

Is China's Growth Rate Sustainable?

At first glance, it seems inevitable that the People's Republic will soon become the world's largest economy. But a closer look reveals considerable obstacles.

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China's model has worked remarkably well in bringing about the fastest economic transformation of any society in history. For the past 20 years, its GDP growth averaged 10 percent, while the United States averaged less than 3 percent. The Chinese economy is now 550 percent larger than it was in 1990. In contrast, the U.S. economy grew only 70 percent over the same time frame (but is still four times larger than China's). In 2010, the People's Republic surpassed Japan to become the second largest economy in the world. Many observers no longer ask if China *will* overtake the United States, but *when*.

China has succeeded by running its economy like a corporation, with government and business working in tandem to achieve economic growth and business profits. Unlike the U.S., group opposition to urban projects is forbidden by law, further speeding up the construction process.

An important government role is to build a state-of-the-art infrastructure that serves its industrial base. Shanghai, for example, built 12 new subway lines in the past 15 years. Spanning more than 260 miles, it is the largest underground rail system in the world. In late 2011,

the world's fastest trains are slated to connect Beijing to Shanghai, traveling at an average speed of 220 miles per hour, covering 800 miles in less than four hours. In addition, China has built 20,000 miles worth of highways in the past five years.

After the transportation infrastructure is built, manufacturing firms often set up shop in short

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order, and entire towns or industrial parks may specialize in a single product. For foreign retailers, this makes for highly efficient one-stop shopping. In the city of Qiaotou, for example, hundreds of firms make 10,000 varieties of buttons, and 60 percent of all the buttons in the world. Foshan, an industrial complex in southern China, has 300 factories that make nothing but bras and underwear.

In its focused role as manufacturer to the world's biggest brands and retailers' private labels, Chinese businesses keep costs low by investing little in branding, advertising, and innovation. No wonder firms across the world are abandoning their domestic manufacturing sites

and racing to China.

But the rush to jump on the China bandwagon as the new "number one" should be edged with caution. In the 1980s, Japan was forecast to become the world's largest economy. Its share of the auto market had gone from 3 or 4 percent to almost 30 percent in just a decade. The economy appeared to be unstoppable, until its housing bubble burst and its economy stagnated throughout the 1990s.

Today, few doubt the powerful inertia of the China juggernaut. *The Economist* magazine, for example, recently gave the year 2019, a mere eight years away, as its best guess when China's economy would overtake America's.

Often unquestioned in projections about China is a key phrase: "at the current rate of growth." This assumption can create woefully bad predictions. If we used the growth rate of a 2-year-old child to predict her height at 16, we might conclude she would reach 10 feet. But growth rates for people and countries drop as they mature. As a result, two girls, aged 2 and 16, tend to converge in height—even if the younger one never catches up. The same holds for poor and rich countries' income levels.

In the 1990s, economists such as Robert Barro and Paul Romer developed what were called “new growth models” that attempted to explain *why* poor countries might grow faster than rich ones. The assumption was that poor countries (called lesser developed countries, or LDCs) get greater returns to capital than wealthy countries. A poor businessman delivering goods on a bicycle could see huge changes in his income after acquiring a truck. By contrast, a wealthy businessman will scarcely notice the difference of an additional vehicle in his driveway. Spread capital across an entire LDC, and rapid growth should follow, assuming functioning government institutions, property rights, and rule of law.

This leads to a dilemma: How can a poor country acquire capital? China neatly solves this problem by saving an astonishing 53 percent of its GDP. This is the highest rate in the world, even though China’s 2009 per capita income is only \$6,800 (using purchasing power parity adjustments by the World Bank).

As China grows, its higher GDP results in even more savings and investment, leading to a so-called “virtuous cycle” of upward spiraling income. But as China becomes richer, it also faces the inevitable diminishing returns to capital and worker productivity, as well as a shortage of skilled workers.

These are significant (and oft-discussed) reasons why China’s growth will slow in the future. But dig deeper and an array of other significant challenges weigh more heavily in the short term, which are a direct result of its focus on low-cost manufacturing. They include China’s ravenous appetite for coal as a source of electricity, a culture that does not cultivate innovation or creativity, and a lack of understanding of how to build brand value. Although no one can predict the future, these large vulnerabilities

make China’s future dominance appear less apparent than many experts have suggested.

China’s coal problem. Coal is the cheapest (and dirtiest) energy in the world. It provides nearly 80 percent of China’s electric needs and is vital to its strategy for future growth. But China’s relentless increase in coal consumption is likely to be unsustainable, when one considers the mind-boggling scale of its future needs.

From 2004 to 2009, China’s coal production became three times as large as the United States. It essentially created a new coal production sector 10 percent larger than the entire U.S. coal industry, while U.S. production remained basically flat. (See the chart on page 3)

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To meet its needs for electricity, China moves millions of tons of coal from mines to electric plants, tying up an astounding 45 percent of all the country’s existing rail traffic. For the next decade, China plans to build 500 more coal plants, with four to six new plants opening each month. By 2020, its coal sector will be four times as large as the United States.

Despite these stunning production increases, the demand for electricity is growing even faster. Since 2005, China’s rapid hunger for coal has outstripped its ability to produce it. China, which consumed one-third of all the coal produced in the world, now imports to fill its production gap, and that gap is growing rapidly. In relative terms, its imports are small, at 137 megatons or 4.4 percent of its total coal consumption. But this amount alone would provide almost enough to power two countries the size of Poland.

In 10 years (with its 500 new coal power plants), China will need to import the equivalent of the entire coal production of Australia, Indonesia, South Africa, and Russia—which are the fourth, fifth, sixth, and seventh largest producers. These countries need coal for their own needs, so huge questions remain about where China’s coal will come from and how world coal prices will be affected. According to a 2007 MIT study on China’s coal industry, decision-making has been “frenetic,” with agencies and individuals in the central government “scrambling simply to keep abreast of developments on the ground... it is vexing, perplexing, and even overwhelming to Chinese governmental insiders, too.”

Per capita, the Chinese consume only 20 percent of the electricity of developed countries, so future demands on a mega-scale seem assured. China’s households currently get a small slice of the country’s electricity, less than 15 percent of output. But the rapidly growing middle and upper classes are demanding a larger share, as sales boom for air conditioners, refrigerators, washing machines, and televisions. According to the International Energy Agency, in the next decade China will need to add nearly nine times as much electricity generation capacity as the United States in order to meet its demands.

According to a 2008 World Bank report, “the Government of China does not seem to fully recognize the scale of the coal supply problem.” The report predicts that by 2020, China will still get 60 percent of its electricity from coal, and have a large shortfall between its indigenous production and demand. The report recommends freeing the government price controls on coal, which have kept domestic coal prices artificially low.

Aside from increasing its reliance on pricier imported coal, China is

shifting to alternative energy sources such as wind and solar. Wind energy is 20 to 40 percent more costly than coal, and solar is at least twice as much. Using them will raise manufacturing costs and spell an inevitable slowdown in growth rates. The bottom line is that China's meteoric growth rates have been highly dependent upon cheap energy sourced by domestic coal with artificially low prices. These energy prices are likely to spike up in the future as needs outpace production.

China's lack of innovation. Innovation is the work of outsiders with fresh, even daring perspectives. The ice industry did not invent the refrigerator. Shipping companies did not devise the universal container. And yearbook publishers did not create Facebook. New inventions upend old ways of doing things and cause disruptions throughout the system. Hundreds of years before its Communist-led government, China led the world with a flurry of inventions that include the compass, fireworks, papermaking, hydraulics, sophisticated drugs, multi-stage rockets, golf, and paper money.

In today's "China, Inc." it is not surprising that few innovative products emerge. The government prizes security, conformity, and control to achieve its central aims of increasing

economic growth. The Internet is closely monitored, and networking sites such as Facebook and Twitter are banned. Individuals, working under this system of state-capitalism, are more likely to keep their heads down than to risk loss of their livelihoods by opposing the aims of the government. As in conservative corporate environments, ideas that may seem unorthodox are more difficult to share.

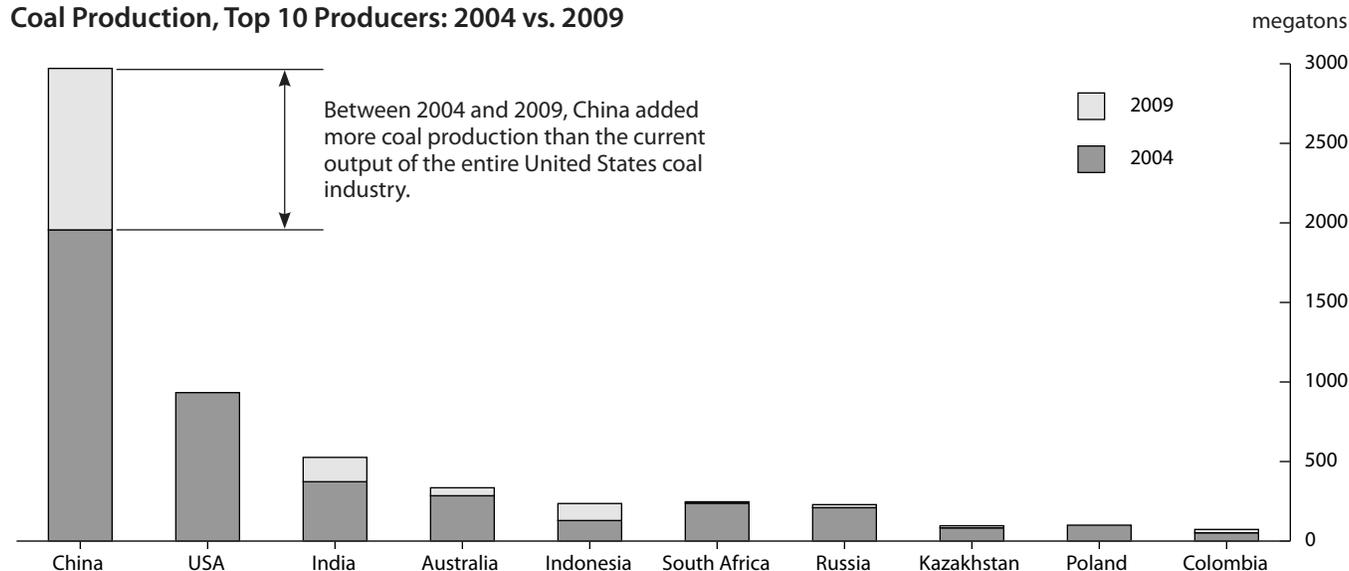
In one sense, the "China, Inc." model of economic growth resembles Wal-Mart's business strategy. Both focus on cheap suppliers, inexpensive overhead, and low wages, but neither adds much value to the products they sell. Both seek growth through the rapid scaling up of sales volume to offset their typically low profit margins. Neither embraces innovation, which helps explain why a close-knit relationship has developed between the two as manufacturer and retailer. Market saturation slowed Wal-Mart's growth in store square footage from 8 percent annually during 2002-2006 to less than 4 percent annually in 2007 to 2009. Its stock price also has stagnated for 15 years after 20 years of brisk increases. Unlike innovative companies, Wal-Mart has not reinvented itself in any substantial way. Its slowdown may be a harbinger for what's to come for

China as it too floods with world with low-end products not known for their quality.

Other countries and companies understand that building product value through innovation is how long-term economic growth typically is sustained. Switzerland made almost 22 million watches in 2008, for example, roughly 4 percent of China's sales of 559 million watches. China's average price was a mere \$2 per watch, whereas Switzerland's price was \$528. As a result, Switzerland received over ten times as much revenue as China, \$11.5 billion versus \$1.1 billion. The Swiss understand how to create value out of more than the sum of parts. Along with a reputation for high quality, they have established a brand by law for the entire country. Swiss Made appears on the face of every Swiss watch. Chinese watches, or other products for that matter, have no such identity.

As wages have risen in China's coastal cities, some manufacturers are moving firms to other Asian countries. Hong Kong-based Neo-Neon Holdings is the largest decorative lighting company in the world and sells merchandise to big retailers including Home Depot, Target, and Wal-Mart. It plans to move 85 percent of its production from China to Vietnam because

Coal Production, Top 10 Producers: 2004 vs. 2009



wages there are \$100 a month, one-third of what it pays in China. CEO Ben Fan noted that two decades ago they moved from Taiwan to mainland China for a similar reason. By December 2010, the company had 8,000 workers in Vietnam—up from 300 a year ago—and just 5,000 in China, down from 25,000 in 2008. This is a small slice of overall production, but it underscores the lack of loyalty that companies and consumers have for Asian suppliers.

China has moved towards outsourcing innovation even as the United States has outsourced manufacturing. Its preferred method is to offer a foreign company large financial incentives, but only if the technological know-how is given to Chinese companies.

Once the Chinese companies learn how to manufacture the products, the relationship with the foreign company is often severed, sometimes without advance knowledge. This occurred with Kawasaki, a Japanese company which manufactured train components as a joint venture in China. After two years, China digested the technology and made its own trains with slight improvements.

If the technology cannot be bought, sometimes the ideas are simply stolen. China's culture has blithely allowed copycatting and intellectual piracy for decades. The Business Software Alliance estimates that 82 percent of the business software used in China in 2006 was pirated.

Any visitor to China quickly sees the hordes of sellers openly hawking counterfeit watches, clothes, and shoes. *Chery*, a Chinese automotive company, for example, manufactured a model known as *QQ*, which was a blatant copy of a GM car known as the Chevy Spark. Even the doors for the cars were interchangeable. (However, the *QQ* had a far worse safety record, which was generally not known by Chinese consumers.)

Lack of branding. Along with its lack of innovation, China struggles with another creative hurdle: establishing brands. Creating and sustaining brands is complex, expensive, and uncertain, which does not play into China's strengths. Chinese manufacturers lack vital marketing skills.

Consider how Coke has created a drink that has world-wide distribution and engages in clever marketing with memorable taglines. Buyers on every continent instantly trust Coke will taste exactly the same and be safe to drink, regardless of local water supplies. For that, customers are willing to pay \$1 for a secret recipe that has perhaps 5 cents worth of ingredients. There is no Chinese brand that even comes close to building this kind of value. Instead, Chinese companies blatantly steal existing brands: Pizza Hut becomes *Pizza Huh*, Starbucks becomes *Buckstarr*, and Nike becomes *Nire*, with nearly identical logos as well. But this unimaginative shortcut creates a fraction of the value of the true brand.

Apple, in contrast, delivers huge value by its brand's cachet. The new iPhone4 retails for \$600. China's sole contribution is the assembly of the individual components, which ties up only 7 percent of the phone's cost. Apple makes a 60 percent profit margin, which it partially reinvests by creating memorable ads, new software applications, and eye-catching store spaces.

China's lack of branding also means companies hide behind their country's skirts when safety issues arise. In recent years, a number of unsettling incidents have damaged the perception of China's quality control. In the case of Chinese gypsum wallboard, which was installed in thousands of American homes primarily in the Florida, residents began noticing sulfuric gasses were emanating from their walls. This caused headaches, nosebleeds, and premature corrosion of electrical products. Homes became unsalable,

and many homeowners became involved in costly litigation with contractors. Yet no Chinese manufacturer admitted wrongdoing.

These types of events lower the value of Chinese goods in general. "No-name Made in China" products with unknown manufacturing origins (and no 1-800 number for consumer complaints) are worth less to consumers. But the impact can be greater than that. Since 2009, Lowe's and Home Depot ended their relationship with Chinese drywall suppliers, and Lowe's, standing behind its brand, has offered up to \$100,000 in reimbursements to affected customers.

China's business approach is reminiscent of a student who copies his classmates' work to get easy A's and then sells the work to others. He is more efficient since he has the highest grades per hours worked. But at some point this may backfire as he never learns to develop ideas on his own. The big unknown question is if China's modus operandi of poaching and outsourcing ideas will work in the long run. Trust is essential in business relationships, and these relationships can quickly sour when knowledge is taken without adequate compensation. Indeed, various economic studies have shown that a country's GDP growth is positively influenced by the degree to which its citizens can be trusted.

If China's focus on increasing profits comes at the cost of losing trust with its foreign partners, then future cooperative arrangements seem less likely, and China's options for outsourcing innovation will diminish.

In any case, China's prospects for high future growth are questionable. Its enormous and unmet need for future energy, its lack of innovation and impending market saturation, as well as its lack of branding spell an inevitable slowdown, unless its business strategies markedly change.