

China and India: The race to growth

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The world's two biggest developing countries are taking different paths to economic prosperity. Which is the better one?

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First it was China. The rest of the world looked on in disbelief, then awe, as the Chinese economy began to take off in the 1980s at what seemed like lightning speed and the country positioned itself as a global economic power. GDP growth, driven largely by manufacturing, rose to 9 percent in 2003 after reaching 8 percent in 2002. China used its vast reservoirs of domestic savings to build an impressive infrastructure and sucked in huge amounts of foreign money to build factories and to acquire the expertise it needed. In 2003 it received \$53 billion in foreign direct investment, or 8.2 percent¹ of the world's total—more than any other country.

India began its economic transformation almost a decade after China did but has recently grabbed just as much attention, prompted largely by the number of jobs transferred to it from the West. At the same time, the country is rapidly creating world-class businesses in knowledge-based industries such as software, IT services, and pharmaceuticals. These companies, which emerged with little government assistance, have helped propel the economy: GDP growth stood at 8.3 percent in 2003, up from 4.3 percent in 2002. But India's level of foreign direct investment—\$4.7 billion in 2003, up from \$3 billion in 2002—is a fraction of China's.

Both countries still have serious problems: India has poor roads and insufficient water and electricity supplies, all of which could thwart its development; China has massive bad bank loans that will have to be accounted for. The contrasting ways in which China and India are developing, and the particular difficulties each still faces, prompt debate about whether one country has a better approach to economic development and will eventually emerge as the stronger. We recently asked three leading experts for their views on the subject; their essays may be accessed on the pages that follow or by clicking on the titles below.

—Jayant Sinha

India's entrepreneurial advantage

China has shackled its independent businesspeople. India has empowered them.

China: The best of all possible models

In an efficient market, the private sector is better than governments at allocating investment funds. But China isn't an efficient market, and India has relatively little investment funding.

Sector by sector

The strength of the Chinese and Indian economies will actually be decided at the industry level.

China and India have followed radically different approaches to economic development. China's resulted from a conscious decision; India more or less happened upon its course. Is one way better than the other? There is no gainsaying the fact that China's growth has rocketed ahead of India's, but the conventional view that the Chinese model is unambiguously the better of the two is wrong in many ways; each has its advantages. And it is far from clear which will deliver the more sustainable growth.

Together with Yasheng Huang, of the Sloan School of Management, at the Massachusetts Institute of Technology (MIT), I have argued that these approaches differ on two dimensions. First, the Chinese government nurtures and directs economic activity more than the Indian government does. It invests heavily in physical infrastructure and often decides which companies—not necessarily the best—receive government resources and listings on local stock markets. By contrast, since the mid-1980s the Indian government has become less and less interventionist. The second dimension is foreign direct investment. China has embraced it; India remains cautious.

These differences have an impact on the types of companies that succeed and, I would argue, on entrepreneurialism. Let's look first at what kinds of companies thrive. China trumps India when it comes to industries that rely on "hard" infrastructure (roads, ports, power) and will do so for the foreseeable future. But when it comes to "soft" infrastructure businesses—those in which intangible assets matter more—India tends to come out ahead, be it in software, biotechnology, or creative industries such as advertising.



Thus manufacturing companies whose just-in-time production processes rely on efficient road and transport networks fare poorly in India. But businesses that are unconstrained by shortages of generators and roads flourish. Soft assets underpin even the Indian car industry. Unlike China's car sector, which has expanded as a result of big capital investments from multinational companies, India's has succeeded on the back of clever designs that make it possible to produce cheap indigenous models. India actually sends China high-value-added mechanized and electronic components whose production depends more on know-how than on infrastructure.

Moreover, many hard-asset companies in China exist because the government funnels money to them. The government can do this because it intervenes in domestic capital markets. In India there is no such government intervention. Hence successful companies tend to cluster in industries where capital constraints are less of an issue. You don't need a deep reservoir of capital to start a software company; you do for a big steel plant.

The Indian government's lower level of intervention in capital markets and its decision not to regulate industries that lack tangible assets (software, biotech, media) have created room for entrepreneurs. Entrepreneurial activity is fueled both by incumbent (often family-owned) enterprises and by new entrants. The former use cash flows from diverse existing businesses to invest in newer ventures. In biotechnology, however, Biocon emerged from pure entrepreneurial effort, as did Infosys Technologies in software. Similarly, hundreds of smaller versions of companies such as Infosys and Wipro Technologies have no government links, unlike so many of China's successful companies.

Although India's stock and bond markets are hardly perfect, they do on the whole support private enterprise. Here too, entrepreneurialism has played a part, even improving India's institutional framework. Take the Bombay Stock Exchange (BSE), founded about 130 years ago and until recently the most inefficient entity imaginable. It has become radically more efficient in the past decade as a result of the competing efforts of an enterprising former bureaucrat named R. H. Patil. With technological inputs from around the world and some fancy footwork to dodge entrenched interests at the BSE, in 1994 he started a rival institution, the state-of-the-art National Stock Exchange of India, which now has more business. In China, by

contrast, the government tries to make stock markets successful by command, with predictably little to show for its efforts. There has been little competition indeed between the Shanghai and Shenzhen exchanges.

Good hard infrastructure and the Chinese government's decision to welcome foreign investment make it reasonably easy for multinationals to do business in China, and since they bring their own capital and senior talent, they do not have to rely heavily on local institutions. China has no shortage of homegrown entrepreneurial talent. But indigenous companies have a much tougher time, hindered as they are by inefficient capital markets, a banking system notorious for bad loans, and the fact that local officials rather than market forces largely decide who receives funding.

The **pros and cons** of these two models should be studied, and it is fair to ask whether China's will hamper its economic development

China and India both have the ability to keep growing in their own very different ways for a decade or so. The Chinese government's intervention in the economy—including the decision to welcome foreign direct investment—has brought a material improvement in the standard of living that India hasn't enjoyed. It may also be that each country has chosen the path best suited to its own historical circumstances. But the pros and cons of these two development models should be studied, and it is fair to ask whether China's approach will hamper its future economic development.

Huang and I believe that the presence of so many self-reliant multi-national companies has partly relieved the Chinese government of pressure to develop or reform the institutions that support free enterprise and economic growth. And the fact that many domestic investments still are not allocated through sensible pricing mechanisms means that China wastes many of its resources. Productivity and long-term economic growth, as we all know, thrive on competition, which is all too often stifled by government intervention.

When the two countries are compared, it is easy to forget that India began its economic reforms more than a decade later than China did. As India opens up further to foreign direct investment, we might well discover that the country's more laissez-faire approach has nurtured the conditions that will enable free enterprise and economic growth to flourish more easily in the long run.

Finding fault with China's approach to economic development is easy: cyclical overcapacity, state-influenced resource allocation, and growing social inequalities are just a few of its shortcomings. But it's hard to see how any other model could have given the economy such a powerful kick start.

The Chinese government manages the development of enterprises with a view to driving economic growth. You can be a small entrepreneur in China, but if you want to be big you will have to get money from a government-affiliated source at some point. Government officials essentially have the power to decide which companies grow.

In achieving the objective of growth, this policy has been tremendously successful. China has quickly built industries large enough to drive its economy. Take the auto industry, now an important contributor to the manufacturing sector. Only 20 years ago, China had no auto industry to speak of; there were a few manufacturers of trucks but none of passenger cars. To get started, the government decided that in a high-scale, high-tech industry, some foreign company—in this case, Volkswagen—had to come in and show local ones what to do. Because most local companies were state-owned 20 years ago, Volkswagen was hooked up with a state-owned company.

You might argue that this development model has thwarted entrepreneurship. But there weren't any entrepreneurs in the industry at the time. There were no private companies that could partner with Volkswagen, let alone compete with it. The government simply said, "We want China to modernize. We want the Chinese economy to grow. We don't have the companies we need to make that happen, so we're prepared to do what it takes to create them."

The capital-intensive auto plants built with foreign partners in China as a result of its development policy may have no particular productivity advantage over the plants they might have built at home. But all of the spending by the big car companies has paid off.



Moreover, local, privately owned automakers such as Chery Automotive and Geely Automotive are beginning to thrive. A generation of entrepreneurs has put to good advantage the skills and training that the foreigners provided, so that Chinese companies now put together cars of reasonable quality much more cheaply than foreign automakers can. At present, domestic players benefit from the price umbrella that the foreign ones provide. But these smaller fry are now making cars for \$2,000, which means that any company that has high cost structures will eventually suffer. With lower tariffs on the way because of China's accession to the World Trade Organization, and with new competitors proliferating, the automotive industry is heading into a classic price war that only the fittest will survive. This is precisely what happened in the consumer electronics industry, where competition led to the emergence of successful Chinese companies that operate globally. I think that in five or ten years' time, at least a third of the Chinese auto industry will be completely private—nothing to do with the current state players. And this will all have started with the state saying, "We want to build a car industry."

Looking at industry more broadly, inefficiencies and cyclicalities have resulted from the fact that many funding decisions are driven at the local-government level. Local officials have GDP growth as a political-performance target, so many of them look for the biggest investments they can make to push along the regional economy. Like stock market investors pursuing the latest speculative fad, they have created a lemming effect, with lots of unsound investments, whether in aluminum smelters, residential real estate, or TV factories. The outcome tends to be waves of overcapacity as investments are made right up to—and sometimes way beyond—the point where it is patently obvious that the economics cannot justify them.

But remember that the essential mechanism of economic reform in China has been the encouragement of competition among provinces and municipalities. Until the 1980s there was no such thing in China as a national company. Everything was local. There was no single legal entity that operated more than five kilometers (about 3.1 miles) from its headquarters. With the removal of internal trade barriers, local entrepreneurs and their government backers invested to build scale and attack neighboring markets. Yes, this does lead to overcapacity and price wars. But over time—and relatively short periods of time, too—all that cyclicalities also leads to shakeouts that the most competitive enterprises survive. These enterprises, thanks to their national scale and real competitive advantages, no longer depend on local-government funding and can now start to compete for the long term, both domestically and internationally.

That has certainly been the story in consumer electronics, where the top three players in personal computers control 50 percent of the domestic market, and in beer, where the top ten own 30 percent. It is starting to be the story in heavy industries, where companies such as China Qianjiang own 40 percent of the motorcycle market and Wanxiang dominates its niche in automotive components (see "Supplying auto parts to the world," available on mckinseyquarterly.com on September 16). Interestingly, it is not the foreign companies but the locals that tend to be the winners of the consolidation wars. The beer industry is a case in point: most foreign brewers, unprepared for tough domestic competition and rapid consolidation, entered and exited in the 1990s.

The government is fixing the banks through **tough** higher reserve margins, branch-level changes, and more flexible risk-based pricing

Moreover, I don't believe that foreign direct investment is linked to the development of China's capital markets or to a reform of the banking system. Multinationals account for only 15 percent of fixed-asset investment, so they don't drive the economy to a very great extent. China must rely on its own domestic financial resources to finance growth. As a result, the country's capital markets *are* being developed. And the government is fixing the banks through tough higher reserve margins, branch-level changes in performance management and incentives, and more flexible risk-based pricing.

As for the oft-stated view that China is trying to create global state-owned champions, it is at least partly a myth. The government does want to develop strong Chinese companies, but it does not expect them to be state enterprises, which are inefficient by definition. Indeed, it is now telling them that if they want to grow, they will have to get listed on the stock market. The government's policy for the first 20 years of its reform program was, "Let's do what's needed to establish markets." Its policy for the next 20 years will be, "Let's get out of those markets." The global Chinese companies of tomorrow will be competitive, mostly listed, and entirely commercial in their aims and purposes.

Ultimately, you have to ask whether the inefficiencies of the Chinese approach outweigh what it has achieved for the economy overall. The answer, I think, is no. The government still controls most of the country's financial resources and has been reasonably good at allocating them—that's why the economy has grown so fast. Compared with the private sector in an efficient market, the government is no doubt worse at allocating funds. But China is not an efficient market, and the Indian model—essentially one with relatively little investment funding, whether by the government or the private sector—could not have achieved as much growth for the Chinese economy as the approach China's government actually took. The Indian model might not be adequate for India's economy either: the country's family-owned businesses and other private investors may be good at deciding what makes a sound investment for them, but they have not spent enough money to drive the kind of growth seen in China. It would not surprise me at all to see investment in India rise dramatically as foreign and domestic investors alike begin to recognize its potential going forward.

The answer to the question, "Which is the better approach to economic development?" is not to be found at the national level. You have to look at what's going on in individual industries. And when you do, you find that supportive government policies that encourage competition drive good performance. Both China and India have some sluggish, inefficient industries that are heavily regulated and lack competitive dynamism. But both countries also have successful industries that thrive unfettered by poor regulation.

The McKinsey Global Institute has long argued that the key to high economic growth is productivity and that the main barrier to productivity gains is the raft of microlevel government regulations that hinder competition. This idea is well illustrated in the case of India.



At the high end of India's productivity spectrum is the information technology, software, and business-process-outsourcing sector. It's a big success story, having created hundreds of thousands of jobs and billions of dollars' worth of exports. As a new sector—and one whose potential the government, in my view, failed to recognize early on—it has avoided stifling regulation. IT, software, and outsourcing companies are exempt from the labor regulations that govern working hours and overtime in other sectors, and they have been allowed to receive foreign direct investment, which is prohibited in retailing, for example. Without this foreign money, it is debatable whether the sector could have taken off. By 2002 it already accounted for 15 percent of all foreign direct investment in India.

In the middle of the spectrum is the auto industry, which has seen dramatic change since the government began to liberalize it in the 1980s. By 1992 most of the barriers to foreign investment had been lifted, and this made it possible for output and labor productivity to soar. Prices have fallen and, even as the industry has consolidated, employment levels have held steady thanks to robust demand. Nonetheless, with tariffs on finished cars still relatively high, automakers remain sheltered from global competition and the sector is less efficient than it could be.


At the low end of the spectrum is the consumer electronics sector, which, despite the lifting of foreign-investment restrictions in the early 1990s, is still burdened by tariffs, taxes, and regulations. As a result, Indian consumer electronics goods can't compete internationally and prices for local consumers are unnecessarily high. The performance of India's food-retailing industry is even worse. Partly as a result of a total ban on foreign investment, labor productivity is just 6 percent of US levels.

Now look at China, which also has some reasonably liberalized and highly competitive industries, including consumer electronics, in which labor productivity is double that of its Indian counterpart. Over the past 20 years, the industry has become globally competitive through a combination of foreign direct investment and intense competition among domestic companies. It is also remarkable for the relatively liberal approach the government has taken to regulation—probably because of a failure to see its growth potential. Today China makes \$60 billion worth of consumer electronics goods a year.

The performance of China's auto industry—which was considered a strategic one and remains tightly regulated because of the government's desire to bring in technology and investment—is less clear-cut. The market has been opened up to foreign automakers, consumer demand has grown enormously, and prices have dropped. Yet the sector shows how government intervention can thwart the potential of foreign direct investment. Foreign automakers can invest only in joint ventures, they have to buy components from local suppliers, and tariffs shield the market from imports. Competition *is* beginning to increase as private companies grow stronger. But for the time being, the productivity of foreign joint ventures in China is low compared with that of plants in Japan or the United States—astounding given China's low labor costs.

Since there are such big differences in the performance of different sectors within the same country, it makes sense to compare the performance of India and China at the sector rather than the national level. In IT and business-process outsourcing, India is so far ahead of the game that China can't do anything during the next 10 or 15 years that would bring it close to catching up. In consumer electronics, however, China dominates, and India won't provide serious competition during the next 10 years.

The auto sector is a toss-up. India's competitive forces have driven an enormous amount of innovation in the sector. Low-cost labor has been used instead of expensive automation, and local engineering talent has developed innovative new products such as the Scorpio—a sport utility vehicle that sells for a fraction of the price of an equivalent car in the United States. In China, large amounts of foreign direct investment have built a big industry, but regulation has so far limited its competitive potential.

It is far from clear which economy will emerge as the stronger one. The foundations of robust, sustainable economic growth must be built at the industry level, on the back of high productivity, which is achieved when governments ensure a level playing field through sound regulation and remove the barriers that stifle competition. Both China and India still have ample opportunity to help their industries and economies thrive. 

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Can China compete in IT services?

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Fragmentation is keeping the country's industry from grabbing a larger share of the global software-outsourcing market.

Giuseppe De Filippo, Jun Hou, and Christopher Ip

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China's spectacular economic success has prompted speculation that the country's software-outsourcing industry could soon compete with India's. A recent McKinsey study of China's software sector,¹ however, shows that it will be many years before the country poses a threat to its continental rival in this arena. For starters, the Chinese must consolidate their highly fragmented industry to gain the size and expertise needed to capture large international projects. Currently, there is little movement in this direction.

To be sure, signs of healthy expansion abound in China's IT industry. The number of engineering graduates and software-applications professionals has grown considerably in recent years. Since 1997, annual revenues in software and IT services have risen by 42 percent a year, on average, reaching \$6.8 billion in 2003.² Moreover, the number of English-speaking graduates in the workforce—particularly crucial in software outsourcing—has doubled since 2000, to more than 24 million in 2004.

But shortcomings in the structure of China's IT industry prevent it from taking full advantage of these changes. Although revenues from IT services are rising, they are barely half of India's \$12.7 billion a year. Growth is driven by domestic demand—most customers are small and midsize Chinese enterprises that want their software customized to their own needs. Moreover, the country's nascent foreign-software-outsourcing business accounts for just 10 percent of the industry's total revenue, compared with around 70 percent for India. Japanese customers, which seek mostly low-value application-development contracts rather than more lucrative ones for design, supply about 65 percent of this sector's income. And despite lower costs, operating margins in Chinese software-services companies average only 7 percent, compared with 11 percent at similar companies around the world, because many projects are below optimal scale, suppliers often compete on price, and collecting payments can be problematic.

To compete effectively in global outsourcing, China's software industry must consolidate. The top ten IT-services companies have only about a 20 percent share of the market, compared with the 45 percent commanded by India's top ten. Furthermore, China has about 8,000 software-services providers, and almost three-quarters of them have fewer than 50 employees. No company has emerged from this crowded pack; indeed, only 5 have more than 2,000 employees. India, on the other hand, has fewer than 3,000 software-services companies. Of these, at least 15 have more than 2,000 workers, and some—including Infosys Technologies, Tata Consultancy Services, and Wipro Technologies—have garnered international recognition and a global clientele.

Without adequate scale, Chinese players are unlikely to attract top international clients. In general, smaller companies are riskier and less reliable partners. They are more vulnerable to the loss of key personnel, may not have the financial muscle to survive for the duration of a project, and often don't have the capacity or breadth to absorb large projects easily. Yet our study shows that only about 12 percent of Chinese software-services providers see mergers, acquisitions, and alliances as a priority (exhibit). Managers in China have little M&A experience, and although the culture tends to favor organic growth, relying on it to counter

new competitors isn't realistic. Meanwhile, several Indian companies are considering acquisitions of Chinese firms to expand their operations.

Fragmentation exacerbates the Chinese industry's other problems, including weak process controls and product management. Only 6 of China's 30 largest software companies are certified at levels five or four of the capability-maturity model (CMM);³ by contrast, all of the top 30 Indian software companies have achieved these rankings. About a quarter of the Chinese companies we surveyed are trying to implement the CMM quality standards, but more than half of the companies in the survey said that such efforts weren't necessary, feasible, or worthwhile.

Chinese software-services providers will also have to manage their talent much better. Most do little to develop their employees, and very few use stock options, training programs, or other incentives to build talent. Among the companies in our sample, annual employee turnover was about 20 percent, compared with an average of 14 percent in the United States, which itself has a very fluid IT labor market. Scale would help—larger companies tend to attract more interesting projects, provide better training opportunities, and offer more generous incentives. All make it easier to attract and retain workers with valuable technical and linguistic skills.

With greater size and an improved talent base, Chinese software-services companies will be in a better position to address other issues, such as building credible brands in international markets and developing knowledge of specific industries, including finance and pharmaceuticals. Organizational and operational changes are also needed to protect the intellectual property of clients. Last, most companies will have to abandon their project-based mentality and adopt a new focus on giving clients long-term value.

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Notes

¹ We analyzed financial and corporate data and interviewed executives from 32 large Chinese software-services companies, including product developers and service providers. We also spoke with venture capitalists, government officials, managers at multinational corporations, and other industry observers.

² Estimates from International Data Corporation (IDC).