

The Rising New Asian Economy

Chayawadee Chai-anant

Akkharaphol Chabchitrchaidol

Danai Aroonkittichai

August 2006

Abstract

The phenomenal economic performance of China and India in the past two decades have recently become a subject of intense discussion, particularly in terms of the potential repercussions in shifting the status quo of growth concentration and trade patterns in the region. In this same time period, growth of the Japanese economy has remained subdued, while growth in most East Asian countries was disrupted by the 1997 economic and financial crisis. China, and to a lesser extent India, on the other hand, have continued to grow at an extraordinary pace throughout this time span. Both have risen to prominence in the past decade - hence coining the term the "new" Asian economy. As such, the emergence of these two economies have changed the patterns of production and trade in the region, posing threats, benefits, and challenges to each country in the region and beyond. This has resulted in the emergence of these economies both as new partners for trade as well as competitors for foreign investment in the region. This paper will focus on analyzing the impact of the rise of the "new" Asian economy, and how this has set a new stage for other economies in the region. This has put pressure on regional economies to rethink their strategies going forward, both in terms of maintaining competitiveness in the global economy, while at the same time exploiting any complementarities, where possible. Finally, the region may need to conjure up new ways to cooperate in order to draw upon its strengths to achieve balanced and sustained growth and development.

Grateful acknowledgment is made for the valuable suggestions and help given by AG. Atchana Waiquamdee, Mrs. Suchada Kirakul, Dr. Amara Sriphayak, Mrs. Chantavarn Sucharitakul, Dr. Pichit Phattaravimolporn, Mr. Supatpong Navaratana, Dr. Songtum Pinto, Mrs. Pornvipa Tamgcharoenmonkong and Dr. Pornpen Sodsrichai. We are also grateful to Dr. Kobsak Photrakul, Dr. Don Nakorn tub, and Dr. Ashvin Ahuja for helpful suggestions, Ms. Pornpra Senavinin for her supporting tasks and all staff of the Monetary Policy Group for their warm support.

The Rising New Asian Economy

Executive Summary

The rapid emergence and phenomenal economic performance of the economies of China and India in the past two decades have fundamentally altered Asia's economic landscape. In particular, this change can be seen in a shifting concentration of economic growth in the region towards these "new" Asian economies, as well as a changing pattern of trade and production in the region. Over this same time period, we have seen a gradual decline in the role of the Japanese economy, which had earlier played an important role in world economic growth. In addition, the emerging tiger economies of East and Southeast Asia saw their growth paths disrupted by the economic and financial crisis of 1997.

China, and to a lesser extent India, on the other hand, have continued to grow at an extraordinary pace throughout this time period. Both have risen to prominence – hence coining the term the "new" Asian economy. This was brought about in part by rapid industrialization and liberalization in China since 1978, as well as the more recent emergence of the service sector as a driving force of economic growth in India, following internal liberalization and reforms since 1991.

Trade liberalization in China and accession to the WTO in late 2001 has further accelerated these effects, in turn leading to new patterns of trade based upon the concept of a regional supply chain. China has taken advantage of its low production costs in its role as a regional hub for production and final assembly, with intermediate goods sourced from throughout the region. For the region as whole, China's low cost also spells production cost efficiency for complementary producers who are part of the supply chain. This in turn has led to a rise in intraregional trade to 40 percent of the region's total trade, compared to 37 percent attributed to trade with the region's traditional G-3 trading partners.

As such, the emergence of these two economies has changed the pattern of production and trade in the region, posing threats, benefits, and challenges to each country in the region and beyond. One important threat is that of increased competition from these two countries, who benefit from the advantage of labor costs. Through a Market Competition Index in Asia, the paper shows that competition of Asian exports with India and China has increased and will continue on an increasing trend. In addition, Revealed Comparative Advantage for Asia-10 shows that China has a comparative advantage both for consumer and manufactured goods, and supports the familiar "flying geese pattern" in China's export sectors.

Another important implication of the rise of China and India is the issue of whether foreign direct investment in these two countries comes at the expense of the rest of developing Asia. While the literature remains divided on this issue, with some suggesting that FDI into China is diverted away from OECD

countries, it is undeniable that these flows are continuing to accumulate in China in record amounts. However, when compared to other developing Asian countries, China and India's stock of FDI as a percentage of GDP is still lower than the rest of the region, indicating potential for further FDI inflows which will be able to sustain attractive levels of marginal return, given the sheer size of their economies.

Developments in Asia have also led to pressure on world commodity prices, and are likely to continue into the future as both China and India focus further on infrastructure development and capital investment. Additionally, China's export boom, in particular, has led to growing concerns over its trade surplus with the United States, leading to pressure on China to allow greater exchange rate flexibility. This has also led to concerns over increased protectionist sentiment from China's main export markets, which will be highly disruptive to growth in the region. Finally, the increased linkage in the regional economy also means that countries will be subject to greater impact from negative shocks in the region, ranging from disruptions in intraregional trade and the regional production network, to global economic recession.

While their growth has undoubtedly changed the regional status quo, the continued growth of these two countries, and their effects on the region, is by no means assured. Both China and India need to consider the numerous challenges in their own economies in order for sustained economic growth. Both countries also need to undertake their own country-specific reforms in order to take advantage of their endowments and growth potential.

At the same time, other countries in the region will need to react and implement policies that will keep them competitive in the region, as other low-cost countries in the region, such as Vietnam, Laos, and Cambodia, have emerged as important contenders in the playing field with their own low-cost advantages. In the case of Thailand, main policies that need to be tackled include development of Thailand's overall competitiveness. In this case, there are roles both for the public sector to support competitiveness, as well as changes by firms and producers to improve efficiency. Other issues include tackling energy efficiency, as well as development of human capital to ensure that Thailand remains ahead of the flock of the "flying geese pattern" of manufacturing production. Finally, there may be a role for regional cooperation to foster economic resiliency for the whole region, which will become increasingly independent with the intensifying intraregional trade.

TABLE OF CONTENTS

List of Tables.....	ii
List of Figures.....	iii
I. Introduction: The New Asian Economy.....	1
II. The Rise of China and India.....	4
Reforms in China: Embracing the market and international practices.....	5
Reforms going forward: WTO Accession.....	7
Reforms in India: Unlocking its growth potential.....	7
Springboard for growth: Consequences of reforms.....	8
III. The Changing Face of The New Asian Economy.....	12
Challenges under the new environment.....	14
Market competition.....	14
Foreign direct investment diversion.....	17
Pressure on world commodity price.....	22
Source of global imbalances.....	24
High regional dependency.....	25
IV. Challenges to China and India's Growth.....	27
China.....	27
India.....	32
V. Implications for Thailand: Supply Side Developments to Enhance	
Competitiveness.....	36
Appendix.....	41
References.....	42

LIST OF TABLES

Table

3.1	Intra-Industry Trade Index in Asia	13
3.2	Comparison of Revealed Comparative Advantage (RCA) on Selected Group of Commodities	18-19
3.3	Inward FDI Stocks as a Percentage of GDP.....	21
3.4	Inward FDI Performance Index Rankings, 1990-2004.....	21
4.1	Effective Import Tariff Rates of China and India.....	34
5.1	Business Efficiency Ranking.....	37
5.2	The Human Capital Index.....	38

LIST OF FIGURES

Figure		
1.1	Average Real GDP Growth (1981 – 2005).....	1
1.2	Contributions to World GDP Growth (1983 – 2005)	2
2.1	Shares of World Working-Age Population 2005	4
2.2	China’s Trade Deficit with Asia.....	9
2.3	China’s Imports from Asia	9
2.4a	China’s GDP by Industry	10
2.4b	India’s GDP by Industry	10
3.1	Correlation of Asian Economic Growth.....	12
3.2	Intra-Regional Trade and Trade with G3 Countries	14
3.3a	Export Share in World Market	15
3.3b	Asia’s Export Share to China.....	15
3.4	Market Competition Index of Asia	15-16
3.5a	Share of World’s FDI.....	20
3.5b	Comparison of FDI Flow to Asia	20
3.6	Movements in World Commodity Prices.....	22
3.7	Steel Production: G3 and China	22
3.8	Rates of World Inflation.....	23
3.9	China and US Current Account and Current Account/GDP	24
3.10	Foreign Reserves of China, India and Selected Asian Economies.....	25
3.11	Economic Cycles of Asian Economies	26
4.1a	Sectoral Share of China’s GDP	27
4.1b	Sectoral Growth of China.....	27

4.2	China's Growth Potential.....	28
4.3	China's Competitiveness.....	29
4.4	Projected Working-Age Population.....	30
4.5	Employment Share by Industry in China.....	31
4.6	Sectoral Share of GDP in India.....	32
4.7	Output Growth Index of Asian Economies.....	33
4.8	Inward FDI of China and India	35
5.1	Energy Intensity.....	37
5.2	Education Attainment of Total Population.....	39

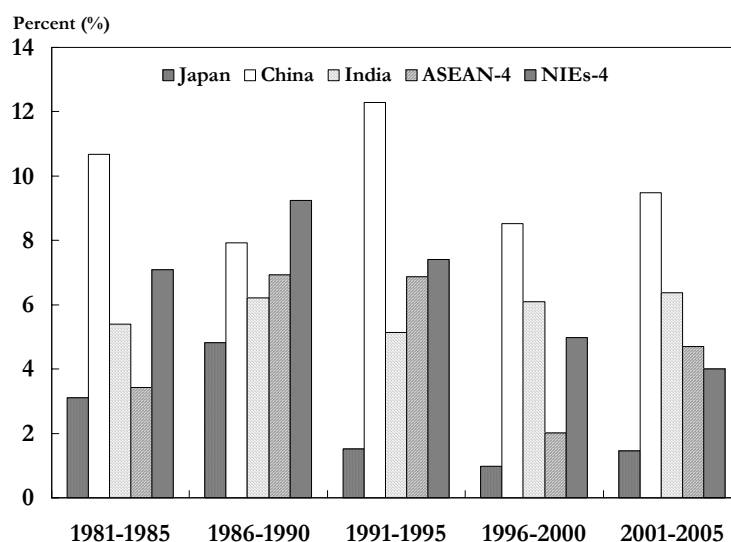
Chapter I

Introduction: The New Asian Economy

The rapid emergence and phenomenal economic performance of the economies of China and India in the past two decades have fundamentally altered Asia's economic landscape. In particular, this change can be seen in a shifting concentration of economic growth in the region towards these "new" Asian economies, as well as a changing pattern of trade and production in the region. Over this same time period, we have seen a gradual decline in the role of the Japanese economy, which had earlier played an important role in world economic growth. In addition, the emerging tiger economies of East and Southeast Asia saw their growth paths disrupted by the economic and financial crisis of 1997.

Throughout this period however, growth in India and China has continued on a sustained growth path. Figure 1.1 shows that while growth in Japan and the NIE's has moderated over the past two decades, growth in China has been sustained at high levels, averaging 9.7 percent over the same period, while growth in India has been on a rising trend, averaging 5.8 percent.

Figure 1.1 Average Real GDP Growth (1981-2005)



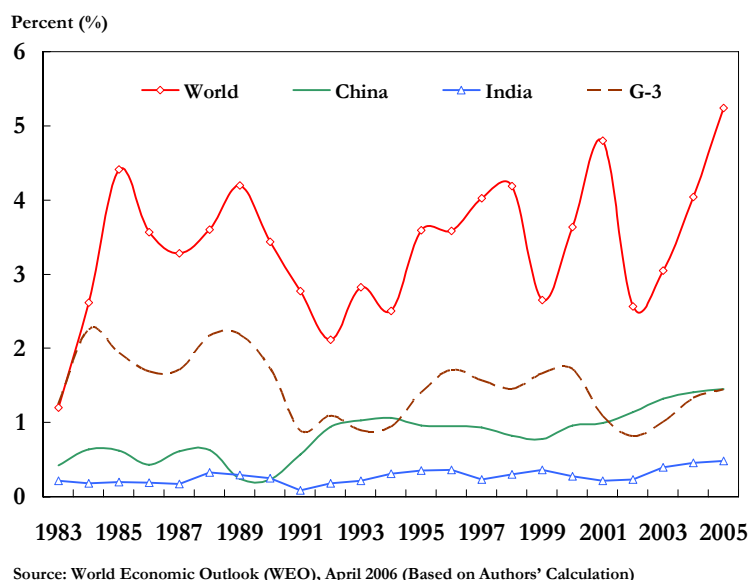
Source: World Economic Outlook (WEO), April 2006

It is this continuous span of rapid growth that has brought these two countries into the spotlight. Measured by purchasing power parity (PPP) GDP, China has grown 21-fold over the past 25 years, while India has grown more than 8-fold over the same time period. This was brought about in part by rapid industrialization and liberalization in China since 1978, as well as the more recent emergence of the service sector as a driving force of economic growth in India, following internal liberalization and reforms since 1991. Trade liberalization in

China and accession to the WTO in late 2001 has further accelerated these effects, in turn leading to new patterns of trade based upon the concept of a regional supply chain and pushing intraregional trade to levels comparable to trade with the region's main traditional trading partners. It is in this context of new production networks, trade linkages, economic liberalization, and growing domestic economies, that we collectively call the "new Asian economy".

In this environment, China and India have recaptured the world's attention and focus on the Asian region, and have once again brought credence to the caption of an "Asian Century", which seemed to come to a premature end after the 1997 crisis. With their abundant labor supplies and huge domestic markets, both China and India are likely to drive growth in Asia for decades to come. The share of the new Asian economy in world GDP has risen significantly, namely China, India, and 8 countries from East Asia (which includes Hong Kong, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand), from 5.7, 4.3, and 5.7 percent in 1990 to 13.6, 6.1 and 7.1 percent in 2005. Figure 1.2 below is one of the clearest reminders yet that the Asian century may well be back on track, revealing the rising contribution to world economic growth by China and India. China's contribution to world growth, in fact, has recently surpassed the G-3, contributing up to 1.45 percent of the world's total growth of 5.2 percent.

Figure 1.2 Contributions to World GDP Growth (1983-2005)



An analysis of the new Asian economy with China and India as the twin engines driving the region's growth would not be complete without a brief discussion of the various reforms which have given rise to the new Asian economy. Chapter 2 briefly recaps and analyzes the important economic reforms in China and India that have led to their current states of growth. It becomes clear that the different approaches taken by each country have led to their

respective specialization in varying sectors. More importantly, we look at how the pending and continued efforts at reform will affect potential growth in the future.

The two different growth paths undertaken by these two countries have led to a change in the pattern of trade on two levels. Firstly, the amount of trade in intermediate goods among Asian countries has risen dramatically to serve the regional supply chain. Taking advantage of labor cost differentials in the region and cost discrepancies in each part of the production chain, China has emerged as a low-cost hub for assembly and production, with final products exported to countries both outside and within the region. Secondly, we continue to see an increase in intraregional trade in terms of intra-industry products; namely, countries are trading variants of final products based upon final demand preferences in their own country in addition to trade of intermediate goods. This is significant in that domestic demand is beginning to play a larger role in intraregional trade, with final demand falling within the region. These issues are examined more closely in Chapter 3.

Chapter 4 discusses the benefits, threats, challenges and opportunities arising in the region, and assesses whether this phenomenal growth in the new Asian economies will be sustainable into the foreseeable future. The sustainability of this growth will in turn determine the new Asian economy's role as an alternative driver of growth for the region. This will also determine whether this altered pattern of trade and production in the region is likely to persist, or whether it will continue to evolve. For example, an important risk to the region includes the potential effect of China internalizing the regional supply chain into its own economy and in effect marginalizing the remaining economies in Asia. Questions also arise as to whether India's service-sector based growth will be sustainable into the future, as part of India's plan to become a "global knowledge hub, with a central place in the transnational movement of knowledge and services"¹, and whether growth in this area alone will be able to support India's growth going forward, given the limits in the global market in IT and IT enabled services outsourcing is limited.

Taking into account these changes and the rise of the "new" Asian economy, as well as its sustainability, Chapter 5 assesses the implications of the new Asian economy and areas that Thailand will need to consider to remain competitive. The government, as well as private businesses, each has a role to play in enhancing competitiveness and developing efficiency and productivity. Other issues that will have important implications to competitiveness need to be considered, ranging from energy efficiency to human resource development. Finally, there may be a role for financial cooperation to support regional trade and growth, in addition to these developments in the real sector.

¹ Quote by Mr. Kamal Nath, India's Minister of Commerce and Industry, Washington Post, 9 June 2005.

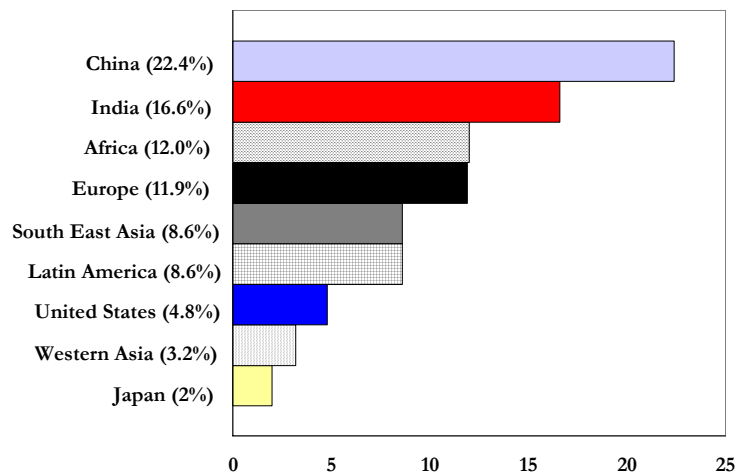
Chapter II

The Rise of China and India

In order to understand the impact of the rise of China and India to the region, it is important to understand the drivers behind the remarkable growth of these two countries and the reforms undertaken by authorities to draw upon their abundant resource bases. More importantly, the direction of government policy and the differing track of reforms undertaken by each economy have had a direct bearing on their growth today and the direction of their growth and specialization in the future.

While the track of reforms undertaken by the respective governments of China and India has differed substantially, it is undeniable that both countries' prosperity can be attributed by their government's policies which have turned to greater international trade and investment flows to expand their production possibilities. In particular for these two countries, a combination of particular demographic characteristics, structural reforms, and the effects of globalization and liberalization have been the key factors that have driven their high growth rates.

Figure 2.1 Shares of World Working-Age Population 2005



Note: Working-Age Population: Population in the 15 to 64 year age
Source: United Nations

One of the most abundant resources available to China and India are their large populations, comprising two-fifths of the world's total, at 1.3 billion and 1.1 billion, respectively (Figure 2.1). More noteworthy is the fact that the workforce of China and India (working-age population) combined represents approximately 40 percent of the global labor supply. This abundance in labor

supply and the cheap cost of labor has allowed a “global arbitrage of labor”², whereby countries have shifted production bases to countries where labor is cheapest. This has led to major gains in productivity in both countries, but especially so in China where a large portion of labor has been mobilized from agriculture into manufacturing.

Secondly, structural reforms have improved the utilization of this resource – namely increasing flexibility of the work force in these two countries. Both countries have seen an opening up of productive job opportunities through reforms, although this has been more apparent in China than in India. For example, China’s government has enacted reforms to reduce government interference in the real economy and deregulation of economic activities, allowing factors of production to operate more freely. This has led to a migration of workers from the agricultural sector into the manufacturing sector, leading to large productivity gains in the case of China.

Finally, both countries, have, to varying extents, embraced globalization through trade and financial liberalization. Combined with the above factors this has accelerated these growth opportunities and increased productivity in both countries. The following sections discuss the details of these key factors and the reforms undertaken by China and India, and how they have shaped each country’s trade patterns today.

Reforms in China: Embracing the market and international practices

The reform process in China began in 1978, in many cases taking a gradual approach. This pace of reform has allowed the authorities to test the effects of reforms through small-scale experiments, and allowed them to pick and choose successful reforms, which would then be implemented on a larger scale. These began with market-oriented structural reforms, allowing the market to operate in parallel with China’s centrally planned economy, which has since resulted in sizable productivity gains. These reforms began with a rapid and comprehensive liberalization of the agricultural sector, allowing a substantial proportion of economic activity and of the labor force to move outside of central planning.

Success with market-oriented reforms in agriculture led authorities to proceed with liberalization of industrial and service sectors in the 1980s, generally through delegating greater authority to enterprises and improving incentives by allowing them to retain a larger share of profits generated. This was implemented through an industrialization plan, which allowed a gradual liberalization of product pricing as well as the setting up of systems that rewarded local governments to promote development. Key industrial reforms implemented include reform of State-owned enterprises (SOEs), deregulation of product prices, as well as extensive labor reforms to introduce greater labor mobility and flexibility. Reform

² “India and China: New Tigers of Asia – Part II”, June 2006; JM Morgan Stanley

of small and medium sized enterprises – i.e. those at the township and village levels - were also extensive, resulting in SMEs playing an important role as a growth driver of industrial output.

Internal reforms in China have therefore been characterized by the government's aim at removing growth bottlenecks. In addition, the government has undertaken major reforms in deregulating its labor market in parallel with the liberalization of its markets. Measures include adopting greater flexibility in labor (both in terms of hiring and firing), as well as greater mobility, such as allowing urban job seekers to choose and find work in SOE's collectives or in the private sector. Enterprises themselves have been given greater autonomy in their hiring decisions and in wage-setting, for example, firms have been allowed to give bonuses to employees, and have greater discretion on the wages that they decide to pay their employees.

Reforms on the external front, through a gradual removal of external trade constraints, have also allowed China to benefit from international trade and investment flows. Weighted average import tariffs have been reduced from over 50 percent in the 1980's to 6.4 percent at present. Capital account reforms allowing foreign investment, as well as the establishment of Special Economic Zones (SEZ's)³, have helped attract foreign direct investment in record levels. In addition, each Special Economic Zone was given autonomy to experiment with new institutional reforms. These included exemptions from the Central Plan, such as looser regulations on labor, as well as allowing foreign funded-enterprises to be set up, and enjoyed special policy benefits such as lower tax rates as well as good infrastructure facilities.

Liberalization on the external front has meant that China's growth has greatly benefited from direct foreign investment to advance development. These investment flows were attracted by a combination of favorable competitive factors and liberal investment regulations. This has led to China's attractiveness as a major manufacturing base for re-exports in addition to domestic consumption. As such, a large share of China's trade (exports) involves reprocessing, with products imported from Asia for assembly and re-exported to G3 trading partners.

In addition to the above reforms, banking sector reforms in China were initiated in the 1980s with the creation of four large state-owned banks. Some limited progress has been made, mainly in changing lending practices in shifting lending for policy purposes away from the state commercial banks. Since the Asian financial crisis of 1997, however, the authorities have pushed forward in financial sector reform, with an aim of making these state-owned commercial banks market competitive. This has included reforms to ensure greater transparency, stricter regulatory standards, reduction of government interference, recapitalization, cleaning up of balance sheets and dealing with NPLs, as well as operational restructuring, to name a few areas. Importantly, with WTO entry,

³ SEZ s were established in Shantou, Shenzhen, Xiamen, and Zhuhai, and later Hainan.

reforms are being undertaken to allow full market access to foreign banks and ensure they receive national treatment in China by 2007. Greater foreign competition will serve as an important source of market discipline, as well as introduce knowledge and new technology.

Reforms going forward: WTO Accession

Reforms in China are likely to continue going forward, particularly in view of its commitments upon accession to the WTO. This should result in further reductions in tariffs, including tariffs on non-agricultural products (which account for nearly 95 percent of its total imports) as well as continued reduction of non-tariff barriers⁴. More importantly however, will be the China's commitments to liberalize trade in services, which includes opening of key services sectors to foreign participation. Notable sectors include telecommunications, financial services, and insurance, where full access will eventually need to be guaranteed to foreign providers through transparent and automatic licensing procedures.

Reforms in India: Unlocking its growth potential

Reforms in India can be dated back to the 1980s with a shift in the national government's attitude to favor private business, and rolling back of the influence of the state. However, this greater pro-business attitude meant that businesses were encouraged to focus more on raising profitability of established industrial and commercial establishments, as opposed to pro-market, which would focus more on removing impediments to the market and favoring new entrants and consumers.

Reform efforts were stepped up following India's 1991 balance of payments crisis. In addition to macroeconomic stabilizing measures – including a 19 percent devaluation of the rupee in July 1991 - a number of critical supply changes marked this as the beginning of economic reforms which have supported growth in India, which has averaged at 6.9 percent since 1991. Various reform measures on the external front have been introduced; including reduction of import tariffs, easing of quantitative trade restrictions, and liberalization of foreign investment policies. On the internal front, the removal of licensing requirements in most sectors (which were previously reserved solely for the public sector) as well as reduction of state control on trade and business helped contribute to the development of the industrial and manufacturing sectors. Other key industrial reforms included the deregulation of product prices, reduction of protection to the SME sector, and privatization of state owned enterprises.

In terms of trade, India also reduced import tariffs significantly, with weighted average import tariffs falling from 56.1 percent in 1992 to around 28

⁴ Tariffs and NTBs have been continually reduced since the early 1990s; therefore the majority of China's imports have not been subject to any tariffs since 2000.

percent, currently. Effective import rates on manufactured goods have also been reduced from an average of 70.8 in 1992 to 25.3 percent in 2004.

Banking sector reforms in India have been much more substantial than in China, with a modern regulatory framework, as well as strict prudential norms and market competition. In addition, most banks in India are likely to move to meet the Basel II requirements by March 2007.

Many reform challenges remain, however, in order for India's economy to continue on its present growth trajectory. India's labor laws as well as restrictions on foreign investment remain tighter than in China. For example, controls on labor exist both at the central government level, as well as at state government level. For instance, these regulations include requirements for any employers of more than 100 employees to go through a rigorous approval seeking process before laying off employees.

Springboard for growth: Consequences of reforms

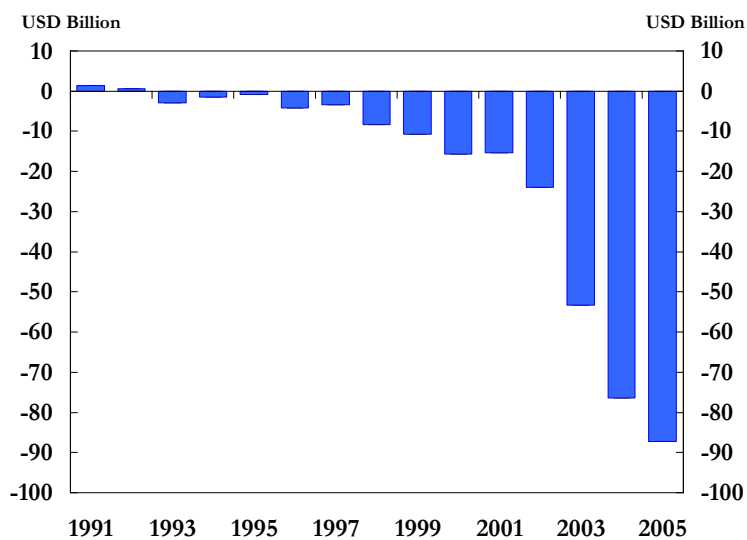
While many of the above reforms seem similar in substance, the extent to which these reforms have been implemented and their effect on each economy has differed widely. In the case of China, reforms and liberalization have resulted in massive flows of foreign capital into the country. For example, the amount of foreign direct investment that has entered China has almost equaled total FDI into the Asian-8 countries. These huge FDI inflows, coupled with China's own high domestic saving rate, have allowed investment in infrastructure and fixed investment.

The Chinese government's emphasis on developing a manufacturing sector focusing on export-led growth has meant that its presence in the global economy has been much more conspicuous than that of India, in a much wider range of sectors and industries. In particular, as many Asian countries have long been aware, the rise of China as a major trading nation has long posed a direct threat to the Asian economies in terms of competition, particularly through trade diversion of investment and exports – displacing the exports of Asian countries to final markets outside the region. In global markets, the demand for commodities by both countries has altered the face of commodity markets.

At the same time, the emergence of these two giants has also changed the pattern of trade in the region – particularly through its role as a regional hub for assembly and processing of intermediate goods. One of the most notable changes in the pattern of trade and production has been based upon the region's increased linkage of the production network. Taking advantage of labor cost differentials in the region and cost discrepancies in each part of the production chain, manufacturing of a single, final good is split up into its component parts and produced in countries with the lowest comparable production cost. While this phenomenon is discussed in greater detail in the next chapter, it should be noted that this new phenomenon has meant that in the past, China's assembly plants and production lines have depended on goods imported from the rest of

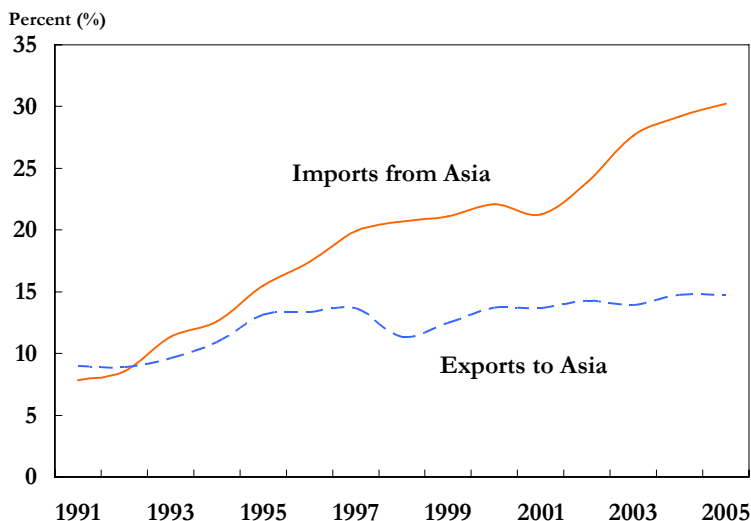
the region. In fact, China's trade deficit with the region (excluding Hong Kong) has risen from just over 3 billion US dollars in 1997 to almost 87 billion US dollars in 2005, as indicated in the Figure 2.2 below.

Figure 2.2 China's Trade Deficit with Asia



Source: Direction of Trade Statistics

Figure 2.3 China's Imports from Asia (Share of Total)



Source: Direction of Trade Statistics

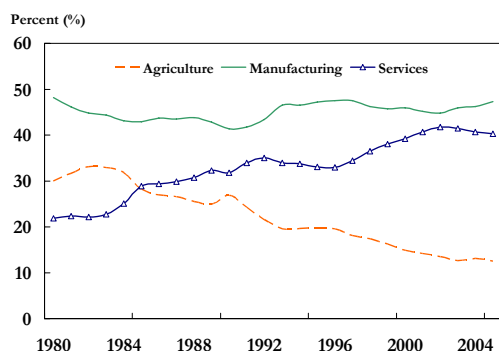
However, it is uncertain whether this trend can continue indefinitely. Going forward, there is the risk that Asian exporters will not be able to continue expanding their share in China's total imports, as China internalizes its supply chain, thereby displacing imports from the rest of Asia. This risk to Asian economies continues to intensify as China makes use of its large workforce still in agriculture. As such, China's dependence on the rest of Asia for imports as part of its reprocessing and assembly may decline over time, as the development of

China's domestic supply network slowly replaces imported inputs. However, at the moment, China's imports from Asia (excluding Hong Kong) have been on a rising trend over the past 15 years, while its exports have remained relatively stable, as demonstrated in Figure 2.3.

From a global perspective, while China's new pattern of trade has had global implications, the effects of India's service sector development has been less obvious, although no less significant. In contrast to China, India's development has been characterized by a lower savings rate, limited inflows of FDI and poor infrastructure. This has limited India's ability to compete in the export market for manufactured goods. In addition, one of the key deficiencies in India's growth process, which has prevented the large gains in labor productivity growth as seen in China, has been the failure of industry to draw workers out of agriculture into industry (60 percent of workforce still remains in agriculture). Other regulations, such as bans on large-scale entry, ensure that many highly labor intensive products are reserved for small-scale producers.

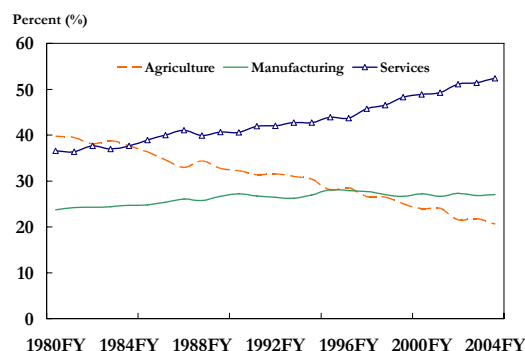
Despite – or perhaps as a result of these regulations – India's entrepreneurs have in turn excelled in sectors where these constraints and regulations have been non-binding, or where deficiencies are insignificant. This has led to the boom in services, particularly in IT services and business outsourcing. The nature of reforms in some sectors – and the lack of reform and development in others (particularly the failure to invest in infrastructure) – have contributed in shaping the growth of India's economy through service sector development. Figure 2.4a below show the rise in the share of services in China's GDP from 31 percent in 1990 to 40 percent in 2005, while India's service sector share in GDP has risen from about 40 percent in 1990 to 52 percent in 2005 (Figure 2.4b).

Figure 2.4a China's GDP by Industry



Note: 2004FY: March 2004 – February 2005
Source: CEIC

Figure 2.4b India's GDP by Industry



Note: 2004FY: March 2004 – February 2005
Source: CEIC

The smaller share of services in trade compared to manufactures means that India's impact on global trade has been small, especially compared to China. However, in the past, industrialized countries have been somewhat accustomed to losing market share in manufacturing to newly industrialized

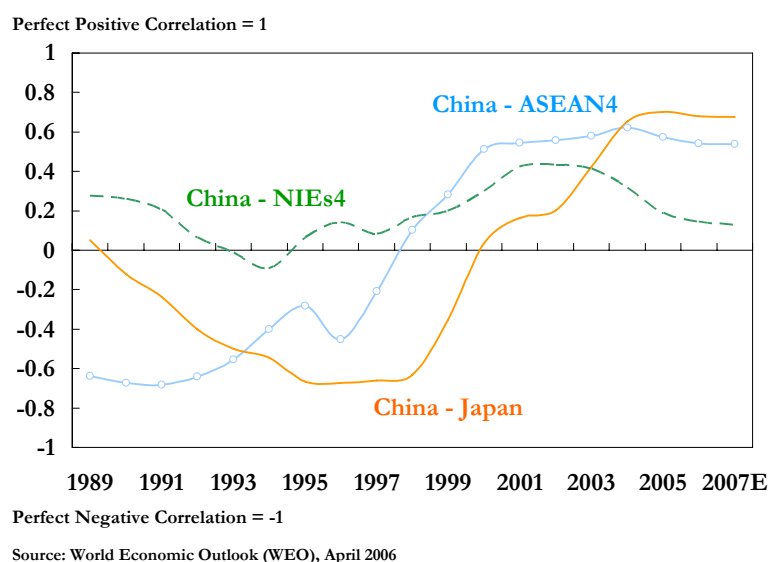
nations with lower production costs. The loss of market share in what in the past has been considered as non-tradable services – which have now become tradable – is likely to cause a rethinking of the effect of these new Asian economies.

Chapter III

The Changing Face of the New Asian Economy

Under the presence of China and India, the Asian economy has faced new challenges and opportunities as the new economic landscape is irreversibly altered. The regional economies have become more tightly integrated in a wider range of areas. As can be seen in Figure 3.1, the correlation of China and the other Asian economies has gradually risen over time, reflecting this increasingly stronger regional linkage.

Figure 3.1 Correlation of Asian Economic Growth



The fundamental reason explaining this closer relationship among the Asian economies is the tighter linkage in the production network. The shift towards an international division of labor has become a main source of growth for the region in the past few decades. This production nest is based primarily on the most attractive feature of the two giants, namely, their highly abundant labor resources. This has provided these two countries with a significant cost advantage. Producers seeking the cheapest production costs have shifted their production bases, particularly their assembly lines, to China to take advantage of its cheap labor. Consequently, China has become an integral part in a regional production line. Moreover, low-price products from China have also made their way into the markets of other countries, causing regional trade and production to expand further.

This changing production structure is reflected in the higher degree of intra-industry trade within the region. Table 3.1 reveals the intra-industry trade

index⁵, which shows that trade in similar goods in a production line among countries in the region has increased for all countries in the region, with the exception of Singapore. From Table 3.1, we see that most countries reveal a higher degree of intra-industry trade over the period between 1999 and 2004. This implies the increasing importance of the supply chain and production networking in the region. A notable point is that in the case of Hong Kong, which already acts as a re-export hub for the region, its increase in intra-industry trade indicates even greater intra-regional linkages.

Table 3.1 Intra-Industry Trade Index in Asia

	1999	2004	Change in Index
China	60.026	66.956	6.930
Hong Kong	87.206	91.008	3.802
Taiwan	68.424	71.217	2.793
Thailand	63.741	70.989	7.247
Malaysia	71.352	78.418	7.065
Singapore	84.691	83.383	-1.308
Indonesia	41.610	54.193	12.583
Philippines	61.543	75.270	13.727
India	43.098	51.590	8.492

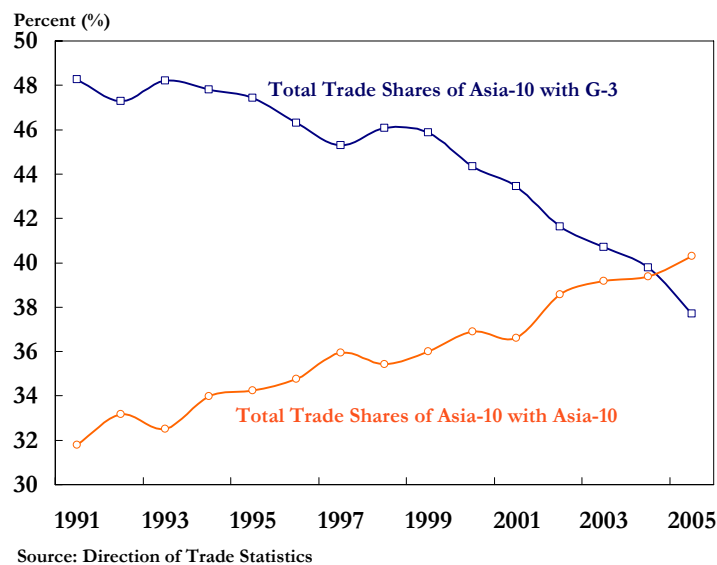
Source: World Trade Atlas (Authors' calculation)

The closer link within the region is also derived from a sharp rise in intra-regional trade. Among the most important changes, rising income in China and India have become a source of growing demand for goods and services that has attracted producers worldwide who seek to maximize sales and profits, as well as benefit from economies of scale production. In addition to the growth of regional trade of goods and services to support this network, trade to support growing consumption in the region has caused intra-regional trade to skyrocket. Figure 3.2 clearly displays the increasing role of trade within the region as a new driver of growth relative to trade with the G3 countries. In fact, the share of intra-regional trade, at 40.3 percent, has recently surpassed the share of Asia's trade with the G3 countries, now at 37.7 percent, and with continuing momentum. This has set a new tone for the regional economic environment, requiring adjustments to be made in order to prosper with these two growing giants.

⁵ $A_{IIT} \equiv \frac{\sum_i (x_i + m_i) - \sum_i |x_i - m_i|}{\sum_i (x_i + m_i)}$ The index measures the proportion of total trade comprise by intra-industry trade. If there

is no intra-industry trade, either x_i or m_i will be zero and AIIIT index will be zero.

Figure 3.2 Intra-Regional Trade and Trade with G3 Countries



Challenges under the new environment

Despite many new opportunities the two giants have introduced to the region, the size of their economy has also brought about new challenges to the rest of the region.

Market competition

One of the most prominent challenges facing countries across the globe has been the threat of crowding out of their export shares to third countries by exports from China and India. Since trade liberalization began in these two countries - in particular China - its export share to the world has increased significantly⁶. According to Figure 3.3a, China's export share to the world has risen from 1.6 percent in 1987 to 7.2 percent in 2005, while that of India remains at 0.95 percent in 2005. The major factor supporting the penetration of China's exports over that of other countries can be attributed to its low labor cost, and hence lower prices. As a result, for competing producers in sectors such as labor-intensive manufactured goods (i.e. textiles, leather products and footwear) and intermediate inputs, the low cost of labor in China directly threatens their competitiveness, and their market share.

On the other hand, one might suggest that China's new production network, and its role at the end of the production line for final assembly, will in fact help boost the region's exports in total. Following this line of thought, China's low cost spells production cost efficiency for complementary producers who are part of the supply chain. This pattern of trade can be confirmed by the

⁶ This is due to the pattern of China's development towards industrialization, which has had a greater impact on the global economy than India.

rising share of exports of Asian countries to China in Figure 3.3b, as regional production expands.

Figure 3.3a Export Share in World Market

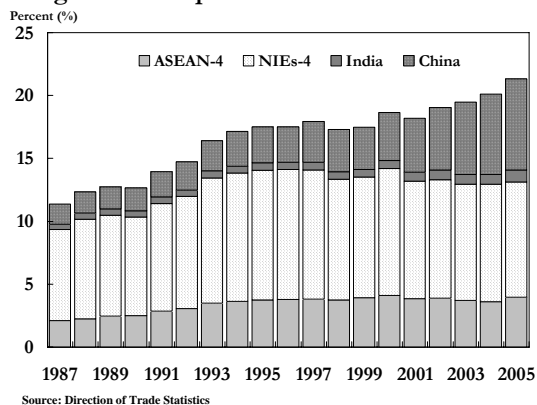
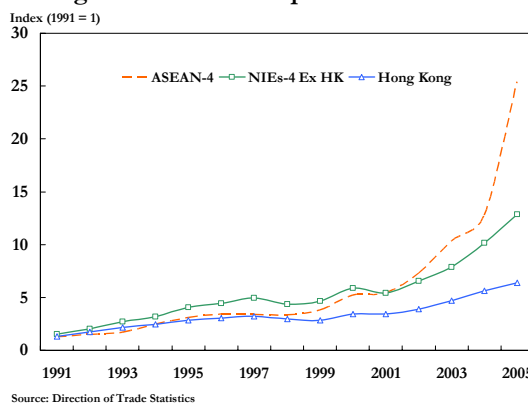


Figure 3.3b Asia's Export Share to China

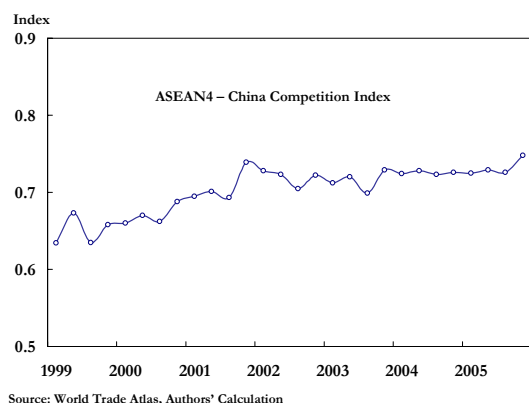


However, the actual data also reveal a gradual rise in overall competition. In the Market Competition Index of Asia which has been compiled and appears as Figure 3.4 below, we see that competition with India and China has in fact increased and continues with an increasing trend. The index computes export shares by sector for each country and measures the extent to which the two countries export the same products in world markets, by using the following formula:

$$ITC_t = 1 - \frac{\sum_i |s_i^j - s_i^k|}{2}$$

where S_i^j is the share of sector i in country j 's exports. The index value ranges between zero and one. If the ITC is equal to zero, the two countries export entirely different products. If ITC is equal to one, they export the same products in identical shares of their total exports.

Figure 3.4 Market Competition Index of Asia



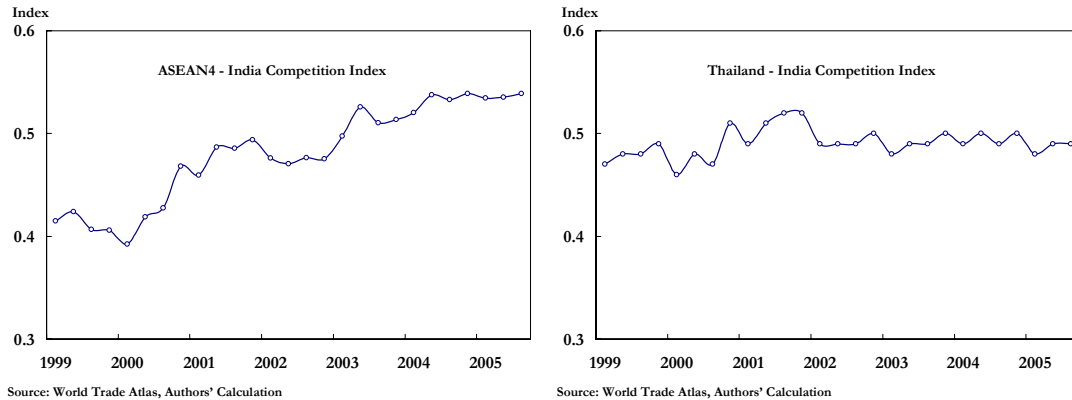


Figure 3.4 also reveals the competition indices between China, India, ASEAN-4⁷ and Thailand. As can be seen, the index between Thailand and China has steadily increased over time from 0.64 in 1998 to 0.72 in 2006. This trend implies that export competition between Thailand and China has intensified over time. In addition, the index between ASEAN-4 and China as well as the index between ASEAN-4 and India also show similar patterns. There has been more trade competition between both groups of countries; and over time, both groups have increasingly traded products from similar sectors. However, the index between Thailand and India has remained stable, ranging from 0.46 to 0.52 over a 7-year period. The constant index implies continuous changes in export structure in the same direction in the two countries.

In a study by Eichengreen, Rhee and Tong (2004), which reviews statistical evidence of the crowding-out effect of China's exports on those of neighboring countries, they find that exports from China crowd out exports of other Asian countries only in markets for consumer goods. This suggests that the negative impact from competition may be limited only to certain industries.

Looking at an index of Revealed Comparative Advantage (RCA) to classify product specialization for each country allows us to further analyze the impact of increased competition on each country's exports. The RCA index is a simple measurement of the degree of trade specialization; it indicates product categories in which a country has comparative advantage relative to the world. In general, the index compares the share of exported goods j of the country i relative to the share of exported goods j of the world (w).

$$RCA_{ij} = \frac{S_j^i}{S_j^w}$$

Due to data limitations, the denominator of the product shares relative to the world market has focused on the share of Asia-10. Therefore, the indices imply the comparative advantage of a country, *compared to Asia-10*. The RCA index of a product category that is greater than one implies that the country

⁷ Thailand, Malaysia, Philippines, and Indonesia

appears to have a comparative advantage on that product category over the rest of Asia-10 and vice versa.

The results in Table 3.2 demonstrate that China appears to have a comparative advantage in both consumer and manufacturing goods. The 2005 figures reveal comparative advantages of China for 9 out of 16 product groups. From those 9 groups, China's comparative advantage has been rising over time, with 2005 figures higher than the 7-year average (1999-2005) for each respective group - namely *Vegetable and Fruits* (HS06-HS15), *Synthetic Fibers and Textiles* (HS54-HS60), *Iron and Steel* (HS72-HS73) and *Machinery Products* (HS84). In terms of particular exports that China has a high degree of comparative advantage in, these can be identified as *Vegetables* (HS07), *Edible Fruits and Nuts* (HS08), *Manmade Staple Fibers* (HS55), *Knit and Crocheted Fabric* (HS60), *Iron and Steel* (HS72), and *Machinery* (HS84).

The result also suggests the familiar "Flying Geese Pattern" in China's export sectors. This pattern is common among developing countries that enjoy a production shift towards more value-added products. The traditional shift in the production pattern is most likely to move from low- to high-technological goods, as is clearly the case in China's export sectors. While the RCA indices and export shares of *Machinery* (HS84) and *Electrical machinery* (HS85) are rising swiftly, however, the RCA indices of traditional and low-technological exports such as food products and shoes and apparel products have declined over time. These two sectors are considered the most important export sectors as they account for 44.2 percent of Asia-10's overall exports in 2005. It is therefore highly probable that competition will continue to intensify in the future, and that production bases previously located in NIEs-4 and ASEAN-4 will be shared by China. This trend seems to indicate that while the analysis by Eichengreen, Rhee and Tong (2004) of a negative impact only on consumer goods may hold in the medium run, this effect may spread to the manufacturing sector in the longer term.

Foreign direct investment diversion

From the perspective of potential international investors, the low cost of resources, which almost guarantees high profit margins for investors, is not the only attraction of these two countries. More importantly, their large domestic markets are an added incentive for any potential production relocation. From a regional perspective, however, a persistent inflow of foreign direct investment into China and India has caused concerns of a possible diversion of foreign direct investment (FDI) from other Asian countries towards these two giants. In terms of empirical evidence, a country's share of FDI inflows appears to fluctuate, based upon world economic cycles. However, over the past three years, and following a downturn in the world cycle of FDI in 2000, FDI into Asia has recovered gradually. Figure 3.5a shows that the share of FDI flowing into China and other Asian countries has risen concurrently with the regional share of the FDI. However, within the region, the allocation of FDI into China seems to outpace inflows to other neighboring countries, as shown in Figure 3.5b. Since FDI is also

Table 3.2 Comparison of Reveal Comparative Advantage (RCA) on Selected Group of Commodities

	Animal Products		Vegetable Products		Food Products		Mineral & Oil Products	
	Average	2005	Average	2005	Average	2005	Average	2005
China	1.24	1.14	0.96	1.18	1.18	1.04	0.61	0.44
Hong Kong	0.46	0.33	0.20	0.13	0.43	0.36	0.06	0.05
India	2.78	2.67	4.02	4.00	1.47	1.25	1.56	2.40
Indonesia	2.33	2.58	3.37	4.92	1.42	1.65	5.60	5.11
Korea	0.48	0.41	0.15	0.13	0.49	0.48	0.91	0.90
Malaysia	0.51	0.75	2.76	3.07	0.88	1.02	1.95	2.15
Philippines	0.84	1.06	1.67	2.25	1.13	1.50	0.35	0.43
Singapore	0.32	0.36	0.29	0.21	0.82	0.80	1.64	1.95
Taiwan	0.84	1.12	0.13	0.12	0.21	0.20	0.42	0.77
Thailand	2.90	2.52	2.29	2.38	4.48	4.66	0.69	0.78

	Chemical Products		Plastic and Rubber		Leather Products		Wood Products	
	Average	2005	Average	2005	Average	2005	Average	2005
China	1.04	0.89	0.68	0.65	1.59	1.49	0.87	0.99
Hong Kong	0.57	0.41	1.05	0.93	2.26	2.49	0.99	0.88
India	2.25	2.07	0.61	0.67	1.54	1.34	0.31	0.38
Indonesia	0.93	0.87	1.09	1.28	0.28	0.22	4.94	4.45
Korea	1.05	1.12	1.30	1.34	0.47	0.26	0.58	0.52
Malaysia	0.83	0.84	0.99	1.10	0.03	0.03	1.87	2.03
Philippines	0.19	0.23	0.20	0.22	0.38	0.24	0.53	0.65
Singapore	1.82	1.96	0.68	0.71	0.08	0.11	0.46	0.49
Taiwan	0.83	1.10	1.51	1.64	0.42	0.37	0.48	0.49
Thailand	0.67	0.77	1.97	2.37	0.60	0.44	1.00	1.10

Source: World Trade Atlas, Authors' Calculation

Note: 1. Average: 1999-2005

2. India Trade Statistics for 2005 includes January until September 2005 only due to unavailable information.

3. The grouping is listed in Appendix 1.

Table 3.2 Comparison of Reveal Comparative Advantage (RCA) on Selected Group of Commodities (Continued)

	Synthetic Fibers & Textile		Shoes & Apparel Products		Stone and Glass Products		Iron and Steel	
	Average	2005	Average	2005	Average	2005	Average	2005
China	0.90	1.07	1.88	1.76	0.87	0.85	1.12	1.18
Hong Kong	1.01	1.02	1.56	1.59	1.47	1.73	0.51	0.38
India	1.26	1.21	1.63	1.51	6.52	7.08	1.79	1.86
Indonesia	1.19	1.28	1.05	1.08	0.62	0.47	0.45	0.40
Korea	1.74	1.38	0.31	0.17	0.65	0.31	1.67	1.59
Malaysia	0.29	0.34	0.15	0.14	0.49	0.56	0.49	0.51
Philippines	0.17	0.17	0.79	0.78	0.33	0.38	0.13	0.19
Singapore	0.14	0.13	0.11	0.14	0.43	0.60	0.31	0.35
Taiwan	2.10	2.03	0.23	0.15	0.27	0.27	1.98	1.83
Thailand	0.70	0.88	0.65	0.58	1.40	1.47	0.70	0.71

	Metal Products		Machinery Products		Electrical Machinery		Transportation Products	
	Average	2005	Average	2005	Average	2005	Average	2005
China	1.29	1.20	0.91	1.17	0.75	0.82	0.78	0.71
Hong Kong	0.86	0.75	0.75	0.92	1.13	1.31	0.18	0.13
India	0.93	1.04	0.21	0.24	0.10	0.09	0.60	0.78
Indonesia	1.23	1.81	0.30	0.32	0.35	0.31	0.28	0.37
Korea	0.88	0.87	0.92	0.81	1.03	1.03	3.75	3.68
Malaysia	0.60	0.59	1.23	1.15	1.40	1.24	0.23	0.25
Philippines	0.61	0.59	1.23	1.20	1.95	1.78	0.68	0.97
Singapore	0.62	0.57	1.50	1.19	1.42	1.37	0.42	0.44
Taiwan	1.57	1.49	1.38	0.89	1.11	.121	0.85	0.72
Thailand	0.62	0.71	1.01	1.05	0.79	0.69	1.19	1.63

Source: World Trade Atlas, Authors' Calculation

Note: 1. Average: 1999-2005

2. India Trade Statistics for 2005 includes January until September 2005 only due to unavailable information.

3. The grouping is listed in Appendix 1.

one of the major sources for long-term investment that brings about the technological spillover and possible crowding-in effects on domestic investment, this trend of a declining share of FDI leads to concerns for businesses and policymakers in rest of Asia.

Figure 3.5a Share of World's FDI

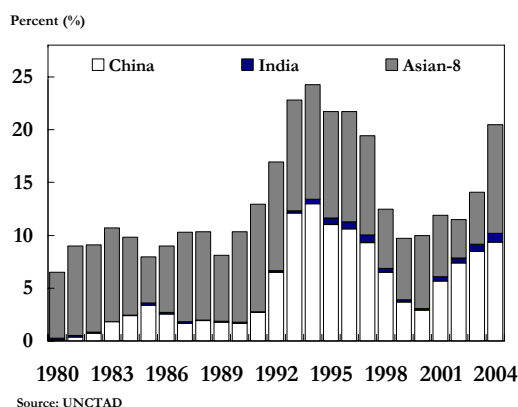
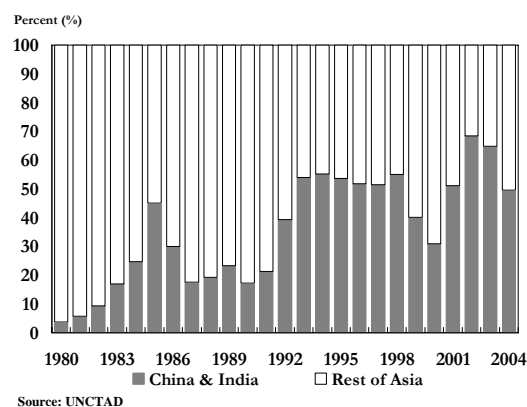


Figure 3.5b Comparison of FDI Flow to Asia



From an empirical perspective, the literature remains divided on China's role in FDI diversion away from the other countries in Asia. Eichengreen and Tong (2005) find that China's emergence as a destination for FDI does not crowd out FDI to other Asian economies. They suggest that the inflows are instead diverted from OECD countries. Mercereau (2005) also confirms Eichengreen and Tong's results by developing a new methodology to estimate the crowding out of China's FDI. His results suggest that low income economies which compete with China for low-wage investment do not seem to be affected by China's FDI inflow.

One possible explanation, however, for the declining share of FDI flows into neighboring countries may have to do with their relatively larger existing level of FDI stock relative to their GDP, compared to that of China and India. From their international investment positions, the ratio of stock of FDI to GDP of China and India are only 14.9 and 5.9 percent respectively, which is much lower when compared to other Asian economies such as Thailand (29.7 percent of GDP) and Malaysia (39.3 percent of GDP). From Table 3.3, we can see that the stock of FDI as a percentage of GDP in China and India is lower than many countries in the region. This indicates that there is potential for further FDI inflows which will be able to sustain attractive levels of marginal return, given the sheer size of their economies.

Table 3.3 Inward FDI Stocks as a Percentage of GDP

Economy	1980	1990	2000	2003	2004
Hong Kong SAR	74.3	60.3	275.4	239.2	277.6
Singapore	52.9	83.1	123.1	160.2	150.2
Malaysia	20.7	23.4	58.6	40.4	39.3
Thailand	3.0	9.7	24.4	33.3	29.7
China	0.5	5.8	17.9	16.2	14.9
Philippines	3.9	7.4	16.9	15.2	14.9
Taiwan	5.8	6.1	5.7	13.0	12.8
Korea	2.1	2.1	8.1	9.0	8.1
India	-	0.5	3.7	5.2	5.9
Indonesia	6.0	7.7	16.5	5.0	4.4

Source: UNCTAD, World Investment Report 2005; www.unctad.org/wir or www.unctad.org/fdistatistics

Table 3.4 Inward FDI Performance Index Rankings, 1990-2004

Economy	1990	2000	2003	2004	Changes (1990-2005)
Hong Kong SAR	3	2	8	7	-4
Singapore	1	6	6	8	-7
China	46	52	42	45	1
Malaysia	5	51	77	56	-51
Philippines	30	87	96	100	-70
Thailand	17	44	88	106	-89
Korea	81	93	116	109	-28
India	98	120	118	112	-14
Taiwan	50	111	117	125	-75
Indonesia	57	138	139	136	-79

Note: Covering 140 economies

Source: UNCTAD, World Investment Report 2005; www.unctad.org/wir or www.unctad.org/fdistatistics

Moreover, in terms of FDI performance, China is ranked as one of the highest in the region, trailing behind only Hong Kong and Singapore, as shown in Table 3.4. This index captures factors that have influence on FDI such as business climate, economic and political stability, the presence of natural resources, infrastructure, skills and technologies, opportunities for participating in privatization and the effectiveness of FDI promotion. As a result, China appears to be relatively attractive for foreign capital flows when compared to other countries in the region.

Pressure on world commodity prices

In the period of their high economic growth, the two giants' voracious appetite for commodities has caused world commodity prices to rise drastically. This pressure is more obvious in the case of China, where rapid industrialization and urbanization has increased the demand for production materials, as opposed to the case of India whereby rapid expansion so far has been concentrated in the service sector. As a result, after the previous price spike in 1999, world fuel prices skyrocketed once again with the expansion of the China's economy. Figure 3.6 shows that in addition to energy prices that have come under demand pressure from China expansion since its WTO accession, prices of other important production materials such as rubber, metal, and iron ore have also risen continuously.

Figure 3.6 Movements in World Commodity Prices

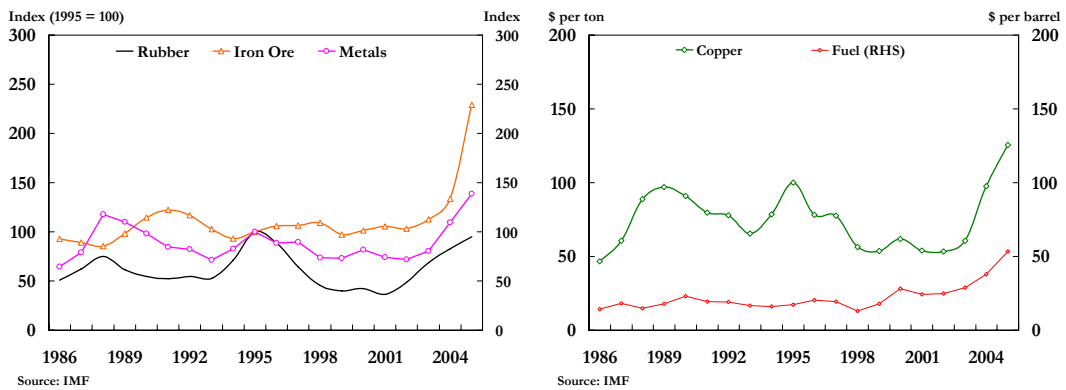
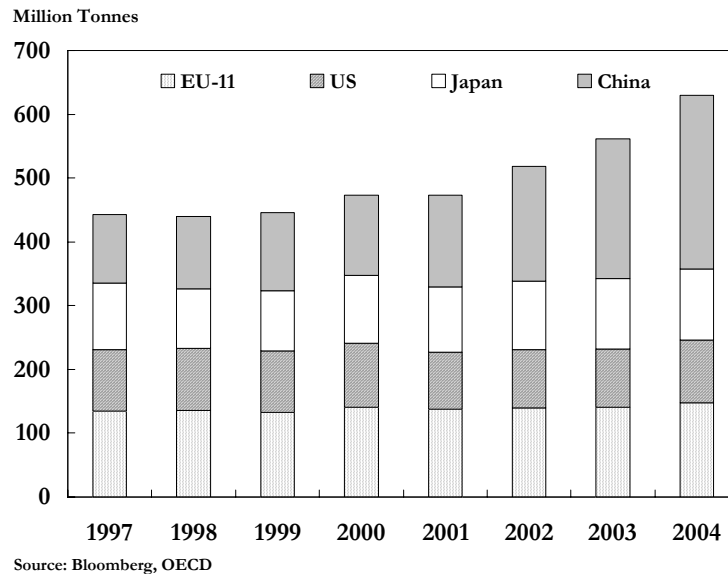


Figure: 3.7 Steel Production: G3 and China

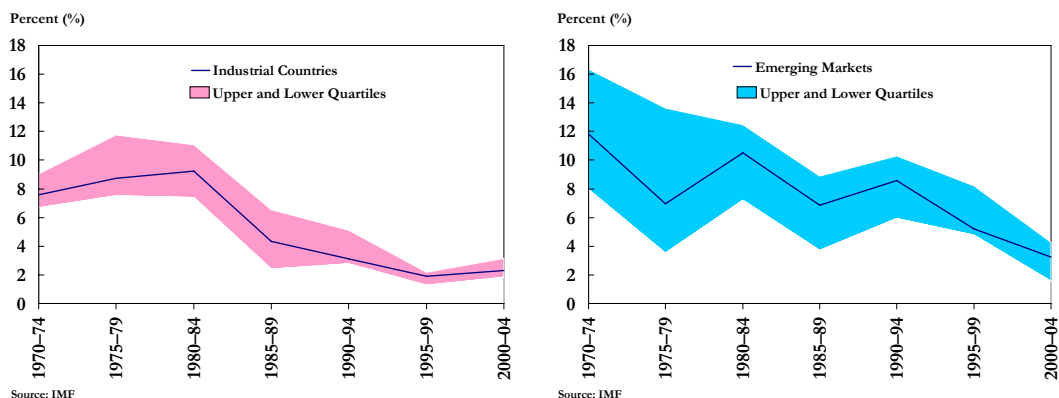


For example, strong growth in conjunction with rapid industrialization and urbanization has made China the world's largest consumer of steel. This has altered global commodity prices as well as the patterns of trade in steel. To tackle this need, China has dramatically increased its capacity to produce steel in the few years, and has become the largest producer of steel in the world, as shown in Figure 3.7. In fact domestic steel production in China in 2005 was twice as much as the EU, three time as much as Japan, and almost four times as much as the US. This picture has been repeated over numerous commodities, and is likely to continue evolving in the future, as India realizes that it too needs to focus efforts on infrastructure building in order to achieve sustained growth.

Nevertheless, China's government has initiated policies to prevent over-investment in particular sectors, which would help alleviate the country's excessive appetite for energy. At the same time, China is adjusting towards greater reliance on domestic supply and alternative sources inputs, which may help ease the pressure on commodity prices. As a result, China has also expanded production capacity in other commodities, and it is now also the world's largest producer of coal, cement and aluminum. However, with continuous economic expansion throughout the world, including the expanding India's economy with higher usage of materials for production, commodity prices are likely to be sustained at high ranges for some time before new supply sources are fully utilized.

On the other hand, low cost products and cheap labor services from China and India that are being exported throughout the world have resulted in a period of global disinflation. Figure 3.8 shows a continuous decline in the rate of inflation, both in industrial and developing economies over the past 3 decades. Nevertheless, world economic expansion and a tightening of labor mobility from the agricultural sector into manufacturing in China will gradually push up wages and production costs in the region. Together with a permanent shift in energy and other commodity prices resulting from this global supply constraint, this period of growth in a low-inflation environment may not last through this decade.

Figure 3.8 Rates of World Inflation

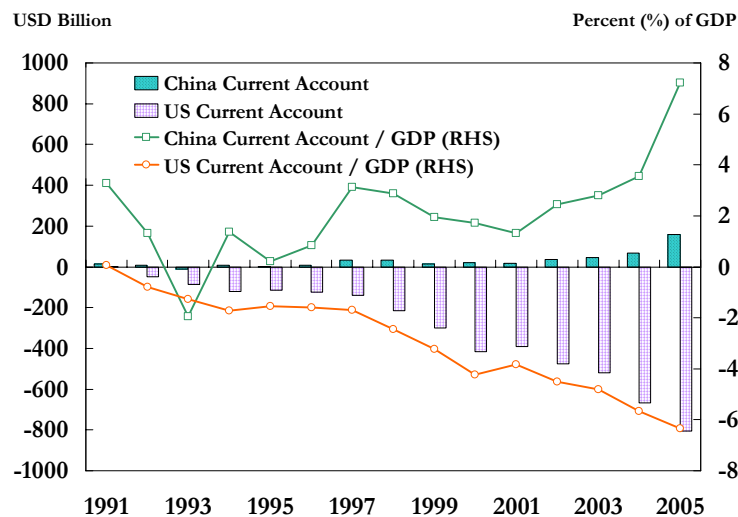


Source of global imbalances

Due to their strong cost advantage, particularly when compared to the industrialized countries, China and India have been net exporters to their main external markets, rather than being overrun by export flows from their trading partners. This continued trade surplus has led the two giants – especially China with its industrialization – to accumulate large trade surpluses with most of their trading partners. With the US alone, China registered a trade surplus as high as 159 billion US dollars in 2005 compared to 35 billion US dollars in 2002. As China’s current account surplus continues to accumulate over time, as illustrated in Figure 3.9, the US current account has also registered a deficit for more than two decades.

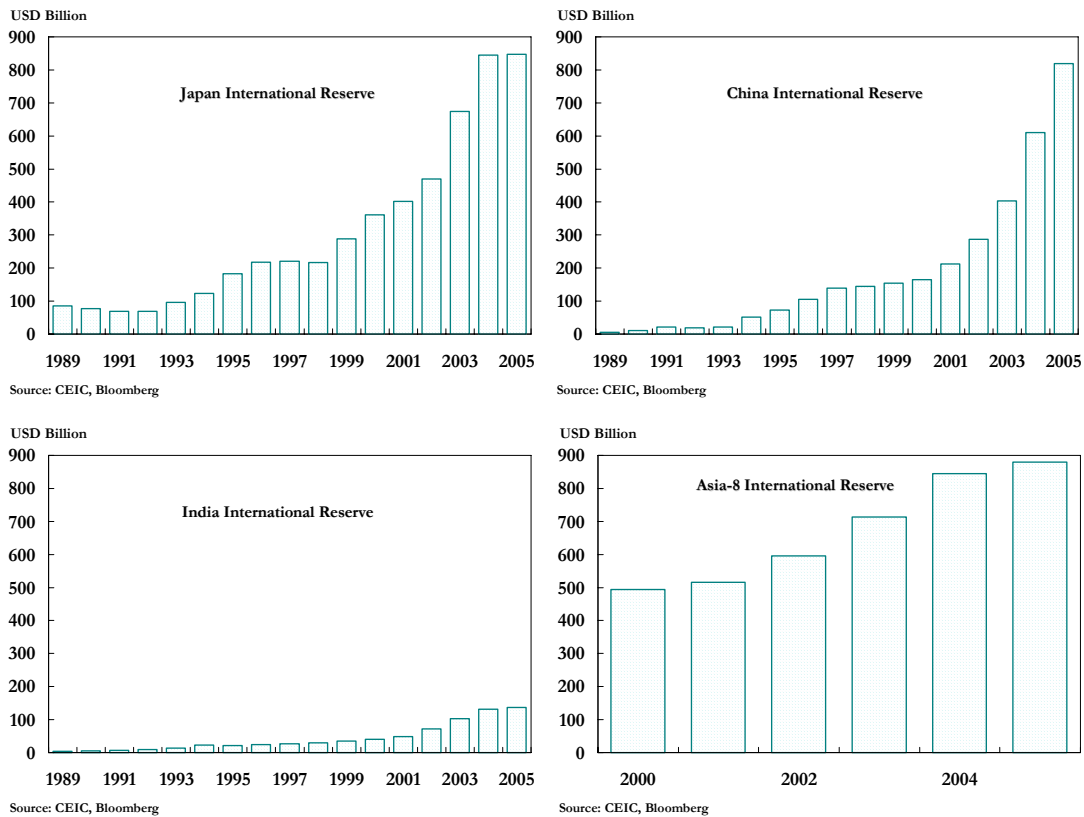
The US trade deficit, mirrored in part by China’s persistent trade surplus, has led to the view that Asia has taken advantage of cheap labor costs and undervalued currencies to push their exports into G-3 markets. There is the added risk that this will heighten protectionist sentiment in these markets, leading to trade disputes and a return to protectionist measures. These sentiments are further enhanced by the rising role of India’s service sector and as a hub for IT services and outsourcing. Many of these services, in the past, have been considered “non-tradables”, for which developed countries would not have to fear competition from developing nations. As India has shown that this is no longer the case, the outsourcing of these services will worsen the current accounts of developed countries and potentially lead to more protectionist sentiment.

Figure 3.9 China and US Current Account and Current Account/GDP



Source: Bloomberg, CEIC

Figure 3.10 Foreign Reserves of China, India and Selected Asian Economies



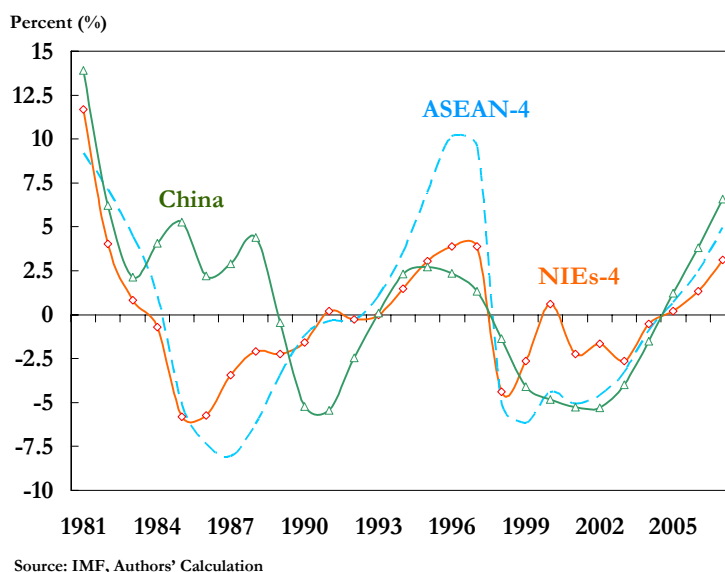
Additionally, the expanding economies of China and India have attracted a large influx of both short-term and long-term capital, adding to the already-high balance of payments surpluses. As a result, there has been a continuous accumulation of foreign reserves in China and India over the last decade, as shown in Figure 3.10. The magnitude of China's reserves has risen 74 times over the past 25 years, while India's reserves rose over 26 times over the same time period. Speculation over revaluation of the Renminbi has led to capital inflows into the whole region, with regional currencies acting as proxies for the Renminbi, which in turn has led to accumulation in international reserves throughout the region. This phenomenon, in turn, has also added to the existing global imbalances, signaling even higher and widespread risks in the case of a sharp reversal of capital flows in the future.

High regional dependency

Under this new economic environment, inter-linked production networks and a higher degree of intra-regional trade has heightened dependency among the Asian economies. As we saw in Figure 3.1 earlier, correlation of economic growth in the region has gradually increased. At this current stage, the region has so far enjoyed the economic upturn brought about by the presence of

China and India. However, this heightened dependency can potentially become a major risk to the regional economy, should China and India experience economic difficulties anytime in the future. The possible difficulties can range from disruptions in intraregional trade and the regional production network, to global economic recession. Figure 3.11 confirms the closer link of economic cycles in the region, which has shown increasing linkage since the early 1990's.

Figure 3.11 Economic Cycles of Asian Economies



This particular risk to the region is quite a challenge to policymakers since it is difficult to resist joining the bandwagon of intra-regional production and trade. But policymakers should also foster policies that encourage development through greater self-dependency, and rely less on the region and external demand alone for sustained growth, although external trade with G3 and other economies with lower average output variation remains an important cushion for the region, in the case of possible downturn of China and India.

The magnitude of these impacts facing Asian economies mainly depends on the growth rate of China and India. Their continued expansion will place further pressure on world prices and competition in the region. On the other hand, the slowdown of China and India will unquestionably pose a major threat to other countries as well. The next chapter will assess the potential of China and India in sustaining this economic growth, and provide deeper insight into how the new Asian economy will develop, and suggest appropriate policy guidelines for countries to benefit from the growing giants.

Chapter IV

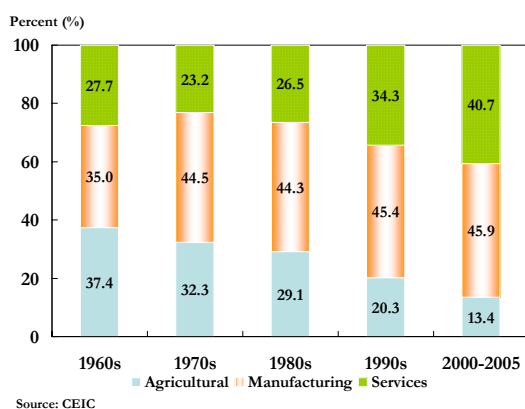
Challenges to China and India's Growth

The extraordinary economic expansion of China and India we have discussed so far has brought about extensive challenges, as well as opportunities, to all countries in the global economy. Whether the two economies will continue to have strong repercussions on the global economy going forward, however, is another interesting question. The prospect that these economies will be able to sustain robust growth means that their global presence will become increasingly prominent over time. The ability of China and India to maintain continued growth will further support the burgeoning intra-regional trade and production linkages, as well as impose pressure on the world's supply of resources as well as their price levels. On the other hand, a disruption in growth of the two giants could lead to an economic slowdown in the region - and possibly lead to the global recession. This section identifies and assesses the various risks and potential vulnerabilities to China and India's growth that could have an impact on the dynamics of their own development paths as well as on the global economy.

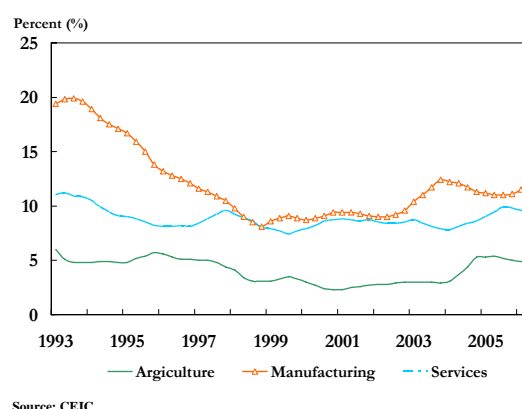
China

Since reforms in the 1980's, China's manufacturing sector has continued on a rising trend, both in terms of growth and factor compensation. The share of industry in China's GDP has remained above 40 percent since 1980, and the growth rate of the industrial sector has overtaken all other sectors in the economy, as shown in Figure 4.1. On the other hand, the share of the agricultural sector in GDP has gradually declined over this period, while the share of the service sector has increased in importance.

Figure 4.1a Sectoral Share of China's GDP



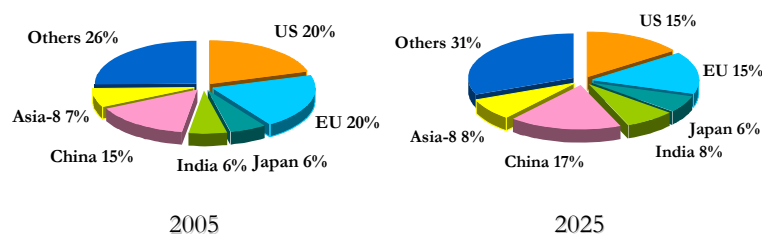
**Figure 4.1b Sectoral Growth of China
(4-period moving average)**



The high rates of growth in the manufacturing and service sectors have been brought about mainly as a result of China's industrialization and liberalization in trade and foreign investment. While this has encouraged a rapid expansion of production, it has also rapidly led to improvements in skills and technological know-how, leading to business investments in industries with higher value-added potential. China's economy, at the same time, has been able to secure the influx of foreign capital for its domestic market, through its high income growth and role as a mass production base linked to the regional production network. Moreover, increased expenditure on education has led to illiteracy rates of less than 9 percent, as of the year 2000. Together with years of spending in investment on infrastructure (9 percent of GDP was spent on infrastructure investment in 2005 alone), these factors have helped make China one of the most attractive destinations for foreign capital in the region. This, as a result, helps assure one of the important supporting factors for further achievement in growth of China.

Additionally, China's abundance of labor resources allows China to achieve its cost advantage in penetrating the world trading community. This acceleration in China's trade has been a major factor supporting China's rapid growth. For international investors, there are great opportunities for China to catch up with the Asian Tigers as well as those in the industrialized world. Some studies seem to suggest that China's growth can be even more significant – and that currently its growth path (in terms of share of nominal GDP relative to the Asian tiger economies during the 1960-1990's) can be even higher. However, if China can maintain its rate of growth at 8 percent while Asian economies and G3 grow at 4 – 5 and 2 – 3 percent respectively, Figure 4.2 shows that the country could become the world's largest economy in the year 2025. (UBS estimates).

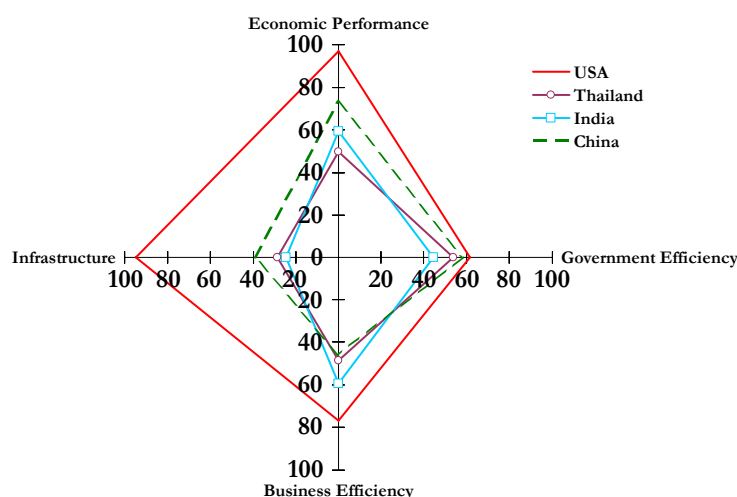
Figure 4.2 China's Growth Potential



Note: PPP term
 Source: World Economic Outlook (WEO), April 2006

However, despite all these advantages China has over other economies, it also faces numerous challenges which are yet to be resolved. Many of these problems concern institutional and organizational shortcomings that need to be addressed, as well as the challenge of ensuring balanced overall growth in its large economy. Low business efficiency is ranked as *the* major concern that could potentially obstruct continued foreign investment inflows into China's economy. According to a survey by the International Institute for Management Development (IMD) in 2006 (Figure 4.3), despite China's outstanding economic performance, the country is relatively lagging others in the region in terms of its business efficiency and its institutional framework.

Figure 4.3 China's Competitiveness



Source: IMD World Competitiveness Yearbook 2006

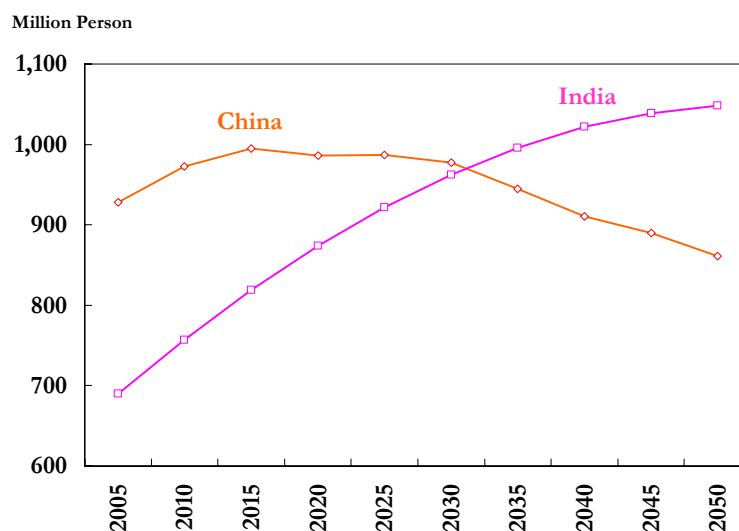
This lack of efficiency primarily stems from China's traditional *institutional problems*. Despite the government's restructuring policies to create a more liberal business environment, the lack of sufficient banking services and sluggish capital market development remain major obstacles for both local and foreign entrepreneurs. The institutional framework of the China's banking system is still in a formative stage relative to international standards. Major commercial banks have traditionally operated under the strong influence of government bureaucracy and mandates. "The incentive system is aligned in a way that encourages them to over-invest, reflected by the high level of NPAs in the banking system". (Morgan Stanley, 2006) Moreover, China's banking system faces problems of weak asset quality and relatively low capitalization, in conjunction with a limited competition structure. Together, these become major obstacles for further development. Nonetheless, in order to alleviate these problems, the Chinese government is attempting to modernize its banking system

through reforms in the ownership structure of banks as well on the issue of corporate governance. If these policy adjustments are implemented, they should lead to improvements to the performance of China’s banks and raise them closer to international standards.

In addition, problems relating to corruption, as well as the added complication of varying rules and regulations in different states and provinces have created confusion and has led to inefficiency in management and production process, particularly for foreign investors. The government has taken some steps to tackle these problems. Recently, surveys on investment climates in different countries shows that China’s position in terms of business efficiency has improved over time. Arguably, the continued inflow of FDI into China’s economy is in itself a vote of confidence by foreign investors of China’s economy and its prospects going forward.

Another potential issue, which may affect China’s sustainable growth in the future, is its demographic problem – namely the falling trend of China’s working-age population, going forward. As a result of the country’s one child policy, the working-age population in China is expected to decline over the next 10 years, as shown in Figure 4.4. This implies that the number of people of working-age will decline, while the number of dependents on these workers will rise. On the other hand, some researchers have argued that further gains in productivity may help mitigate, and to some extent offset, the problem of future labor “shortages” in China. In due course this will cause China’s dependency ratio to rise steadily and place strains on economic growth.

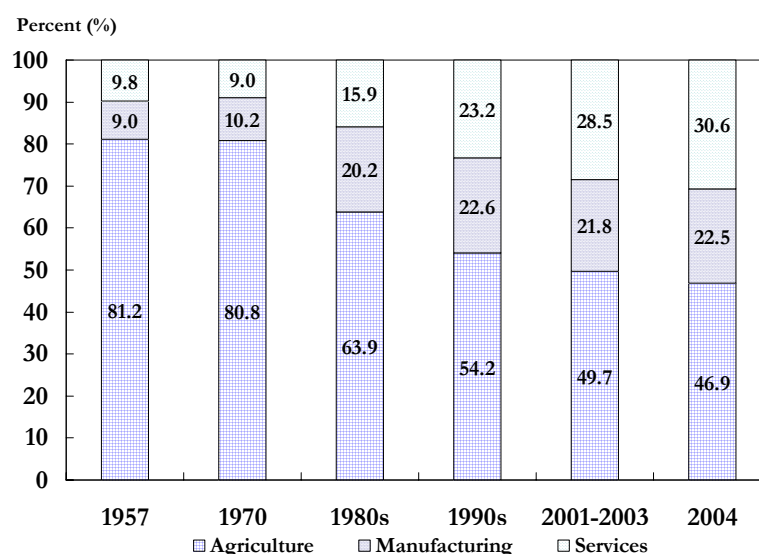
Figure 4.4 Projected Working-Age Population
(millions of people, 15 – 64 years old)



Source: U.S. Census Bureau International Database

With regards to wealth distribution, a by-product of China's rapid industrialization and urbanization is evident in its unbalanced growth among sectors in the economy. Even though the first phase of reforms in China focused on the rural sector to reduce the country's income inequality – particularly in the agricultural sector, this inequality has again widened, following the government's initiatives on liberalization and globalization to increase foreign trade and attract FDI inflows. As can be seen in Figure 4.5, a sizable share of labor is still based in the agricultural sector, which on the other hand accounts for the smallest slice of the country's GDP pie. In addition, this group of labor is considered unskilled as they are unable to migrate into the industrial sector without incurring substantial retraining costs. The Chinese government, therefore, is currently attempting to improve living standards and enhance productivity levels by focusing on rural infrastructure development and investment in education to help alleviate this problem. Though labor productivity improvements are expected as a result of this training process, it is expected that labor costs in China will eventually have to rise, possibly eroding China's cost advantages if labor demand in manufacturing sector expands faster than the growth in productivity.

Figure 4.5 Employment Share by Industry in China



Source: National Bureau of Statistics of China

Furthermore, with sustained rapid economic development, a large population, as well as insufficient domestic energy supplies have caused China to grow by an average of almost 10 percent a year. This growth has also resulted from price controls as well as an energy inefficiency problem. This can eventually erode China's cost advantage, and eventually, its future competitiveness in global export markets. However, reforms in energy usage more market-oriented pricing of energy may allow China to gradually trim down its energy intensity. This may

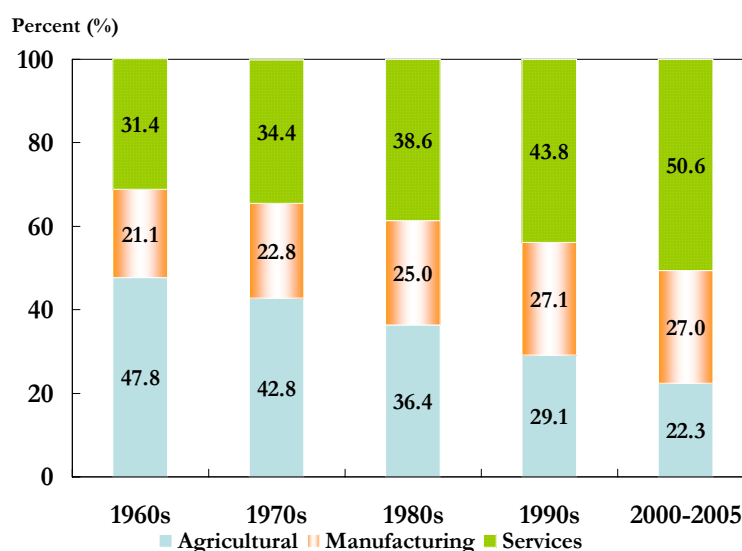
help offset the country's increasing appetite for energy as its economy continues to expand.

China's economic development path towards industrialization and its high degree of openness to trade has put it in a position of relatively greater advantage than India, both in terms of basic infrastructure and the fundamental factors to facilitate growth. Yet, many important tasks remain to be tackled in order to put China on a more stable growth path as one of the world's new leading economies.

India

India's era of high growth era started in the early 1990's, following major structural policy adjustments towards a market-based economy and greater trade openness were implemented. In contrast to China, India's growth performance has mainly been driven by a growing service sector that has gradually replaced the prominence of the agricultural sector. At the same time, as shown in Figure 4.6, the share of the industrial sector in GDP has been relatively stable and remains subordinate to the fast-growing service sector. The supporting factors for growth in India's service sector include a high income elasticity of demand for consumption of services, as well as structural policies that help promote high efficiency in business outsourcing services.

Figure 4.6 Sectoral Share of GDP in India

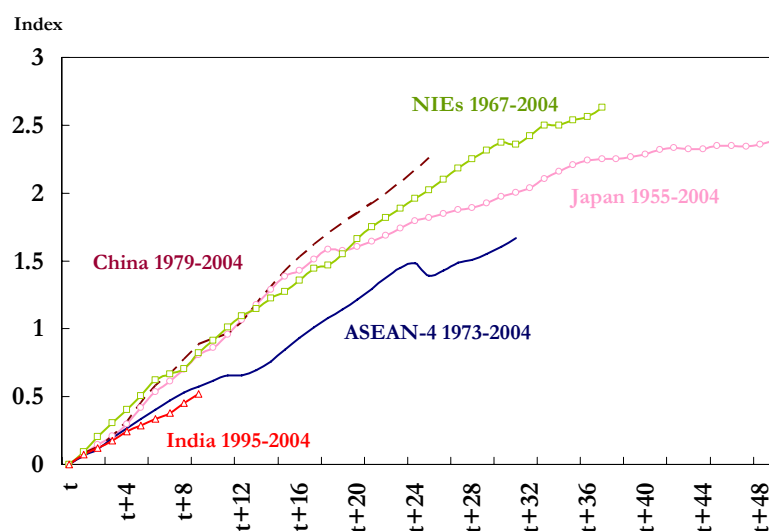


Source: CEIC

India's potential is supported by the modernization of the private sector, which allows firms to be efficiently assertive in their business management. Moreover, the country's large English speaking population, as well as the

expanding specialization in the booming global market for IT services will continue to support the country's expanding service industry. To help facilitate India's growth, a well-developed financial system and vibrant corporate sector will be crucial factors. The banking system in India, at present, is well-equipped with sufficient levels of capitalization (due to strict capital requirement regulations), efficient supervision, as well as market competition, which has helped achieve efficiency in this area. These strong fundamentals, though different from the case of China, have helped put India on a similar growth path to the rest of Asian economies.

Figure 4.7 Output Growth Index of Asian Economies



Source: IMF

Based upon calculations by the International Institute of Finance (IIF), and assuming the Indian economy will continue to register annual real GDP growth rates at 8-9 percent for the next ten years (and moderates by 0.5 percentage points per decade thereafter), the Indian economy is set to increase in size by almost five-folds by the year 2025. One reason for this is attributed to India's demographic advantage over other Asian economies, including China. India is predicted to maintain its growth phase for longer than Asia, as its dependency ratio will continue to decline, while that of the rest of Asia will begin to rise. United Nation's projections show that India will be the only large country still enjoying favorable demographics after 2010. (Figure 4.4) This potential implies a greater impact of India economy on the global and regional front in the very near future.

Nonetheless, the Indian economy, similarly to China, is still likely to confront many challenges. While registering the highest growth and taking up the largest share of the country's GDP, India's service sector employs less than a

quarter of its total labor force. This is relatively moderate, particularly when compared to the capital formation ratio of around 40 percent in the sector, signaling potentially unbalanced growth in the country's development.

Another major impediment to India's growth is the country's moderate openness to trade and investment. Despite the structural reforms towards liberalization, India is still relatively closed compared to China. Table 4.1 compares the effective import tariff barriers of India and China. In terms of openness for all products, China's effective tariffs has fallen from 32.1 percent to 6.0 percent while India's effective tariff rates have only fallen from 56.1 percent to 28.0 percent, from 1992 to 2004. In both cases there has been greater reduction in effective tariff rates of manufactured goods, while tariffs on primary goods have actually *risen* slightly in the case of India.

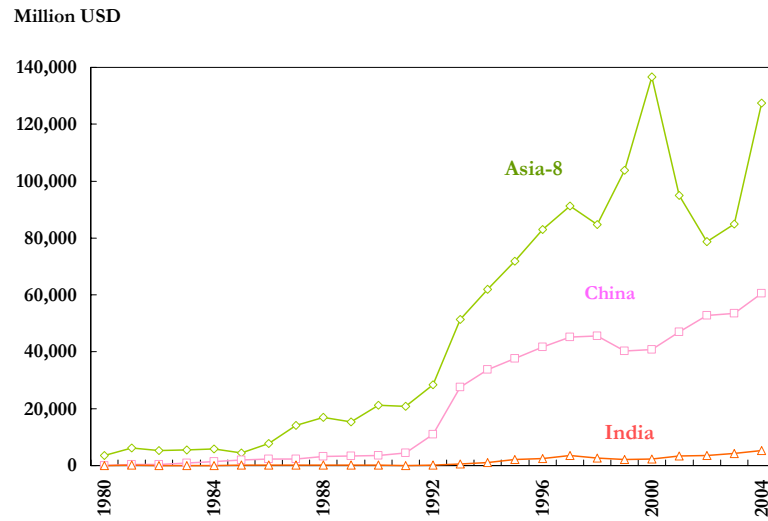
Table 4.1 Effective Import Tariff Rates of China and India (percent)

Import Weighted		All Products	Primary	Manufactured Goods
China	1992	32.1	14.1	35.6
	2004	6.0	5.6	6.0
India	1992	56.1	34.1	70.8
	2004	28.0	36.9	25.3

Source: World Bank, WDI

This low degree of openness also applies in a similar way to foreign investment. As a result, the share of global FDI to India has gradually risen but is still at a very low level when compared to China or other countries in Asia, as shown in Figure 4.8. India has received an average of about 4.4 billion US dollars a year from privatization proceeds and FDI over the past ten years, compared with 53 billion US dollar each year which has gone to China. The main hurdles to FDI inflow into India are the existing myriad of regulations and laws as well as inadequate infrastructure to facilitate efficient production. However, the country's plan to expand its outsourcing, mining and metals manufacturing as well as infrastructure spending should help attract more FDI flows into India in the future.

Figure 4.8 Inward FDI of China and India



Source: UNCTAD

While China's growth model has been driven by supply from investment, India's growth has been underpinned by consumption demand. Demand driven growth is usually a precursor to a number of challenges that pose risks to macroeconomic stability. India, therefore, needs to solve the problem of its weak supply response by improving its investment climate to facilitate investment in the economy. Moreover, the abysmally slow privatization process has also worsened India's supply-side development. A rise in supply should ensure a more sustainable acceleration in economic expansion.

In addition, the lack of a well-developed infrastructure throughout India is one of the main obstructions to supply-side growth. Presently, spending on infrastructure investment in India has only begun to rise, allowing authorities to place greater focus on investment and FDI. These policy changes should eventually move India towards a higher growth cycle.

Another drawback of India's development path are the country's rigid labor laws. Most labor-related laws are outmoded and are impractical, particularly in terms of hiring and firing policies. India is ranked 111th out of 117 countries on labor policies in the World Economic Forum's global competitiveness report in 2005.

For India, infrastructure and greater openness are the keys to the country's sustainable growth. The two factors will ultimately draw greater foreign investment to support country's supply development and productivity growth.

Chapter V

Implications for Thailand: Supply Side Developments to Enhance Competitiveness

The ascent of China and India has irreversibly transformed both the Asian region and the global economy. In the adjustment process, it is inevitable that Thailand and other neighboring Asian economies will feel the direct impact of the rise of these two giants. Going forward, regardless of the performance of China and India, the economic landscape for Asian economies will be undeniably changed, through waves of intense competition and even tighter linkages are brought to play. To make positive gains from these changes and in order to survive in this new environment, countries need to go through various policy adjustments. With these new challenges involving fierce cost competition and production efficiency, demand management policy alone will not be sufficient. Medium-term supply side policies need to be a priority on many countries' policy checklists.

The need for policy adjustments apply directly to the case of Thailand, in order to overcome these new risks and challenges. Among these concerns, an improvement in Thailand's overall competitiveness is arguably one of the most urgent tasks which needs to be tackled. In addition to China and India, other low-cost countries in the region, such as Vietnam, Laos, and Cambodia, have emerged as important contenders in the playing field, with their own low-cost advantages. The pressure, therefore, is on Thailand to proceed with numerous structural transformations to remain competitive. Thailand must stay ahead of these new emerging low-cost economies, in order not to lose world market share, which will threaten the domestic production sector and economic growth.

In deciding which areas need to be reformed, authorities should keep in mind ways to develop supply side policies in order to enhance the economy's overall competitive advantage. For example, a key feature that will help secure the country's share in the world market is to enhance product competitiveness. Evidence from the previous chapter indicates the higher overall export competition that Thailand faces from China and India. However, not all export products are being threatened. From the RCA indices, Thailand's exports still possess a comparative advantage in a number of product groups, ranging from agricultural and food products to plastic products. In this light, the government should focus on supporting ways to enhance competitiveness of products where Thailand still has a competitive advantage. At the same time, products that have lost their comparative advantage, concentrated mostly in the labor-intensive manufactured sector, should be given assistance for efficient resource relocation.

The second feature necessary for a country to remain competitive in the global markets is the efficiency of its firms and producers. A firm's productivity does not only contribute to cost efficiency of production, but also to

the business environment as a whole, which in turn determines a country's attractiveness for FDI into the country. From surveys of the IMD on businesses efficiency, as reported in Table 5.1, Thailand is ranked 28th while China moved up to 30th (from 50th) while India is ranked 19th in 2006. Under the subcategory of "Productivity and Efficiency", Thailand is ranked at 48, compared to China at 29 and India at 38. This should come as a wake up call for Thailand and the need to improve business efficiency.

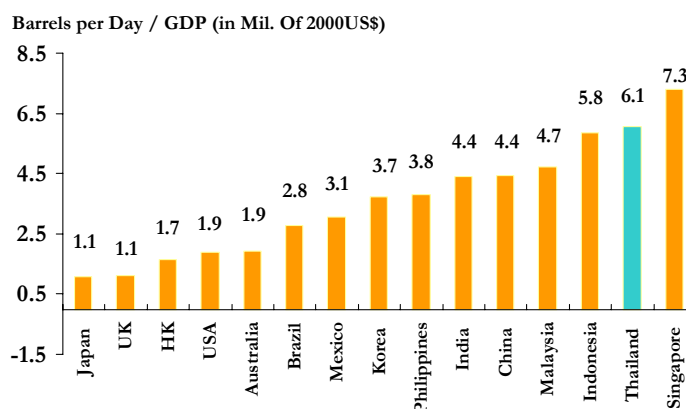
From a World Bank survey, Thai firms are facing three main problems in creating a productive environment, including regulatory burdens, shortages of skilled labor, as well as infrastructure deficiency. These three main obstacles can be tackled, could be overcome mostly by government actions. However, there are other factors such as market competition and foreign ownership that are also important elements for firms' productivity improvement in achieving these cost advantages. It is worth noting that foreign capital is again a key ingredient for competitiveness.

Table 5.1 Business Efficiency Ranking

	2005	2006
China	50	30
India	23	19
Thailand	28	28

Source: IMD Competitiveness Yearbook 2006

Figure 5.1 Energy Intensity



Source: BP Statistics

Another channel to help improve cost efficiency of firms to compete under a more competitive environment is energy efficiency. Every country in the world now faces the challenge of sustained high energy prices. Under this new environment of rising production costs, a country with flexibility in production should find it easier to retain cost competitiveness. Unfortunately, Thailand's energy intensity is amongst the highest in the region, as shown in Figure 5.1. It is therefore crucial for the country's competitiveness that Thailand rapidly improves its energy efficiency. Being a net importer of oil puts Thailand at a greater disadvantage. In order not to fall behind its peers, Thailand needs to urgently tackle this problem, as greater efficiency in energy usage implies greater cost-competitiveness for that country.

On this issue, the Thai government is currently implementing policies to improve energy efficiency as well as promoting usage of alternative forms of energy. An adjustment in the production process in conjunction with a switch to alternative forms of energy can only be, unfortunately, a long-term target. Nevertheless, allowing market-driven price movements can help trigger an initial adjustment process, in the mean time. The latest figures reveal a gradual improvement in Thailand's imports of crude oil, which partly signals an adjustment of domestic energy consumption. Moreover, the lower energy intensity worldwide will help alleviate the price pressure in world commodity markets as well.

In terms of improving the country's productivity, one of Thailand's main shortcomings, as reported by the World Bank, is the shortage of skilled labor and mismatch of skills. Therefore, human capital development should be given high priority in improving productivity. From an IMD survey on the availability of skilled labor conducted for 61 countries, India earns the best rank in the region at 2nd place, while Thailand is at 37th place and China is at 53rd place. However, this survey data could be biased, in that it might reflect skilled labor out of employment, rather than the actual amount of skilled labor available in the economy. In terms of the Human Capital Index reported in Table 5.2, Thailand is ranked best among the three economies. Nevertheless, this good ranking could stem from Thailand's smaller population, which would account for a relatively more efficient distribution system for education.

Table 5.2 The Human Capital Index⁸

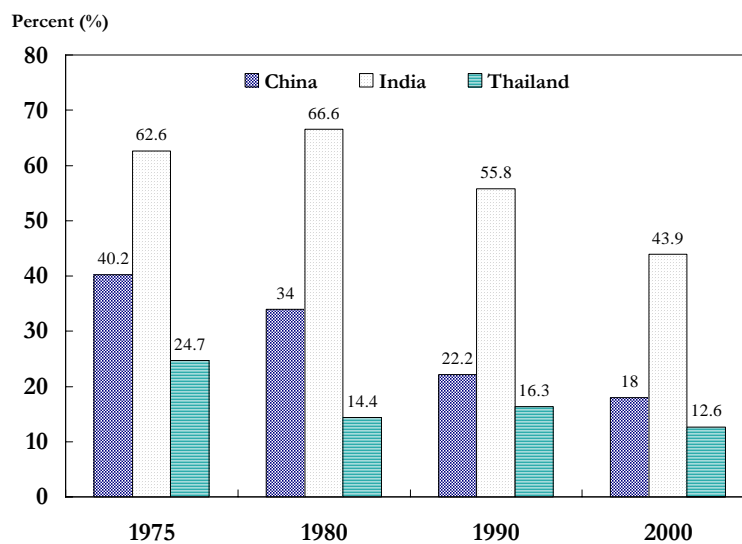
	2005	2006
China	0.318 (86 th)	0.298 (87 th)
India	0.247 (95 th)	0.247 (92 nd)
Thailand	0.485 (60 th)	0.615 (46 th)

Source: World Investment Report, 2005

⁸ The Human Capital Index is calculated from the literacy rate (weight of 1), secondary enrollments (weight of 2) and tertiary enrolments in all subjects (weight of 3).

Figure 5.2 confirms this, with Thailand's illiteracy rate ranked lower than that of India and China. However, as can be seen, the illiteracy rates of both China and India have fallen rapidly, and they are bound to catch up with Thailand in the near future. According to the flying geese pattern of production, Thailand needs to maintain its human capital differential of higher skilled workers in order to stay ahead of the flock. India, on the other hand, seems to be flying with its own group of the IT industry. Regardless, there is a need for educational improvement, not only in policy-design, but also in policy implementation. The process itself will take decades; hence it is for the country's best benefit to start the enactment as soon as possible. In the long run, a country endowed with more skilled labor will improve its business efficiency and attractiveness, in order for the desired foreign capital to achieve further gains in productivity.

Figure 5.2 Education Attainment of Total Population



Source: World Bank Education Statistics Database

These suggestions for policy adjustments are supply-side issues for improving a country's market competitiveness. As economies in the region become more integrated through production and trade linkages, there is the increased need to support and facilitate regional transactions to support for stable regional growth. In this case, any individual country's policy adjustments on their own may not be sufficient. Policy coordination within the region may complement each individual country's structural policy adjustments in order to secure overall regional stability. Such coordination can be approached through various aspects; for example, financial integration will help facilitate trade and hence promote growth and capital market deepening. Highly developed financial and capital markets are also essential for the region as a whole in attracting long-term foreign investment in order to achieve gains in productivity and growth.

Regional cooperation should also include policies to foster economic resiliency for the whole region. Despite the increasing importance of intra-regional trade, trade with countries outside the region can still provide a cushion in the case of limited regional economic downturns. In addition, there are new potential markets to be penetrated and new products to serve those markets. As the world economy itself becomes more interrelated, Asia cannot isolate itself from this global trend. To prevent severe impacts from the global shocks, policies to strengthen demand and develop supply sources in the region need to be concurrently implemented.

Appendix

Table A1. Sector Aggregation

	Sector	HS Codes	Corresponding Items
1	Animal Products	01 - 05	Live animals, meat, fish and seafood, dairy, eggs, honey, other of animal origin
2	Vegetable Products	06 - 15	Live trees and plants, vegetables, fruit and nuts, spices, coffee and tea, cereals, grain, seed, oils
3	Food Products	16 - 24	Prepared meat and fish, sugars, cocoa, baking related, preserved food, beverages, tobacco, miscellaneous food
4	Mineral & Oil Products	25 - 27	Salt, sulfur, ores, mineral fuel, oil
5	Chemical Products	28 - 38	Pharmaceutical products, fertilizers, tanning, dye, paint, putty, perfumery, cosmetic, soap, wax, misc. chemical products
6	Plastic and Rubber	39 - 40	Plastic, rubber
7	Leather Products	41 - 43	Hides and skins, leathers, furs, artificial furs
8	Wood Products	44 - 49	Wood, cork, straw, woodpulp, paper, paperboard
9	Spinning	50-53	Silk, Cotton, Yarn
10	Synthetic Fibers & Textile Products	54-60	Manmade filament, knit, staple fibers
11	Shoes & Apparel Products	61-67	Menswear, womenswear, and finished clothes
12	Stone and Glass Products	68 - 71	Stone, cement, plaster, ceramic, glass, glassware, precious stones
13	Iron and Steel	72 -73	Iron, Steel
14	Metal Products	74 - 83	Copper, nickel, aluminum, lead, zinc, tin, metal related products
15	Machinery Products	84	Machinery
16	Electrical Machinery	85	Electrical Machinery
17	Transportation Products	86 - 89	Railway, vehicles, aircraft, ships, boats
18	Miscellaneous Products	90 - 97	Optic, clocks, watches, musical instruments, arms, ammunition, furniture, bedding, toys, sports

References

- Asia Times Online (10/09/2005), "No Stopping Asia", http://www.atimes.com/atimes/Asian_Economy/GI10Dk02.html, accessed 14/02/2006.
- Bardhan, Pranab (2006), "Awakening Giants, Feet of Clay: A Comparative Assessment of the Rise of China and India", <http://globetrotter.berkeley.edu/macarthur/inequality/papers/BardhanAwakeningGiants2.pdf>
- Bardhan, Pranab (2005), "China, India Superpower? Not so Fast!", *YaleGlobal*, <http://yaleglobal.yale.edu/display.article?id=6407>
- Branson, William H., and Conor N. Healy (2005), "Monetary and Exchange Rate Policy Coordination in ASEAN+1", *NBER Working Paper 11713*, (Massachusetts: National Bureau of Economic Research).
- Business Week Online (22/08/2005), "A New World Economy", http://www.businessweek.com/magazine/content/05_34/b3948401.htm, accessed 10/02/2006.
- Business Week Online (22/08/2005), "China Is a Private-Sector Economy", http://www.businessweek.com/magazine/content/05_34/b3948478.htm, accessed 10/02/2006.
- Business Week Online (22/08/2005), "Expert Roundtable 1; Growth: China vs. India", http://www.businessweek.com/magazine/content/05_34/b3948421.htm, accessed 10/02/2006.
- Business Week Online (22/08/2005), "Expert Roundtable 3; India and China: Partners?", http://www.businessweek.com/magazine/content/05_34/b3948423.htm, accessed 10/02/2006.
- Business Week Online (22/08/2005), "Expert Roundtable 4; Advice for the U.S.", http://www.businessweek.com/magazine/content/05_34/b3948424.htm, accessed 10/02/2006.
- Business Week Online (22/08/2005), "Expert Roundtable 5; Can China and India Innovate?", http://www.businessweek.com/magazine/content/05_34/b3948425.htm, accessed 10/02/2006.
- Business Week Online (22/08/2005), "Expert Roundtable 6; Chinese and Indian Youth", http://www.businessweek.com/magazine/content/05_34/b3948426.htm, accessed 10/02/2006.

- Business Week Online (22/08/2005), “Expert Roundtable 7; Reading about China and India”, http://www.businessweek.com/magazine/content/05_34/b3948427.htm, accessed 10/02/2006.
- Business Week Online (22/08/2005), “Jobs that Could Swim Offshore”, http://www.businessweek.com/magazine/content/05_34/b3948546.htm, accessed 10/02/2006.
- Business Week Online (22/08/2005), “What’s Next for China’s Miracle?”, http://www.businessweek.com/magazine/content/05_34/b3948439.htm, accessed 10/02/2006.
- Cerra, Valerie, Sandra A. Rivera, and Sweta Chaman Saxena (2005), “Crouching Tiger, Hidden Dragon: What Are the Consequences of China’s WTO Entry for India’s Trade?”, *IMF Working Paper 05/101*, (Washington: International Monetary Fund).
- Economy Watch Online, “India Information Technology Industry”, <http://www.economywatch.com/business-and-economy/information-technology-industry.html>, accessed 15/03/2006.
- Eichengreen, Barry, and Hui Tong (2005), “How China is Reorganizing the World Economy”, paper prepared for the meeting of the Asian Economic Policy Panel in Tokyo, October 22.
- Eichengreen, Barry, and Hui Tong (2005), “Is China’s FDI Coming at the Expense of Other Countries?”, *NBER Working Paper 11335*, (Massachusetts: National Bureau of Economic Research).
- Eichengreen, Barry, Yeongseop Rhee, and Hui Tong (2004), “The Impact of China on the Exports of other Asian Countries”, *NBER Working Paper 10768*, (Massachusetts: National Bureau of Economic Research).
- Embassy of India, “India’s Information Technology Industry”, http://www.indianembassy.org/indiainfo/india_it.htm, accessed 15/03/2006.
- Gordon, James, and Poonam Gupta (2004), “Understanding India’s Services Revolution”, *IMF Working Paper 04/171*, (Washington: International Monetary Fund).
- Gordon, James, and Poonam Gupta (2003), “Understanding India’s Services Revolution”, paper prepared for an International Monetary Fund and National Council of Applied Economic Research Conference in New Delhi in November.

- Hu, Zuli, and Mohsin S. Khan (1997), “Why Is China Growing So Fast?”, *IMF Economic Issues* 8, (Washington: International Monetary Fund).
- Institute of International Finance, Inc. (2006), “The Ascendance of China and India: Implications for Asia and the World Economy”, *IIF Ditchley Conference*, June 22-23.
- International Institute for Management Development (2006), “IMD World Competitiveness Yearbook”, International Institute for Management Development, June.
- International Monetary Fund (2006), “International Financial Statistics”, *Database and Browser CD-ROM*.
- International Monetary Fund (2006), “Direction of Trade Statistics”, *Database and Browser CD-ROM*.
- JPMorgan (2006), “Greater China Thematic Issues: A quarterly handbook for investors (First Quarter, 2006)”, *JPMorgan Chase Bank*, Hong Kong.
- JPMorgan (2006), “India: service-sector deregulation boosts GDP growth”, *JPMorgan Chase Bank*, Singapore.
- Kerr, Roger (2005), “Why the rise of China and India can benefit us all”, *New Zealand Business Roundtable*, <http://www.nzbr.org.nz/documents/articles/articles-2005/050921chinaindia.htm>
- Kwan, Chi Hung (2002), “The Rise of China and Asia’s Flying-Geese Pattern of Economic Development: An Empirical Analysis Based on US Import Statistics”, *NRI Paper No. 52*, (Japan: Nomura Research Institute).
- Lardy, Nicholas R. (2003), “The Economic Rise of China: Threat or Opportunity?”, *Federal Reserve Bank of Cleveland*, 1 August.
- Lardy, Nicholas R. (2003), “Trade Liberalization and Its Role in Chinese Economic Growth”, paper prepared for an International Monetary Fund and National Council of Applied Economic Research Conference in New Delhi in November.
- Mercereau, Benoit (2005), “FDI Flows to Asia: Did the Dragon Crowd Out the Tigers?”, *IMF Working Paper 05/189*, (Washington: International Monetary Fund).

- Mohan, Rakesh (2006), “Financial sector reforms and monetary policy – the Indian experience”, paper presented at the Conference on Economic Policy in Asia on June 2.
- Morgan Stanley (2006), “India and China: New Tigers of Asia, Part II”, *Special Economic Analysis*, Morgan Stanley.
- Morrison, Wayne M. (2005), “China’s Economic Conditions”, CRS Issue Brief for Congress, (Washington: Congressional Research Service).
- People’s Daily (17/12/2001), “Analysis: China New Powerhouse for Asian Economy Growth”, http://english.people.com.cn/200112/17/eng20011217_86917.shtml, accessed 13/02/2006.
- Prasad, Eswar S. and Raghuram G. Rajan (2006), “Modernizing China’s Growth Paradigm” , *IMF Working Paper 06/3*, (Washington: International Monetary Fund).
- Prior-Wandesforde, Robert (2006), “India: pitfalls and possibilities; Is GDP growth destined for double digits?”, *HSBC Global Research*, July 2006.
- Rajghatta, Chidanand (2005), “India, China may outshine US by 2020”, <http://www.freerepublic.com/focus/f-news/1320906/posts>.
- Reddy, YV (2006), “Reflections on India’s Economic Development”, address at the Council on Foreign Relations, New York, 12 May 2006
- Rodrik, Dani and Arvind Subramanian (2004), “Why India Can Grow at 7 Percent a Year or More: Projections and Reflections”, *IMF Working Paper 04/118* , (Washington: International Monetary Fund).
- Rumbaugh, Thomas, and Nicolas Blancher (2004), “China: International Trade and WTO Accession”, *IMF Working Paper 04/36*, (Washington: International Monetary Fund).
- Runckel, Christopher (2005), “Asia Focus – Location, location, location: Asian comparison”, *Wire Journal International Magazine*, http://www.business-in-asia.com/wire_journal_nov2005.html
- Sachs, Jeffrey D., and Wing Thye Woo (1997), “Understanding China’s Economic Performance”, *NBER Working Paper 5935*, (Massachusetts: National Bureau of Economic Research).

Song, Tan Kim, and Khor Hoe Ee (2005), "China's Changing Economic Structures and Its Implication for Regional Patterns of Trade Production and Integration", paper presented at the workshop on 'Southeast Asia in the World Economy: Avoiding the Problem of Globalization's Missing Middle' in Singapore on November 10-11.

The Business Online (18/09/2005), "Why rise of China and India can benefit us all", available on the web at www.thebusinessonline.com.

World Investment Report 2005: Transnational Corporations and the Internationalization of R&D, Persephone Economou (Editor), September 30, 2005, (United Nations, New York and Geneva, 2005)

Zheng, Kit Wei, Ong Jia Wern, and Kevin Kwan Tai You (2005), "China's Rise as a Manufacturing Powerhouse: Implications for Asia", *MAS Staff Paper No. 42*, (Singapore: Monetary Authority of Singapore).

