

Destinations and Uses of East Asian Merchandise Exports

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Over recent decades, Australia's trade has become increasingly oriented toward east Asia (excluding Japan). Rapid growth in economies from this region is often attributed to their export-oriented policies, with the volume of east Asian exports having increased six-fold over the past 20 years. Using information on the destinations and uses of east Asian exports, this article examines the characteristics of both intra-regional trade and exports to economies outside the region.

Introduction

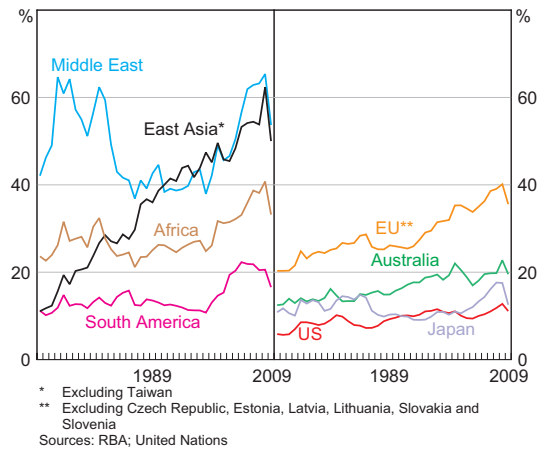
East Asian¹ exports have risen rapidly over the past two decades. Excluding Japan, export volumes for the region grew at an average annual pace of above 10 per cent between 1990 and 2009, considerably faster than the 6 per cent growth in world export volumes. Growth in east Asian exports has also outpaced production growth across the region, in both volume and value terms. As a result, the ratio of exports to GDP is now higher than equivalent ratios in most other areas of the world, and more than twice that in Australia (Graph 1).

The rapid increase in exports has occurred for both intra-regional trade and trade with the rest of the world (Table 1). Growth in intra-regional trade of both intermediate and capital goods has been particularly strong. Exports of capital goods to countries outside the region have also grown solidly, although consumption goods still make up a larger share of total extra-regional exports. Despite the strong growth in intra-regional trade, the bulk of the region's exports of final goods (both consumption and capital goods) still go to major advanced

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1 Unless otherwise specified, east Asia refers to the economies of China, South Korea, Taiwan, Hong Kong, Singapore, Indonesia, Thailand, Malaysia, the Philippines and Vietnam.

Graph 1
Export Values
Per cent of nominal GDP



economies, such as the United States, the European Union and Japan, although there has been some diversification over the past decade to emerging markets. This article uses data on merchandise export values to examine these trends in more detail, focusing on trends in intermediate goods trade and exports of capital and consumption goods to destinations both within and outside the region.

Table 1: East Asian Exports – Growth and Composition

	Share of total merchandise exports		Annual average growth	
	Per cent		Per cent	
	2002	2009	2001–2005	2006–2009
Intra-regional	40	40	14	6
<i>of which:</i> ^(a)				
Intermediate	67	64	18	7
Capital	16	22	27	13
Consumption	14	10	10	6
Major trading partners ^(b)	44	36	10	3
<i>of which:</i> ^(a)				
Intermediate	33	33	11	1
Capital	21	28	20	3
Consumption	40	32	9	–1
Rest of the world	16	24	17	11
<i>of which:</i> ^(a)				
Intermediate	53	47	14	16
Capital	17	25	19	27
Consumption	25	25	14	21

(a) Component shares exclude exports from or to Singapore, Taiwan and Vietnam

(b) United States, European Union and Japan

Sources: CEIC; IMF; RBA; Thomson Reuters; UN Comtrade

Integration of Production Processes

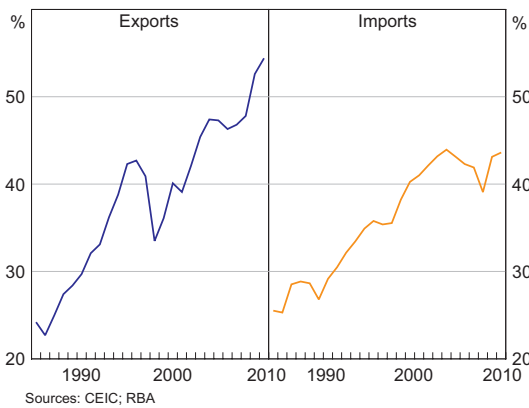
An important factor contributing to the strong growth in east Asian exports over the past two decades has been the integration of production processes across the region. In particular, technological advancements and the reduction of trade barriers have allowed multinational firms, particularly in the information & communication technology and automotive sectors, to establish cross-country production networks – whereby a company in one country completes part of the production process, before exporting the component to another country in the region where another stage of production takes place.

One example of the role of regional supply chains in stimulating intra-regional trade in intermediate goods is the production of microprocessors and

their installation in computers. As detailed in Tweeney (2007), the initial stages of microprocessor production (starting with quartz and coal, and ending with the testing of silicon wafers) take place primarily in the United States and Japan, although other countries are often involved. The wafers (intermediate goods) are then shipped to countries such as Malaysia and the Philippines where they are separated, retested and classified according to their performance. The wafers, along with other components, are then exported to China for assembly onto a motherboard (with the transportation of the wafers recorded as an intra-regional intermediate good export). The motherboard later becomes part of a computer, which is sold to a final consumer; this may involve further component trade as well as the export of the final good.

Regionally integrated production networks were first established in east Asia by Japanese firms in the 1980s. In common with the experience of other east Asian economies a decade later, Japanese firms began by moving parts of their production processes offshore. As components were exported between production facilities in Japan and other east Asian economies, the share of Japan's trade with east Asia rose markedly (Graph 2).

Graph 2
Japan – Merchandise Trade with East Asia
Share of total



Japanese firms initially began to use regional production networks in an effort to maintain competitiveness. Japan had developed an export-focused production sector in the decades following World War II, when it provided outsourcing facilities to Western multinationals. However, by the mid 1980s, trade barriers facing Japanese exporters had increased and Japan's competitiveness had declined due to a strong yen and labour shortages (Belderbos 1997). Looking to reduce costs, Japanese firms (particularly in the electronics sector) invested heavily in east Asian economies – most notably in Hong Kong, Singapore, South Korea and Taiwan – where labour costs were not as high. As producers in these economies moved up the value-added chain in the late 1990s and became competitors, Japanese firms turned to establishing production networks

in the lower-income economies in the region, including China and the ASEAN-5.² Competitor firms from Hong Kong, Singapore, South Korea and Taiwan also began establishing production networks in these lower-cost economies.

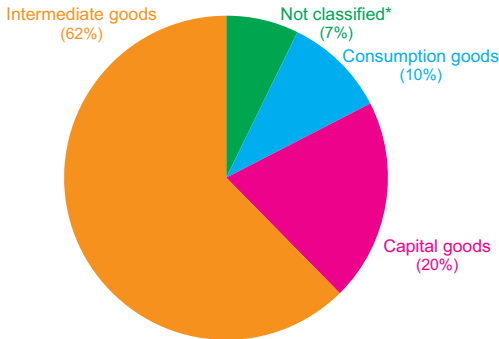
By March 2010, one in six Japanese companies had at least one subsidiary overseas (METI 2010). For manufacturers, this share was substantially higher – at one in four – and each of the parent manufacturing companies had, on average, seven subsidiaries overseas. Reflecting the development of production networks within the region, almost 60 per cent of Japanese manufacturing subsidiaries are in Asia, with just under half of these in China or Hong Kong. Moreover, in 2010, east Asian economies imported almost 60 per cent of Japan's exports of intermediate goods and supplied over one-third of Japan's imports of these products.

The integration of production across the region has underpinned growth of east Asian intra-regional trade in intermediate goods at an annual average pace of around 12 per cent over the past decade. As a result, intermediate goods constitute the largest share of total intra-regional trade; in 2009, intra-regional trade in these goods made up about one-quarter of all east Asian merchandise exports and around two-thirds of intra-regional trade (Graph 3). In contrast, just 40 per cent of extra-regional east Asian exports are intermediate goods. The share of intermediate goods in east Asian trade is considerably higher than in other highly integrated regions such as the European Union, where intermediate goods make up only one-eighth of intra-regional trade and one-fifth of total European Union exports outside the region.

Although increased integration of production is an important driver of intra-regional trade in east Asia, the pattern of trade suggests much of this trade is ultimately driven by demand from the rest of the world. Fluctuations in intra-regional trade tend to precede fluctuations in extra-regional exports

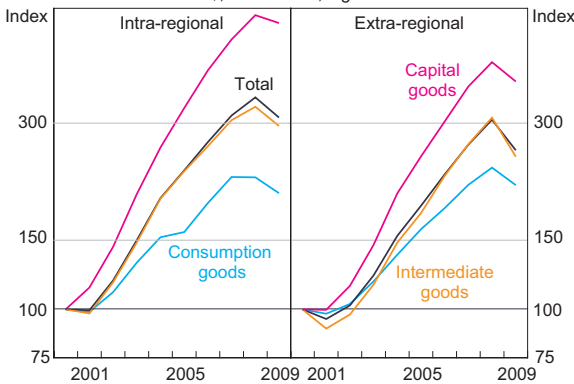
² We follow the IMF in defining the ASEAN-5 as Indonesia, Malaysia, the Philippines, Thailand and Vietnam.

Graph 3
East Asia – Intra-regional Trade
 US\$, 2009 share of total



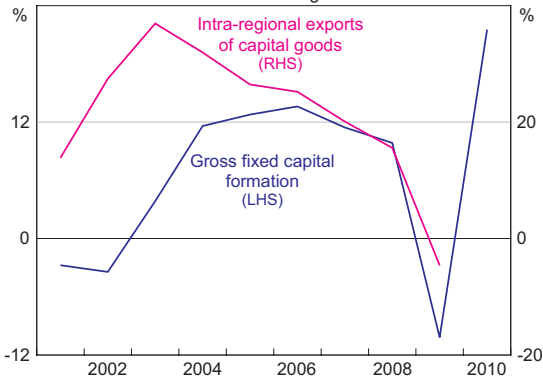
* Contains passenger vehicles, processed fuels and some other unclassified goods including defence goods
 Sources: RBA; UN Comtrade

Graph 4
East Asia* – Merchandise Exports
 US\$, 2000 = 100, log scale



* Excluding the Philippines, Singapore, Taiwan and Vietnam
 Sources: RBA; UN Comtrade

Graph 5
East Asia* – Investment and Trade Growth
 Year-average



* Excluding the Philippines, Singapore, Taiwan and Vietnam
 Sources: CEIC; IMF; Thomson Reuters; UN Comtrade

as intra-regional production chains produce final goods for export to economies outside of east Asia.

Exports of Final Goods

Exports of final capital goods from east Asia have also grown very rapidly over the past decade. Although capital goods are a much smaller share of total exports than intermediate goods, they have grown at a significantly faster pace, with their share of total exports increasing by 9 percentage points to 25 per cent between 2000 and 2009. The rapid increase in capital goods exports has occurred both in intra-regional and extra-regional exports (Graph 4). The share of capital goods in intra-regional exports nearly doubled from 12½ per cent in 2000 to 22½ per cent in 2009, reflecting strong investment growth within the region over this period (Graph 5). Growth in exports of capital goods to economies outside of east Asia also outpaced growth in other exports to these economies between 2000 and 2009, with the share of capital goods rising from 18 per cent to 27 per cent.

A key feature of the growth in both intra- and extra-regional capital goods exports has been the increasing importance of China. Over the past decade, China has provided a growing share of the world’s capital goods, reflecting its dominance in the production of some electronic goods such as laptop computers; Chinese exports of computers grew at an annual average pace of almost 75 per cent between 2000 and 2009. The United States now sources almost 50 per cent of its capital imports from east Asia, up from around 25 per cent in 2000 reflecting an increasing contribution from China.³

The two other countries where capital goods exports have grown particularly rapidly are Thailand and South Korea. Unlike in China – where growth in capital goods exports has been relatively broad-based across regional destinations, major advanced economies and other trading partners – growth in capital goods exports from Thailand and

³ In fact, the share of capital imports from east Asia (excluding China) has fallen slightly.

South Korea has been concentrated in exports to economies within the region and, to a lesser extent, to smaller trading partners, including emerging economies. For South Korea, exports of ships have been a key driver of growth in capital goods exports to regional destinations and smaller trading partners. South Korea has the second largest shipbuilding industry in the world in volume terms (having been recently overtaken by China) and produces over one-third of the world's ships by value. South Korea benefited from the rapid growth in this industry prior to the global financial crisis as the rise of China increased global trade volumes. Exports of radio transmission equipment from South Korea have also contributed significantly to exports growth. The rapid expansion of Thailand's trade, in contrast, largely reflects growing exports of computer-related equipment, particularly to its regional partners. Growth in exports to Thailand's smaller trading partners has been more concentrated in transport equipment, reflecting growth in Thailand's motor vehicle industry over the past decade.

The corollary of the rapid increase in exports of capital goods (and the stable share of intermediate goods) is that consumption goods have fallen as a share of both intra-regional trade and extra-regional exports. The share of consumption goods in extra-regional exports fell from 35 per cent to 28 per cent between 2000 and 2009. This reflects a shift in the composition of exports to the major advanced economies, as these economies have imported more computer and computer-related capital goods from east Asia. The share of consumption goods in intra-regional exports has fallen from 15½ per cent to 10 per cent over the same period. This partly reflects the decline in the share of private consumption expenditure in GDP in east Asia from 52 per cent in 2000 to 43 per cent in 2009, which was driven by the investment boom in China. However, these trends may only be temporary; the share of consumption goods in intra-regional exports and the share of consumption in GDP are likely to rise

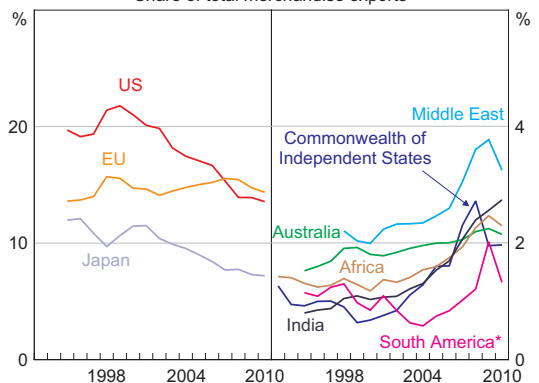
over coming years as consumption is supported by rising incomes, urbanisation and industrialisation.

Extra-regional Export Destinations

The strong growth in capital and consumer goods exports to emerging economies has seen a modest shift in the importance of these economies to east Asia in aggregate. Exports to extra-regional destinations excluding the United States, the European Union and Japan grew by 11 per cent per year on average from 1994 to 2010, compared with an average annual pace of 8 per cent for the major advanced economies. This has reduced the share of east Asian exports going to major advanced economies from 77 per cent to 60 per cent over this period (Graph 6).

The growth in exports to extra-regional destinations has been broad-based and goes well beyond the major advanced economies. Growth in exports to commodity-producing regions does, however, stand out. Exports to the Commonwealth of Independent States and India have risen by around 18 per cent per year on average over the past

Graph 6
East Asia – Merchandise Exports
 Share of total merchandise exports



* Including Argentina, Brazil, Chile, Colombia and Venezuela
 Sources: CEIC; IMF; RBA; Thomson Reuters

15 years.⁴ Similarly, exports to Africa and the Middle East have risen at an average annual rate of 15 per cent. As a result, the share of exports that leave east Asia for these four regions has nearly doubled, although their combined share remains at around 10 per cent. Exports to South America have also risen markedly since 2005.

East Asian exports to Australia have also experienced strong growth (though not as rapid as the growth in exports to emerging economies), with annual growth averaging 13 per cent between 1999 and 2008, before moderating in more recent years. Reflecting this strong growth, Australia's share of east Asian merchandise exports has risen to be just over 2 per cent. In 2009, almost half of these exports to Australia were of intermediate goods – suggesting Australian firms use components from east Asia in their production of goods and services – while one-quarter were consumption goods, and one-fifth were capital goods.

Conclusion

Trade within east Asia has grown rapidly over the past two decades. While this partly reflects growing regional demand for final capital goods, much of this trade reflects increasing regional integration of supply chains. The establishment of regional production networks by Japanese firms in the 1980s has been continued by firms throughout the region, leading to a high level of intra-regional trade in intermediate goods. Exports of east Asian capital goods to extra-regional destinations have also risen strongly. Growth in consumption goods exports has been more subdued than that of capital goods exports, largely due to weak growth in exports of consumption goods to the major advanced economies. In contrast, there has been strong growth in consumption and investment goods

exports to emerging economies, which has reduced the importance of the major advanced economies as destinations for east Asian exports (although they still receive the majority of extra-regional exports). With trend rates of growth in emerging economies substantially higher than trend rates in advanced economies, it seems likely that this gradual diversification of east Asian export destinations will continue. ✎

References

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4 We follow the IMF in defining the Commonwealth of Independent States as Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Mongolia, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. Georgia and Mongolia, which are not part of the Commonwealth of Independent States, are included in this group for reasons of geography and similarities in economic structure.