# The Coming Chinese Century: Boon or Bane for Southeast Asia?

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**Abstract**

China's explosive growth in recent decades has come with the fear that its cheap labor, together with its increasing prowess in science and technology, will crowd out Southeast Asian economies in both the high value-added end of the economic ladder as well as in the low value-added manufacturing sector. However, there is another view of China that rejects this new economic paradigm and the zero-sum game it implies. Here, the theory of comparative advantage in trade still holds, and instead of an economic competitor dominating the entire economic ladder, it is argued that there are complementarities in economies that allow all parties to benefit from increased consumption. Under this view, the increased consumption of the newly prosperous Chinese consumers and of the burgeoning Chinese market will enable Southeast Asian countries to prosper from trade with China. This paper evaluates each of these viewpoints, arriving at mixed results. While there is some evidence of trade competition, data also suggests the existence of economic complementation, with Chinese growth providing opportunities for increased growth and economic integration within Southeast Asia. Furthermore, the varied economic structures of Southeast Asia mean that this impact could be different among the individual countries in this region.

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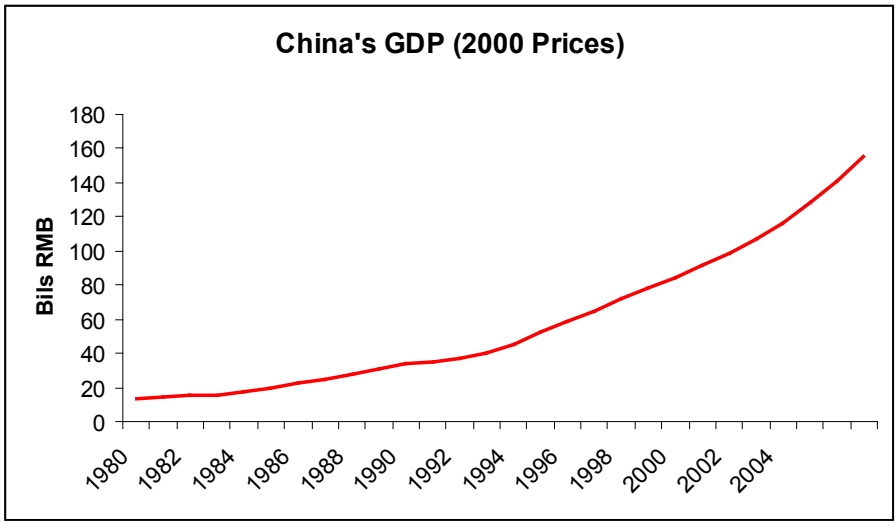
## A Summary of China's Economic Transformation

In 1978, under Deng Xiaoping's leadership, China began a series of economic reforms that generated spectacular economic growth (see Figure 1). Since the reforms began, China's GDP has grown at an impressive rate of 9.4 percent per annum (p.a.) in real terms. Additionally, real GDP per capita has risen by more than six-fold and a predominantly agrarian society has become heavily industrialized.[2]

**Figure 1:** China's GDP at constant prices




**Source**: Compiled from International Financial Statistics

Prior to the reforms, China was a planned economy with a growth rate of 5 percent p.a. between 1960 and 1981.[3] The growth rate distinctly decelerated from the 8.88 percent p.a. from 1952 to 1957, though this deceleration fails to capture poor performance on other social indicators that were affected by the disruption caused by the Cultural Revolution in 1966.

China's 1978 economic overhaul had three starting points: the reorganization of farming, the increased autonomy given to State-Owned Enterprises

[2] Liang, Hong and Eva Yi. "China's Ascent: Can the Middle Kingdom Meet Its Dreams? (Global Economics Paper 133)." Goldman Sachs Global Economic. 2005.

[3] Nolan, Peter and Robert F. Ash. "China's Economy on the Eve of Reform." The China Quarterly 144: China's Transitional Economy (1995) 980-998.

(SOEs), and an expansion of Township and Village Enterprises (TVEs).[4] The marketization of the Chinese economy produced productivity gains that accounted for more than 42 percent of China's growth between 1979 and 1994.[5] This pool of "reform reservoir" still exists, and supports the rapid pace of growth of the Chinese economy today.

In the early 1980s, agricultural collectives were replaced by family farms.[6] This change only codified the unofficial change that began in the early 1970s which saw increased autonomy for collective farms. At the same time, TVEs were expanding in the 1980s. Since local political leaders frequently ran TVEs, the incentives of these leaders with were aligned with the momentum for economic reforms.[7] The TVEs also played a vital role in China's development of a manufacturing base from 1985 to the early 1990s.[8] At the state-level, the Contract Responsibility System was implemented in the mid 1980s, paving the way for greater independence of the SOEs.

As China's productivity soared, it also opened up to world trade by accepting foreign direct investments; first in the "special economic zones" enclave and later more broadly across the country. These zones supported export-oriented industries, and this export-dependence is reminiscent of the East Asian Economic Model: the export-led development path that South Korea, Japan, Singapore and Hong Kong treaded upon in the years preceding China's economic reforms.[9]

Many of the Southeast Asian economies, along with the economies

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[4] Lindbeck, Assar. "An Essay on Economic Reforms and Social Change in China (Policy Research Working Paper No. 4057)." World Bank, Washington D.C. 2006.

State-Owned Enterprises refer to companies that are owned by the state, while Township and Village Enterprises refer to entrepreneurial communities based in villages and towns, often run by a government official, that were set up after market-based reforms began in China.

[5] Hu, Zuliu and Mohsin S. Khan. "Why is China Growing So Fast? (Working Paper No. 96/75)." International Monetary Fund. 1996.

[6] Zhou, Kate Xiao. How the Farmers Changed China: Power of the People. Boulder, CO: Westview Press, 1996.

[7] Cai, Hongbin and Daniel Treisman. "Did government decentralization cause China's economic miracle?" World Politics 58.4 (2006).

[8] Lindbeck, Assar, Ibid.

[9] The export-led growth model referred to here is economic growth that is predominantly driven by a growth in exports in the manufacturing sector.

of Hong Kong, South Korea and Japan, are still heavily export-dependent.[10] Traditionally, it was expected that as countries became more prosperous, they would move up an "economic ladder" and engage in more high value-added economic activities that resided in countries with competitive advantages of a highly educated workforce and advanced infrastructure of legal systems and governance. With the advent of China's explosive economic growth, there is a fear that its cheap labor, along with its increasing science and technology prowess, will increasingly crowd out these countries' economies in both the high value-added end of the economic ladder, *as well as* in the low value-added manufacturing sector.[11]

Another view of China rejects this new economic paradigm and the zero-sum game it implies. The theory of comparative advantage in trade still holds, and instead of an economic competitor dominating the entire economic ladder, it is argued that there are complementarities in economies that allow all parties to benefit from increased consumption.[12] Under this view, the increased consumption of newly prosperous Chinese consumers, and its burgeoning market, will enable Southeast Asian countries to prosper from trade with China.

This paper will examine whether China's economic rise is more of a blessing or a curse for Southeast Asia (SEA).[13] It looks at whether the traditional trade theory of comparative advantage no longer holds for SEA with China's rise. If China's labor wages are so depressed compared to the rest of SEA, and if it possesses technological prowess at the same time, China could

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[10] He, Dong, Lilian Cheung, and Jian Chang. "Sense and Nonsense on Aisa's Export Dependency and the Decoupling Thesis (Working Paper No. 03/2007)." Hong Kong Monetary Authority Research Department. 2007.
The authors note that there is significance variance in export dependence over the last 10 years, although much of the variance can be attributed to the Asian Financial Crisis.

[11] Rodrik, Dani. "What's so Special About China's Exports? (Paper prepared for project on 'China and the Global Economy 2010')." China Economic Research and Advisory Programme, Harvard University. Jan. 2006.
Rodrik argues that China's exports are highly sophisticated and comparable to OECD exports, posing a significant threat along all levels of the manufacturing chain.

[12] Trade theory is based on absolute and comparative advantage in production. Under comparative advantage, countries trade because their *opportunity cost* of producing one item is greater than that of their partners.

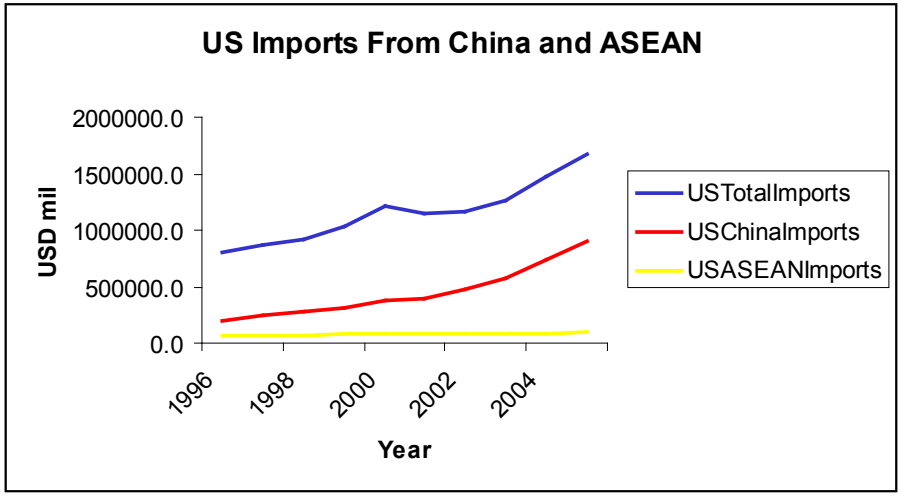
[13] The SEA grouping of countries used in this analysis focuses on the main economies of the region such as Indonesia, Malaysia, Thailand, Singapore and Vietnam. However, macro-data on the region also includes Laos PDR, Brunei, Burma (Myanmar) and Cambodia.

displace SEA completely in the export markets of the United States and the European Union in both sophisticated and non-sophisticated product categories. If traditional comparative advantage still holds, then SEA should be able to find export niches. If these niches exist for SEA, SEA can benefit from China's growth by meeting China's consumption needs.

## Loss of Market Share from Competition *and* Trade Diversion

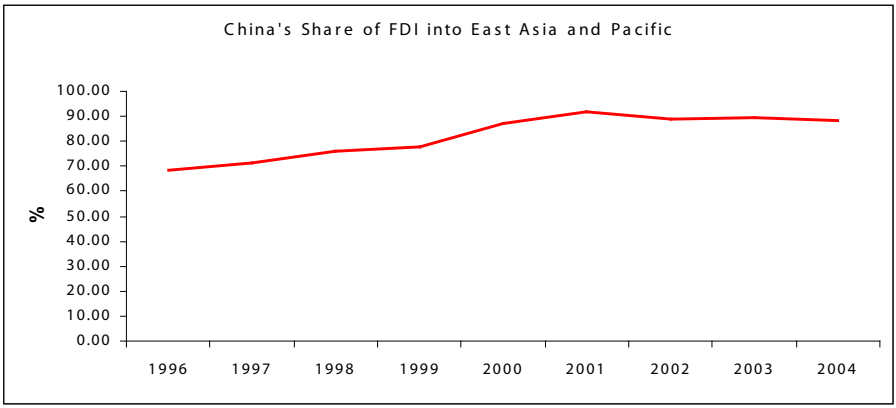
Looking at trade data (see Figure 2) and FDI data (see Figure 3), it would appear as if China is a black hole, sucking out FDI and export market share to the US from SEA. Both of these views over-simplify the complex trade and investment dynamics between SEA and China. The decrease in SEA's share of US trade can be broken down into a competitive effect and a diversion effect. The former represents the share of SEA trade "lost" to China, while the latter represents output that is going to China for assembly before re-export to the US. This trade artificially boosts China's export figures to the US while depressing those of SEA, though even the "lost" trade is not totally lost since rising Chinese incomes leads to increased Chinese consumption and trade with the region.

**Figure 2**




**Source**: Compiled from CEIC database.

**Figure 3**




**Source**: Compiled from CEIC database.

The huge arbitrage opportunities of low Chinese labor wages have altered production patterns in the region to give rise to this misleading statistic of Chinese export hegemony. There is increasing vertical specialization in production lines as companies take advantage of low labor costs by outsourcing labor-intensive assembly work to China. Some of China's export growth can be explained by its assembly of intermediate goods produced by SEA which are then exported to the US. Assembly work comprises the low value-added components of the supply chain, and its migration to China could allow SEA to focus more on higher value-added products, benefiting both countries.

Increasing vertical specialization is seen in the increased ratio of imports for processing to total imports in China from 35 percent in the early 1990s to over 50 percent in 1997.[14] China's exports contain high import content, and this is borne out by China's increasing trade deficit with the rest of Asia.[15] Only 15 percent of the value of China's electronics and IT exports are added in China.[16] In 2006, China had a deficit of $92 billion in electronic components while maintaining a surplus in computers, video cameras, televisions and telephones.[17] Intense competition for export markets between China

[14] Prasad, Eswar et. al. "China's Growth and Integration into the World Economy (IMF Occasional Paper No. 232)." International Monetary Fund, Washington, D.C. 2004.

[15] In 2006, China's trade deficit with East Asia reached $87.5 billion (Xinhua 2007).

[16] Branstetter, Lee, and Nicholas Lardy. "China's Embrace of Globalization (Working Paper No. 12373)." National Bureau of Economic Research. 2006.

[17] The Economist. Special report on Technology in India and China. Oct 27 – Nov 03 2007.

and SEA would also imply a strong negative correlation between China's and SEA's export rates, but this is not borne out in trade data.[18] Instead, the correlation is negligible.

Loss of export market share can also be attributed to the newly industrialized economies (NIEs) moving out of labor intensive, low value-added industries, into more capital-intensive industries or into services.[19] China's export gains come largely from taking over industries which NIEs were relinquishing. These export gains also have not come at the expense of the labor-intensive economies of the ASEAN-4, which it must in order to support the thesis of competition rather than complementation in economies.[20] From 1989 to 2002, the ASEAN-4 increased their percentage of exports to the US in 27 industries out of 52 categories, China in 42 industries and NIEs in 5 industries.[21] Gains by both the ASEAN-4 and China were made at the expense of the NIEs.

Although SEA faces some competition from China in both labor intensive and technologically sophisticated trade categories, it is found that within trade categories, technological sophistication offers some protection to ASEAN exporters.[22] China's technological sophistication is often over-exaggerated and China is still a place where electronic goods are made, not where much of the value is added.[23] A study of Apple's iPod revealed that the most expensive part of the iPod was manufactured in Japan, and China's role was mainly to assemble the pieces and test the product, which accounts for a mere $3.70 out of a $224 wholesale value.[24]

## Complementary FDI Inflows Suggest Complementary Economies

As previously mentioned, popular perception compares China to a black hole that sucks in FDI. This assumes that SEA and China compete for the same product markets, and in doing so, chase the same FDI. However, China is a source of FDI creation for SEA, indicating that their economies complement each other.

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[18] See "Table 1" in Appendix.

[19] This grouping of economies includes Singapore, Hong Kong, South Korea and Taiwan.

[20] This grouping of countries includes Malaysia, Thailand, Philippines and Indonesia.

[21] See "Table 2" in Appendix.

[22] Weiss, John. "People's Republic of China and its Neighbors: Partners or Competitors for Trade and Investment? (Research Paper Series No. 59)." Asian Development Bank, Tokyo, Japan. 2004.

[23] Economist Nov 10 2007 A special report on technology in India and China

[24] Linden, Greg, Kenneth L. Kraemer, and Jason Dedrick. "Who Captures Value in a Global Innovation System? The case of Apple's iPod." Personal Computing Industry Center. 2007.

Before examining the correlation between FDI into SEA and FDI into China, China's massive FDI inflows must be treated with caution. FDI into China is greatly exaggerated because of round tripping. Chinese firms, before China revamped its preferential tax treatment for foreign firms in 2007, often used holding companies abroad to carry their assets.[25] Earnings were repatriated abroad to benefit from the lower tax rate on foreign firms. These earnings returned as FDI and are estimated to account for 30 percent to 40 percent of total FDI inflows to China.[26]

FDI figures also appear much more modest after being adjusted for the size of China's economy. China receives far less FDI than SEA when FDI inflows are measured relative to the size of the economy. The 2002 UNCTAD FDI Performance Index, which compares FDI inflows to GDP, rates China at 1.2, which is only average for Asia and lower than Singapore, Malaysia or Thailand.[27] These figures used the reported FDI numbers unadjusted for round tripping, which indicates that Chinese actual FDI performance is even more dismal.

While China's attractiveness to FDI is overstated, it is still beneficial to SEA. China's FDI inflows are positively correlated with FDI inflows to ASEAN (Chantasasawat 2003).[28] This is explained by the increasingly integrated production lines in the region. FDI flows to one economy interact positively with FDI flows to another as international firms exploit production opportunities on a regional basis.

## But The Economic Paradigm Could Still Change…

A closer look at FDI correlation and trade data in individual categories appears to support the thesis that SEA's economies complement China's. Instead of trade displacement across all export categories, China's rise has encouraged these economies to relinquish labor-intensive and low value-added manufacturing activities for capital-intensive and high value-added industries. Evidence also stems from the nature of exports to China: SEA increased exports

[25] In March 2007, China announced that corporate tax rates for foreign and domestic businesses will be unified (International Herald Tribune 2007).

[26] Xiao, Geng. "People's Republic of China's Round-Tripping FDI: Scale, Causes and Implications (ADB Institute Discussion Paper No. 7)." Asian Development Bank, Tokyo, Japan. 2004.

[27] UNCTAD 2002, Table 2.1.

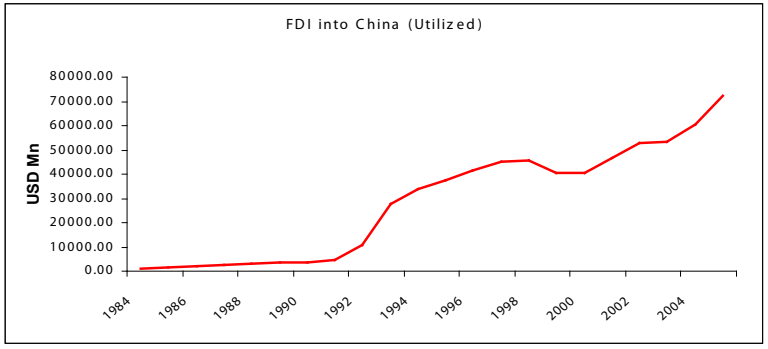
[28] Using a regression model comparing FDI inflow to ASEAN against some variables, including FDI inflows to China, the author found that a 10% increase in FDI to PRC raises FDI to elsewhere in region by 5-6%.

to China in relatively more skill-intensive activities from 1996 to 2000.[29]

These changes might have taken place eventually without China, but China has definitely made this change an urgent imperative. This shift in comparative advantage is positive and can be compared to Japan's development in the 1980s. NIEs flocked to take Japan's place in the flying geese formation[30] as Japan moved up the value chain into more innovative and technologically sophisticated industries, allowing material wellbeing to continue to improve.

Although China has not displaced SEA across the entire economic ladder in the past 20 years, this remains a possibility. FDI into China doubled this decade (see Figure 4) and China is likely to start shifting into more capital-intensive production categories. This trend is encouraged by the rising labor costs faced by China in the Pearl River Delta and Shanghai. China's competition for export markets has picked up in recent years, and from 2000 to 2002, it increased its market share in 40 out of 49 trade categories in the G3 market at the expense of *both* NIEs and ASEAN-4 (Ahearne et al. 2003).[31]

**Figure 4**




**Source**: Compiled from CEIC database.

[29] Roland-Holst, David and John Weiss. "People's Republic of China and its Neighbours: Evidence on regional trade and investment effects." Asian-Pacific Economic Literature 19.2 (2005): 18-35.
Applying a GTAP model, and making suitable adjustments, Roland and Holst (2003) found that in bilateral PRC-ASEAN trade on a skilled labor content basis, there was a substantial shift of 16% towards greater export orientation.

[30] Flying Geese Model, popularized by Japanese economist Kaname Akamatsu, postulates that Asian countries will catch up with the West in a tier-level; Japan being the lead goose, the "Asian Tigers" second, and the ASEAN countries being the third tier.

[31] Ahearne, Alan, John Fernald, Prakash Loungani, and John Schindler. "China and emerging Asia: Comrades or competitors? (Working Paper No. 2003-27)." Chicago Federal Reserve Bank. 2003.

China's entry into the World Trade Organization in 2001 also removed a lot of the risk stemming from its need to receive annual renewal of Most Favored Nation trade status with the United States. The reduced risk implies that firms that previously diversified their supply sources across Asia might seek to do the bulk of their production in China. The textile industry provides an example of how trade dynamics in the region can change. In December 2004, quotas on the export of textiles and clothing from developing countries were removed with the Agreement on Textiles and Clothing (ATC). It was expected that countries that benefited from the quotas, despite being uncompetitive competitors in the industry, would lose market share to countries with cost advantages in the industry. In particular, China was expected to be a primary beneficiary because of its cheap labor costs and modern mills.

As predicted, shortly after the removal of quotas, US imports of Chinese textiles rose 55.8 percent in 2005, while the rest of Asia saw their imports fall by 7.71 percent.[32] The market share for Asian producers, excluding China, fell by almost 3 percent between 2004 and 2005. EU imports of textiles from China grew 40.07 percent in 2005 against a 13.37 percent increase for Asia as a whole. Most of the rest of Asia suffered negative growth in their exports to the EU in this market. However, the risk of protectionism still exists, and the European Commission in the second quarter of 2005 began implementing special safeguards that limited imports on certain textile categories. The US sought to limit inroads by China into the textile markets in a trade memorandum that set out agreed levels of imports by volume over 2006-2008. These restrictions appear to benefit other Asian suppliers.[33] However, once these safeguards expire, it is likely that China will continue dominating this market. The case of textiles reveals how low labor costs and efficient production could allow China to become dominant in more trade categories over time. Nevertheless, textile is a labor-intensive and low-technology industry, and this example does not support the idea of China taking over the entire economic ladder.

## China's Rising Affluence Can Drive Southeast Asian Growth

As economic niches for SEA exist even with China's rise, SEA can benefit from continued Chinese growth. By one estimate, China is expected to be the leading economic power by 2041 in terms of gross domestic output

[32] See "Table 3" in Appendix.

[33] "Asian Development Outlook 2006." Asian Development Bank, Tokyo, Japan. 2006.

unadjusted for purchasing power parity.[34] If measured on a purchasing power parity basis, it could attain this status even earlier. Rising affluence will lead to increased demand from Chinese consumers. Increased demand stems not only from a continuation of China's wealth buildup, but also from the formation of a true middle class between 2015 and 2025.[35] If SEA succeeds at raising the technological sophistication of their economies and finding the right niches, this rising tide will also lift their boats.[36]

Although Wilson's and Purushothaman's estimates are based on historical growth rates adjusted for demographic trends, they paint a picture for the potential of China's domestic consumption growth. There is no *economic reason* to expect China's growth to slow down short of geopolitical conflict or internal strife. The NIEs and Japan maintained stronger growth rates for over a 30-year period than China in her last decade. It is projected that China's GDP growth will average 7.2 percent in the next five years, fall to 5 percent in 2020 and slow to around 3.5 percent by the mid 2040s (see Table 1). These projections are based on middle-of-the-path estimates and the fact that China has exceeded the growth forecasts over the four years since the report's publication.

**Table 1**: Chinese Growth Rates

| | **Real GDP Growth: 5-yr Avg.** | **GDP/Capita Growth: yoy** | |
|---|---|---|---|
| **%** | **China** | **China** | **US** |
| **2000-2005** | 8.0 | 9.2 | 2.6 |
| **2005-2010** | 7.2 | 11.2 | 1.7 |
| **2010-2015** | 5.9 | 9.2 | 1.3 |
| **2015-2020** | 5.0 | 7.8 | 1.3 |
| **2020-2025** | 4.6 | 7.3 | 1.4 |
| **2025-2030** | 4.1 | 6.9 | 1.7 |
| **2030-2035** | 3.9 | 6.5 | 1.9 |
| **2035-2040** | 3.9 | 6.3 | 2.0 |
| **2040-2045** | 3.5 | 5.9 | 1.9 |
| **2045-2050** | 2.9 | 5.4 | 1.9 |

**Source**: Goldman Sachs Global Paper No.99 (Wilson and Purushothaman 2003)

[34] Wilson, Dominic and Roopa Purushothaman. "Dreaming with BRICs: The Path to 2050. (Global Economics Paper No. 99)." Goldman Sachs Economic Research. 2003.

[35] Farrell, Diana, Ulrich A. Gersch, and Elizabeth Stephenson. "The Value of China's emerging Middle Class." The Mckinsey Quarterly 2006 Special Edition (2006).

[36] Roland-Holst, David and John Weiss. "People's Republic of China and its Neighbours: Evidence on regional trade and investment effects." Asian-Pacific Economic Literature 19.2 (2005): 18-35.

China's unusually high growth is also sustainable because it is driven by increases in productivity. Economists have in recent times criticized the "inefficient" investments driving Chinese growth and argued that such growth is unsustainable.[37] The Cobb-Douglas function used for economic growth forecast in Goldman Sachs' report considers productivity, labor and capital as drivers of growth. If growth is driven by rising employment (e.g. through women entering the workforce), it is likely to slow as full employment, especially of scarce skilled labor, is achieved. The rising wages in coastal cities imply that the benefits of China's labor reserves are limited. If growth relies only on capital investments, growth will eventually decay to a steady-state level as the rate of capital depreciation grows to match investment levels. At the height of the Asian Miracle debate, economist Paul Krugman argued that the growth of the Asian Tigers was unsustainable as they were built on massive increases in employment and capital accumulation instead of on productivity improvements.[38]

Chinese growth has taken place on a firm foundation of rapid productivity increases and a slowdown in growth is unlikely to happen anytime soon. Total Factor Productivity (TFP) gains averaged 3.3 percent per annum from 1978 to 2004, and accounted for 36 percent of China's growth.[39] This compares favorably with TFP growth in the Asian Tigers at around 2 percent.[40] These rapid gains can be attributed to "reform dividends" from China's transition from central planning to a market system. There are still many reforms to be taken and TFP gains are likely to continue if the reforms are managed well.[41] As productivity gains factors heavily in the Chinese growth story, there is a stable foundation for future growth.[42]

Demand for imports from SEA will be driven by economic growth

[37] Wolf, Martin. "China has further to grow to catch up with the world." Financial Times 13 April 2005.

[38] Krugman, Paul. "The Myth of Asia's Miracle." Foreign Affairs (1994).

[39] Liang, Hong and Eva Yi. "China's Ascent: Can the Middle Kingdom Meet Its Dreams? (Global Economics Paper 133)." Goldman Sachs Global Economic. 2005.

[40] Young, Alwyn. "The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience (NBER Working Paper No. W4680)." 1994. <http://ssrn.com/abstract=226946>.

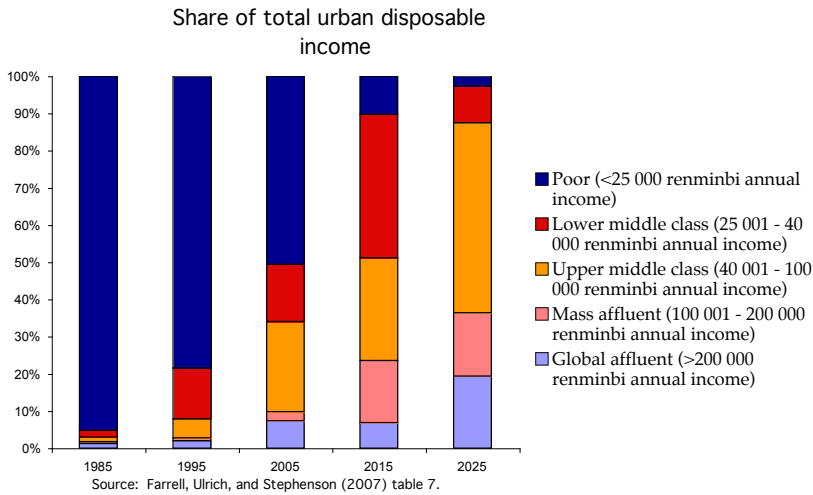
[41] Liang, Hong, Ibid.

[42] Goldman Sachs predictions of Chinese growth rate might have underestimated growth as it does not take into account this "reform reserve". It assumes that productivity increases are a function of income per-capita based on the experience of other countries. However, this reserve could lead to larger productivity increases for a given per-capita income in China.

and also by the development of a middle class in China. The development of an urban middle class in the next 20 years is a major demographic trend.[43] This new consumer group will demand higher consumption and will contribute to the demand of SEA's imports.

The McKinsey Global Institute (2006) projects the emergence of the urban middle class as a major consumer group from 2010 onwards. Comprised of working-class migrants into major cities, their population rose 15 percent in the last two years to reach 80 million.[44] By 2015, the disposable income of the middle-class is expected to be the largest among all consumer segments (see Figure 7). By 2025, the middle class will comprise 520 million people, and will possess 61 percent of China's national income.

**Figure 7**




**Source:** National Bureau of Statistics of China; McKinsey Global Institute analysis

## A Rising Tide Lifts All Boats?

Trade data does not strongly suggest that China's growth has changed the fundamentals of economics and trade by dominating the entire economic ladder, leading to the displacement of SEA economies. Instead, a more nuanced picture has emerged suggesting economic complementation co-existing alongside limited competition. Although the effects vary across Southeast Asian economies, the decrease in exports to the US markets in various trade

[43] Farrell, Diana, Ulrich A. Gersch, and Elizabeth Stephenson. "The Value of China's emerging Middle Class." The Mckinsey Quarterly 2006 Special Edition (2006).

[44] These segment is defined as having RMB 60 000 to RMB 500 000 in annual income

categories are largely confined to the NIEs moving up the economic ladder to focus on more capital-intensive industries. Export figures also overstate the extent of China's trade with the US and understate that of Southeast Asia. Because final assembly of manufacturing components takes place in China, significant portions of the value-chain still remain within Southeast Asia.

There has also been no evidence so far that China is successfully competing for value-added activities at the upper regions of the economic ladder. However, this analysis examines the relationship between China's growth and Southeast Asia's economies for the past 20 years. A future study with the latest macro- and micro-economic data might be able to shed more light on whether the lack of economic displacement still holds and will continue to hold.

At the same time, Chinese growth provides opportunities for increased SEA growth and economic integration. SEA can benefit from increased exports to China as China's market grows. On the demand side, rapid Chinese growth and middle-class formation will lead to increased consumerism. Technological sophistication within a trade category has been shown to provide SEA with protection from Chinese competition. If SEA is able to find technologically advanced niches within this new global supply chain, they can benefit from China's growth. Roland-Holst (2002, 2003) forecasts imports by China from SEA to increase by 28% between 2002 and 2020.[45]

This paper studies Southeast Asia as a general economic bloc and largely considers trade data for the region as a whole. This sheds light on the macro-implication of Chinese growth on Southeast Asia. However, economies in the region range from developed Singapore to the transitional economy of Vietnam, and have widely varying levels of economic development. Given the variance in economic structures and standards of living in these countries, China's growth could have a different impact on individual countries in Southeast Asia. Further studies can be done to study the impact on individual countries in this bloc.

[45] Roland-Holst, David and John Weiss. "People's Republic of China and its Neighbours: Evidence on regional trade and investment effects." Asian-Pacific Economic Literature 19.2 (2005): 18-35.

## Appendix

Table 1
Conditional Correlations between China's Real Export Growth and Real Export Growth in other Asian Economies

| | NIEs (Korea, Singapore, Taiwan, Hong Kong) | | | ASEAN-4 (Indonesia, Malaysia, Philippines, Thailand) | | | All eight countries (NIEs plus ASEAN-4) | | |
|---|---|---|---|---|---|---|---|---|---|
| Independent Variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| **China's Real Exports** | 0.29 | 0.03 | 0.08 | 0.48 | 0.22 | 0.11 | 0.38 | 0.11 | 0.13 |
| | (0.08) | (0.10) | (0.10) | (0.11) | (0.13) | (0.13) | (0.07) | (0.08) | (0.09) |
| Lag 1 | . | . | 0.09 | . | . | 0.22 | . | . | 0.09 |
| | | | (0.14) | | | (0.17) | | | (0.11) |
| Lag 2 | . | . | -0.03 | . | . | 0.17 | . | . | -0.01 |
| | | | (0.13) | | | (0.19) | | | (0.13) |
| Foreign Demand | | 3.16 | 3.87 | | 2.97 | 5.22 | | 3.13 | 4.13 |
| | . | (0.63) | (0.93) | . | (0.69) | (1.23) | . | (0.47) | (0.83) |
| Lag 1 | . | . | -1.60 | . | . | -0.04 | . | . | -1.06 |
| | | | (0.73) | | | (0.12) | | | (0.62) |
| Lag 2 | . | . | 1.16 | . | . | 0.03 | . | . | 0.58 |
| | | | (0.54) | | | (0.81) | | | (0.55) |
| Real Exchange Rate | | -0.38 | -0.37 | | -0.32 | -0.29 | | -0.33 | -0.37 |
| | . | (0.13) | (0.10) | . | (0.12) | (0.06) | . | (0.10) | (0.08) |
| Lag 1 | . | . | -0.37 | . | . | 0.30 | . | . | 0.15 |
| | | | (0.12) | | | (0.08) | | | (0.10) |
| Lag 2 | . | . | -0.09 | . | . | 0.11 | . | . | -0.05 |
| | | | (0.14) | | | (0.08) | | | (0.07) |
| Lagged Dependent Variable | 0.12 | 0.14 | 0.14 | -0.08 | -0.05 | -0.02 | -0.01 | 0.02 | 0.12 |
| | (0.11) | (0.10) | (0.10) | (0.10) | (0.09) | (0.13) | (0.08) | (0.07) | (0.09) |
| Adjusted $R^2$ | 0.07 | 0.34 | 0.44 | 0.19 | 0.41 | 0.49 | 0.14 | 0.39 | 0.39 |

Note: Standard errors are in parenthesis. Regression estimated as a panel from 1981 – 2001. All regressions include country fixed effects (not shown). Data are from IFS and National Income accounts data from country sources.

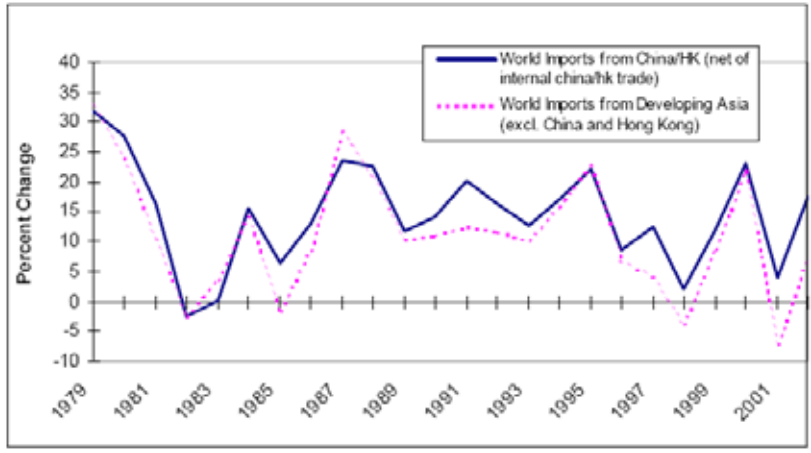
1. Regression of real export growth against (1) country fixed effects, (2) a lagged dependent variable and (3) China's real export growth.

**Table 2:** Shares in US Imports from Asia

| End Use Code | 1989 China | 1989 NIE's | 1989 ASEAN | 2002 China | 2002 NIE's | 2002 ASEAN | Total Imports from Asia 2002 (US $ billions) |
|---|---|---|---|---|---|---|---|
| 000 | 0 | 3 | 96 | 1 | 2 | 98 | 0.3 |
| 001 | 22 | 17 | 62 | 34 | 14 | 52 | 2.2 |
| 002 | 2 | 4 | 93 | 20 | 4 | 76 | 0.2 |
| 010 | 22 | 29 | 49 | 30 | 8 | 62 | 3.1 |
| 100 | 21 | 9 | 70 | 18 | 42 | 40 | 1.8 |
| 101 | 71 | 1 | 29 | 72 | 0 | 28 | 0.1 |
| 103 | 98 | 0 | 2 | 100 | 0 | 0 | 0.1 |
| 104 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 110 | 24 | 75 | 1 | 35 | 0 | 65 | 0.0 |
| 111 | 19 | 76 | 5 | 26 | 58 | 16 | 0.5 |
| 120 | 13 | 5 | 82 | 25 | 5 | 69 | 1.3 |
| 121 | 29 | 56 | 16 | 28 | 55 | 17 | 3.0 |
| 123 | 16 | 37 | 46 | 8 | 84 | 8 | 0.1 |
| 125 | 22 | 70 | 9 | 44 | 39 | 17 | 3.2 |
| 130 | 2 | 28 | 70 | 58 | 6 | 36 | 1.5 |
| 131 | 8 | 75 | 17 | 62 | 12 | 27 | 1.5 |
| 140 | 68 | 5 | 27 | 79 | 14 | 7 | 0.1 |
| 141 | 1 | 96 | 3 | 17 | 71 | 12 | 0.9 |
| 142 | 52 | 14 | 33 | 60 | 30 | 11 | 0.4 |
| 150 | 10 | 80 | 10 | 33 | 55 | 11 | 0.8 |
| 151 | 12 | 86 | 3 | 36 | 61 | 3 | 1.8 |
| 152 | 18 | 78 | 4 | 56 | 36 | 8 | 1.5 |
| 160 | 63 | 19 | 18 | 65 | 30 | 6 | 0.2 |
| 161 | 23 | 67 | 10 | 48 | 44 | 9 | 4.4 |
| 200 | 22 | 70 | 8 | 55 | 31 | 14 | 8.3 |
| 210 | 4 | 75 | 21 | 36 | 54 | 10 | 0.7 |
| 211 | 16 | 82 | 2 | 50 | 44 | 6 | 9.9 |
| 212 | 11 | 86 | 4 | 52 | 45 | 3 | 0.3 |
| 213 | 7 | 72 | 21 | 24 | 42 | 34 | 67.8 |
| 214 | 21 | 66 | 13 | 39 | 30 | 31 | 7.8 |
| 215 | 28 | 66 | 6 | 72 | 14 | 14 | 1.8 |
| 216 | 20 | 49 | 31 | 37 | 31 | 32 | 2.8 |
| 220 | 10 | 86 | 4 | 22 | 72 | 6 | 0.5 |
| 221 | 16 | 83 | 2 | 73 | 26 | 1 | 0.0 |
| 222 | 11 | 83 | 6 | 37 | 55 | 8 | 0.1 |
| 223 | 0 | 100 | 0 | 14 | 22 | 64 | 0.0 |
| 300 | 0 | 100 | 0 | 0 | 100 | 0 | 6.9 |
| 301 | 0 | 99 | 0 | 70 | 28 | 2 | 0.0 |
| 302 | 11 | 75 | 13 | 34 | 43 | 23 | 6.5 |
| 400 | 36 | 52 | 12 | 69 | 12 | 20 | 41.1 |
| 401 | 46 | 46 | 8 | 64 | 30 | 5 | 6.5 |
| 410 | 24 | 66 | 10 | 67 | 22 | 11 | 38.8 |
| 411 | 38 | 57 | 5 | 84 | 11 | 6 | 19.4 |
| 412 | 19 | 64 | 18 | 53 | 17 | 30 | 17.1 |
| 413 | 48 | 23 | 29 | 67 | 5 | 28 | 4.0 |
| 420 | 16 | 40 | 45 | 34 | 39 | 27 | 0.0 |
| 421 | 34 | 38 | 28 | 71 | 10 | 19 | 1.2 |
| 500 | 27 | 58 | 15 | 34 | 47 | 19 | 5.9 |

**Source:** China and Emerging Asia: Comrades or Competitors? (WP 2003-27)
Alan G. Ahearne, John G. Fernald, Prakash Loungani and John W. Schindler

Figure 1:
Exports from Greater China and from Developing Asia




Note: The solid line shows recorded imports by all countries in the world from either China or Hong Kong, excluding China's imports from Hong Kong and Hong Kong's imports from China. The dashed line shows imports by all countries in the world from developing Asian economies other than China or Hong Kong. Data source is IMF's Direction of Trade Statistics.

**Source:** China and Emerging Asia: Comrades or Competitors Alan G. Ahearne et al.

**Table 3:** United States imports of clothing, by volume

| | Volume change over prev. year (%) | | | | Market share (%) | | | |
|---|---|---|---|---|---|---|---|---|
| | **2002** | **2003** | **2004** | **2005** | **2002** | **2003** | **2004** | **2005** |
| **Asia Pacific DMC suppliers** | **12.88** | **14.73** | **10.4** | **21.87** | **49.75** | **52.21** | **55.01** | **63.05** |
| **People's Republic of China** | **60.35** | **46.32** | **29.81** | **97.93** | **9.07** | **12.14** | **14.9** | **26.73** |
| **Asia Pacfic excluding PRC** | **5.89** | **7.69** | **5.86** | **-0.09** | **40.68** | **40.07** | **40.11** | **36.32** |
| **World** | **7.15** | **9.32** | **5.76** | **10.32** | **100** | **100** | **100** | **100** |

**Source:** United States Dept. of Commerce, Office of Textiles and Apparel.
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