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China and India: Two Paths to Economic Power

by W. Michael Cox and Richard Alm

The two Asian giants have achieved rapid and sustained growth—China by focusing on goods, India by tilting toward services.

For decades, China and India plodded along under ideologies that favored the visible hand of government over the invisible hand of markets. Their economic systems stifled growth and left both countries poor. In 1980, real per capita income stood at $556 in China and $917 in India.

To jump-start their economies, China and India shifted strategies, letting private enterprise flourish and opening markets to trade and investment. The new policies have led to rapid economic development. China's real per capita income has grown an average of 8.4 percent a year since 1995, climbing to $4,766. India's 5 percent average annual growth has raised per capita income to $2,534.[1]

Both China and India have unleashed pent-up economic energy, but they're not traveling the same development path. China has followed the traditional route, becoming a center for low-wage manufacturing and exporting clothing, toys, electronics and other goods. India has emphasized services, using its large English-speaking labor force for call centers, data-processing operations and the like.

Growth rates give China's goods-dominated strategy the better track record so far. But India's approach may pay off better longer term. A look at per capita incomes around the world shows that the wealth of nations eventually depends more on services than industry.

On Different Paths

China's strides in industrial production have been phenomenal. Since 1978, when early reforms began loosening communism's yoke, the country has made great leaps forward in producing such inputs as cloth, electricity, steel and cement (*Table 1*). Gains have been just as impressive in such finished products as air conditioners, color televisions, microcomputers and mobile phones. The bulk of the production increases have occurred since 1990, suggesting the Chinese economy performed better as reforms took root and spread.

This development path forged an economy skewed toward producing goods, a broad category that encompasses manufacturing, construction and agriculture. China's goods output as a share of gross domestic product exceeds the average for nations at its per capita income level by about 12 percentage points (*Chart 1*).

The country lags the worldwide average in services as a share of GDP by the same amount. Other global centers for low-wage manufacturing—for example, Malaysia and Thailand—also depend heavily on goods. Some wealthier countries, among them South Korea and Ireland, are above average in goods production as well.

India hasn't matched China's breakneck industrial buildup. For its per capita income level, India lags the global average of goods output as a share of GDP by about 8 percentage points. It tilts toward services by an

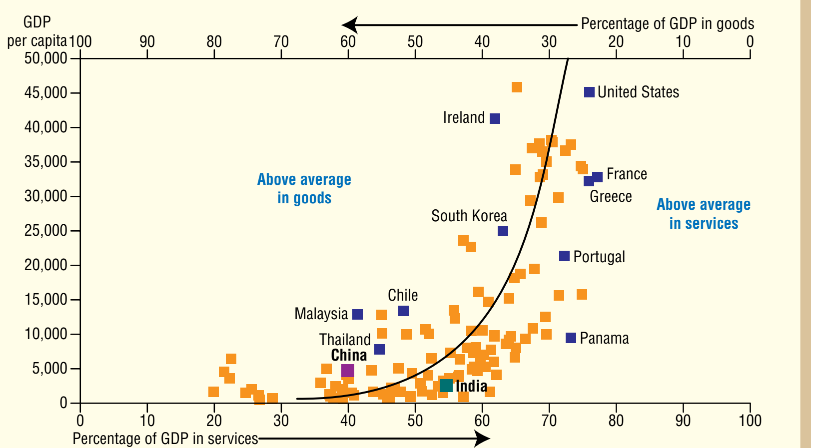
Table 1
China's Goods Output Soars

	1978	1990	2006	Units (millions)
Chemical fiber	.3	1.7	20.7	tons
Cloth	11,030.0	18,880.0	59,855.0	meters
Paper	4.4	13.7	68.6	tons
Plastics	.7	2.3	26.0	tons
Electricity	256.6	621.2	2,865.7	1,000 kwh
Coal	618.0	1,080.0	2,373.0	tons
Pig iron	34.8	62.4	412.5	tons
Steel	31.8	66.4	419.1	tons
Steel products	22.1	51.5	468.9	tons
Cement	65.2	209.7	1,236.8	tons
Plate glass	17.8	80.7	465.7	weight cases
Refrigerators	0	4.6	35.3	units
Room ACs	0	.2	68.5	units
Washing machines	0	6.6	35.6	units
Color TVs	0	10.3	83.8	units
Motor vehicles	.1	.5	7.3	units
Microcomputers	0	.1	93.4	units
Integrated circuits	30.4	108.4	33,575.0	units
Mobile phones	0	0	480.1	units

NOTE: In 1978, China produced 28,000 refrigerators, 200 ACs, 400 washing machines and 3,800 color TVs.

SOURCE: *China Statistical Yearbook 2007.*

Chart 1
China Above Average in Goods, India Above Average in Services



NOTES: Data for Australia, Iceland, Ireland, Japan, Nigeria, Serbia, Switzerland and the U.S. are for 2005. Data for the remaining countries are for 2006. GDP per capita is in 2007 U.S. dollars, adjusted for purchasing power parity.

SOURCES: World Bank, World Development Indicators database; Central Intelligence Agency, *The World Factbook 2007*.

equal amount. India shares an above-average reliance on services with dozens of wealthier nations. Panama, with its namesake canal, has carved out footholds in international trade and banking. France, Greece and other economies with thriving tourism industries—and the U.S., with its globalized business services—also lean toward services.

All told, 20 percentage points separate goods and services as a share of GDP in the Chinese and Indian economies—a gap that confirms the two countries are on different development paths. Goods production includes agriculture, a backward sector in both China and India. Narrowing the focus to manufacturing, however, reveals a similar dichotomy, with factory output accounting for 48 percent of GDP in China but just 28 percent in India.

Today's rapid globalization has been vital to the countries' climb up the income ladder. As they opened their economies and began to grow, both saw trade boom and became magnets for foreign investment. China's surging goods production laid the foundation for a rapidly expanding export sector, while India built up its niche in the global services market.

China sold more than 60 percent of its goods abroad in 2006, up from just 12 percent in the early 1980s. Its exports of goods relative to total production are nearly double India's (*Chart 2A*). India passed China a decade ago in the share of services going overseas and in 2006 exported nearly 17 percent of its services, double China's share (*Chart 2B*).

Production and trade data tell a consistent story: China tends to make goods; India tends to sell services. Of course, the split isn't clear-cut.

As its economy took off, India made strides in goods production and trade. Its goods exports, for example, grew 11.4 percent a year from 1996 to 2006—strong but less than China's 17.8 percent. At the same time, China made headway selling services on global markets, posting a healthy 13.6 percent export growth rate, compared with India's 23.7 percent.

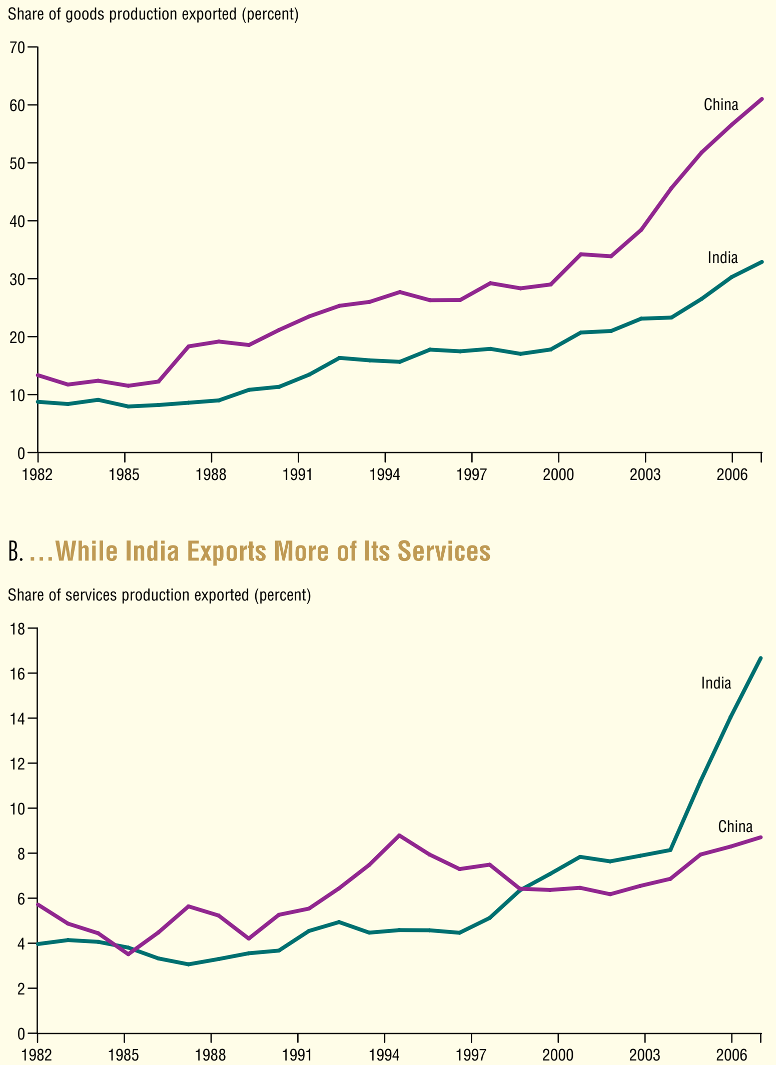
Despite their different development paths, both countries have reaped the same reward: rapid and sustained economic growth. Their rapid progress evokes comparison to Germany and Japan, which became economic miracles with their quick recoveries after World War II, and South Korea, whose rapid ascent began in the 1960s. Following some variation of a free enterprise model, these countries prospered and narrowed their income gaps with the U.S. (*Chart 3*).

Today, sheer size gives greater weight to the economic miracles taking place in China and India. The two nations' combined population of nearly

Chart 2
Two Paths to the Same Goal—Economic Growth

A. **China Exports More of Its Goods…**

B. **…While India Exports More of Its Services**

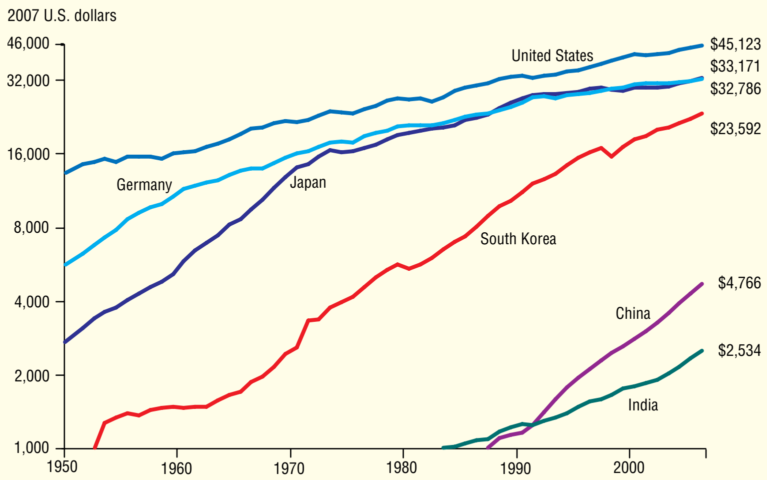


SOURCE: World Bank, World Development Indicators database.

Chart 3

Fast Growing Economies Gain Ground

(GDP per capita)



NOTE: GDP per capita is adjusted for purchasing power parity and displayed in a log base 2 format.

SOURCE: World Bank, World Development Indicators database.

2.5 billion is 10 times the 260 million total of Germany, Japan and South Korea. Never before has the world seen an economic development story of such epic proportions.

The Services Strategy

Japan and South Korea launched their economic transformations by using abundant, low-wage labor to establish manufacturing-for-export industries. China has followed a similar path, becoming the world's low-cost producer of goods and a daunting competitor for global market share.

Japan and South Korea provided a road map for China, but India knew it couldn't go toe-to-toe with China in manufacturing. It had a better chance with services exports, which are often an afterthought in the early stages of economic development.

India possesses advantages that bolster a services strategy. Two are legacies of British rule: large numbers of English-speaking workers and familiarity with the West. India also offers an ample supply of educated workers, many of them college graduates available at a fraction of what they could earn in the U.S. and other advanced economies. China's labor force includes larger numbers of educated workers, but the country has a ways to go before matching India's advantages in language, cultural compatibility and communications technology.[2]

India also had the blessing of good timing. Services trade has surged in recent decades, providing new opportunities in the global marketplace. Two factors are at work. First, the Internet and other technologies have made international communications faster and cheaper, lowering barriers to marketing and delivering services over vast distances. Second, rising incomes have shifted consumers' spending from goods, boosting demand for services and making it an engine for economic growth.[3]

Globalizing companies exploit new technologies by moving services work to low-wage economies—an extension of domestic outsourcing known as offshoring. To meet the needs of foreign multinationals, Indian companies offer services that include computer programming, tax return processing, back-office numbers-crunching, debt collection and cross-border tutoring. One database of the business-processing segment of India's offshoring industry lists more than 900 companies employing almost 575,000 workers.[4]

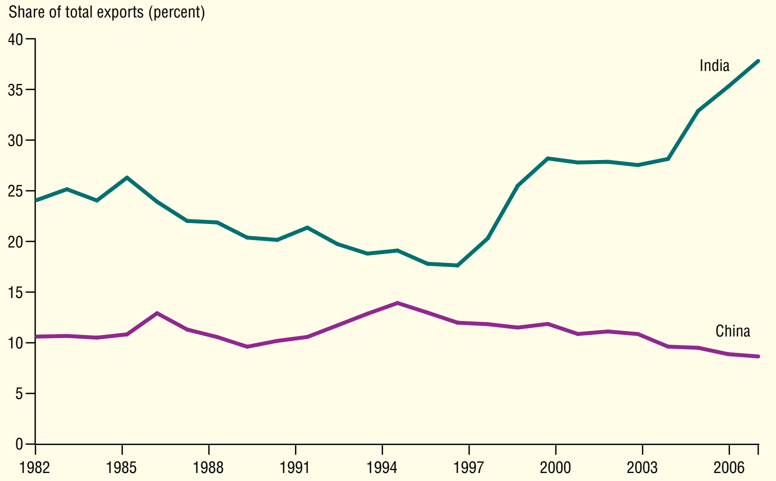
In addition to the homegrown services companies, multinationals like Dell and IBM have established their own operations in India. The country's major offshoring firms, for their part, have gone global, even setting up operations in China and the U.S. Although the tentacles of India's service providers stretch around the globe, the chief export destinations are the U.S., Britain and the Middle East.

Industry experts extol India's edge in delivering global services. Business consultant A.T. Kearney put India at the top of its 2007 Global Services Location Index, based on such factors as cost, worker skills and information technology infrastructure. Jones Lang LaSalle, another consultant, included the Indian cities of Bangalore, Delhi and Chennai on its list of the 10 lowest-cost offshoring destinations.[5]

India's fastest-growing services exports are linked to offshoring. Business services, which make up a quarter of the country's services exports, shot up 107 percent in 2006 and 138 percent in 2007. Software services, two-fifths of the services exports, rose about 33 percent each of the past two years. Financial services exports may be relatively small, but they grew roughly 140 percent in both 2006 and 2007.

These recent gains build on earlier ones. In the past decade, India's services sales have risen from 18 percent to 38 percent of all exports, topping the 30 percent of the U.S., the largest seller of services in the global marketplace (*Chart 4*).[6] At the same time, China's services sales have fallen from 13 percent to 8 percent of all exports, confirming that sales have risen faster for its goods than its services.

Chart 4
India's Services Exports Up Sharply



SOURCE: World Bank, World Development Indicators database.

India expects even greater success selling its services in the future. The Federation of Indian Chambers of Commerce and Industry, the country's largest business group, estimates services exports will more than triple in the next five years, growing much faster than goods shipments and reaching more than 50 percent of total exports in 2012.

A key insight by Eli Heckscher and Berlin Ohlin helps explain China's relative strength in goods and India's in services. In the 1930s, the two economists refined David Ricardo's theory of comparative advantage and showed that nations tend to export goods and services that intensely use their abundant factors of production. China's abundant factor has been low-wage workers, many of whom become factory hands. India's abundant factor has been the relatively well-educated, English-speaking labor that provides a low-cost gateway to global services.

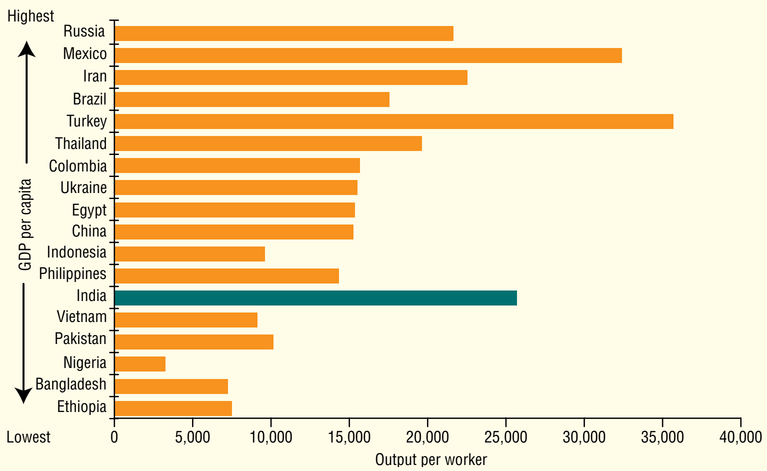
The largest chunk of any country's services output meets its consumers' demand for such things as transportation, recreation, and help around the office, store and house. In developing economies, many of these domestic services involve low-productivity work, and they're rarely exported. By contrast, globally traded services tend to be knowledge-intensive, requiring more-educated and productive workers.

What India sells doesn't match the sophisticated services exports of the U.S. and other advanced economies. However, India's exports are more likely to be at the top end of its services hierarchy. In fact, export success has allowed India to achieve a high level of services productivity for a nation at its stage of economic development.

A typical Indian services worker generates over $25,000 a year in output—significantly more than Russia, a country with four times the per capita income (*Chart 5*). India more than doubles the services productivity of Indonesia, a country with similar per capita income. Average income is four times higher in Turkey and more than twice as high in Mexico, two countries that eclipse India in services productivity.

Japan and South Korea provided a road map for China, but India knew it couldn't go toe-to-toe with China in manufacturing. It had a better chance with services exports.

Chart 5
India Stands Out in Services Productivity



NOTES: Data are for 2007. Output is in U.S. dollars, adjusted for purchasing power parity. All the nations have per capita income below $15,000.

SOURCES: World Bank, World Development Indicators database; Central Intelligence Agency, *The World Factbook 2007*.

The Road Ahead

China and India have taken different development paths, but each moved ahead with a strategy that made sense given its economic fundamentals. China probably wouldn't have grown as fast had it sought to become a services powerhouse. It would have stumbled on language and cultural barriers. Similarly, emphasizing goods probably wouldn't have worked well in India, especially if it meant competing with China for export markets.

For both countries, the challenge now centers on pushing the development process further along and moving up to more sophisticated goods and services, the domain of the world's richer nations. Competing in cutting-edge industries will require China and India to further improve business climates that in many ways aren't up to the standards of the U.S. and other nations.

A useful gauge of business climates is the Fraser Institute's Economic Freedom of the World index, which rates 141 countries on how well they provide an environment for the private sector to conduct business efficiently, effectively and profitably.[7]

Fraser documents a strong positive relationship between economic freedom and per capita income. The "most free" nations grow more rapidly and achieve higher levels of per capita income. For China and India, the rapid growth of recent years has come as both countries have made significant gains in economic freedom, reflecting the broad shift away from closed, state-dominated systems (*Chart 6A*).

In addition to an overall score, Fraser ranks countries on five measures—freedom to trade internationally; size of government; access to sound money; legal structure and security of property rights; and regulation of business and labor.

When it comes to the freedom to trade, China has pulled even with the U.S. and India has narrowed the gap (*6B*). Opening markets, of course, has been a key facet of the two Asian giants' development strategies. India now compares favorably with the U.S. on the size of the government sector, a measure that tracks public spending, subsidies and tax rates (*6C*). China has greatly improved its rating on sound money, a measure of the ability to control inflation and access to foreign currency (*6D*).

China and India still lag in some areas. China has done little to reduce the size of its government sector (*6C*). India has encountered difficulty ensuring access to sound money (*6D*). Because both countries remain heavily bureaucratized, their governments impose heavy regulatory burdens on business and labor (*6E*).[8] They've failed to sustain progress toward improving their legal systems and guaranteeing property rights (*6F*).

Fraser isn't alone in identifying deficiencies in the Chinese and Indian systems. The World Bank's Doing Business survey shows substantial burdens on starting a business—in time, red tape and initial costs. Starting a business, for example, takes 35 days in China and 33 days India, more than five times the United States' six days.

Compared with the U.S., the cost of start-up procedures is 106 times higher in India and 12 times higher in China, according to the Doing Business survey. Enforcing contracts is particularly difficult in India, where the process typically takes three years.

China and India rank in the bottom 10th of the 60 countries on the A.T. Kearney/Foreign Policy Globalization Index, suggesting they still have a ways to go in integrating into the world economy. The two countries also fare badly on Transparency International's assessment of corruption.

It may seem petty to fault the two major economic success stories of our time. More sophisticated economies, however, demand strengths that aren't critical to the catch-up phase of development. These include higher levels of innovation, entrepreneurship and education.

Economic freedom enhances all three. An effective legal system protects the rewards for developing new products and technologies. Start-up firms are often innovators, and high cost and red tape hinder their formation. Excess regulation saps incentives to expand operations and create new and better jobs. These new employment opportunities motivate the next generation of workers to become better educated.[9]

Works in Progress

Economies advance as they shift from low-productivity agriculture to higher-valued productive resources in industry and services. China and India are building viable alternatives to farming in low-end goods and services production. But both maintain agriculture sectors that are larger than other countries with similar per capita incomes, a sign they still have far to go.

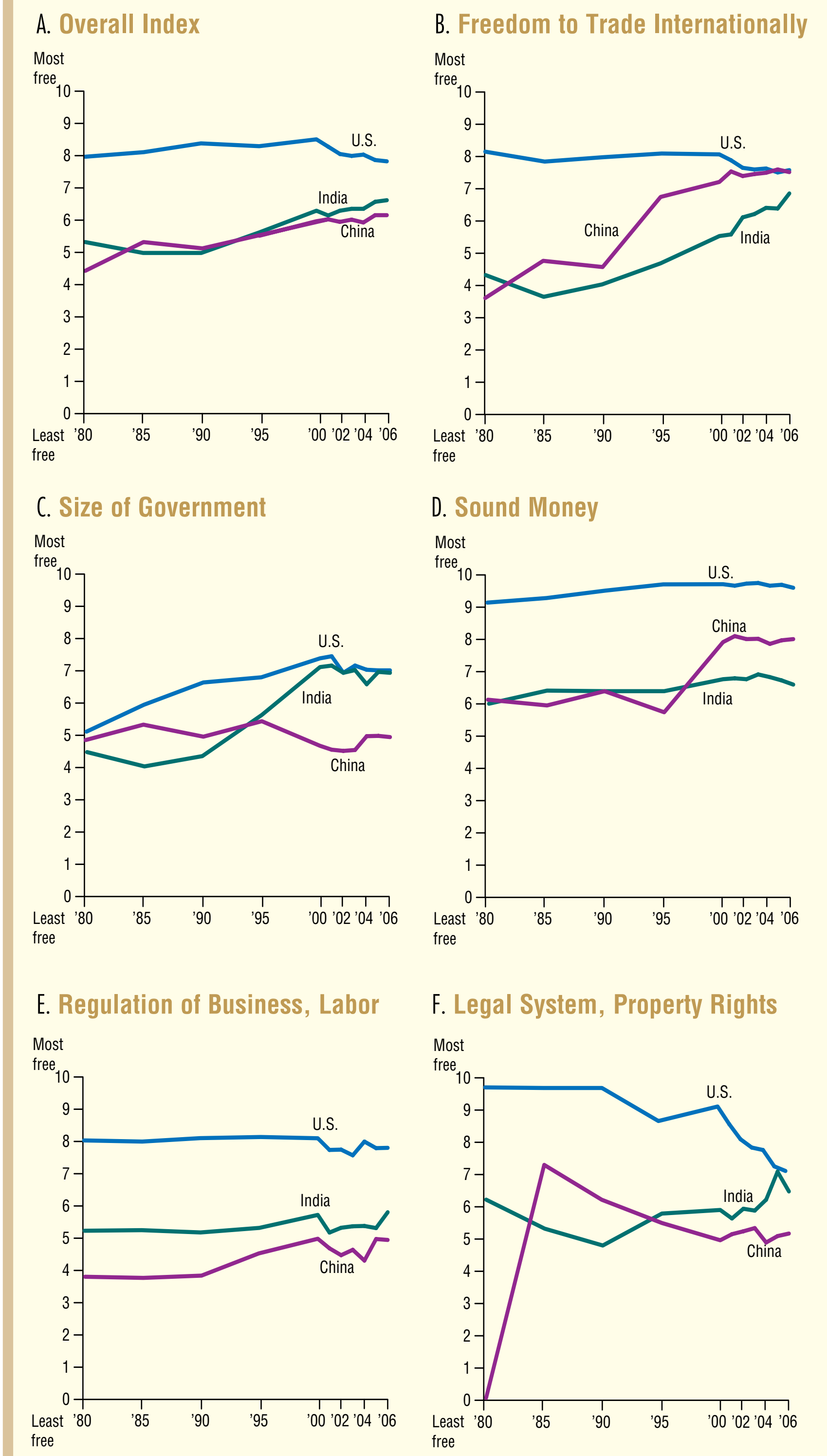
About 45 percent of China's workforce remains in the countryside; 30 percent is in services and 25 percent in industry. Seventy percent of India's workers are still on the farm, leaving services at 20 percent of the labor force and industry at 10 percent.

Labor migrating from rural areas can usually go to work doing the rote tasks of factories, so industry often takes the lead in economic development. This may provide a growth spurt, but research shows industry eventually bumps up against a ceiling at about 30 percent of the labor force and a per capita income of $20,000.

Beyond these levels, further expansion of goods production doesn't raise income, and economic progress comes from increasing services' share of the economy. Countries with the highest per capita income tend to concentrate employment and production in services. Four-fifths of the U.S. economy, for example, is in this sprawling sector.

This broad view of economic progress provides a framework for assessing the development strategies of China and India. With its tilt towards goods, China grew faster over the past two decades, using its cheap labor to

Chart 6
How China, India Rate on Economic Freedom



SOURCE: Fraser Institute, forthcoming.

good effect in developing industry. Today, production costs are rising, with wages jumping 18 percent the first half of this year. Other countries—Vietnam, for example—can feed foreign markets more cheaply. At the same time, high oil prices are pushing up shipping rates, which may crimp China's exports as U.S. companies shorten their supply lines.

India's service industries have offered few opportunities for poorly educated peasants, slowing the development process. Like China, India faces rising costs that erode competitiveness. Wages are increasing particularly fast for well-educated workers, the lifeblood of the offshoring industry. Indeed, a shortage of educated workers is one of the economy's biggest problems.

Over time, though, India's strategy may be more sustainable than China's. Exporting will help India raise its per capita income as it develops world-class service providers, fosters a skilled workforce and provides incentives for education. India may fare better in a world of high transport costs because moving information on the Internet will remain cheap.

China and India made great economic strides because low labor costs improved their competitiveness on world markets. Today's rising wages and prices undermine their cost advantages, suggesting they can't forever be the world's low-cost producers. Nor should they want to be.

Both countries will remain relatively poor unless they shift their economies toward producing the more sophisticated goods and services associated with higher incomes. The assessments from Fraser, the World Bank and others show that China and India remain works in progress, with systems that would reap big rewards from pressing forward on economic freedom and globalization.

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Notes

The authors thank Robert Lawson of Auburn University for providing the latest data on economic freedom indicators. Lawson is coauthor of the Fraser Institute's *Economic Freedom of the World* reports.

[1] Per capita income is in 2007 dollars, adjusted for purchasing power parity.

[2] India's 3.3 percent of college graduates as a share of the population exceeds China's 2.3 percent. Both are well below the 30.3 percent of the U.S. The size of their populations, however, give China and India large numbers of college graduates. Management consultants generally rate the quality of India's college graduates above China's.

[3] See "Opportunity Knocks: Selling Our Service to the World," by W. Michael Cox and Richard Alm, Federal Reserve Bank of Dallas Annual Report, 2007.

[4] See www.bpoindia.org.

[5] See A.T. Kearney at www.atkearney.com/shared_res/pdf/GSLI_2007.pdf and Jones Lang LaSalle at www.joneslanglasalle.co.id/en-GB/news/2004/160904OffshoringIndex.htm.

[6] U.S. services exports totaled $497 billion in 2007, followed by Britain at $275.5 billion and Germany at $210 billion.

[7] See *Economic Freedom of the World: 2008 Annual Report*, forthcoming at www.freetheworld.com/release.html.

[8] The new Chinese employment contract law took effect in January 2008. Among its provisions are 30-day notice of layoffs, new limits on dismissing long-term workers and mandatory severance pay. These recent changes aren't captured in Fraser's assessment of regulation of business and labor, which applies to 2006.

[9] For more on the connection between economic freedom and education, see "What D'Ya Know? Lifetime Learning in Pursuit of the American Dream," by W. Michael Cox and Richard Alm, Federal Reserve Bank of Dallas Annual Report, 2004, Exhibit 3, p. 12.

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