2. Regional Impact of China’s WTO Accession

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China’s WTO accession and deeper integration into the world economy presents important opportunities and challenges for the East Asia region. China’s role in the region is unrivaled. First, its economy is large in absolute terms—constituting half the economy of Asia, according to measures of purchasing power. Second, China has rapidly expanded its trade, almost tripling its share of global exports and more than doubling its share of global imports over the period 1990-2002 and absorbing a fast-growing share of exports from East Asia over the last decade. Third, though its capital account is not fully convertible, China is important both as an investment destination and as a lender in global capital markets. It is the world’s largest host country for foreign direct investment (FDI)¹ and the largest capital supplier among developing countries.² Looking ahead, China will continue to be an important driver of change in East Asia. With WTO accession, it will continue opening its markets to other countries’ exports and improving its business climate.

The task of assessing the impact of China and its WTO accession on East Asia presents an enormous challenge given the complexity of the changes resulting from accession and the difficulty of specifying clearly what would have happened had China not acceded to the WTO. Thus the goal of this chapter is less to predict detailed changes than to provide a framework for understanding the impact on the region’s economies and offer a broad assessment of this impact for different countries and country groupings. The findings are drawn from quantitative and qualitative analysis, including improved computable general equilibrium modeling and partial equilibrium studies, which are detailed in the Website associated with this volume.³ Because the analysis is at an aggregated level, readers should supplement the findings here with information from subsectoral case studies before making policy decisions.

The chapter is organized as follows. The next section briefly describes the major channels of impact, followed by a section assessing the impact on the newly industrializing economies in East Asia—in particular, their growing opportunities in China’s markets and the impact of the evolution of global production networks. The next section assesses the scope for East

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¹ It is difficult to judge the accuracy of the FDI data as they reflect “round-tripping” investments undertaken from China to take advantage of concessions enjoyed only by foreign investors.

² These outflows do not include flows through Hong Kong.

Asian middle-income developing countries to expand exports to China, as well as the challenges they face from competition with China in third markets. It also outlines how domestic markets are likely to be affected by increases in the supply of exports from China and by patterns of foreign direct investment. The following section looks at the impact on lower-income countries of East Asia. A final section concludes.

Channels of impact

Over the next decade, China’s growth and increasing integration into the world economy will have major effects on the region. Other countries in East Asia will feel the impact of China’s WTO accession through four main channels:

- Expansion of markets in China for their exports
- Increased imports from China into their domestic markets
- Competition with China in third markets
- Expansion of foreign direct investment in China and, potentially, outward foreign investment from China.

Increased access to China’s domestic markets

In the 1990s, exports to China spurred growth not only in the newly industrializing economies but also in the developing countries of East Asia (Figure 2.1). The ASEAN countries have increased their exports to China by 390 percent and expanded their share in China’s total imports from 6 percent to 9 percent.

Looking ahead, continued growth in China’s huge domestic markets will fuel further export growth for the world and the economies of the region. In many sectors, China’s WTO accession only adds a little to the already vigorous projected growth of these markets. Nonetheless, the accession will cause several significant shifts. China’s substantial commitments to liberalize trade in services represent the most significant part of the accession package, providing national treatment to foreign-funded firms and greater opportunities for exporters of services. In manufacturing industries, China’s commitments to abolish nontariff barriers and reduce its import tariffs from 13.3 percent in 2001 to 6.8 percent by the end of the implementation period will fuel further industrial restructuring. Some sectors such as motor vehicles and high-end manufacturing industries will be affected significantly by rationalization and industrial restructuring. In agriculture, too, China’s imports are projected to grow substantially, though the effect on agricultural output and imports from WTO-related reforms is much smaller than projected by earlier studies. The reason is that protection on many farm products is expected to remain virtually unchanged by the end of the implementation period.

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4 Mattoo (2001).
6 Huang and Rozelle (2002).
Growth in the region’s exports will also be fueled by the increased demand from those major trading partners that benefit directly from China’s accession. The developing countries of East Asia will export more not only to China, but also to the newly industrializing economies in East Asia, whose own demand for imports has grown as a result of the accession. Both the direct and indirect effects of increased access to China’s markets will be important for regional trade.
Increased imports from China

China’s accession to the WTO will be accompanied by cuts in its export prices, increasing China’s appeal as an efficient supplier of intermediate inputs. China’s pre-accession reforms have already improved the competitiveness of Chinese exports and have benefited its closest trading partners. Trade intensity indexes for 1985 and 2001 suggest that trade between individual East Asian countries and China has intensified sharply since 1985. Consequently, most East Asian economies are expected to benefit from further cuts in export prices as China continues to implement WTO-related reforms over the next few years. The benefits to these countries will be seen in terms of both increased output and welfare.

A growing segment of imports from China will be inputs in production processes, not only finished consumer goods. China is increasingly a central player in production networks. While Japan remains an important center of production-sharing operations in East Asia, originating about one-third of all regional exports of components for assembly, China is finding niches; its exports of parts and components increased by almost US$20 billion from 1996 to 2001. By 2001, China was exporting more than US$20 billion in parts and components to others parts of emerging East Asia, representing up to 20 percent of those countries’ parts and components trade. Hence, imports from China represent an opportunity for the rest of emerging East Asia to benefit from China’s growing role in global production networks.

Figure 2.3: China increasingly a central player in production networks

<table>
<thead>
<tr>
<th>Parts and Components Imports from China, 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
</tr>
<tr>
<td>Japan</td>
</tr>
<tr>
<td>Hong Kong/China</td>
</tr>
<tr>
<td>Korea</td>
</tr>
<tr>
<td>Singapore</td>
</tr>
<tr>
<td>Taiwan/China</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>Malaysia</td>
</tr>
<tr>
<td>Philippines</td>
</tr>
<tr>
<td>Thailand</td>
</tr>
</tbody>
</table>

Source: Yeats and Ng (2003), Table 17.1.

RCA = Revealed Comparative Advantage.
Source: Ng and Yeats (2003).

To realize the full benefits of China’s lower export prices, it will be important for countries to resist pressures to protect their domestic producers and to avoid imposing excessive safeguard measures for this purpose. Pressures to do so are growing in several countries. However, succumbing to them will only prolong the adjustments that are needed to realize

7 Ng and Yeats (2003).
8 Ng and Yeats (2003).
regional comparative advantages, and will distract policymakers from facilitating the transition of workers through appropriate labor market and safety net policies and programs.

**Increased competition in third markets**

Competition with China in third markets will intensify as a result of China’s accession. This will present a challenge for many countries, especially those with a similar comparative advantage in labor-intensive goods.

Southeast Asia competes with China in world markets for manufactures, especially labor-intensive products, and increasingly in higher value-added manufactures such as semiconductors and other high-technology products. Competition with China has brought unit prices down, but thus far other East Asian exporters have maintained their market shares in the United States and Japan. In Japan, developing East Asian countries have even managed to enlarge their market share slightly, while China has captured market share at the expense of the United States.

Looking ahead, competition is set to intensify for two reasons. First, the United States, Canada, and the European Union will abolish their import quotas on Chinese textiles and apparel by 2005.\(^9\) China will become a formidable competitor, especially in the apparel sector,\(^{10}\) pushing prices down in these important third markets. Second, China will lower its own import tariffs on inputs for manufacturing. The effect of these tariff reductions on the real exchange rate will lower the costs of both traded and nontraded inputs for China’s manufacturers. This will make China’s products more competitive as imports, putting pressure on domestic producers in the countries that import them.

**Shifts in investment patterns**

WTO accession is likely to increase foreign direct investment in China, as trade liberalization lowers production costs and the price of capital goods and increases the rental rates, resulting in rising returns to capital in China.\(^{11}\) Meanwhile, the liberalization of rules on investment should ease flows of foreign direct investment (FDI) into previously restricted sectors such as services and automobile production. Given the substantial productivity gap that exists between local and foreign firms, the new FDI flows are likely to raise China’s productivity. In apparel and footwear, for example, the adoption of foreign technology raises productivity by 30-62 percent in collective enterprises and 20-59 percent in state enterprises.\(^{12}\)

China’s accession is also likely to set off changes in regional trade and production patterns the effects of which will be felt over the medium to long term. The issue for other East Asian economies is whether their own FDI inflows will increase or decrease as a result. It is

\(^9\) China will be subject to additional textile safeguard quotas until 2007, but these will be applicable for only one year at a time, unlike the existing quotas, which were put in place for an indefinite period.

\(^{10}\) This is a consensus finding supported by Ianchovichina and Martin (2001), Deutsche Bank (2001), Ianchovichina and Walmsley (2002), and Wang (2002).


\(^{12}\) Claro (2001).
difficult to answer this question since much will depend on the policy responses of individual
countries. In addition, a number of factors will work simultaneously to determine the net
regional impact of China’s WTO accession on FDI flows. Though countries that lose
competitiveness may see declining returns to capital and FDI diverted to China, several
effects are likely to counteract this negative impact on FDI.

First, increased productivity and trade liberalization in China both increase the country’s
demand for imports and raise investment and welfare in China’s trading partners. Martin
(1993) shows that a productivity shock in manufactures and services, for which there is a lot
of two-way trade, is more likely to raise welfare in a country’s trading partners than is trade
liberalization. The technological advance accompanying China’s liberalization will improve
the country’s competitiveness, but also increase the country’s demand for imports.

Second, investment liberalization in China will make it possible for multinational firms to
further rationalize their production processes within East Asia. The relief of local content
requirements under Trade-Related Investment Measures (TRIMs) will encourage these firms
to relocate some segments of their production from China to other countries in the region.

Third, in some sectors, China’s neighbors may receive FDI flows that complement those
going to China. The scope for export specialization varies with the degree of
complementarity between China and other countries of East Asia.

Fourth, as FDI creates more backward and forward linkages among countries in the region,
the competitiveness of Asian products will depend not only on the competitiveness of the
country that exports the final product, but also on those neighboring countries that contribute
various components at different stages of the production process. This will create an
incentive to direct investment to different countries that are part of the regional production
network where China is playing an increasingly central role.

Fifth, whereas in the past China drew heavily on the overseas Chinese community as a source
of FDI, with accession China will be able to draw on global capital markets both for FDI and
portfolio investment. Therefore, competition between China and other countries in the region
for FDI may actually weaken.

Last, but not least, the determinants of FDI are evolving over time. Agglomeration effects are
becoming more important relative to traditional determinants of FDI such as market size and
labor costs. China’s comparative advantage may also change appreciably after WTO
accession. Its current comparative advantage in labor-intensive products suggests that there is
more scope for export specialization vis-à-vis the newly industrializing economies than vis-à-
vis the developing East Asian countries. However, this is likely to change as East Asia’s
export structure evolves. Over time, China is also likely to shift and extend its comparative

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13 UNCTAD (2002).
14 All East Asian economies saw increases in the share of manufactured exports during the first half of the
1990s and all saw changes in the structure of manufactured exports. In the 1990s, the NIEs increased their share
of electronics and information technology products and China increased its share of electronics and
telecommunications exports.
advantage into higher-end products as the result of trade-induced productivity gains and savings in transaction costs from the reforms spurred by WTO accession. This implies that the impact of China’s WTO accession on industrializing East Asia may change to include heightened competition in global markets.

Analysis shows that the impact of accession is significantly larger than the estimated static gain if productivity increases in services and high-end manufacturing are taken into account. Every percentage point increase in productivity from expanded competition and foreign entry in China’s services sector implies a welfare gain for China of US$10 billion and a GDP increase of 2.2 percent—equivalent to the total estimated static gain from China’s WTO accession.15

The spillover effect of the productivity gain in services is substantial, and China is likely to expand not only its services sectors, but also its high-end manufacturing industries, which use services as intermediate inputs. China’s industrial structure will increasingly shift away from land- and labor-intensive products and low-end manufacturing, benefiting developing countries such as Indonesia and Vietnam at the expense of the newly industrializing economies.

**Impact on newly industrializing East Asia and Japan**

On balance, the industrialized and newly industrialized economies (NIEs) in East Asia will benefit from China’s accession to the WTO.16 As important suppliers of materials to China, these countries will see an improvement in their terms of trade. In both Japan and the NIEs, most of the projected increase in production will be driven by expansion in exports to China. While these countries are well positioned to gain from accession, many of the trends from China’s growing role are already underway.

Japan, Taiwan (China), Korea, and Hong Kong (China) are expected to raise their output of textiles in response to increased demand from China’s expanding garment industry (Figure 2.3). Their own garment industries will be squeezed, however, particularly in the markets where the quotas on Chinese textile and apparel exports are removed—North America and the European Union. The growth of their textile exports to the Philippines, Vietnam, India, and other South and Southeast Asian economies is also expected to drop, as these countries’ garment industries contract in the face of competition with China in third markets.

China’s demand for intermediate inputs and final products is expected to drive the export growth of these products from its neighbors. Examples include metals and petrochemicals from Korea; electronics and other manufactures from Singapore; light manufactures, petrochemicals, machinery, equipment, and electronics from Taiwan (China); and metals, petrochemicals, oil, and other extractive industry products from Japan. In electronics, China is expected to source its additional inputs from the countries that get the largest tariff

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16 These results from CGE modeling are consistent with findings of other CGE modeling work. See Wang (2002), Ianchovichina and Martin (2002), Li and others (2000), Deutsche Bank (2001).
reductions—the United States, India, and other South Asian countries, and to a lesser extent Hong Kong (China) and Singapore—rather than from Korea, where tariffs on electronic products are already low. The potential for specialization and complementary intra-industry trade could be significant. As shown in Figure 2.4, already China represents an important source of parts and components for the NIEs.

In automobile production, China’s current plans for restructuring its industry will make it a more efficient assembler of motor vehicles and eventually an exporter. This prospect could provoke a major reorganization of the industry across the region. Our analysis projects a contraction of automobile production in Japan and the NIEs.

The NIEs will benefit from China’s increased demand for services. Accession is likely to increase demand for all types of services, including transport and communications, which these economies are well positioned to provide. And it will enhance the role of Hong Kong as a financial center serving the mainland’s investment needs and providing investment services.

Figure 2.4: Impact of China’s WTO accession on Japan and the East Asia’s NIEs for 2001-2010
Cumulative changes in output of selected sectors, relative to baseline (US$ millions)

Investment flows into the NIEs are unlikely to fall as the result of China’s WTO accession. The returns to capital in these countries will rise relative to the baseline (though not by as much as in China). This is because the NIEs are suppliers of raw materials to China, rather than competitors of China, and hence the prices received for their exports will tend to rise.

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17 Differences in tariff cuts reflect differences in export composition by exporting country.
18 Francois and Spinanger (2002).
For Japan, the major impact from China’s WTO accession is that China will become a more attractive destination for Japanese investments. After five years of strong growth, Japanese FDI to China dropped substantially in 1996-99, less because of Japanese firms’ financial difficulties than because of a difficult market environment in China. Some of the concerns about China’s weak legal and administrative environment for foreign investment are likely to be addressed in line with WTO accession, although competition in markets for goods and services is expected to intensify.

**Impact on middle-income developing countries of East Asia**

Overall, China’s trade liberalization and growth will have a mixed impact on these countries—Indonesia, Malaysia, the Philippines, and Thailand. China’s market presents sizable opportunities. At the same time, the impact of accession itself is concentrated in a few sectors—apparel and textiles, where adjustments are likely.

China’s growing import demand gives these economies potential to expand their agroprocessing, electronics, and other manufacturing industries such as machinery and equipment. Demand from China will be compounded by increased import demand from China’s closest trading partners—Japan, NIEs, the EU, and the United States—which themselves have benefited from China’s growth and WTO accession. And, given China’s agricultural reforms, there is scope for expansion of agricultural exports to China such as oilseeds and sugar as well as basic raw materials such as timber and energy products. These countries also have opportunities to export professional and tourism services to China.

**Figure 2.5: Impact of China’s WTO accession on developing economies of East Asia for period 2001-2010**

*Cumulative changes in output of selected sectors, relative to baseline (US$ million).*

![Figure 2.5](image)


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20 Ministry of Finance, Japan.
The high intensity of trade between individual East Asian developing countries and China\textsuperscript{22} in 2001 suggests that the planned reductions in the protection of China’s markets offer some good opportunities for exporters. For Indonesia and Thailand, much of the tariff reduction will occur by 2004 (Table 2.1). Thailand receives an average tariff reduction of more than 6 percentage points. These rates represent the statutory tariff bindings under China’s WTO accession, but China is free to offer tariff rates below these bindings. Under the “Early Harvest” and China-ASEAN Free Trade Arrangement that was announced in November 2002 in Phnom Penh, for example, ASEAN countries’ exports to China could face even lower tariffs than other countries’ exports. Some of the top exports from Indonesia and Thailand to China will also benefit significantly from reductions in nontariff barriers (Table 2.2), as explored below.

### Table 2.1: Weighted average tariffs facing exports to China: Indonesia and Thailand\textsuperscript{*} (%)

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>8.20</td>
<td>8.66</td>
<td>5.82</td>
<td>4.91</td>
<td>4.73</td>
<td>4.65</td>
<td>4.58</td>
<td>4.51</td>
</tr>
<tr>
<td>Thailand</td>
<td>10.19</td>
<td>8.91</td>
<td>8.41</td>
<td>4.86</td>
<td>4.63</td>
<td>4.43</td>
<td>4.25</td>
<td>4.05</td>
</tr>
</tbody>
</table>

Notes: Uses in-quota tariff rate for tariff-rate quota products.
*Weighted average tariff calculated on top 100 export products to China, representing more than 85 percent of each country's exports to China.
Sources: UN Comtrade data; PRC WTO accession agreement; authors’ calculations.

### Table 2.2: Shares of exports to China affected by lifting of quantitative restrictions (% of total exports, 1995-99)

<table>
<thead>
<tr>
<th>Country</th>
<th>% of exports facing QRs</th>
<th>Key products (% of total exports)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>16.5</td>
<td>Palm oil (7.3); rubber (2.9); processed oil (0.6)</td>
</tr>
<tr>
<td>Thailand</td>
<td>30.6</td>
<td>Rice (9.24); rubber (11.8); cane sugar (5.8)</td>
</tr>
</tbody>
</table>

Sources: UN Comtrade data; PRC WTO Accession Agreement; authors’ calculations.

The middle-income countries also will have opportunities to strengthen their links with China as it plays an increasingly large role in global production networks. Intra-industry trade and specialization will be reflected in both exports and imports. As shown in Figure 2.3, developing East Asia imported roughly US$3 billion in parts and components from China in 2001, representing 13 percent of Thailand and Malaysia’s total\textsuperscript{23}.

At the same time, an issue that has received much attention is the threat of increased competition in third-country markets from increased exports from China. The increasing similarity in export structure between China and several of the countries under consideration gives some support for this concern. The correlation of exports, even at the five-digit (SITC) level between China and middle-income countries such as Indonesia and Thailand is significant and has been increasing\textsuperscript{24}.

\textsuperscript{22} Ng and Yeats (2003).
\textsuperscript{23} Ng and Yeats (2003).
\textsuperscript{24} During 1995-99, based on 2,700 products at the 5-digit SITC level, the correlation of export structure with China’s rose from 0.174 to 0.302 for Indonesia and from 0.337 to 0.491 for Thailand.
The garment and textile sectors pose particular challenges. Once quotas on Chinese textile and apparel exports to North American and Western European markets are lifted in 2005,\textsuperscript{25} apparel exports from Malaysia, the Philippines, Thailand, and Indonesia will be negatively affected. The textile industry in developing East Asian countries in general will also be hurt, though nearly not as much as the apparel industry, because some of these countries will start exporting textiles to China and other NIEs.\textsuperscript{26} The risk to exports to third-country markets is confirmed by a market-by-market and product-by-product analysis for sample countries. For this analysis we identify “exports at risk” to the U.S. and Japan markets based on their importance to the exporting country and the extent to which they compete with similar products from China.\textsuperscript{27} Exports in product categories that are characterized by both a high share of Chinese imports (at least 5 percent) and unit values close to those of competing imports from China are deemed to be most at risk. For Thailand and Indonesia, the results show that 15-25 percent of exports to the United States and Japan are at risk from growing competition from China (Figures 2.6 and 2.7).

Overall, and increasingly over time, trade-induced changes in China’s productivity will make China a stronger partner and ensure that the benefits from market opportunities outweigh third-market competitive challenges.

\textbf{Indonesia}

In the decade ahead, China’s liberalization and economic expansion open several opportunities for Indonesia as well as poses risks, both as an exporter and as a destination for investment. The challenge will be to manage the transition to realize those opportunities.

Indonesia’s exports to China stand to benefit significantly from China’s growth and liberalization. Nearly 20 percent of Indonesian exports to China are in products—especially processed oil, rubber, and palm—on which quantitative restrictions will be lifted (Table 2.2). Palm oil exports, in particular, should gain significantly from the relaxation of quantitative restrictions (QRs).\textsuperscript{28} Palm oil, which was previously subject to an import license, is now subject to tariff-rate quotas (TRQs) with accession. Initial quota levels are set significantly above import levels prior to accession and are slated to increase significantly by 2005.\textsuperscript{29} QRs

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\textsuperscript{25} Importing economies will be allowed to introduce special textile safeguards during the period 2005-07, but these will be effective for only one year at a time.

\textsuperscript{26} See Appendix table 2 at http://www.worldbank.org/eaptrade.

\textsuperscript{27} In each major import market we look at three variables: (1) Imports in a particular product category as a share of total imports from that country (for example, garment imports from Thailand as a share of total imports from Thailand). This variable indicates the importance of exports in that product category to the sending country. (2) Imports from China as a share of total imports in that product category (for example, garment imports from China as a share of total garment imports in the United States). In the country-by-country analyses, we look at two (arbitrary) threshold levels for the share of Chinese imports—10 percent and 5 percent of total imports. (3) Unit values of imports in the product categories in question. Product categories mask a variety of differences; unit values provide an additional indication of how similar products are and hence how likely there is to be a terms-of-trade impact from competition. If the unit values of imports from both sending countries are on the same side of the average unit values for the product category in question, we deem them to be “close.”

\textsuperscript{28} Between 1995 and 1999, Indonesia was the second largest exporter of palm oil to China after Malaysia. In 1999 it supplied 355,172 metric tons to China.

\textsuperscript{29} The initial quota for palm oil is 2,100,000 metric tons; that will rise to 3,168,000 metric tons in 2005. In 1999, Total PRC imports of palm oil was 1,193,509 metric tons. The in-quota tariff rate is set at 9 percent throughout the period, and while the initial out-of-tariff rate is as high as 63.3 percent, it is slated to decline
on rubber will occur in 2004, when quotas are eliminated. Urea will also be subject to a TRQ, with a final quota level in 2006 of more than 2.5 times the initial quota level and an in-quota tariff rate of 4 percent. Most categories of timber will also be liberalized within three years of accession. In the Chinese market, under the “Early Harvest” and China-ASEAN FTA, a range of Indonesian exports will face lower tariffs than other countries’ exports.

Indonesia’s overall export volume will continue growing, but competitive pressures are likely to shift the manufacturing structure. Exports from electronics and other manufacturing industries are projected to increase, as are exports of land-intensive products—food and feed grains and wood products—and other raw materials, including energy products. Indonesia will also increase its exports of oilseeds, sugar, and cotton to China.

At the same time, Indonesia’s apparel sector will need to adjust. Indonesian apparel sells mainly in North America and Western Europe, where it will be particularly vulnerable to the abolition of quotas on Chinese apparel exports. With a possible decline in apparel output, Indonesia’s textile sector will also come under pressure, though there will be niches for its expansion.

Indonesian exports are more at risk in the United States than in Japan. Among Indonesia’s exports to the United States in 1995-99, the top 5 products accounted for more than 30 percent, and the top 100 products for 84 percent. Of Indonesian exports to the United States, nearly half (47 percent) appear to have unit values close to those of competitor products from China, and 16 percent are in the risky categories—those where unit values are close to those of China and where China supplies more than 10 percent of imports (Figure 2.6). Using the 5 percent threshold, nearly a quarter of Indonesian exports to the United States are at risk, including Indonesia’s second and third most important export products to the United States.
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### Figure 2.6: Indonesian Exports Potentially at Risk

**Market-by-market and product-by-product analysis: China market share and close unit value**

<table>
<thead>
<tr>
<th>Share in U.S. market (%) (n=165 products)</th>
<th>PRC import share &lt; 10%</th>
<th>PRC import share &gt; 10%</th>
<th>Share in Japan market (%) (n=188 products)</th>
<th>UV Close</th>
<th>UV Not close</th>
</tr>
</thead>
<tbody>
<tr>
<td>UV Close</td>
<td>30.5</td>
<td>16.2</td>
<td>22.8%</td>
<td>24.0</td>
<td>23.1</td>
</tr>
<tr>
<td>UV Not close</td>
<td>16.1</td>
<td>21.1</td>
<td>14.1%</td>
<td>21.1</td>
<td>23.1</td>
</tr>
<tr>
<td>Share of market in analysis</td>
<td>83.9</td>
<td>83.9</td>
<td>Share of market in analysis</td>
<td>71.2</td>
<td>77.9</td>
</tr>
</tbody>
</table>

**Notes:** The figure shows calculations using two (arbitrary) threshold levels for Chinese imports: 5 percent and 10 percent of the total import market. UV = unit value.

**Sources:** UN Comtrade data; China WTO Accession Agreement; authors’ calculations.

In the Japanese market, Indonesia’s export structure has been even more concentrated than in the United States, with the top five products\(^{36}\) accounting for more than 44 percent and the top 100 for more than 85 percent of total exports in 1995-99. About 11 percent of Indonesia’s exports are in risky categories, with unit values close to those of competing Chinese products and with China supplying more than 10 percent of imports. Using the 5 percent threshold, 23 percent of Indonesia’s exports are potentially at risk; they include some of the most important exports to Japan.\(^{37}\)

Indonesia is likely to adjust to the increased competition in apparel by increasing its specialization in wood and paper products and in light, high-end, and other manufactures. Exports of these products could increase, primarily in response to rising demand in China.

China’s increased attractiveness for investors again provides both opportunities to Indonesia to expand its intra-industry trade and potential threats. One approach to assessing Indonesia’s ability to prevent a decline in direct foreign investment is to look at the sectoral changes that are likely to occur. If the sectors that are expanding (contracting) are the ones that already account for a large share of FDI, then FDI is likely to increase (decrease) as well. Sectors that are growing less rapidly in Indonesia—apparel and textiles as well as assembly operations—have received foreign investment in the past, whereas any expansion in agriculture likely involves little FDI. Opportunities exist for Indonesia to participate in global production networks—cosmetics, machinery, and audiovisual equipment, for example—in which FDI may expand in China and Indonesia simultaneously. And, like other ASEAN middle-income countries, Indonesia has the potential to develop its role as a supplier of specific parts to an

\(^{36}\) Plywood with an outer ply of tropical wood (63431) (19.4 percent); frozen shrimps and prawns (03611) (11.5 percent); bituminous coal (32121) (7.1 percent); nickel mattes (28421) (3.5 percent); and nonalloyed aluminum (68411) (2.9 percent).

\(^{37}\) Bituminous coal and cotton yarn other than sewing thread.
automobile production network, given the restructuring of the industry now taking place in the region.\textsuperscript{38}

Indonesia will need to tailor its strategy to grasp the opportunities for increases in trade and investment flows if it is to offset the declines that are projected in its exports to the United States, Japan, and the EU. Key elements will be measures to restore investor confidence and increase competitiveness. Indonesia will need to avoid protecting its domestic producers with excessive safeguard measures so as to facilitate an adjustment in the manufacturing sector that responds to the opportunities in China’s markets. Measures like the recently introduced temporary safeguards against garment imports, for example, will only prolong the adjustments that Indonesia needs to make to realize its regional comparative advantages.

**Malaysia**

Among the developing middle-income countries in East Asia, Malaysia is likely to be the most positively affected by China’s WTO accession. Overall, the effect on trade will be positive, as Malaysia becomes a more important trading partner to China. Flows of foreign investment will not be much affected, as the returns to investment in Malaysia are expected to rise only slightly over the accession period.

Malaysia’s exports of wood products and other manufactures are expected to increase as a result of WTO accession, relative to the baseline, in response to increased demand for these products in China and Taiwan (China).\textsuperscript{39} Malaysia’s overall volume of agricultural exports is not projected to change much, but exports of oil seeds, sugar, livestock, and cotton to China and Taiwan are likely to increase as a result of China’s WTO accession.

Just like the other developing economies of East Asia, Malaysia is expected to lose share in the world apparel market as a result of China’s accession.\textsuperscript{40} In textiles, however, output will be little affected; and while the textile exports of all the other developing countries in the region contract as a result of China’s accession, Malaysia’s will hold their ground, buttressed by increased demand from China’s apparel industry. In this way, Malaysia is more similar to the NIEs in the region.

Malaysia’s involvement in intraregional production networks and its increasingly high quality labor and infrastructure position it well as a destination for foreign direct investment that complements investment to China. Already, by 2001, Malaysia was exporting US$1.3 billion to China and importing US$1.4 billion from China in parts and components.\textsuperscript{41} During China’s recent expansion, Malaysia received significant FDI in the IT-related and electronics industries; FDI in electronics grew 40 percent from 1997 to 2001. In the automobile sector, Malaysia may position itself to benefit from participating in international production

\textsuperscript{39} See Appendix table 2 at http://www.worldbank.org/eaptrade.
\textsuperscript{40} See Appendix table 2 at http://www.worldbank.org/eaptrade.
\textsuperscript{41} See Ng and Yeats (2003.)
networks—for example, it produces steering gears at present. Alternatively, it may maintain its more protectionist stand, which may harm its prospects to attract additional FDI.

**The Philippines**

After WTO entry, China will demand more raw materials and land-intensive products, and the Philippines is well positioned to increase production of food and feed grains, cottons, sugar, vegetables, and fruits in response. Food grain exports, in particular, are expected to rise substantially as a result of China’s accession. Output of light manufactures is expected to grow faster with than without China’s accession.

At the same time, because the Philippines has comparative advantages in many areas in which China is strong, China’s WTO accession will intensify competition between the two countries. Competition with China will be particularly acute in apparel produced for North America and Western Europe, given the removal of quotas on China’s textiles and apparel in these markets. Overall, the impact of accession on the Philippines’ output of apparel and textiles will be negative. Even so, the Philippines occupies certain niches within the export market that may be less exposed to Chinese competition.

The impact on the Philippines will also depend on investment flows. As in Indonesia and Thailand, the sectors that are growing less rapidly—apparel, textiles, and assembly operations—have been targets of FDI in the past. However, looking ahead, the Philippines is poised to take part in global production networks in electronics, machinery and equipment, processing, and light manufacturing, where FDI may well expand in China and the Philippines simultaneously. In 2001, imports from China and exports to China in parts and components totaled US$170 million and US$342 million, respectively. This represents only a small 2 percent share of total for the Philippines, suggesting considerable opportunity for expansion.

The Philippines’ ability to move up the value chain and capture more benefits from China’s accession will depend on what strategy the country adopts. Many of the sectors that will suffer from China’s WTO accession are intensive in the use of unskilled labor, while those that will expand are more intensive in land or skilled labor. Wages of unskilled workers may well come under pressure. The potential impact on urban inequality and vulnerability in the short term will need to be carefully monitored and addressed, with increasing pressure to facilitate the adjustment process in the labor market.

**Thailand**

Thailand is well positioned to expand its manufacturing base, despite the fact that China’s WTO accession may present a challenge to the Thai economy as competition in the textile and apparel sector intensifies.

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43 Ng and Yeats (2003).
Thailand’s agricultural exports to China stand to benefit significantly from the liberalization of nontariff barriers. More than 30 percent of Thai exports to China are in products—especially rice, rubber, and cane sugar—on which quantitative restrictions will be lifted (Table 2.2). And, under the WTO accession agreement, China confirms that tariff-rate quotas will be allocated with regard to historical trade flows to end users, and imports will be allocated to the full limit of the quota established for each calendar year based on demand in the Chinese market. Since Thailand’s import share in many of the products subject to tariff-rate quotas has been high historically, Thailand can expect to be allocated high quotas. Thailand’s food-processing industries also are well placed to expand in China’s markets.

Thailand’s overall export volume will continue growing, but competitive pressures are likely to shift Thai manufacturing increasingly into electronics and other manufactures, especially metals and petrochemical products. Exports from processing and electronics industries are projected to increase, as are exports to China of land-intensive products—oilseeds, sugar, and wood products. Cotton production may expand as demand for cotton increases in response to the expansion of Taiwan (China)’s textile sector. China’s accession will have a negative impact on growth in the apparel and textile sectors.

Market and product analysis suggests that Thai exports are less at risk in the United States than in Japan. In the U.S. market, the specific products that appear most at risk from Chinese competition do not include Thailand’s most important export products to the United States. Thailand’s exports to the United States are heavily concentrated; based on data for 1995-99, the top five products account for more than 25 percent of total Thai exports, and the top 100 products account for 81 percent. Less than 9 percent of Thailand’s U.S. exports fall into the risky categories—where unit values are close to those of Chinese products and where China’s import market share exceeds 10 percent (Figure 2.7). For products in which China supplies 5-10 percent of U.S. imports, roughly 15 percent of Thai exports are at risk.

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44 The annual average value of Thailand’s exports to China is US$2,142 million. Thailand’s top exports to China include parts for automated data processing machines, rice, rubber, cane sugar, and plastics.

45 According to China’s WTO Protocol of Accession, tariff-rate quotas will apply to grains, sugar, and cotton for which out-of-quota tariffs are quite high, but otherwise, after the phase-in period, the tariffs range between just 1 and 15 percent—representing substantial liberalizations over 2001 levels (Anderson, Huang, and Ianchovichina, 2002).

46 In 1995-99, Thailand supplied more than 84 percent of PRC imports of rice and nearly 60 percent of imports of natural rubber. Thailand supplied nearly 33 percent of China’s imports of raw cane sugar, but it is only one of 12 countries that have initial negotiating rights.


48 The top export products include digital monolithic units (77641) (7.7 percent); frozen shrimps and prawns (03611) (7.5 percent); precious metal jewelry (89731) (4.1 percent); prepared and preserved crustacea (03721) (3.6 percent); and leather sole footwear (85148) (2.4 percent).

49 These shares denote minimum levels of exposure, since the analysis covers only the top 150 and 165 products.
Thailand’s exports to Japan are more vulnerable than those to the United States. They are less concentrated than those to the United States, with the top five export products accounting for only 21 percent of total Thai exports, and the top 100 for 76 percent. But nearly 21 percent of Thailand’s exports are in the risky category—where the unit values of Thai products are close to those of their Chinese competitors, and where China’s share of imports is greater than 10 percent. Four of Thailand’s top ten exports to Japan appear to be at risk, on this basis. Using the 5 percent threshold, nearly 25 percent of Thailand’s exports to Japan are at risk.

As regards investment flows, the opportunities may outweigh the risks. Sectors that are now contracting in Thailand—apparel and textiles as well as assembly operations—have historically accounted for important shares of inward FDI. One-fourth of FDI has gone to the hotel and restaurant sectors, which have scope for expansion. At the same, Thailand is poised to expand its role in global networks producing electronics, metals, petrochemicals, and other manufactures. In the electronics industry, when FDI into China gained momentum in the late 1990s, FDI flows to Thailand continued growing, reaching 27 percent of the FDI in Thai manufacturing in 1997–2001. In 2001, imports from China of parts and components already represented 13 percent of Thailand’s total parts and components imports, more than US$1 billion, with additional exports to China of parts and components of nearly US$1 billion.

In Thailand as in the Philippines, many of the sectors with exports at risk are intensive in the use of unskilled labor, while the expanding sectors are more intensive in land or skilled labor.
This suggests that one of the effects of growth and change in China will be to lower the wages of unskilled Thai workers relative to skilled workers. The potential impact on urban inequality and vulnerability in the short term will need to be carefully monitored and addressed. As unemployment in the labor-intensive sectors rises, there will be increasing pressure to facilitate the adjustment process in the labor market.

The extent to which Thailand will exit from assembly-type production or upgrade its capabilities will depend largely on the policies it pursues—either embracing trade-induced competitiveness and productivity gains, or submitting to short-term protectionist pressures; manufacturers already are complaining about low-cost imports of electrical appliances and motorbikes from China. Also important are supply factors, including local availability of engineering and sourcing capabilities, as are government incentives for upgrading technology. Thailand’s private business community is already exploring niche opportunities within labor-intensive sectors.

Impact on low-income countries of East Asia

The impacts of China’s WTO accession will vary widely among Cambodia, Lao People’s Democratic Republic (Lao PDR), and Vietnam. Cambodia is particularly vulnerable because of its concentration in apparel exports. Lao PDR, by contrast, is likely to be little affected in either China or third markets. Vietnam falls somewhere in between, with competitive pressures on its exports matched by growing market opportunities.

Regional arrangements are playing an important role in ensuring that the low-income countries of East Asia benefit from regional trade. For example, under the “Early Harvest” and China-ASEAN FTA announced in November 2002, China granted these countries Most-Favored-Nation status, even though they have not yet acceded to the WTO.

Cambodia

For Cambodia, it will be important to capitalize on any opportunities from China’s growth. Cambodia will have some benefits from China’s import tariff reductions.\(^5\) Most important, some of Cambodia’s top exports—especially rubber and wood—will benefit from the reduction of quantitative restrictions (Figure 2.8). The “Early Harvest” under the ASEAN-China agreement also gives Cambodia an MFN treatment, as noted above. Growth in China overall is expected to be a powerful source of external demand for Cambodia, including for cross-border activity that may not be well captured in official statistics.

To Cambodia, China’s WTO accession poses a potential threat both to the balance of payments, from lost exports, and to many households, from lost jobs and lower wage incomes. Cambodia’s exports are already highly correlated with China’s, and many of Cambodia’s leading exports are precisely in the apparel and textile categories where China is currently quota-constrained.

\(^5\) The decline in the weighted average tariff for the top 100 exports to China is from a relatively low level of 4.3 percent in 2001 to 2.6 percent in 2005.
The United States makes up 40 percent of Cambodia’s export market. Cambodia’s exports to the United States have been very concentrated, with 94 percent of them in textiles and apparel. Five products—all apparel—accounted for nearly half of total exports in 1995-99. It is true that a high proportion (68 percent) of Cambodian exports to the United States have unit values that are not close to those of their Chinese competitor products, and hence the share of exports that are at risk at the 10 percent share threshold appears low (9 percent) (Figure 2.9). But this significantly understates Cambodia’s likely true exposure. Once the quota restrictions on China are lifted, its exports to the EU and North America are likely to capture more than 10 percent of these markets. If Cambodia’s exports in these categories are viewed as being in a category with a high Chinese import share, the picture changes dramatically: Roughly 30 percent of Cambodia’s exports show themselves to be at risk.

Cambodian manufacturers continue to hope they can compete in a number of niche markets. But they face some significant administrative hurdles and government interventions that tend to negate Cambodia’s comparative advantage against its regional competitors, particularly in the context of low labor input costs.

Singapore is another important market. Cambodia’s exports to Singapore are extremely concentrated, with natural rubber accounting for nearly 60 percent, and their exposure to Chinese exports is quite limited. Even at the 10 percent import share threshold, less than 3 percent of Cambodian exports appears to be at risk.

All this said, Cambodia faces major challenges in adjusting its economy. Reforms in governance and other areas need to be speeded up to ensure that alternative production networks develop.
**Lao People’s Democratic Republic**

Lao PDR is less exposed than Cambodia to the impact of China’s accession. Although the effects of tariff reduction will be quite small, the phase-out of QR associated with WTO accession will create market opportunities for Lao PDR. The main benefit of the QR liberalization will be felt in timber exports, which comprise 62 percent of total exports to China, but will also affect other key exports such as dried fruits, “other pharmaceutical plants,” and coffee.

No appreciable losses are expected in Lao PDR’s most important export market, Thailand, which absorbs one-fourth of its total exports. Ten percent of Laotian exports go to Japan, and 45 percent of these are in a single product category—builders and joinery. Only 4 percent of Lao exports to Japan are in risky categories, where unit values are close to those of competitor products from China and where China’s import share is more than 10 percent. (Using the 5 percent import share threshold, the exposure increases to 19 percent, but sensitivity analysis shows only an insignificant impact on the terms of trade.)

![Figure 2.10: Exports potentially at risk: Lao PDR](image)

**Market-by-market and product-by-product analysis: China market share and close unit value**

<table>
<thead>
<tr>
<th>PRC import share</th>
<th>PRC import share</th>
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</thead>
<tbody>
<tr>
<td>&lt; 10%</td>
<td>&gt; 10%</td>
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<tr>
<td>&lt; 5%</td>
<td>&gt; 5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Share in Japan market (%) (n=11 products)</th>
<th>UV Close</th>
<th>UV Not close</th>
</tr>
</thead>
<tbody>
<tr>
<td>UV Close</td>
<td>67.3</td>
<td>4.0</td>
</tr>
<tr>
<td>UV Not close</td>
<td>24.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Share of market in analysis</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Notes: The figure shows calculations using two (arbitrary) threshold levels for Chinese imports: 5 percent and 10 percent of the total import market. UV = unit value. Sources: UN Comtrade data; PRC WTO Accession Agreement; authors’ calculations.*

While trade with China clearly represents opportunities for Lao PDR, the likely impact of China’s WTO accession on the country may be limited; this allows its policymakers some breathing space to implement their broader development agenda.

**Vietnam**

China’s WTO accession will present Vietnam with a combination of expanding market opportunities in China’s growing market and serious competitive threats. The ability of the economy and particularly the private sector to react flexibly will be critical. Vietnam itself is

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55 The weighted average tariff for the top 100 exports to China will decline from 7.3 percent in 2001 to 6.0 percent in 2005.
56 Timber trading will be liberalized within three years of accession.
57 Nearly 62 percent of exports to Thailand are of wood and related products—categories in which a large Chinese export supply response is not expected.
58 Lao PDR exports 11 products to Japan, largely wood and wood products (74 percent); coffee (24 percent); and some cotton shirts and footwear (2 percent).
preparing for integration with the rest of the world. The country has made a bold step toward trade reform by signing the Vietnam-U.S. Bilateral Trade Agreement (USBTA). It is also in the process of implementing AFTA and getting ready for accession to the WTO. Despite these reforms, however, its economy is still relatively closed\(^59\) and it is still in the process of establishing its export base.

On the positive side, increased access to China’s domestic market will stimulate Vietnamese exports across most product categories and further intensify trade between the two economies.\(^60\) China’s accession will create opportunities for expanding rice production and increased exports to China of oilseeds, sugar and cotton, for example. Other sectors that are likely to expand include food processing, light manufacturing, metals and petrochemicals, electronics, and other manufactures, as shown in Figure 2.4.

To date, Vietnam has been particularly successful at expanding its apparel and other labor-intensive exports. Apparel is an important growth sector for Vietnam. By global standards, Vietnam’s exports of garments are small,\(^61\) but at the national level they are important. They account for more than 14 percent of Vietnamese exports and provide a livelihood for thousands of unskilled workers, many of whom are female. The country has exported apparel mainly to the European Union and Japan. More recently, the USBTA has opened up the U.S. market to apparel from Vietnam,\(^62\) but China’s WTO accession calls into question how much share Vietnamese exporters will be able to capture in this market. Vietnam has two years to establish itself before the 2005 removal of the quota on Chinese imports. Estimates suggest that China’s entry to the WTO will depress Vietnam’s apparel output and exports relative to the baseline by 2010 (Figure 2.4). Therefore, it is important for Vietnam to use the period 2002-05 to advance the reform process and smooth the structural adjustment that will need to take place.

For Vietnam, trade liberalization by China implies lower costs of Chinese imports, which represents an important opportunity to reduce costs of Vietnamese manufacturing overall. At the same time, it may represent tougher competition for its own manufacturers. Already, Vietnam has imposed temporary safeguard measures on imports of motorbikes. Such measures can only prolong the adjustments that Vietnam needs to make to realize its regional comparative advantages.

Vietnam will need to greatly improve its business environment if it is to compete successfully for foreign investment with China and reap net gains from China’s growing role in the region. Without such action, the net impact of China’s WTO accession could be negative for Vietnam. It will be important to resist protectionist pressures from domestic producers and to act aggressively to establish its garment exports in the United States.

\(^59\) Ianchovichina (2001a).
\(^60\) Trade intensity indexes in Ng and Yeats (2002) show that the intensity of trade between China and Vietnam grew markedly between 1985 and 2001.
\(^61\) In 1997 Vietnam had less than 1 percent share in the global apparel market.
\(^62\) Vietnamese apparel exports to the United States have grown rapidly over the past couple of years. In 2001, articles of apparel and clothing accessories exported to the United States amounted to US$57 million. In 2002, exports of these items exploded to nearly US$900 million, and to more than US$200 million in January 2003 alone (http://dataweb.usitc.gov/).
Conclusion

The biggest beneficiary of China’s accession to the WTO is China itself, and most of the benefits are associated with China’s own trade liberalization. China’s accession and growing role also have important implications for the rest of East Asia.

Emerging East Asia is in a good position to benefit from China’s agricultural liberalization. China already is a major agricultural market for these countries, and the markets of most interest to developing East Asia—oilseeds, sugar, processed foods—are poised to open further. While initial protection in China’s food grain sector might be less than other studies have suggested, for example, for rice, import demand is still expected to increase considerably.

The potential for specialization and complementary intra-industry trade in the manufacturing sector could be significant. China is increasingly a central player in production networks, including electronics and machinery. Its trade with the rest of East Asia in parts and components—both imports and exports—represents an opportunity for the rest of emerging East Asia to benefit from China’s growing role in global production networks. In select sectors, however, such as automobiles, China’s current plans for restructuring its industry will make it a more efficient assembler of motor vehicles, leading to a contraction of production in Japan and the NIEs. Likewise, the abolition of import quotas on Chinese textiles and apparel in key markets by 2005 will make China a formidable competitor, especially in the apparel sector, and lead to restructuring with a particularly significant impact on quota-dependent low- and middle-income countries.

Dynamic gains will swamp the static impact from China’s WTO accession. Not only will China’s services sector liberalization lead to expanded exports of services such as transport logistics, communication, business, and tourism services, but also the productivity from expanded competition and foreign entry in China’s service sector will fuel China’s economy and demand. Because trade intensity with China is high for all emerging East Asian economies, they stand to benefit from this dynamic growth. Growth in the region’s exports will also be fueled by the increased demand from China’s major trading partners that benefit directly from China’s accession.

China’s WTO accession and deeper integration into the world economy present a range of opportunities and challenges for the East Asia region. Given the complexity of the changes, this assessment of the impact on the region’s economies is merely suggestive. However, it provides a framework for further understanding the likely changes so that East Asian economies can position themselves to grasp the opportunities and manage the challenges.