FOREIGN AFFAIRS

March / April 2016
Volume 95 • Number 2

Can China's Companies Conquer the World?

The Overlooked Importance of Corporate Power

Pankaj Ghemawat and Thomas Hout

Can China's Companies Conquer the World?

The Overlooked Importance of Corporate Power

Pankaj Ghemawat and Thomas Hout

Despite China's recent economic struggles, many economists and analysts argue that the country remains on course to overtake the United States and become the world's leading economic power someday soon. Indeed, this has become a mainstream view—if not quite a consensus belief—on both sides of the Pacific. But proponents of this position often neglect to take into account an important truth: economic power is closely related to business power, an area in which China still lags far behind the United States.

To understand how that might affect China's future prospects, it's important to first grasp the reasons why many remain bullish on China—to review the evidence that supports the case for future Chinese dominance. At first glance, the numbers are impressive. China's GDP is likely to surpass that of the United States—although probably not until at least 2028, which is five to ten years later than most analysts were predicting before China's current slowdown began in 2014. After all, China is already the world's largest market for hundreds of products, from cars to power stations to diapers. The Chinese government has over $3 trillion in foreign exchange reserves, which is easily the world's largest such holding. And China overshadows the

PANKAJ GHEMAWAT is Global Professor of Management and Strategy at New York University's Stern School of Business and Anselmo Rubiralta Chair of Strategy and Globalization at the University of Navarra's IESE Business School. Follow him on Twitter @PankajGhemawat.

THOMAS HOUT teaches strategy at the Middlebury Institute of International Studies at Monterey, the Fletcher School of Law and Diplomacy at Tufts University, and the University of Hong Kong's School of Business.

United States in trade volume: of the 180 nations with which the two countries both trade, China is the larger trading partner with 124, including some important U.S. political and military allies. Finally, China has made steady progress toward its goal of becoming the investor, infrastructure builder, equipment supplier, and banker of choice in the developing world. Much of Asia, Africa, and Latin America now depends on China economically and politically.

Since Chinese share prices tumbled last summer and then again earlier this year, investors have grown wary of the country's stock market. But that market has been largely irrelevant to China's economic growth: from 1990 to 2013, as Chinese GDP grew at roughly ten percent annually, the stock market barely moved. Its recent gyrations are no more indicative of China's overall economic well-being than was its long stagnation. China will likely recover from its current economic setbacks just as the United States recuperated after wild stock market swings and a major depression in the first half of the twentieth century.

But strong macroeconomic data don't tell the whole story, and China's likely short-term recovery will mean little in the longer run. The fact is that China's success to date doesn't necessarily mean that it will surpass the United States as the world's leading economic power. Metrics such as GDP, trade volume, and financial reserves all reflect economic power. But they don't entirely encompass it, for underneath those numbers lies the real world of corporations and industries that actually create growth and wealth. And a close look at the performance and prospects of Chinese firms reveals the obstacles the country still faces.

In both China and the United States, corporations account for roughly three-quarters of GDP. More generally, multinational corporations and their supply chains control 80 percent of global exports and foreign direct investment. In other words, economic power rests heavily on business power.

China's economy exploded during the last three decades thanks to the extraordinary performance of its low-cost manufacturers—reliable, responsive companies that make the apparel and household items that fill Walmart's shelves. The Chinese state created the conditions for such firms to thrive by upgrading China's infrastructure, attracting foreign investment, and keeping the value of China's currency relatively low. But to succeed, Chinese manufacturers still had to outperform

competitors elsewhere—which they did, turning China into a crucial player on the global economic stage.

If China is ever going to become the world's most powerful economy, however, its businesses will have to learn to excel in the much more competitive capital-goods and high-tech sectors, creating and marketing sophisticated products such as semiconductors, medical imaging equipment, and jet aircraft. Those who believe that China will become dominant often assume that Chinese firms will perform as well in those second-generation sectors as they have in far less complex first-generation ones, such as textiles and consumer electronics. But there are many reasons to question that assumption.

China's initial economic boom relied on labor outsourcing by U.S. and European firms and revolved around hundreds of similar companies, many of them foreign-owned, that exported low-tech products. In contrast, to succeed in capital goods (goods that are used to produce other goods) and high technology, companies must develop unique capabilities suited to a small number of clients, master a broad range of technologies, acquire deep customer knowledge, and manage a global supply chain. And unlike in the low-cost manufacturing sector, where Chinese firms have competed primarily with companies in developing countries, the capital-goods and high-tech industries are dominated by large, deep-pocketed multinational corporations based in Japan, South Korea, the United States, and Europe.

Moreover, some of the advantages that China enjoyed during the past three decades, such as a large labor force, matter less in determining whether a country succeeds in capital goods and high technology. For example, jet aircraft production and Internet search are led by two companies—Boeing and Google, respectively—that are based in a large country, the United States. But the leading companies in high-precision bearings (SKF) and semiconductor memory chips (Samsung) are based in much smaller countries: Sweden and South Korea, respectively. The roots of those companies' success lie mostly inside the firms themselves rather than in advantages conferred by their host countries.

The future of China's economic power will depend less on when the country's GDP passes that of the United States and more on the progress that Chinese corporations make in manufacturing and selling capital goods and high technology. Foreign multinationals still dominate China's home market in advanced capital goods, and China

But can you make a semiconductor? A factory in Anhui Province, China, May 2015

STR / AFP / GETTY IMAGES

remains broadly dependent on Western technology. In the areas that will matter most in the twenty-first century, Chinese companies have a long way to go, which should give pause to anyone confidently predicting a not-too-distant era of Chinese economic dominance.

DOWNSTREAM VS. UPSTREAM

Although it is still playing catch-up, China has made some significant progress in its quest to move into capital goods and high-tech products, which now account for 25 percent of its exports. Chinese producers currently control between 50 and 75 percent of the global markets (including China) for shipping containers, port cranes, and coal power generation equipment and between 15 and 30 percent of the global markets for telecommunications equipment, onshore wind turbines, and high-speed rail systems. Despite rising wages and energy costs, Chinese firms have used their ability to simplify manufacturing processes to maintain a ten to 30 percent cost advantage over Western competitors in capital goods—even before the recent devaluation of the yuan.

The Chinese government's trillion-dollar "One Belt, One Road" strategy, which aims to cover the Eurasia with Chinese-built roads, rail, and port facilities, gives Chinese producers additional advantages far from home. The government has also aided local firms by limiting the amounts of capital goods and services that major Western compa-

nies can sell in China and by requiring them to transfer technologies to Chinese companies. Still, China has yet to become a real player in the markets for more expensive and complex products, such as offshore wind turbines, nuclear reactor cores, and large jet aircraft. As the head of a large Western aviation manufacturer remarked to us recently, it is one thing to reverse engineer the components of a jet engine and figure out how to make and sell them, but quite another to develop the knowledge and skills to make sure those components actually work together.

Chinese capabilities tend to be oriented "downstream": absorbing imported technologies, simplifying manufacturing, and adapting advanced designs to more basic products at a lower cost. Such tinkering and innovation at the margins has proved hugely beneficial for businesses that rely on mature technologies, such as shipping containers and port equipment. But Western multinationals tend to focus their energies "upstream": on developing deep knowledge of customers' technical needs, designing high-performing products that incorporate new technologies, and mastering software development and the efficient management of global supply chains. Those qualities have allowed Western companies to dominate the markets for nuclear power reactors, industrial automation systems, and jet aircraft. Chinese companies have been slow to develop upstream skills, which partly explains why their success in capital-goods and high-tech markets has been uneven and why it's unclear how soon they will be able to move from the lower end to the higher end of those sectors.

Competition from Western firms has slowed the growth in exports of Chinese-made telecommunications equipment from 25 percent in 2010 to ten percent in 2014. Meanwhile, China accounts for only around 15 percent of global exports in infrastructure contractor services—a number that hasn't grown in five years. Its overall export growth slowed from an average annual increase of 17 percent between 2004 and 2011 to an average annual increase of five percent between 2011 and 2015, and the share of exports accounted for by capital goods has leveled off at 25 percent. China is not transitioning from low-end, first-generation exports to high-end, second-generation exports as quickly as Japan or South Korea did. When those countries' GDPs per capita were at China's current level, capital goods made up more than 25 percent of their exports, and their performance on capital-goods exports continued to improve, rather than leveling off as China's has.

In addition to their relative lack of upstream skills, Chinese firms also face challenges when it comes to managing global supply chains. Chinese companies have typically tried to reduce costs by learning to manufacture critical components, such as hydraulics for construction equipment or avionics for jet aircraft, so that they can avoid importing them. Most Western companies take a different approach, turning to multiple sources for such parts: suppliers from all over Asia and Europe provide components for Apple iPhones and Boeing 787s, for example. These contrasting sourcing patterns reflect different views of how to create business power and also demonstrate China's historical preoccupation with self-sufficiency. Chinese authorities invite more advanced foreign companies into China, learn from them, and try to replace them, whereas Western multinationals prefer to find the best available components no matter where they originate. The difference will allow China to develop a larger production scale, but its foreign competitors will be able to draw from a bigger, more competitive pool of partners.

INSPECT THEIR GADGETS

China is a particularly interesting place to look at the head-to-head competition between Chinese companies and foreign multinationals, both because it's the world's largest market for most products and because nearly every major company in the world operates there. Unsurprisingly, out of a representative sample of 44 industries among those that are open to foreign corporations in China, Chinese companies dominate 25, including solar panels, construction equipment, and mobile port cranes. But in all of the 19 sectors led by foreign multinationals, technology or marketing is disproportionately critical to success. Foreign multinationals operating in China lead in ten of the 13 industries in which R & D costs are greater than six percent of revenue, including jet aircraft, packaged software, and semiconductors. And foreign firms lead in four of the six industries in which advertising costs exceed six percent of revenue, including carbonated beverages, patented pharmaceuticals, and personal-care and beauty products.

Another striking thing about the Chinese market is how little the industry leaders have changed over the last decade. During this period, Chinese companies displaced foreign firms as leaders in only two of the 44 industries in question: Internet hardware (including a portion of the wireless telecommunications sector) and wind turbines.

And in the latter case, China's industrial policy tilted the playing field by limiting foreign producers' access to the market and by requiring them to use many Chinese-manufactured parts.

Meanwhile, little evidence supports the widespread notion that China is the world's leading exporter of high-tech gadgets. Although China does lead the world in the export of smartphones and personal computers, it accounts for only 15 percent of those products' value at most. That's because Chinese companies typically just assemble and package semiconductors, software, cameras, and other advanced high-tech components fabricated abroad. Consider the Tianhe-2, for example. This supercomputer, built by the Chinese firm Inspur in collaboration with the National University of Defense Technology, is the fastest in the world. But it is only Chinese in a very limited sense, since it is actually composed of thousands of U.S.-made microprocessors.

PLAYING CATCH-UP

The dominance of Western multinationals in capital goods and high technology rests on two pillars: open systems of innovation that result in superior high-performance products and direct foreign investment in operations that are global in scale but responsive to local conditions and needs. If they ever hope to challenge the industry leaders, Chinese firms will have to develop their own versions of those qualities. Some have taken steps in that direction, but their lack of experience in designing advanced systems and managing international supply chains will likely limit what they can do for many years.

The superior commercial technology currently enjoyed by foreign incumbents will be one of the major obstacles China faces. In 2014, China spent $218 billion to import semiconductors, far more than it spent on crude oil. It also paid $21 billion in royalties for the use of foreign-owned technologies, a number that has doubled since 2008 and that rankles Beijing. (It hardly helps that the government's own information systems are dependent on technology made by IBM, Oracle, EMC, Qualcomm, and other non-Chinese firms, which many Chinese officials see as a security problem.)

Last year, Beijing launched a serious drive, called "Made in China 2025," to transform the country into an innovative and environmentally responsible "world manufacturing power" within ten years. The

program aims to create 40 innovation centers in ten sectors, including smart transportation, information technology, and aerospace. If the government follows through, China's total public and private spending on R & D may well surpass that of the United States sometime in the next ten years—a significant milestone even if one takes into account the high levels of fraud in Chinese research and the fact that Chinese government research funds are frequently misallocated to serve political agendas. The increase in funding has already had one easily observable effect: papers published by Chinese researchers are gaining more international respect. China's share of the papers recognized in Thomson Reuters' authoritative Science Citation Index rose from near zero in 2001 to 9.5 percent in 2011, putting the country second only to the United States.

Barring major errors by Washington, there is no reason to think the United States will lose its edge in technology.

But R & D spending is far from the only factor that matters. Succeeding in capital goods and high-tech equipment results from a long chain of institutional, social, and legal supports. At the front end of the chain lie high-quality graduate-degree programs, an open flow of information through peer-reviewed journals, and reliable protections for intellectual property; at the back end are advanced product design, innovative engineering, and frequent collaboration with important customers. The United States excels at each part of that chain. It boasts superior graduate programs in STEM subjects (science, technology, engineering, and math) that attract the best students from all over the world, with China and India by far the largest sources. (Despite all the attention paid to the fact that many Chinese students return home after getting their U.S. degrees, STEM students from China are actually more likely to stay in the United States than STEM grads from anywhere else.) U.S. federal nondefense spending on research has been flat for the last ten years, but American corporations—which fund nearly three-quarters of total U.S. R & D—increased their research spending by an average of 3.5 percent annually during the same period. U.S. science journals produce a steady flow of peer-reviewed findings, and American scientists—unlike their Chinese counterparts—can profit from the intellectual property they produce during state-funded research. Many

European and Japanese multinationals invest in research facilities in China, but the high degree of intellectual property protections in the United States lead them to base their most promising projects there.

To catch up, China is developing innovation and entrepreneurial hubs in Shenzhen and in Beijing's Zhongguancun Science Park. Shenzhen is home to a number of inventive companies, such as Huawei, Xiaomi, and DJI (China's leading drone manufacturer). But most of the firms clustered there focus on fast-turnaround, incremental innovations, not on big-ticket capital goods or high-tech products.

Barring major errors by Washington—for example, a failure to increase U.S. federal research funding—there is no reason to think the United States will lose its edge in technology. But if U.S. technology does stop advancing and Chinese competitors catch up, China's lower costs could allow it to gain market share. That's what happened in the case of equipment used in coal power generation: Chinese firms began to match their Western competitors in terms of quality and exploited their lower costs to become leaders in the global market. And even if Chinese wages continue to rise and the yuan begins to appreciate at some point, it's not likely that China will lose its cost advantage anytime soon. So if the United States wants to stay ahead, it has to keep winning in technology.

A LONELY POWER

One of the keys to the United States' economic dominance is its huge investment in foreign markets. American corporations put $337 billion into overseas markets in 2014, a full ten percent of what they committed at home. All told, U.S. firms have directly invested $6.3 trillion overseas, which helps explain why the companies listed on the S&P 500 earn roughly 40 percent of their profits outside the United States. Despite slow growth at home, companies based in the United States and the EU have increased their foreign direct investment at an average annual rate of seven percent over the last ten years, and Japanese firms have increased theirs at an even faster rate.

After a late start, Chinese multinationals are now following this model. By the end of 2014, they had cumulatively invested $730 billion, and that number is projected to nearly triple, to $2 trillion, in the next five years—an impressive gain, although a figure that would still equal less than one-third of current U.S. foreign direct investment. Nearly all of China's early overseas investments were in oil fields and mines,

but recently, Chinese corporations have begun moving up the value ladder by acquiring established Western companies or by purchasing and turning around struggling factories, some of them in the U.S. rust belt. China has made 141 overseas deals worth over $1 billion and is now home to more multinational enterprises than any country other than the United States.

But as a late globalizer, China has pursued a riskier foreign investment strategy than Western countries. Although Australia and the United States are the top two recipients of Chinese investment, over half of all Chinese foreign direct investment goes to developing countries in Asia, Africa, Latin America, and the Middle East. The riskier the country, the more willing the Chinese seem to be to put their money there. China is easily the largest foreign investor in Afghanistan, Angola, and Ecuador, for example—all places where wars or debt defaults have scared off most Westerners. The political scientist David Shambaugh has dubbed China "a lonely power," without close allies, and these investments, along with aid-financed public works projects and the much-touted Asian Infrastructure Investment Bank, are part of Beijing's strategy for changing that picture.

This approach might work. But in the meantime, Western multinationals are the primary investors in stable developing economies with stronger credit ratings and more democratic regimes, and they are profiting as a consequence. In 2014, the EU and Japan both invested more than China in Southeast Asia, and U.S. corporations alone invested $114 billion just in Asia (excluding Japan) and Latin America. The result of this strategy is that although China's bold investments attract considerable attention, Western and Japanese capital-goods and high-tech multinationals continue, with less fanfare, to expand their larger and more powerful global positions. China is a classic "late follower," investing in riskier assets and buying up second-tier Western technology companies. That might be a good way to play catch-up, but it is not a path to dominance.

A CHINA MODEL?

Those who predict that China will dominate the future often point to two economic concepts to bolster their case: the product life cycle, which posits that a product originates in advanced economies but ends up being made in lower-cost developing economies, and disruptive innovation, the process by which leading products lose their

position to initially inferior, lower-priced products that get better over time. But emphasizing these two trends overlooks the fact that incumbent multinationals can prevent those outcomes in capital goods and high technology by developing a range of products and supply chains in different regions and then mixing and matching them to serve different sets of customers around the globe.

Take, for example, Cummins, an Indiana-based U.S. diesel engine manufacturer that develops and manufactures product families with varying prices and different features in China, India, Europe, and North America. Cummins shares the lead in China's high-performance diesel engine sector, but its globally distributed production and R & D networks allow it to ship more engines into China than it ships out. Such global operations require cross-border coordination, technical depth in many locations, and middle managers with international experience.

Few Chinese firms enjoy those advantages. Most Chinese companies prefer to keep their production at home, use simple lines of organization, and maintain autonomy for the heads of individual businesses. That more stripped-down multinational model worked extremely well during China's first-generation boom. But in more recent years, many Chinese firms have struggled to adapt to globalization. There are exceptions, however: Lenovo, for example, passed Hewlett-Packard and Dell to become the world's largest personal computer manufacturer in 2013 by relying on an unusual international distribution of responsibilities, which involves forgoing a traditional global headquarters while centralizing the company's marketing operations in Bangalore, India.

Corporate China's uneven efforts to adapt to the global market will probably continue into the foreseeable future. In time, China will produce its share of great companies, just as other major economies have, but a unique "China model" seems unlikely to emerge, and it does not appear that the country's success rate will improve dramatically anytime soon.

A LONG CLIMB FOR CHINA

Advocates of the view that China will inevitably dominate the global economy tend to see the United States as strong but slow moving, owing to its messy free markets and political gridlock, and tend to see China as a rising power on the march, thanks to its clear planning and clever strategy. But this simplistic view fails to account for how corporations and markets change in response to external factors.

U.S. business power flows from the restless competitiveness of American culture, the political influence of U.S. corporations, the research productivity of U.S. universities and government laboratories, a U.S. financial system that directs investment to new technologies and ventures, immigration that brings in talent, laws and tax codes that reward entrepreneurial activity, the United States' status as the sole superpower, and the dollar's role as the world's reserve currency.

There are internal factors that can threaten U.S. business power, of course—for example, right-wing opposition to federal science spending and activist shareholders' focus on the short-term profits of blue-chip firms instead of long-term investment in innovation. But 30 years ago, when some observers believed that Japan was poised to overtake the United States in terms of economic power, few predicted the role that tech entrepreneurs and innovative state and municipal governments would play in creating an era of unrivaled American dominance.

Chinese business power has different but also strong foundations, such as farsighted policies favoring investment over consumption, government encouragement of foreign investment to jump-start local industries, intrepid entrepreneurs who succeed despite a state-enterprise system designed to thwart them, a shift in the world's center of economic gravity toward Asia, and a massive domestic market. Many factors hold China back, too, including a low-performing state-owned sector that stifles market forces, mounting internal debt burdens, and a crackdown on the free flow of information.

It's difficult to predict how external factors might influence the growth of Chinese economic power. Not many inside or outside China foresaw the limitations of state-owned enterprises or the rise of impressive independent firms such as Huawei, Lenovo, and Alibaba. Looking ahead, it's hard to know what effect China's slowing growth will have on the global competitiveness of its companies: it could prove deeply damaging, but it could also precipitate bankruptcies and industry shakeouts that would concentrate power in the hands of fewer, more capable companies, which could make them a stronger force in world markets.

More broadly, it's difficult to know how the rest of the world will respond to China as it grows. When China became a huge buyer of natural resources, many analysts fearfully predicted permanent

increases in commodity prices. What happened instead was that prospectors found new ways to increase supply and governments and companies found new ways to conserve and improve efficiency. The global system adapted, and commodity prices overall are lower today in real terms than they were 20 years ago. In a similar vein, as Chinese multinationals fight their way into global markets, Western incumbents will innovate, consolidate, and develop new sources of demand.

Moreover, the futures of the U.S. and Chinese political systems are not fixed. Both have experienced remarkable adaptability as well as self-inflicted wounds, and there is no reason to think that will change.

Confidence in the inevitability of Chinese economic dominance is unfounded. China is gaining strength but faces a long climb. The outcome of the U.S.-Chinese contest is far from clear and depends at least as much on how well Western multinationals and governments exploit their existing advantages as on China's ability to up its game when it comes to the kinds of products and services that will define the twenty-first-century economy.