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

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August 2009
Working Paper No. 2009/09

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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 global financial crisis against the backdrop of pre-crisis trade patterns. The analysis is motivated by the ‘decoupling’ thesis, which was a popular theme in the 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 pre-crisis policy stance favoring export-oriented growth? The findings caution against a possible policy backlash against openness to foreign trade arising from the new-found enthusiasm for rebalancing growth, and make a strong case for a long-term commitment to non-discriminatory multilateral and unilateral trade liberalization.

JEL Classification: E32, F15, F40, O53

Key words: production networks, trade patterns, global financial crisis

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

1. Introduction

The ‘decoupling’ thesis, the notion that the East Asian region has become a self-contained economic entity with potential for maintaining 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 this 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 China as a world export powerhouse. A few studies questioned the validity of this inference in a context where international production fragmentation and the related network trade had been rapidly expanding with East Asia as its centre of gravity (Athukorala 2005[2003], 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 China 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 with a view to reducing its susceptibility to vagaries of the rest of the world (ADB 2009).

What has gone wrong with the decoupling thesis? Was the trade integration

* Revised version of a paper presented at the conference on Global Financial and Economic Crisis: Impact, Lessons and Growth rebalancing, Asian Development Bank Institution, Tokyo, 22-23 April 2009. The authors are grateful to the formal discussant, Professor Shujiro Urata and other conference participants for very helpful comments.

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

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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 pre-crisis policy stance favouring 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 pre-crisis 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 (South Korea, Taiwan and Hong Kong), China and members of the Association of Southeast Asian Nations (ASEAN). Among the ASEAN countries, Myanmar is not covered because of lack of data and Brunei, Cambodia and Laos 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 network is growing rapidly, a meaningful analysis of trade patterns requires systematic separation of parts and components (henceforth referred to as ‘components’ for short) 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 trade data reporting system (UN Comtrade database).² It is important to note that the Comtrade database does not provide for the construction of data series covering the entire range of fragmentation-based trade. Data on trade in parts and 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

² For details on the decomposition procedure, see Athukorala (2005). The list of parts and components is available on request.

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 undercoverage is perhaps even greater for some products belonging to SITC 8 such as clothing, furniture and leather products. Some components used for the production of these goods (for example, designer/tailor-made fabrics, parts of furniture, parts of leather soles) are 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 trade in parts and components 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 4 deals with post-crisis 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. Pre-crisis Trade patterns

The decoupling thesis is based on the traditional notion of horizontal specialisation 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 China 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 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 for growth dynamism of a given country/region, even controlling for double counting in trade. This is because '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 imports and exports tends to hide a significant asymmetry in regional trade patterns on import and export sides in a context where network related trade is growing rapidly.

These considerations are far more important for trade flow analysis in East Asia compared to total global trade or trade patterns of NAFTA, EU or any other region in the world. While growth in fragmentation-based specialisation is now a global phenomenon, such trade is far more important and growing rapidly in East Asia than elsewhere in the world.

Rapid export growth in Asia over the past half a century has been underpinned by a pronounced shift in export structure away from primary commodities and toward manufactures (Tables 1). By 2006/07 manufactures accounted for 90.5% of total exports from Asia, up from 83.7% 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. There has been a heavy concentration of exports in information and communication technology (ICT) products and electrical goods which together accounted for nearly three fifths of total exports from the

region in 2006/7.³ 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 to the rest of the world.⁴

Intra regional trade patterns

Intra-regional trade shares of East Asia and the major sub-regions therein as measured using the *standard trade data* (that is, trade data which do 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 patterns resulting from East Asia's increased engagement in fragmentation-based international exchange. The series for the entire East Asian region⁵ are plotted for Figure 1.

It is common in the available studies on trade patterns in the region to use the share of intra-regional share of total trade as a measure of regional trade integration⁶. 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 (import + export) share in 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. For developing East Asia (Asia excluding Japan) and ASEAN +3, the ratios are lower than the aggregate regional figure, but they have increased at a much faster rate. Intra-regional trade share of ASEAN has been much lower compared to the other two sub-regions. When East Asia's total trade is 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

³ For a detailed discussion on exports patterns in East Asia, see Athukorala and Kohpaiboon (2008)

⁴ For a discussion, with detailed listing of the relevant literature, on the causes of East Asia's dominance in this new form of international exchange see Athukorala and Yamashita (2008).

⁵ The patterns are strikingly similar for Developing East Asia, ASEAN+ 3 and ASEAN.

⁶ See for example Lee and Roland-Holst 1989, Urata 2006, Yoshitomi (2007) and Kawai and Wignaraja (2008).

strikingly 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 (imports + exports) data. There is a notable asymmetry in the degree of regional trade integration in East Asia. Unlike in EU and NAFTA, in East Asia the increase over time in intraregional trade ratio has emanated largely from rapid increase in intra-regional imports; the expansion intra-regional export has been consistently slower. The dependence of East Asia (and country sub-groups therein) on extra-regional markets (in particular those in NAFTA and 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 was 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 47.2% 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 China 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 centre within regional production networks since the early 1990s further amplified this trade asymmetry; China 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 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, focussing on manufacturing trade. For this purpose, intra regional trade shares calculated separately for component trade and final trade (total trade –component trade) are reported together with the standard intra regional trade share (for total trade) in Table 4. The table covers 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 exports and each of the sub-categories, the standard intra-regional trade shares are given in Panel A, and the estimates for components and final goods are in Panels B and C respectively. The three alternative series for total manufacturing exports from East Asia⁷ are plotted for Figure 2.

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 Asia’ intra-regional trade. Intra-regional import and export 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-crossing of parts and components within regional production networks. The asymmetry between intra-regional shares on the imports and exports is, therefore, much sharper when the parts and components are netted out. On the export side, intra-regional share of final goods declined continuously from 46% in 1995 to 37% in 2007, whereas intra-regional import share increased from 56% to 63% between these two time points (Panels C2 and C3). Clearly, the region’s dependence on the rest of the world for its economic dynamism has *increased* over the 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 during the period under study. The share of intra-regional final trade of East Asia in this product category increased from 58.8% in 1994/5 to 67.4 in 2005/6. It seems that there is significant potential for 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, intra-regional shares of final trade have declined pointing to

⁷ The patterns are strikingly similar for Developing East Asia, ASEAN+ 3 and ASEAN.

growing importance of global markets. For final trade in electronics the intra-East Asian trade share declined from 36.4% in 1994/5 to 34.4% in 2006/7. Intra-regional share in final trade is the lowest for motor vehicles; it was 16.5% in 2006/7, down from 22.5% in 1994/5. This reflects the fact that Car makers in Japan and Korea serve extra regional markets from their home countries while serving markets in most of the countries in the regions through local assembly.

China in East Asian Trade

As mentioned at the outset of this paper, China'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 China's trade patterns with emphasis on her trade links with the rest of East Asia.

The commodity profile of China-East Asia trade in the wider global context is illustrated by Table 5 and Figure 2. Manufacturing products dominate China-East Asia trade flows, accounting for over 80% on both import and export sides. In China'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 shares of parts and components in total manufacturing imports as well as the subcategories listed in the table also have increased over the years, but their levels are significantly lower compared to those in imports. Overall, these patterns reflect the importance of China as the main final assembly centre in the region. Interestingly, although China's importance as a maker for the rest of East Asia has increased during the period under study, the importance of the region for China's export expansion has declined notably (Table 5, Panel C). For instance, only 32% of China'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. Overall, these patterns reflect the importance of China as the main final assembly centre in the region.

Table 6 summarizes data on the geographic profile of China-East Asia trade relations at the individual-country level. Data on the geographic profile of China's

manufacturing imports from the region are in Panel A. Panel B gives data on the relative importance of China as export destination of East Asia economies. Nearly 60% of China's manufacturing imports originate in East Asia. However, China's regional import trade is heavily concentrated in Japan, Korea and Taiwan. The share of imports coming from the other East Asian countries is small, although growing past. In 2006/7 China accounted for only 21.2% of total manufacturing exports from the rest of East Asia. At the individual country level, China accounted for 33% and 27% of exports from Taiwan and Korea respectively. China was also one of the important export destinations of the Philippines accounting for above one fifth of total export. For all other ASEAN countries, the figures are much smaller, varying from 8% to 13.5%. Clearly, the aggregate data hide significant differences among East Asian countries in trade links with China; China's intra-regional trade is largely concentrated in trade with Japan, Korea and Taiwan.

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 individual countries 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 synchronized among the countries regardless of the well-documented differences among these countries in the degree of export orientation or the degree of dependence of the US and other developed country market. These patterns suggest that drying up of trade credit and traders' over reaction to possible collapse in demand would have played a role. 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 pre-crisis 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.

Among the East Asian countries Japan is by far the worst hit. A large share of Japan's exports consists of capital goods and high-end durable consumer goods, such

as cars and electrical machinery, machine tools and their components. Exports of capital goods and high-end consumer durables are heavily concentrated in the US and other developed-country markets and therefore are directly exposed to the global economic decline. On the other hand, contrary to the predictions of the decoupling enthusiasts, Japan's growing exports to China have been indirectly affected by decline in final (assembled) exports from China (Fukao and Yuan 2009). The degree of export contraction suffered by Taiwan and Korea has been much smaller compared to Japan, but, on average, notable higher compared to the other East Asian countries. As in the case of Japan, growing exports to China 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, Taiwan and the second-tier exporting countries in the region compared to Japan could possibly reflect consumers preference for price-competitive low-end products in the crisis context.

Table 8 compares growth rates of intra-regional exports of East Asian countries with that of these countries exports to the USA and EU. There is no evidence here to suggest that East Asian economies have become less susceptible to the world-wide trade contraction because of the regional growth dynamism. Exports to China too have recorded significant contraction, more than 10% in most cases. China's imports from Japan, Korea and Taiwan 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 China which are heavily exposed to contraction in import demand in the USA and other developed countries.

The data on export and import growth of China (Table 8 and Figure 4), provides further evidence of the synchronized nature of the trade shock of the global economic crisis. In the first quarter of 2009 China's exports to the USA contracted by 15.4% accompanied by contraction in exports to East Asia and the three sub-regions therein even at slightly higher rates (over 20%). China imports from most countries in the region have generally contracted at a much faster rate compared to exports, perhaps an indication of destocking of imported parts and components by Chinese firms given the gloomy market outlook for exports. Overall China's intra-regional imports have contracted at a much faster rate compared to her imports from the USA

and EU.

Data on export growth by major commodity category for import and export of China, and export trade of Malaysia and Thailand are summarized in Tables 9 and 10 respectively. A notable pattern 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 to other product categories, in particular traditional labour intensive products (textile and garments, footwear and other miscellaneous manufactures). Exports belonging to machinery and transport equipment category, in particular ICT products and electronics are predominantly consumers durables demand for which is generally more susceptible to income contraction. In traditional labour intensive products developing country producers have the ability to perform better purely on the basis of cost competitiveness even in a context of depressed demand.

4. Policy options

At the time of writing this paper (end of June 2009) there are some signs of global economic contraction bottoming. However the economic forces unleashed by the crisis will probably run rampant for years. Although the frequency of 'green sprouts' 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 adjustment 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 over the period since 1960s, point to process of 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 the massive accumulated debts.

In this 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 towards domestic market (ADB 2009). The policy measures under consideration include both measures to redress export bias in the incentive structure and various measures to reduce high saving propensity with a view to boosting domestic demand (ADB 2009). The major focus of this policy advocacy is on China.

China's degree of export dependence is unusually high for a continental economy of China's size. China's export to GDP ratio (around 40%) grossly exaggerates its export dependence because of the heavy import dependence of assembly exports which accounts for over two thirds of total merchandise exports. However, even the available adjusted estimates (around 20%) seem too high for China's potential economic size. Moreover the unusually high domestic saving rates, the vast population base, and highly repressed domestic financial system, all indicate the vast potential for domestic-demand led growth in China. However, China faces a formidable political constraint in shifting policy emphasis away from export-oriented growth and towards domestic-market oriented growth; there is strong domestic pressure to maintain the momentum of employment-intensive growth through export orientation (Yu 2007, Gan 2008).

About half of China's massive labour 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 worker in the economy as a whole 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 China's income level. These features, coupled with the high skilled-unskilled wage differential (which, according to some estimates, has risen from 1.3 to 2.1 over the past decade according to some estimates) suggest that China still has much potential for moving unskilled workers out of agriculture and into manufacturing and other

productive urban sector activities. Given the ample availability of unskilled and semi-skilled labour, and 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 China (elaborate on this sentence).

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, Chinese officials announced a series of measures to help exporters including new directive to state banks to expand lending more particularly to small and medium-size exporters and setting up new Government research funds to help exporters and export tax rebates for 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 these labour intensive product lines in an effort to set the stage for the Chinese economy to climb the ladder of economic development. Municipal governments in China have also stopped raising the minimum wages in an attempt to relieve exporting firms of cost pressure.

These initiatives by China 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 Chinese products to enter Indonesian markets. Starting from March 2009 Chinese firms are allowed to export garments, electronics, shoes, toys and food to Indonesia only from designated ports in China. Indonesian importers of these goods 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 also on arrival in and then have every single container inspected on arrival. There are also signs of political concerns in other countries in the region such as Cambodia and Vietnam about unfair import competition from China.

This emerging trade policy reaction is not an isolated Asian development. Rather it is a manifestation of a wider global tendency of 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 reporting to disguise means of protection such as filing anti-dumping complains and stringent implementation of technical and sanitary and phytosanitary standard, in addition of course to massive financial support extended by the US and some other countries to automobile manufacturers (Gamberoni and Newfarmer 2009).

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

Trade within global production networks (both in parts and components and final assembly) 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 one percentage point reduction in tariff leads to a decline in the cost of production of a vertically integrated good by a multiple of this initial reduction, in contrast to a 1 per cent decline in the cost of a regular 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.

Even though rates on electronics have been notably reduced under the ITC agreement in all these 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 11). 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 duty free regime as income levels increase.

However, in reality, trade effect of any FTA would depend very much on the nature of rules of origin built into it. Trade-distorting effects of rules of origin 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 because of 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 criss-crossing FTAs can raise business costs and divert trade and associated investment. In addition, at the highly disaggregate level, e.g. HS 6-digit level, 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.⁸ 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 business. The conventional value-added criterion is not virtually applicable to this trade because the products involved are low-value added by very nature. The only viable option is to go for ‘change in tariff lines’ based’ ROOs, but this leads to insurmountable administrative problems because trade in electrical and electronics goods and the related parts and components belong to the same tariff codes at the HS-6 digit level, which is the normal base for designing this type of ROOs (Kohpaiboon 2009: Appendix 2). For example, electrical appliances assembly plants in Thailand which use imported bare printed circuit board (BPCB) together with other locally procured electronic components (e.g. diode, integrated circuits, semi-conductors) to printed circuit board assembly (PCBA) for export are not eligible to FTA concessions because BPCBs and PCBAs 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 in tandem, these product invention/innovation naturally opens up room for

⁸ As argued in Kohpaiboon (2008), when analysis undertaken at the 6 digit HS level, it is likely to find mismatching cases in which official records of preferential trade far exceed actual trade simply because it is likely for firms to make mistake 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 ones, mismatching cases disappear.

unnecessary administrative delays and/or tweaking of rules as a means of disguised protection (Elek 2005). Moreover, given the importance of extra-regional market for final goods for the growth dynamism of production networks in Asia, maintaining barriers to trade against non-members (while allowing free trade among members) can thwart ‘natural’ expansion of fragmentation-based trade across countries.

The experience to-date with FTA negotiation 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 liberalisation of border barriers to these products tends to be negated by product-specific rules of origin 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 in a context where 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 one the procurement of one critical input would suffice to protect competing domestic producers of the final (assembled) product.⁹

The experience to-date with FTA negotiation 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 liberalisation of border barriers to these products tends to be

⁹ 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 TV Picture Tubes (HS854011) are not produced in Thailand and Thai color TV assembly is viable if an only this item is procured from Japan, Taiwan, or Korea. Thus, even though preferential tariff on TV under the FTA (20%) is very attractive, Thailand-Australia FTA is virtually irrelevant for TV assembly plants located in Thailand.

negated by product-specific rules of origin 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 in a context where 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). Tightening ROOs on one the procurement of one critical input would suffice to protect competing domestic producers of the final (assembled) product. In some cases, authorities who still have believe the concept of tariff-hopping FDI put effort to manipulate ROOs with the presumption that such effort could attract more FDI inflows. What suggest in FDI literature is such belief is wrong. A number of studies (e.g. Athukorala & Chand, 2000; Kohpaiboon, 2006) point that pursuing restrictive policy regimes including tightening ROOs is unlikely to have significant impact in enticing MNEs but could simply retard potential benefit MNEs can generate in the host country. All in all, it would be more risky to face hidden protection attempts mentioned under the FTA-led liberalization and in a period of the increasing threat of return of nationalism and protectionism as a consequence of global economic recession. Twisting ROOs for this purpose becomes easier when the production process involves procuring parts and components from a number of sources.

It is also important to note that, the available evidence on the operation of FTAs in operation 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, ranging from about 5% to 20% across different product categories (Takahasgi and Urata 2008¹⁰, Kawai and Wignaraja 2009, Kohpaiboon 2008). More importantly, there is evidence that the utilization rates are often firm/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

¹⁰ 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 the message about 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 by Professor Urata).

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 is a dangerous (risky) strategy given Asia's heavy reliance on extra regional markets for its export dynamism. Such a move would invite swift retaliation by the US and EU.¹¹

In any case, the chances of negotiating a region-wide FTA look rather slim in the context of the on-going crisis. In particular China may not want to get involved in such 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.¹² Governments in Southeast Asian countries are also concerned that any region wide attempt to liberalize trade would give unfair advantage to China in attracting FDI involved in global production networks, given its vast domestic economy chancieries by regional differences in cost of production.¹³

There is therefore a strong case for devising strategies to fight new protectionism as part of a long term commitment to non-discriminatory 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 a case 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 complete the incomplete reform agenda is vital for them for recovery from the crisis and sustaining future growth.

¹¹ 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 significant world trading nations, is likely to involve significant trade diversion even under the existing extra-regional tariffs

¹² See for instance the recent article wrote by the Chinese Minister of Trade to the *Wall Street Journal* (Demin 2009)

¹³ This point is based on interviews with high-ranking officials at the Thai Ministry of Foreign Affairs.

¹⁴ We owe this point to Professor Shujiro Urata.

5 Concluding remarks

Intra-regional trade shares based on the conventional trade data are generally consistent with the view that Asia, in particular East Asia, has become increasingly integrated through merchandise trade. But, when the on-going process of international production fragmentation and East Asia's unique role in the related global production networks are appropriately taken into account, it is clearly evident that, the increase over time in intraregional trade ratio has emanated largely from rapid increase in intra-regional imports; intra-regional exports expansion has lagged behind persistently. The asymmetry in intra-regional shares between imports and exports is much sharper when reported trade data are adjusted for trade in parts and components. Clearly, the region's dependence of 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 the trade contraction across countries in the region is generally consistent with close trade ties among the East Asian countries forged within regional production networks. China has failed to provide cushion giants this export contraction as postulated by the decoupling thesis. Taiwan, Korea and Japan have suffered the highest rates of contraction in exports to China compared to the other countries in the region reflecting their greater dependence on that market. China imports from most countries in the region have contracted at a much faster rate compared to exports, perhaps an indication of destocking 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 China?

It is not realistic to anticipate a dramatic shift in China's development strategy away from export-orientation and to domestic-demand led growth. There is strong domestic pressure in China to maintain the momentum of employment-intensive

growth through export orientation. Moreover, China has immense potential for continuing with efficient export-oriented growth. China is still a labour-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 incentive biases in favor of domestic-oriented production (and against exports).

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 maintain export competitiveness in face shrinking export demand would naturally lead to resurgence of 'new protectionism' (as it 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 Asia countries. Therefore, at a first blush, there seems to have room for promoting intra-regional trade through an FTA. In theory, the trade-stimulating effect of FTAs would be higher for network trade than for normal trade, other things remaining unchanged. However, the experience to-date with FTAs in the region (and beyond) does not leave room for much optimism. The tendency so far has been that 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 liberalise in the Doha Development Agenda of the WTO, 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/sectors, casting doubts 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 in the context of the on-going crisis.

In this context there is a strong case for devising strategies to fight new

protectionism as part of a long term commitment to non-discriminatory multilateral and unilateral trade liberalization. Perhaps the East Asian policy makers want to consider seriously the example of ITC Agreement and consider the possibility of extending it to cover trade in electrical goods and possibly a wide range of other new products.

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

	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

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

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

	Exports						Imports					
	Total mfg	Total	Machinery & transport equipment			Misc. Mfg.	Total mfg	Machinery & transport equipment				Misc. mfg
			ICT product	Electrical goods	Road vehicles			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	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
Taiwan	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
China	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	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	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
Vietnam	8	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	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, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam (data for Myanmar are not available); ASEAN+ 3: ASEAN9, Mainland China, South Korea and Japan; Developing East Asia: ASEAN9, South Korea, Taiwan, Mainland China, Hong Kong; East Asia: Developing East Asia and Japan; ANAFTA: United State, Canada, Mexico; EU15: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Luxemburg, 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 (for data on Taiwan)

Table 3: Intra-regional shares of Non-oil Trade (%), 1986/7, 1994/5 and 2006/07¹

	East Asia	Developing East Asia	ASEAN+3	ASEAN	NAFTA	EU-15
Total non-oil trade ²						
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						
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						
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

- 1 Two-year averages
- 2 Total merchandise trade excluding oil and gas (SITC 3)
- 3 Primary products excluding oil and gas (SITC 3)
- 4 Products belong to SITC 5 to 8 less SITC 68.

SITC Standard International Trade Classification.

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

Table 4: Intra-regional shares of Manufacturing Trade: Total, Parts and Components, and Final Trade (%), 1994/5 and 2006/07¹

	East Asia ²	Developing East Asia ²	ASEAN+3 ²	ASEAN	NAFTA	EU15
4.1: Total manufacturing³						
4.1a: Total						
Exports	47.15	38.15	15.25	20.7	44.35	61.15
1994-95	43.85	33.35	21.85	18.4	48.1	56.85
2006-07						
Imports						
1994-95	58.15	34.85	42.95	15.5	36.3	64.1
2006-07	64.4	46.7	49.25	20.75	31.95	57.85
Trade (exports + imports)						
1994-95	52.0	36.5	27	17.75	39.9	62.6
2006-07	52.1	40	30.4	20.05	38.4	57.35
4.1b: Parts and components						
Exports						
1994-95	50.2	42.55	33.65	30.3	43.5	62.25
2006-07	61.1	53.9	35.3	25.4	46.85	55.9
Imports						
1994-95	65.85	35.3	39.55	20.15	39.45	58
2006-07	66.9	50.85	47.8	22.85	39.9	55.15
Trade						
1994-95						
2006-07	57.0	38.7	35.4	24.2	41.35	60.1
4.1c: Final goods ⁴						
Exports						
1994-95	46.0	36.75	11.4	16.1	44.7	60.9
2006-07	36.85	28.3	16.95	15.9	48.65	57
Imports						
1994-95	55.4	34.65	43.4	12.85	35.25	65.55
2006-07	62.95	42.75	50.15	20.55	30.15	58.45
Trade						
1994-95	50.25	35.7	25.4	14.3	39.4	63.15
2006-07	46.4	34	29.1	17.95	37.25	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
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 products⁵						
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 goods⁶						

4.4a: Total						
Total exports						
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 trade⁴						
Exports						
1994-95	67.4	39.8	67.0	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 vehicles⁷						
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	68.8
4.b: 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
2006-07	59.9	34	73.1	31.7	59.6	70
Trade (Export +Imports)						
1994-95	42.5	18	67.4	16.6	66.1	75.5

2006-07	44.0	31.2	69	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 apparels⁴						
4.6: Total						
Exports						
1994-95	36.5	19	22	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	31.1	63.2
2006-07	38.6	21.3	33.6	10	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 China and Hong Kong.
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 in negligible in this product category

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

Table 5: China's trade with rest of East Asia

A: Commodity composition	Exports			Imports		
	1994-95	1999-00	2006-07	1994-95	1999-00	2006-07
A:1: 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
A2: 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
B: 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
C: Trade with East Asia in China's world trade						
C.1: 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
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
C2: 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: 1. East Asia: Developing East Asia and Japan
2

Source: As for Table

Table 6: East Asia – China manufacturing trade

	A: Geographic profile of China's imports		B: Exports to China relative to total exports by country/region	
	1994/5	2006/7	1994/5	2006/7
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	17.3	2.0	29.6	19.5
Korea	4.3	13.4	5.8	27.2
Taiwan	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
Vietnam	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 Taiwan)

Table 7 : Export growth by destination region/country, 2007Q1- February 2009
(Year-on-year parentage change, current US\$)

Region/country	Destination region/country										
	Total	East Asia	Japan	DEA	ASEAN+3	China	Korea	Taiwan	ASEAN6	USA	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											
2008Q1	21.7	15.9	21.9	13.6	16.8	12.4	22.0	-2.3	15.9	4.4	-10.3

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										
Taiwan											
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											
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											
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

Source: Compiled from CEIM database.

Table 8 : China: Growth of total merchandise exports and imports by trading partner countries, 2007Q1 – 2009Q1
(Year-on-year parentage change, current US\$)

	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
	19.5	19.5	21.6	-1.2	-22.8	15.6	-8.8	-10.3	-25.6	-22.8	-20.0
East Asia											
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
Taiwan	15.4	21.1	17.3	-10.4	-34.5	9.1	-13.1	-27.1	-43.9	-32.1	-27.5
Hong Kong	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
Philippine	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
Vietnam	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
USA	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	Mra-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
	17.0	23.7	18.7	-5.0	-29.8	15.3	-14.8	-15.4	-43.6	-20.4	-25.5
Japan											
Korea	14.9	25.0	14.8	-18.5	-26.6	4.9	-30.2	-30.0	-46.4	-14.1	-19.4
Taiwan	24.5	24.2	5.0	-33.3	-43.9	-13.4	-42.3	-44.3	-58.1	-40.1	-33.4
Hong Kong	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
Philippine	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
Vietnam	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
USA	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 CEIM database.

Table 9: China: Growth of total merchandise exports and imports by commodity category, 2008Q1 – 2009Q3
(Year-on-year parentage 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 Artices	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								
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 CEIM database.

Table 10: Growth of Exports from Malaysia and Thailand

	2008Q1	2008Q2	2008Q3	2008Q3	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	2008Q3	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

Source: Compiled from CEIM database.

Table 11: Tariff of Manufacturing Goods (unweighted average%), 2006

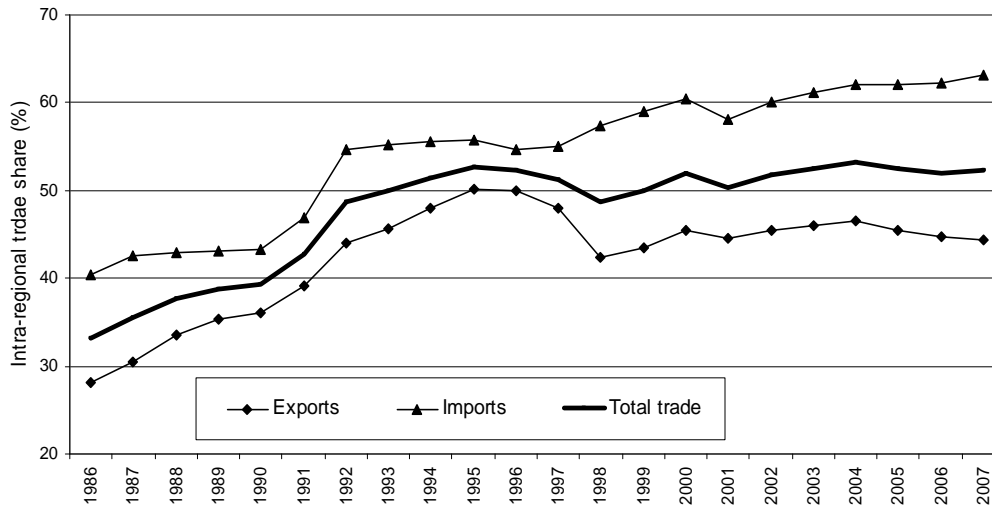
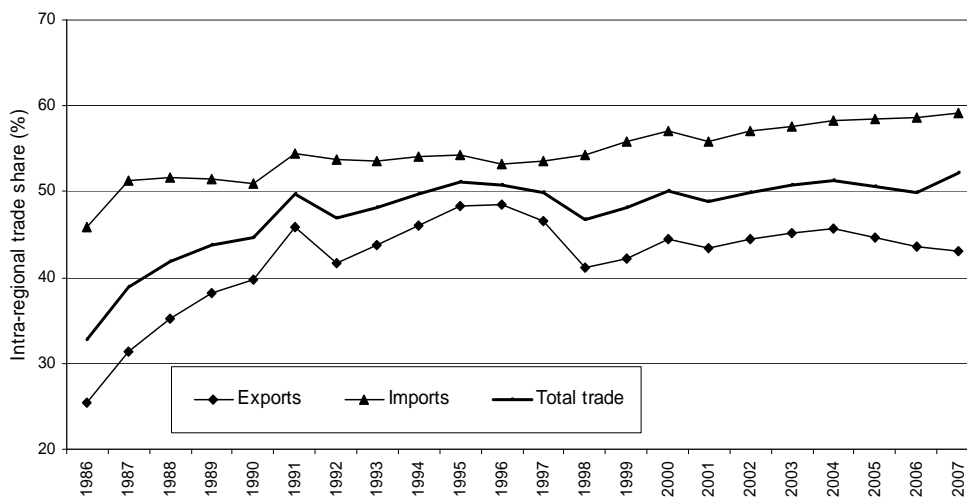
	<i>All manufactures</i>			<i>Electronics</i>		Electrical Appliances	
	Total (1)	Parts (2)	Finished Goods (3)	Parts (4)	Finished Goods (5)	Parts (6)	Finished Goods (7)
Thailand	7.5	7.6	7.5	1.5	1.8	9.7	16.3
China	9.6	8.2	9.8	1.4	3.2	9.6	15.7
India	11.1	10.6	11.2	1.6	2.7	11.4	11.1
Japan	2.5	0.2	2.7	0.2	1.5	0.7	2.5
Korea	7.5	6.5	7.6	0.3	1.7	7.2	6.8
Taiwan	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

1. Finished goods in SITC 75 and 76.

2. Electrical appliances here consist of finished goods in SITC 77.

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

Figure 1: Intra-regional share in East Asian Trade

(a) Non-oil trade¹(b) Manufacturing trade²

(1) Total merchandise trade less oil and gas.

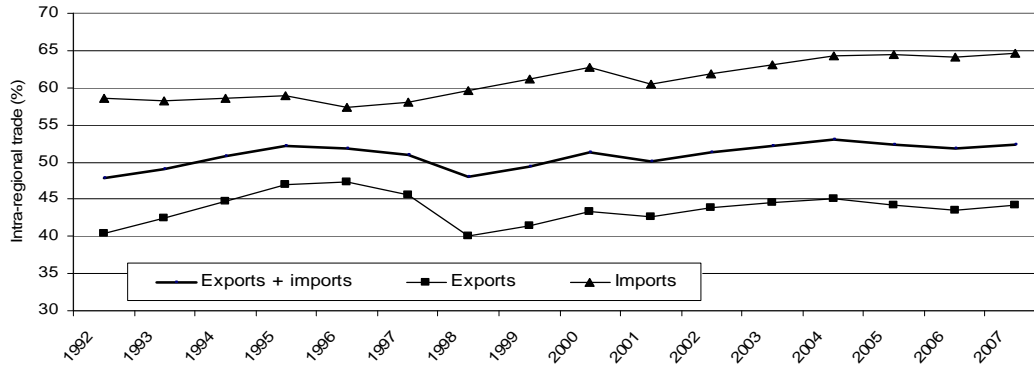
(2) Memorandum item: manufacturing share in East Asian non-oil trade

	Exports		Imports	
	Total	Intra-regional	Total	Intra-regional
1986/87	90.35	79.4	65.95	74.3
1994/5	90.20	86.95	83.1	87
2006/7	91.05	91.35	88.25	88.55

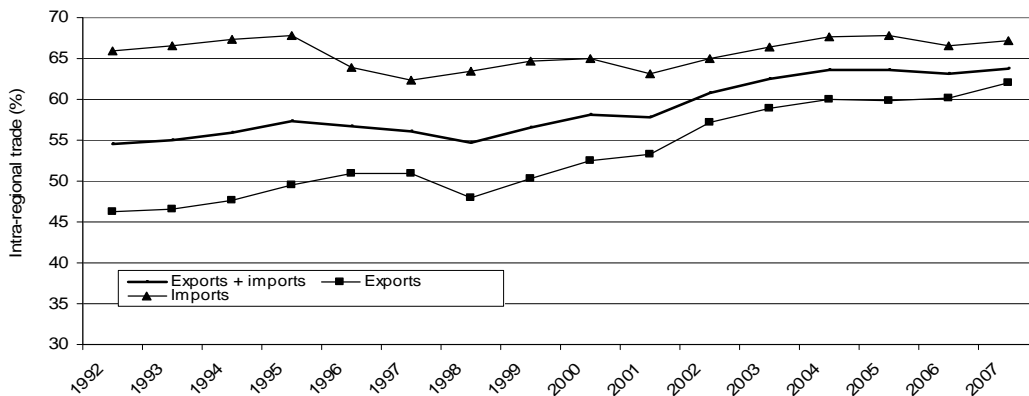
Source: Based on data compiled from UN Comtrade database

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

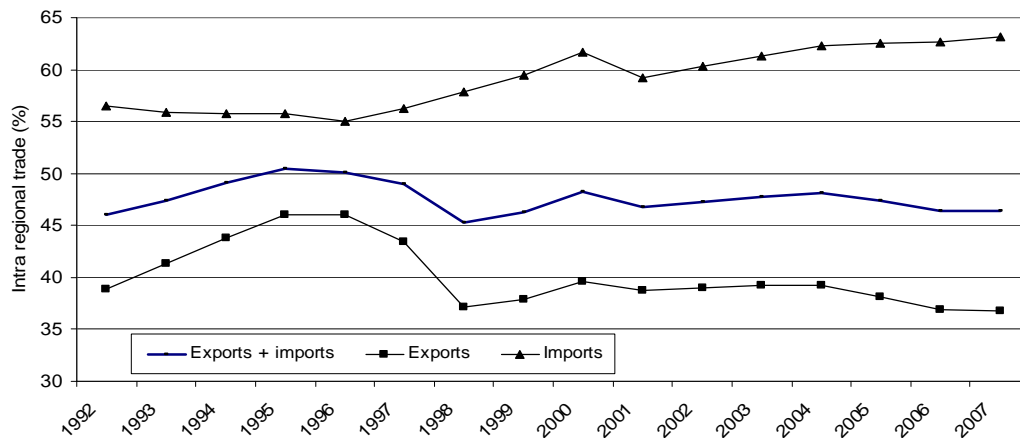
A: Total (parts and component + final) trade



B: Parts and components



C: Final (total – parts and components)



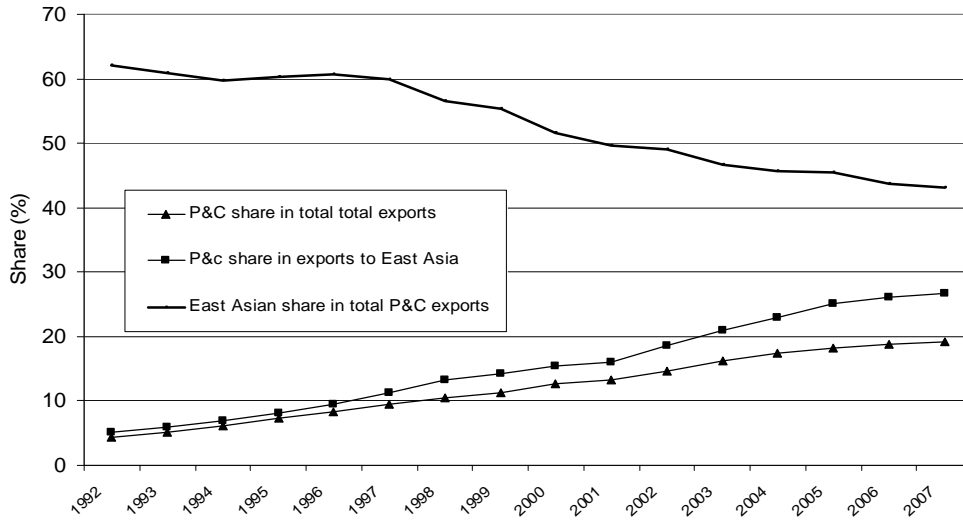
Note:

1. Country grouping: see Table 1, Note 1.

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

Figure 3: Parts and components in China's Manufacturing trade, 1992 - 2007

A: Manufacturing exports



A: Manufacturing imports

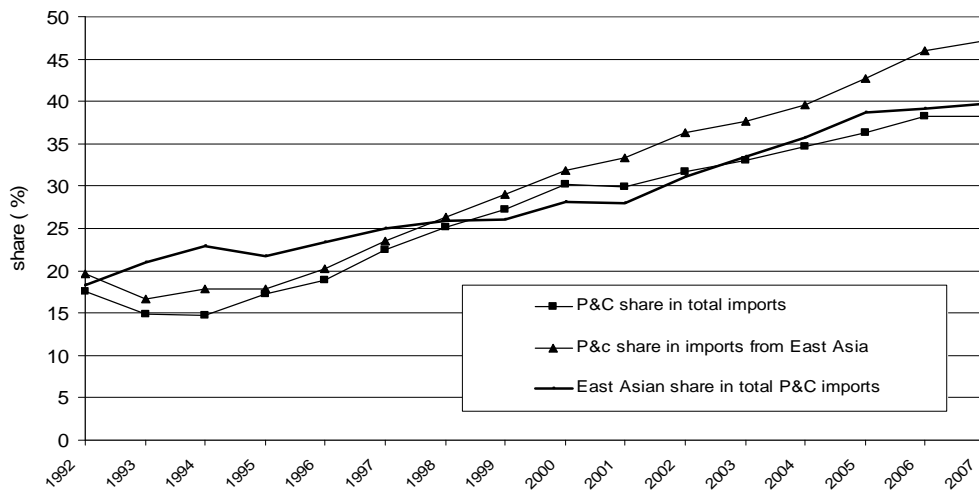
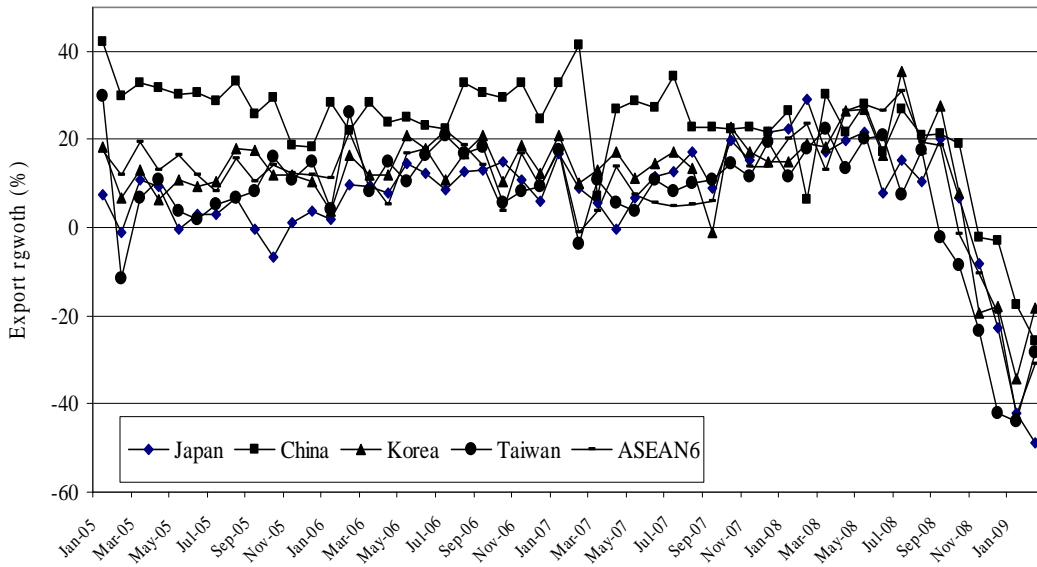
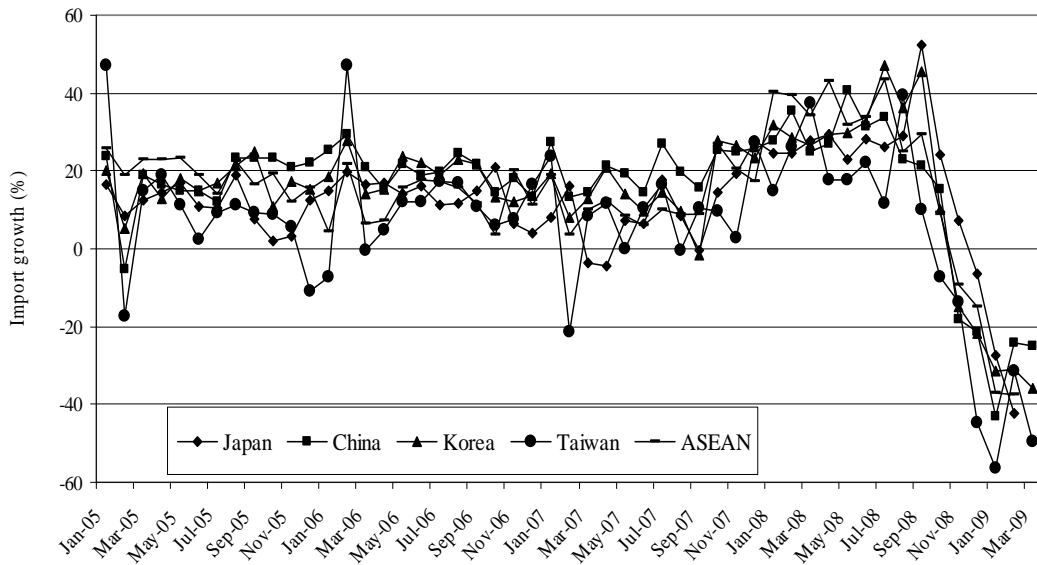


Figure 4 : Trade growth: Japan, China, Korea, Taiwan and ASEAN6, Jan 2005 – March 2009

A: Exports



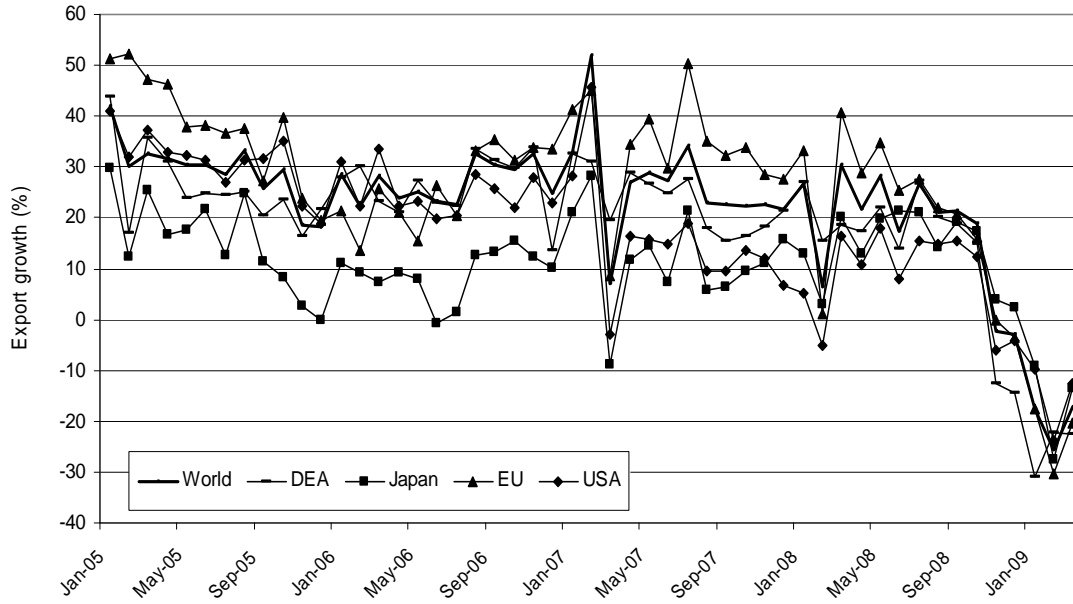
B: Imports



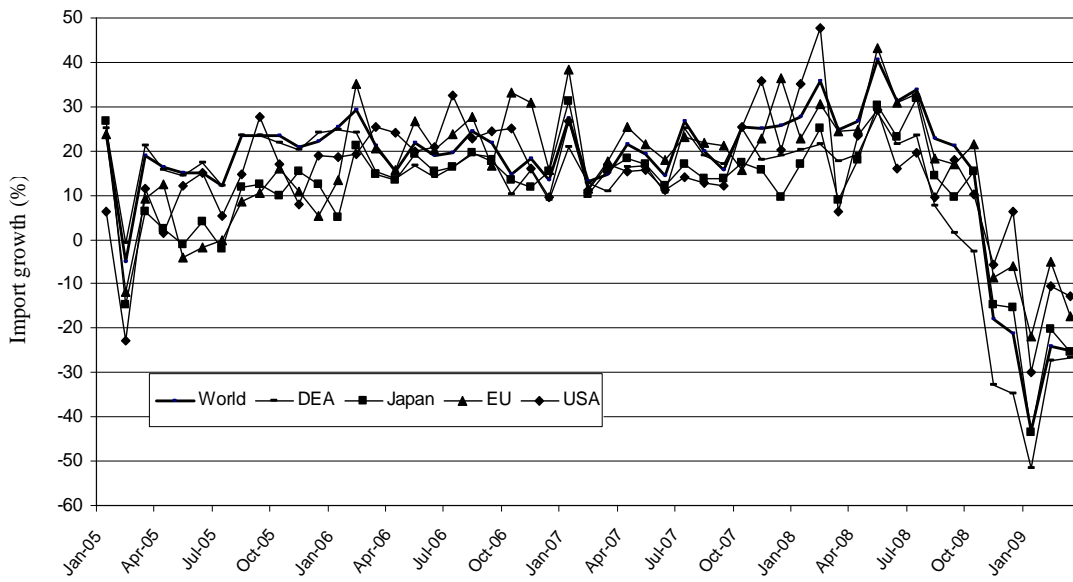
Source:

Figure 5 : China: Growth of Merchandise Trade, Jan 5 – March 2009

A: Exports



B: Imports



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