japan	2.5	0.2	2.7	0.2	1.5	0.7	2.5
Korea	7.5	6.5	7.6	0.3	**1.7**	7.2	6.8
Taipei,China	4.6	3.5	4.7	0.1	**1.3**	4.6	5.1
Indonesia	7.3	3.9	7.7	0.5	**1.3**	6.1	9.3
Philippines	6.0	3.3	6.3	0.4	**1.2**	4.7	5.3
Malaysia	8.7	5.2	9.1	0.3	1.3	1.4	11.3

Notes:

[1] SITC 5 though 8 less SITC 68.

[2] SITC 75+76+772 +776

[3] SITC 77 excluding SITC 772 and 776

Source: Compiled using data extracted from the World Trade Organization (WTO) website at http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm.

In reality, however, the effect on trade of any FTA would depend very much on the nature of rules of origin built into it. Trade-distorting effects of rules of origin (ROO) are presumably more detrimental to network trade than to conventional final-goods trade, because of the inherent difficulties in defining the 'product' for duty exemption, and due to the transaction costs associated with the bureaucratic supervision of the amount of value-added in production coming from various sources. Hence, even small differences in ROOs among overlapping FTAs can raise business costs and divert trade and associated investment. In addition, at the highly disaggregate level, e.g. (6-digit level of the Harmonized System (HS) of trade classification, it is not easy for individual firms to identify HS codes for their related products (inputs and outputs) so that it creates room for policy discretion.[9] Those costs are much more onerous for small- and medium-size trading firms in developing countries than they are for large corporations. There are two other complications involved in bringing network trade under FTAs (or other preferential trading arrangements.

First, formulating ROOs for network-related trade is rather complicated. The conventional value-added criterion is, essentially, not applicable to this trade because the products involved are low value-added by their nature. The only viable option is to opt for "change in tariff lines" based ROOs (that is, classifying a product which shift from an intermediate goods tariff line on the import side to a final good tariff line on the export side as eligible for FTA tariff concessions), but this leads to insurmountable administrative problems because electrical and electronics goods, and their related parts and components belong to the same tariff codes (at the HS-6 digit level, which is the normal basis for designing this type of ROO) (Kohpaiboon 2008: Appendix). For example, electrical appliances assembly plants is Thailand which use imported bare printed circuit boards (BPCB) together with other locally

[9] As argued in Kohpaiboon (2008), when analysis undertaking at the 6 digit HS level, it is likely to find mismatched cases in which official records of preferential trade far exceed actual trade simply because it is likely for firms to make mistakes in identifying their own HS codes at the very high disaggregated level. But when the 6-digit-HS level is aggregated to 4 digit HS levels, mismatching cases disappear.

procured electronic components (e.g. diodes, integrated circuits, semi-conductors) for printed circuit board assembly (PCB) for export are not eligible for FTA concessions because BPCBs and PCBs belong to the same HS code 853690.

Second, the process of international production fragmentation and the network-based international production is characterized by continuous emergence of 'new' products. Given the obvious administrative problems involved in revising ROOs for these new products, product invention and innovation naturally opens up room for unnecessary administrative delays and/or tweaking of rules as a means of disguised protection (Elek 2005). Moreover, given the importance of extra-regional markets for final goods to growth for production networks in Asia, maintaining barriers to trade against non-members (while allowing free trade among members) can thwart the "natural" expansion of fragmentation-based trade across countries.

The experience to date with FTA negotiations in the region (and beyond) clearly attests to the political power of producer interests in insulating a few heavily protected sectors against any attempt to cut tariffs through FTAs. The same sensitive products, which are proving hard to liberalise in the Doha Development Agenda of the WTO, or among APEC economies, are also routinely exempted from "free trade" deals. Furthermore, any marginal liberalization of border barriers to these products tends to be negated by product-specific ROOs and by retaining the right to impose less transparent forms of protection, such as anti-dumping actions. There is also the possibility that authorities use ROOs as a means of protecting import-competing industries, when a country pursues both export-promoting and import-substitution industrialization strategies simultaneously (as is the case with a number of countries in the East Asian region). Twisting ROOs for this purpose become easier when the production process involves procuring parts and components from a number of sources: tightening ROOs on the procurement of one critical input would suffice to protect competing domestic producers of the final (assembled) product.[10]

It is also important to note that the available evidence on the operation of current FTAs in the region (and beyond) augur well for the potency of a new region-wide FTA. The actual utilization rates of tariff concessions provided under these FTAs are rather low, raging from about 5% to 20% across different product categories (Takahashi and Urata 2008[11], Kawai and Wignaraja 2009, Kohpaiboon 2008). More importantly, there is evidence that the utilization rates are often firm and/or industry specific: Normally large firms and firms with close trade and FDI ties, or those located in particular industries where meeting ROO requirements are simple and straightforward, use FTAs. The upshot is that FTAs are unlikely to have the potential to promote trade in a neutral and broad-based fashion. Another relevant concern is that creating an Asia-wide trade bloc entails substantial risks given Asia's heavy reliance on extra-regional markets for its export dynamism. Such a strategy would invite swift retaliation by the US and EU.[12]

[10] ROOs relating to TV sets (HS852812) in the Thailand-Australia Free Trade Agreements (Annex 4.1) can be used to illustrate this point. To become eligible for preferential tariffs, TV producers must source three parts (HS701120, 854011, and 854091) locally. But item 854011 (TV Picture Tubes) are not domestically available; Thai color TV assembly is viable only if this item is procured from Japan; Taipei,China; or Korea. Thus, even though preferential tariffs on TVs under the FTA (20%) is very attractive, the Thailand-Australia FTA is virtually irrelevant for TV assembly plants located in Thailand.

[11] This study is based on a survey the use of FTA tariff concessions by Japanese firms conducted in early 2006. According to a follow-up survey conducted by the authors in early 2009, the usage rate of tariff concessions under the Japan-Mexico FTA increased from 15% at the time of the previous survey to 35% in 2008. This finding seems to suggest that the utilization rates of FTA concessions tend to increase over time as increasing awareness of the benefits of new tariff concessions gets wider publicity in the business community and firms become familiar with the related administrative procedures (based on comments at the ADBI Conference by Professor Urata).

[12] A firm commitment as part of the FTA to not to increase existing tariff and non-tariff barriers against non-member is unlikely to avert this threat because an Asia-wide FTA, given that it encompasses a number of

In any case, the chances of negotiating a region-wide FTA look rather slim given the ongoing crisis. In particular, the PRC may not want to get involved in such an endeavor, not only because of its new emphasis on domestic-oriented growth but also because of its official commitment to averting protectionist backlash against its exports from developed countries.[13] Governments in Southeast Asian countries are also concerned that any region-wide attempt to liberalize trade would give an unfair advantage to the PRC, given its vast domestic economy, in attracting FDI for global production networks, accentuating regional differences in the cost of production.

There is, therefore, a strong case for devising strategies to fight new protectionism as part of a long-term commitment to nondiscriminatory multilateral and unilateral liberalization. The Information Technology Agreement which came into force in 1997 seems to be a promising example to follow (Elek 2008). There is also case to be made for Asia's G7 countries and the ASEAN Secretariat to consolidate their positions against protectionist tendencies;[14] East Asian countries have benefited enormously from the process of multilateral trade opening over the past four decades, and averting policy backsliding while striving to finalize the incomplete reform agenda is vital for their recovery from the crisis and to sustain future growth.

5. CONCLUDING REMARKS

Intra-regional trade data, based on conventional measures, are generally consistent with the view that Asia, in particular East Asia, has become increasingly integrated through merchandise trade. But, considering both the ongoing process of international production fragmentation and East Asia's unique role in the related global production networks, it is clearly evident that the increase over time in the ratio of intra-regional trade has emanated largely from a rapid increase in intra-regional imports; the expansion of intra-regional exports expansion has persistently lagged. The asymmetry in the share of intra-regional trade between imports and exports is much sharper when reported trade data are adjusted for trade in parts and components. Clearly, the region's dependence on the rest of the world for its trade expansion has in fact increased over the time.

This inference is basically consistent with the behavior of trade flows following the onset of the global financial crisis. The remarkably synchronized nature of trade contraction across countries in the region is generally consistent with the close trade ties among the East Asian countries forged within regional production networks. Naturally, the rate of contraction of exports from East Asia, both as a whole and for its countries, to the US has been much sharper compared with exports to the PRC and other destinations. But, the PRC has failed to provide a cushion against this export contraction, as postulated by the decoupling thesis. Taipei,China, Korea, and Japan have suffered the highest rates of contraction in exports to the PRC compared with the other countries in the region, reflecting their greater dependence on that market. PRC imports from most countries in the region have contracted at a much faster rate compared to exports to the region, perhaps an indication of liquidation of imported parts and components by Chinese firms given the gloomy outlook for exports.

What are the implications of our findings for the new policy emphasis on rebalancing growth in East Asia through the expansion of domestic demand, particularly in the PRC?

It is not realistic to anticipate a dramatic shift in the PRC's developing strategy away from export-orientation and toward domestic demand-led growth. There is strong domestic

significant global trading nations, is likely to involve significant trade diversion even under the existing extra-regional tariffs.

[13] See for instance the recent article wrote by the Chinese Minister of Trade in the Wall Street Journal (Deming 2009).

[14] I owe this point to a comment at the ADBI Conference by Professor Shujiro Urata.

pressure in the PRC to maintain the momentum of employment-intensive growth through export orientation. Moreover, the PRC has immense potential to continuing with efficient export-oriented growth. China is still a labor-surplus economy and, given that capital is mobile, export-orientation and import-substitution are not mutually exclusive policy priorities. The policy emphasis should be on removing constraints on domestic demand expansion and redressing export incentive biases.

The emphasis on redressing policy biases against domestic-oriented production needs to be accompanied by attempts to avoid a backlash against openness to foreign trade. The pressure for maintaining export competitiveness in the face of shrinking export demand would naturally lead to resurgence of "new protectionism" (as happened in the world economy—mostly in developed countries—during the era of slow growth following the oil crisis in the early 1970s).

Can a region-wide FTA help? Notwithstanding significant tariff cuts over the years, tariffs on some dynamic manufacturing product lines, in particular electrical goods and transport equipment still remain high in most developing East Asian countries. Therefore, at first impression, promoting intra-regional trade through an FTA seems possible. In theory, the trade-stimulating effect of FTAs would be higher for network trade than for normal trade, other things remaining unchanged. The experience to-date with FTAs in the region (and beyond), however, does not leave room for much optimism. The tendency so far has been that the political power of producer interests usually succeed in insulating a few heavily protected sectors against any attempt to cut tariffs through FTAs; the same sensitive products, which are proving hard to liberalize in the Doha Development Agenda of the World Trade Organization or among APEC economies, are also routinely exempted from "free trade" deals. There are also a number of formidable difficulties involved in formulating ROOs for network-related trade. The actual utilization rates of tariff concessions offered under the existing FTAs are not only rather low but vary considerably across industries and sectors, casting doubt on the usefulness of FTAs as a means of promoting intra-regional trade in a neutral, broad-based fashion. In any case, chances of negotiating a region-wide FTA look rather slim given the ongoing crisis.

In this context there is a strong case for devising strategies to fight new protectionism as part of a long-term commitment to nondiscriminatory multilateral and unilateral trade liberalization. Perhaps the East Asian policymakers want to consider seriously the example of the ITC Agreement and examine the possibility of extending it to cover trade in electrical goods and possibly a wide range of other new products.

REFERENCES

Anderson, J. 2008. China's Industrial Investment Boom and the Renminbi. In Debating China's Exchange Rate Policy, edited by M. Goldstein and N. R. Lardy. Washington, DC: Peterson Institute for International Economics.

Asian Development Bank (ADB). 2009. Asian Development Outlook: Rebalancing Asia's Growth. Manila: ADB.

Athukorala, P. 2005. Product Fragmentation and Trade Patterns in East Asia. Asian Economic Papers 4(3): 1-27. (Originally issued as a Trade and Development Discussion Paper 2003/21, Division of Economics, Research School of Pacific and Asian Studies, Australian National University).

———. 2009. The Rise of China and East Asian Export Performance: Is the Crowding-out Fear Warranted?'. World Economy, 32(2), 234–66.

Athukorala, P., and A. Kohpaiboon. 2008. 'Trade and Investment Patterns in Asia: Implications for the Debate on Multilateralising Regionalism', paper for presentation to the conference on 'Multilateralizing Asian Regionalism', Asian Development Bank Institute, Tokyo, Japan, 18–19 September.

Athukorala, P., and N. Yamashita. 2009. Patterns and Determinants of Production Fragmentation in World Manufacturing Trade. In Globalization, Regionalism and Economic Interdependence, edited by Filippo di Mauro, Warwick McKibbin and Stephane Dees. Cambridge UK: Cambridge University Press.

Baston, A., and J. W. Miller. 2009. Chinese Export Decline Deepens in May. Wall Street Journal 12 June.

Bhagwati, J. 1988. Protectionism. Cambridge, MAS: MIT Press.

Bergsten, C. F., B. Gill, N. R. Lardy, and D. Mitchell. 2006. China: The Balance Sheet. New York: Public Affairs.

Bradsher, K. 2009. As Trade Slows, China Rethinks its Growth Strategy. New York Times 1 January.

Buiter, W. 2009. Green Shoots: Grounds for Cautious Pessimism. www.voxEU.org. 29 April.(accessed on 4 May 2009).

Deming, C. 2009. China Calls on the World's Governments to Learn from History. Wall Street Journal 20 February.

The Economist. 2009. Decoupling Emerging Asia: An Independent Streak. 26 January.

Elek, A. 2005. The mid-term review of the Bogor goals: strategic issues and options. In The Future of APEC and Regionalism in the Asia Pacific: perspectives from the second track. Jakarta: Pacific Economic Cooperation Council and Singapore: Center for Strategic and International Studies.

———. 2008. Immunising future trade against protectionists: preventing the emergence of more sensitive sectors. Asia Pacific Economic Papers 372. Canberra: Australia-Japan Research Center, Australian National University.

Erixson, F.,, and R. Sally. 2009. Fighting the Urge for Protectionism. Far Eastern Economic Review 172(1): 28–31.

Fukao, K., and T. Yuan. 2009. Why is Japan so heavily affected by the global economic crisis? www.voxeu.org. 8 June.

Gamberoni, E., and R. Newfarmer. 2009. Trade Protection: Incipient but Worrisome Trends. www.voxeu.org. , 4 March.

Gang, F. 2008. Renminbi Revaluation and US Dollar Depreciation. In Debating China's Exchange Rate Policy, edited by M. Goldstein and N. R. Lardy. Washington, DC: Peterson Institute for International Economics.

Garnaut, R. 2003. Australia and Japan: Time to be Important to Each Other Again. Address to the Australia-Japan Business Committee conference, Kyoto, 5 October. (unpublished paper)

International Monetary Fund. 2009. Global Economic Outlook. Washington DC: IMF.

Kawai, M., and G. Wignaraja. 2008. The Asian Noodle Bowl: Is It Serious for Business? ADBI Working Paper 136. Tokyo: Asian Development Bank Institute.

———. 2009. Multilateralising Regional Trading Agreements in Asia. In Multilateralizing Regionalism: Challenges for the Global Trading System, edited by Richard Baldwin and Patrick Low. Cambridge UK: Cambridge University Press.

Kimura, F., and M. Ando. 2005. Two-dimensional Fragmentation in East Asia: Conceptual Framework and Empirics. International Review of Economics and Finance 14(3): 317–348.

Lee, H., and D. W. Roland-Holst. 1998. Prelude to the Pacific Century: Overview of the Region, Leading Issues and Methodology.. In Economic Development and Cooperation in the Pacific Basin: Trade, Investment, Environmental Issues, edited by Hiro Lee and David W. Roland-Holst. Cambridge UK: Cambridge University Press.

Kohpaiboon, A. 2008. Exporters' Response to AFTA Tariff Preferences: Evidence from Thailand. Economics Discussion Paper 2008/4, Faculty of Economics, Thammasat University, Bangkok.

McKendrick, D. G.., Richard F. Doner, and Stephen Haggard. 2000. Silicon Valley to Singapore: Location and Competitive Advantage in the Hard Disk Drive Industry. Stanford, CA: Stanford University Press.

Ng, F., and A. Yeats. 2003. Major trade trends in East Asia: what are their implications for regional cooperation and growth? Policy Research Working Paper 3084. Washington DC: World Bank.

Park, Y. C., and K. Shin. 2009. Economic Integration and Changes in the Business Cycle in East Asia: Is the Region Decoupling from the Rest of the World? Asian Economic Papers 8(1): 107-140.

Shiller, R. 2008. The Subprime Solution: How Today's Global Financial Crisis Happened, and What to Do about it. Princeton NJ: Princeton University Press.

Takahashi, K., and S. Urata. 2008. On the Use of FTAs by Japanese Firms. RIETI Discussion Paper 08-E-002. Graduate School of Asia-Pacific Studies, Waseda University, Tokyo.

Urata, S. 2006. A Shift from Market-driven to Institution-driven Regionalization in East Asia. Paper presented at the Conference on Economic Policy Reform in Asia, Stanford University, June.

Yoshitomi, M. 2007. Global Imbalances and East Asian Monetary Cooperation. In Towards and East Asian Exchange Rate Regime, edited by D. Chung and B. Eichengreen. Washington, DC: Brookings Institutions Press.

Yu, Y. 2007. Global Imbalances and the PRC. The Australian Economic Review 40(1): 3–23.