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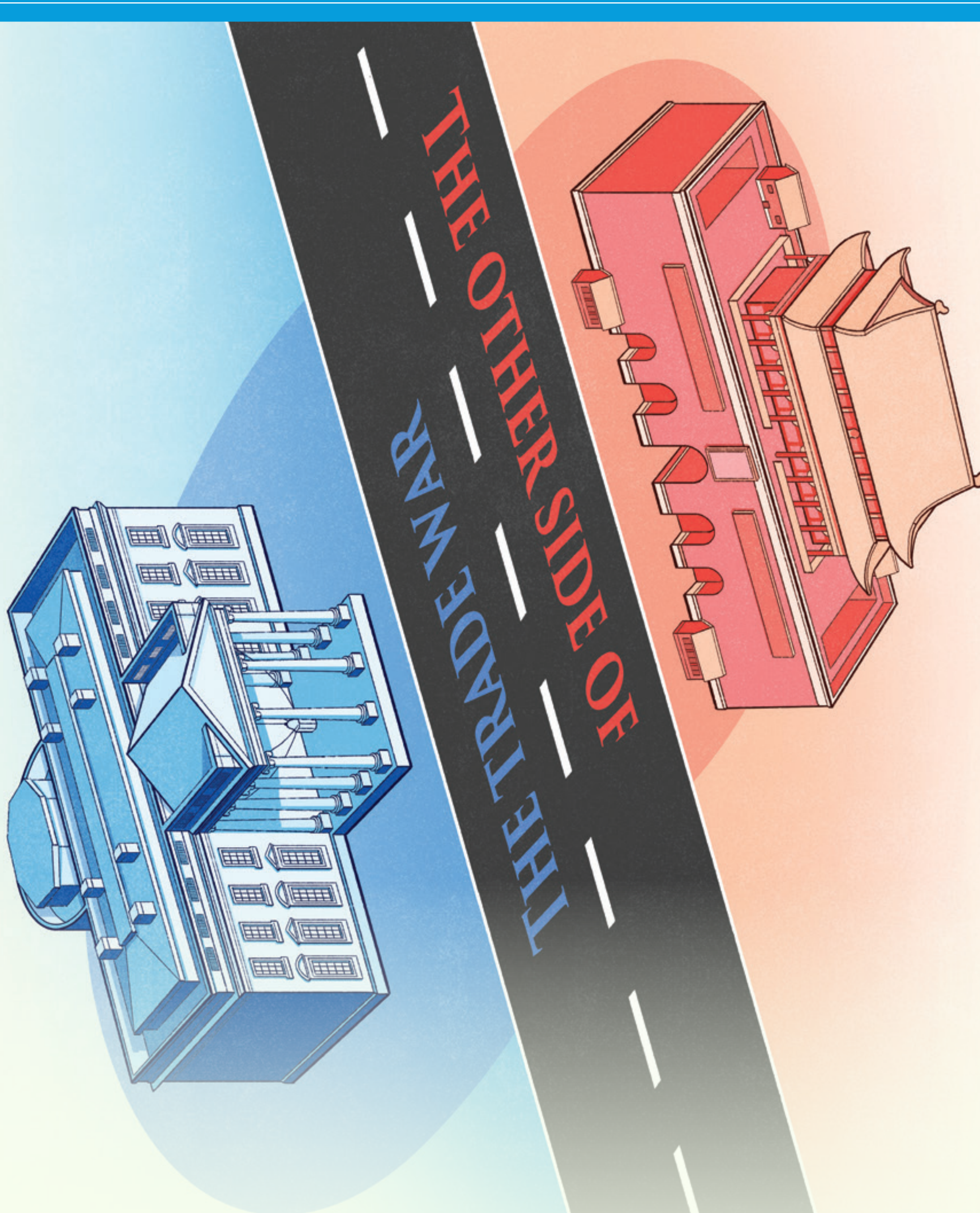

What growing tensions with the US mean for China's future

- Stephen S. Roach on the codependency of the US and China
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Editor-in-Chief
Zhou Li

Senior Editor
Greg Langley

Managing Editor
Dominic Morgan

Coordination
Liu Sha

Design
Jason Wong

Cover
Wei Bingnan

Produced By
SinoMedia

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Publisher
CKGSB GLOBAL LIMITED
Suite 3203, 32/F, Champion Tower,
3 Garden Road,
Central, Hong Kong

For Letters to the Editor or reprint requests, please contact:
ckgsb.knowledge@ckgsb.edu.cn

Stephen S. Roach

Business Trends

Dame Barbara Woodward

Company

Business Barometer

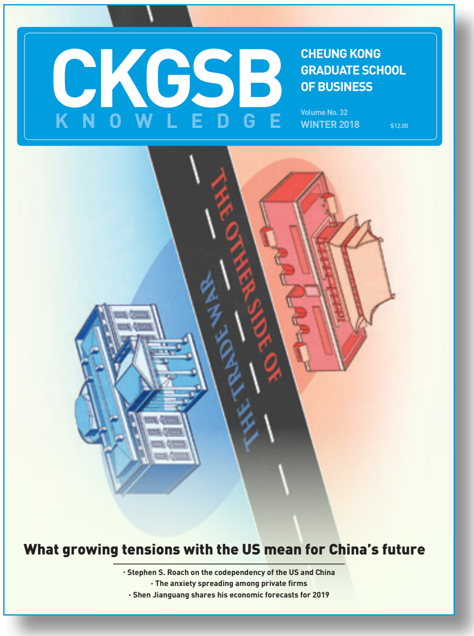
Downtime

Decision Time

Over the past few months, a catchphrase from the hit HBO drama Game of Thrones seems to have been on everyone's lips in China. Investors, analysts and reporters have been lining up to tell the world that "winter is coming" to the Chinese market.

Several factors have contributed to this gloomy sentiment. More businesses are struggling to access credit following a deleveraging drive in the financial sector. A sell-off in the stock markets has exacerbated many firms' difficulties. Meanwhile, the trade war with the United States is making life tough for exporters.

All of this means that Beijing faces some big challenges in 2019. But how worried should we really be about the health of the economy? In this issue, we dig deeper into the issues driving recent headlines, and in many cases arrive at some unexpected conclusions.



We begin with the light flashing brightest on Beijing's dashboard: the growing tensions with Washington. At stake in the trade war is the fate of several core economic policies. What impact would nixing these initiatives have on China's future? Find out in "**The View from Beijing**" (page **17**).

The tariff war has mainly been viewed as a chess game between Beijing and Washington, but the pawns in this battle include the many multinational companies operating in China. In "**Stuck in the Middle**" (page **13**), we consider how they are being affected.

Completing our trade war trilogy is "**Unplugging America**" (page **35**), which dives into the issue that many consider to be the greatest source of tension between the two sides: China's ambition to rival US dominance in a number of high-tech industries.

Next, we look at the state of China's private sector. There has been a growing view that Beijing is promoting state-owned enterprises at the expense of private firms. In "**State Advances, Private Retreats**" (page **25**), we ask how worried entrepreneurs should be.

"**Saving Is the New Spending**" (page **6**) analyzes another recent media obsession in China. For months, netizens have been complaining of a "consumption downgrade" due to the rising cost of living. But as we discover, there is more to this than meets the eye.

We also have a pair of stories that zoom in on industries being transformed by new technologies. "**Blockchain Chicken**" (page **43**) looks at how startups are using blockchain to improve food safety, while "**Retail Revolution**" (page **54**) explores how facial recognition companies like SenseTime are bridging the gap between online and offline retail.

China's technology sector is also driving social change, and in "**Rising to the Top**" (page **47**) we shine a light on how more women are obtaining top jobs in the country's largest companies, though there is still a long way to go. And "**Beijing Cool**" (page **62**) focuses on the world of fashion and asks whether we may soon see a Chinese superbrand emerge to rival the likes of Chanel and Prada.

We also feature five fascinating Q&As in this issue. Dame Barbara Woodward, British Ambassador to China, explains how the UK and Chinese governments are working together to promote gender equality (page **51**). Dr. Eugene Qian, President of UBS Securities, highlights how foreign financial firms are finding new opportunities in China (page **22**).

Stephen S. Roach, Senior Lecturer at the Yale School of Management, explores the US and China's "codependent" relationship (page **10**). Elena Botelho, best-selling author of *The CEO Next Door*, tells us what it really takes to get the top job (page **40**). And Dr. Shen Jianguang, Chief Economist at JD Digits, shares his predictions for the economy in 2019 (page **32**).

All in all, there is plenty to think about and discuss. If you have any comments or opinions to contribute, we would love to hear from you (lzhou@ckgsb.edu.cn or ckgsb.knowledge@ckgsb.edu.cn).

Yours Sincerely,

Zhou Li
Assistant Dean, CKGSB
Editor-in-Chief, *CKGSB Knowledge*

For more insights on the Chinese economy and business, please visit the CKGSB Knowledge *site: http://knowledge.ckgsb.edu.cn/*

SAVING IS THE NEW SPENDING

As China's economy slows, there are signs that consumers are tightening their purse strings

By Colin Shek

Gu Anzhong looks wistful as he stares at a sleek BMW sedan at China's first-ever import expo in Shanghai. The 52-year old management consultant had pined for the same model—with a price approaching RMB 1 million ($144,000)—as a second car to go with the purchase of a new villa on the outskirts of Shanghai, but rising bills scotched the plan.

"Cash flow is tighter since my family bought our second home. Two mortgages mean we have to be more careful," says Gu. "It's fine. Frugality never hurt anybody."

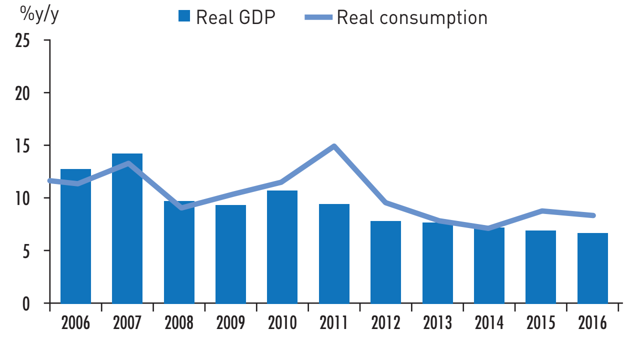
Gu is hardly alone when it comes to watching his spending. Across the country, the talk is about cutting back in big ways and small—from cooking at home instead of eating out, to getting around by bicycle rather than taxis.

At a busy KFC restaurant near the expo, for instance, Yang Jianhong says he used to eat fast food several times a week, but this year has cut down to once or twice per month. "I pack my own lunch now to save money, like many of my colleagues," says the 28-year old graphics designer.

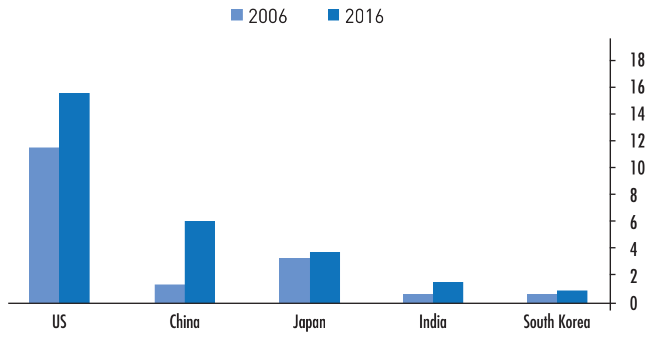
After years of enjoying the fruits of a booming economy and sharply rising disposable income, life for many of China's

KEEPING IT IN CONTEXT | Consumption has risen faster than GDP for most of the past decade

China GDP and consumption growth rate



Total consumption by country ($ trillion)



Source: CEIC, Haver, UBS

higher earners is getting harder. Amid mounting debt levels and economic headwinds, urban middle-class consumers like Gu and Yang have responded by scaling back their discretionary spending and reducing luxury purchases—an emerging phenomenon known as the "consumption downgrade."

Social media chatter over this pullback began in the summer. "This generation of young Chinese, brace for the bitter days ahead," Beijing-based blogger Ma Ning wrote in a widely read social media post in August. Ma told her followers that "things have changed" since the boom times and warned them to brace for a diet of pickled vegetables and cheap erguotou liquor, a white liquor made from sorghum.

Recent strong performances by budget food companies appeared to support Ma's theory. Instant noodle maker Tingyi Holding reported an 8.5% annual increase in revenues for the first half of 2018, following years of stagnation. Tingyi's stock price in Hong Kong doubled from a year ago to nearly $48 per share in July, before falling back to $28 in December. Shares in Beijing Shunxin Agriculture, an erguotou distiller, have soared by 82%.

Others have pointed to the phenomenal success of Pinduoduo, a social e-commerce app that offers group discounts on cheap, sometimes low-quality goods and groceries. The 3-year-old company, which raised $1.6 billion in a New York listing over the summer, reported merchandise sales of RMB 344.8 billion ($50.4 billion) in Q3 2018, not far from the RMB 394.8 billion of e-commerce giant JD.com.

The newfound frugality of middle-class spenders like Gu and Yang may be good for their wallets, but it is an unwelcome development for Beijing. Talk of a consumption downgrade has touched a nerve with authorities, who have long touted consumer demand for higher-quality, higher-priced goods as a key growth driver for the world's second biggest economy.

With consumption now contributing more than two-thirds of annual output growth, the worry is that reduced consumer spending could thwart Beijing's ability to shield the economy from the US trade war and prop up a battered stock market.

The Squeezed Middle

Recent economic data suggests that consumer spending is indeed slowing. Retail sales growth unexpectedly dipped from September to 8.6% year-on-year in October, the slowest pace since May and well behind last year's full-year growth of 10.4%. Total vehicle sales—a pillar of consumerism in China—dropped 11.7% year-on-year in October to 2.38 million units, according to the China Association of Automobile Manufacturers. This is a dramatic reversal for a sector accustomed to double-digit growth.

Consumers are tightening purse strings for a number of reasons, according to Wang Dan, a consumer analyst at the Economist Intelligence Unit (EIU) in Beijing. She attributes the primary cause to rising property prices, which have pinched disposable incomes for those living in first- and second-tier cities. "Because mortgages are picking up so much, household savings and consumption have been squeezed for other durable goods, like high-end cars," says Wang.

Gu, the management consultant, concurs. Mortgage payments for his two homes have now topped RMB 80,000 ($11,600) per month. This enormous sum has not only forced him to park the purchase of the BMW, but also led to the cancellation of a planned summer vacation to the United States.

Prohibitively expensive property prices mean many people rent, but they have also been buffeted by a dramatic rise in rates since the start of the summer. Rents in China's major cities have soared, with prices in Beijing up by as much as 22% year-on-year in July.

A downturn in China's financial markets has also hit the pockets of consumers. Chinese stocks have been among the world's worst performers this year, with the benchmark CSI 300 Index tumbling more than 20% between January and late November. Financial pain from the equities slump has been compounded by a collapse in peer-to-peer lending platforms and falling returns on wealth management products, which were favored by many white-collar workers as places to park their savings.

Yan Danmai, a 36-year old insurance broker in Shanghai's commercial district of Xujiahui, says her finances took a blow

Staff of delivery firm STO Express sort parcels after Singles' Day, an online shopping festival that takes place in November

when one defaulted peer-to-peer platform ran away with her six-figure RMB investment and another postponed its repayment. Without the help of high-yielding investments, Yan says she is now wholly dependent on her after-tax salary of RMB 22,000 for paying bills that include an expensive mortgage.

In other cases, people have cut back because of worries about the overall economic outlook and the potential implications for their jobs and income. Consumer confidence has been beset by slowing growth, a weaker currency, mounting trade tensions with the US and the withering stock market. And rising costs for food and energy have also prompted some consumers to seek to economize on their daily spending.

The Full Picture

But not all Chinese are scaling back. In smaller cities and the countryside, where cost-of-living pressures are lower, people are still upgrading lifestyles that are unrecognizable from a decade ago.

Lower-income groups, including rural residents and migrant workers, are prospering thanks to wages rising faster than those in the big cities. Real median disposable income for these groups grew by 8.4% year-on-year in the first half of 2018, accelerating from 7.0% in the same period of 2017, according to the EIU. Higher incomes, combined with property prices that remain relatively low, has strengthened the purchasing power of these residents.

Even among urban dwellers, the picture is nuanced. The wealthiest consumers are relatively insulated from any slowdown, while "for the younger generation—let's say anyone who's not married—their ability to consume is definitely much higher than any other generation," says Bo Zhuang, Chief China Economist at TS Lombard.

"In western countries, young people borrow from credit cards. In China, it's online financial platforms. They just borrow and spend as much as they can," adds Bo.

It is also important to keep things in context, points out Andy Rothman, an investment strategist at investment fund Matthews Asia. Consumption has been rising faster than gross domestic product (GDP) for years and is continuing to rise, just not as fast as before. Final consumption spending—which includes government expenditure—accounted for 78% of China's GDP growth in the first three quarters of 2018, up from less than 50% in 2013, according to official statistics.

Certain categories and sectors continue to grow healthily. Wang from the EIU singled out insurance along with other finance-related services—even maligned wealth management products are enjoying a rebound. Upmarket household appliances have shrugged off the malaise affecting the property market so far, with premium-priced vacuums, hair dryers and air conditioners still proving popular.

In other sectors, the slowdown in spending can partly be explained by changes in consumer tastes, as much as issues in the wider economy. Rothman argues that consumers in China are undergoing the same shift in spending patterns that their counterparts in South Korea and Japan did 20 years ago.

"You've seen shifts away from luxury brands that are ostentatious to more low-key brands," Rothman says. "And there's been a shift toward more experiential stuff, whether it's travel or services or education for the kids, as opposed to buying more stuff to put in the closet."

In the auto market, whose spluttering sales are held up as a sign of a wider economic cooling, there are also issues specific to take into account. Sales have been weak this year in part due to customers rushing to buy cars in 2017, before tax breaks for certain vehicles were rolled back. In recent months, would-be car buyers have held off purchases amid speculation the government will slash taxes again to revive growth.

And while new car sales have been weak, Bo from TS Lombard points out that the used car market is booming with growth of 13% year-on-year in the first half of 2018. This indicates fundamental

> **The consumption slowdown is most concentrated among middle-class consumers, and they're the noisiest**
>
> Wang Dan
> Consumer Analyst
> Economist Intelligence Unit

demand remains strong. "People still need cars. It's just that they don't want to buy firsthand cars because secondhand cars are cheaper," he says.

Some commentators wonder if the reason why the consumption downgrade narrative has drawn so much attention is because it mainly involves the urban middle class, which exerts an outsize media influence "The consumption slowdown is most concentrated among middle-class consumers, and they're the noisiest," agrees Wang.

Rothman believes the fuss is simply part of a long-running trend to play up China's weaknesses. "I think there is a tendency to look for the negative story in China by a lot of commentators," he says.

Media coverage of this year's Singles' Day, an e-commerce festival that takes place on November 11, serves as a good example of this trend, according to Rothman. Alibaba raked in 27% more revenue from the flagship sales extravaganza than in 2017, but some reports were quick to point out this represented a slowdown from 39% growth in 2017.

"Singles' Day for Alibaba is seven times larger in value than Amazon Prime Day, and so to expect the year-over-year growth rate to continue accelerating forever is totally unrealistic," says Rothman.

Shoring up Consumption

For now, China's economy continues to chug along at a reasonable pace. Driving consumption remains a top priority, as evidenced by Chinese President Xi Jinping's pledge at the recent import expo in Shanghai to promote imports and demand for pricier, better-quality premium products. The goal is to import $40 trillion in combined goods and services over the next 15 years, or an annual average of $2.67 trillion—up from last year's $2.3 trillion.

Beijing has also moved to ensure China remains the world's best consumer story. From the start of 2019, Chinese shoppers will be able to spend 30% more on tax-free online purchases from overseas every year. The higher quota follows the country's first income tax cuts in seven years, which hiked the salary threshold for paying income tax by more than 40%, to RMB 5,000 ($725) per month.

Consumers and analysts are divided on the tax cuts' effectiveness. Bo says the higher income tax threshold and associated deductions—which allow Chinese taxpayers to deduct expenses such as mortgage interest and children's education for the first time—will stabilize consumption and retail sales. "It's quite likely they will have a significant impact," he says.

But opinions on the ground are different. Yan, the insurance broker, claims the new tax code will only give her an extra RMB 600 per month. "It won't make a difference to my disposable income because I have to put it toward my rising mortgage," she says.

One option for the government that could provide a shot in the arm for consumption would be subsidizing purchases of certain goods. This happened in 2009-2012 with a massive subsidy program to boost rural sales of home appliances. But a new scheme could be fiscally unfeasible, as it would need to be targeted at urban dwellers and big-ticket items, such as cars.

Alternatively, the government could simply wait. While the consensus is that consumer sentiment will remain weak in 2019, Bo says that Chinese consumers have historically reined in their traditional spending patterns for 12-18 months at most before loosening the purse strings again.

"Once they have reduced their daily consumption, it doesn't last long," says Bo. "By the end of next year, they will start to forget about the higher housing prices, higher rental prices or whatever. They will get out and continue to spend."

The wider question is how sustainable this spending is. After decades of thrift and saving, Chinese households are now taking on debt at an alarming rate. The national household debt-to-GDP ratio reached a record high of 49% at the end of 2017, up from 40% two years earlier.

Although household debt levels remain lower than in developed countries, the rapid buildup has observers worried as the cost of servicing loans could drag on long-term consumer spending and growth. "The increasing leverage among Chinese households is definitely a warning sign," says Bo.

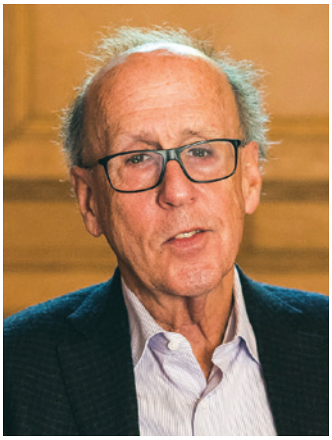
With Japan and South Korea, rising household debt stopped benefiting the economy when its ratio to GDP exceeded 60%, according to Bo. At the rate households are borrowing, China could hit this level as soon as mid-2020. When that moment arrives, it will take much deeper reforms than e-commerce tax cuts to get the economy back on track.

Codependent Partners

Stephen S. Roach, former Chairman of Morgan Stanley Asia, discusses the dysfunctions of the China-US relationship

The rapid deterioration in relations between China and the United States over the past 12 months has left many scratching their heads and wondering how we got here. Stephen S. Roach is not one of those people.

A former Chief Economist of Morgan Stanley, Chairman of Morgan Stanley Asia and currently Senior Fellow at Yale University's Jackson Institute for Global Affairs, Roach has been watching the development of Chinese-US relations closely for more than three decades. For him, a tariff war between the world's two largest economies was as predictable as it is harmful.



In his 2014 book, *Unbalanced: The Codependency of America and China*, Roach warned that growing bipartisan anger toward Beijing in Washington was making "the unthinkable Bad Dream" of a Sino-US trade war a real possibility. The reason did not lie with the policies of a particular leader, but the pathologies of the economic relationship itself. Like two needy partners, America and China had become trapped in an economic embrace that was unsustainable for both of them.

In this interview, Roach explains how this codependency developed, and what the two economies need to do to avoid a messy divorce.

Q. Why did you decide to use the concept of codependency to describe the US-China relationship?

A. After spending most of my career analyzing and writing about the United States, I went on to head up the global economics team at Morgan Stanley. When the Asian financial crisis came about in the 1990s, China was a country that I knew little about in-depth. But I had a gut feeling that China would hold the key to the end game of that crisis, so I started going there every other month. It quickly became clear to me that China was not Indonesia or Thailand but was handling and managing the crisis very differently. As time went on, I became fascinated by China.

During the 2000s, especially after the accession of China to the World Trade Organization, it struck me that the story was more about the two-way relationship [between the US and China] than about either economy. While export-led China had a strong reliance on the American consumer for its growth, the US consumer needed low-cost goods to make ends meet. The US did not save because of budget deficits and problems with household savings, so we needed surplus savings from abroad to grow. That gave rise to a balance-of-payments deficit, which, in turn, spawned a multilateral trade deficit with over a hundred countries in order to attract the foreign capital. China—largely because of its competitive cost structure—quickly became our most important foreign supplier.

Finally, it became clear in the wake of the 2008 financial crisis that while US domestic demand was struggling, we turned increasingly to external demand, exports in particular, to make up for this weakness. The NAFTA partners, Canada and Mexico, were obviously our two most important export markets, but China quickly emerged as our third-largest and fastest-growing export market. So, not only did China rely on the US as a major source of external demand, but the US developed an increasing reliance on Chinese saving and demand for American products. I dubbed this two-way dependency as codependency.

Q. Are there deeper historical roots to the codependent relationship between the US and China?

A. It was a natural process that started in the late 1970s, when both economies were struggling. China was struggling in the aftermath of two decades of instability, and the economy was in tatters. China was desperate for a new growth solution, and Deng

Xiaoping was able to appreciate the role that external demand could play in driving reform and opening-up the economy.

In the meantime, the US economy was struggling through a very tough period of stagflation—weak growth and rising inflation—and it needed new answers for a tired and disappointing growth model. So, America, the ultimate consumer, turned to China, the ultimate producer, at a time when both economies were in a state of need.

This is how I made the leap from the psychology of codependency to the economics of codependency. In the human context, it is usually two needy partners that rely on each other for external feedback to compensate for that loss of self at their core. Typically what happens in a psychological relationship is that one partner decides to break it off and start to grow on his or her terms, and the other partner, who is unwilling to change or is in denial over the loss of support from the first partner, feels scorned and lashes out in response. That is exactly what is going on right now: we're in what I would call the classic conflict phase of codependency.

Q. Many Western commentators discussing the state of China-US relations are asking the question "who needs whom more?" The logic of the codependency framework suggests that it is in fact the US that is the more dependent partner.

A. Yes, the US is insistent that it feels no pain from the frictions that have emerged because of the tariffs and other issues. And it points to some short-term developments like the decline in the Chinese stock market and the slowdown in the growth in gross domestic product (GDP) as an indication that China is hurting more than America. Under that presumption that America is so much stronger than China, then it is a great time, argues the Trump administration, to intensify pressure. Sadly, I think that is a very short-term assessment of the risks—a myopia that could come back to haunt the United States in the years ahead.

Q. You argue in the book that the US needs to go through a period of readjustment to move on from its codependent relationship with China. Why has the US, up to now, been so resistant to this idea?

A. I think the US is, unfortunately, stuck in a growth model that has relied excessively on the dollar's role as a reserve currency and the related ability of America to attract the surplus savings of countries like China, Germany and Japan. It has not really faced the consequences of its, ultimately quite destructive, erosion of longer-term saving. Even though the visible manifestations of our shortfall in saving is showing up in the form of pressures on our manufacturing sector, the problems we have in our educational system, and the crumbling infrastructure, we just don't feel compelled to address that.

In fact, Congress and the Trump administration a year ago enacted reckless outsize tax cuts at a time of improved economic activity, which will push our savings rate even lower. It is already as low as any leading country has ever had.

The US has not really faced the consequences of its, ultimately quite destructive, erosion of longer-term saving

Q. You point out in the book that the US will need to increase exports, especially of high-tech products, if it is to rebalance its economy in the long run. Some see China's industrial strategy Made in China 2025 as a threat to America's ability to do that. Do you agree with that view?

A. This bears directly on some of the more contentious issues of the current economic conflict between the United States and China: intellectual property rights, technology transfer, industrial polices like Made in China 2025, cyber hacking.

We have imposed tariffs to deal with these issues as well as with our outsize bilateral trade deficit. But there is a serious flaw in that logic. In 2017, for example, the US had merchandise trade deficits with 102 countries. This is a multilateral problem directly traceable to our saving issues. There can be no bilateral fix for a multilateral problem.

The trade war is more about the perceived threat that China poses to—in the words of one of the most absurd trade advisers we have ever had, Peter Navarro—the "crown jewels" of America's competitive prowess. This is the essence of the so-called Section 301 investigation conducted by US Trade Representative (USTR) Robert Lighthizer that was published in March 2018, and has provided the foundational "evidence" for the initiation of the tariffs.

Q. To what extent do you think the trade war is an effective tool to deal with those deeper issues?

A. Unfortunately, the Section 301 allegations are lacking some important, fundamental analytical and empirical verification. For example, the USTR accuses China of being unique in embracing industrial policies like Made in China 2025. However, it is important to understand that other countries, including Germany,

Stephen Roach addresses the World Economic Forum's CCTV Debate in 2008

Japan and even the US through its Pentagon-sponsored R&D efforts, have also practiced industrial policies in one way or another.

On other issues raised in the Section 301 report, such as allegations of forced technology transfers through joint ventures, we need to be scrupulous in examining the evidence behind these charges.

Related to that are all these numbers floating around about how much IP China has stolen from the US. Recently, I looked at the evidence offered in support of those allegations. Unfortunately, given the gravity of the purported transgressions, this is some of the weakest evidence I have ever seen. And yet, this is the evidence that is used in the court of public opinion to support the notions that China every year steals between $200 billion and $300 billion of our intellectual property rights. There is really nothing to support estimates of that magnitude.

I will just give you one snippet of my critical assessment of this so-called evidence. The only hard data point that the IP Commission has in terms of the magnitude of IP theft in the US is that the US Customs and Border Patrol confiscated $1.35 billion of counterfeited data crossing the border in 2014. Then, they use a bunch of ridiculous models put together by consultants and the OECD to blow up that $1.35 billion figure into $200 billion to $300 billion of alleged IP theft by China.

Q. Hank Paulsen recently warned of the risk of an "economic Iron Curtain" descending between China and the US if relations do not improve. To what extent do you think that is a possibility?

A. I agree with that concern. We're in for a fundamental, long-term conflict. These issues—technology, innovation and industrial policy—are core issues for both countries. They both feel strongly about the role that technology and innovation play in shaping and defining their goals.

But one thing is very different for China: China is right at the threshold where most economies fall into what's called the middle-income trap. They grow very quickly for a considerable period largely drawing on technologies imported from the more advanced economies. To move beyond the middle-income threshold, they need to shift from imported to indigenous innovation. And that is what all this is about for China: both the Made in China 2025 and the AI 2030 plans are focused on the need to go to indigenous innovation. Beijing can hardly be expected to back down from that core strategic objective.

Q. How do you see Europe fitting into this picture? The US-China relationship has its own unique characteristics, but many of the issues between the two countries affect Europe too.

A. Europe has its own agenda and value propositions. One thing that is clear in contrasting Europe with the United States is that European leaders are much more comfortable using state-directed industrial policies for competitive purposes. Germany is the powerhouse of Europe, and whether it is decades of support for SMEs or Industrie 4.0 that is driving its innovation-based breakthroughs in advanced manufacturing, Germany is just as wedded to this type of state intervention shaping competitiveness as China is.

If Europe has issues with Chinese trade practices or other types of violations of the rules-based norms that exist under the WTO framework, I think it will be more willing to use the dispute mechanism of the WTO to address these concerns than the US would be with its unilateral tariffs.

Q. As you pointed out in a recent Project Syndicate article, China has been a major buyer of US Treasurys for years, but it too could soon start running a deficit. How would that affect the US-China relationship?

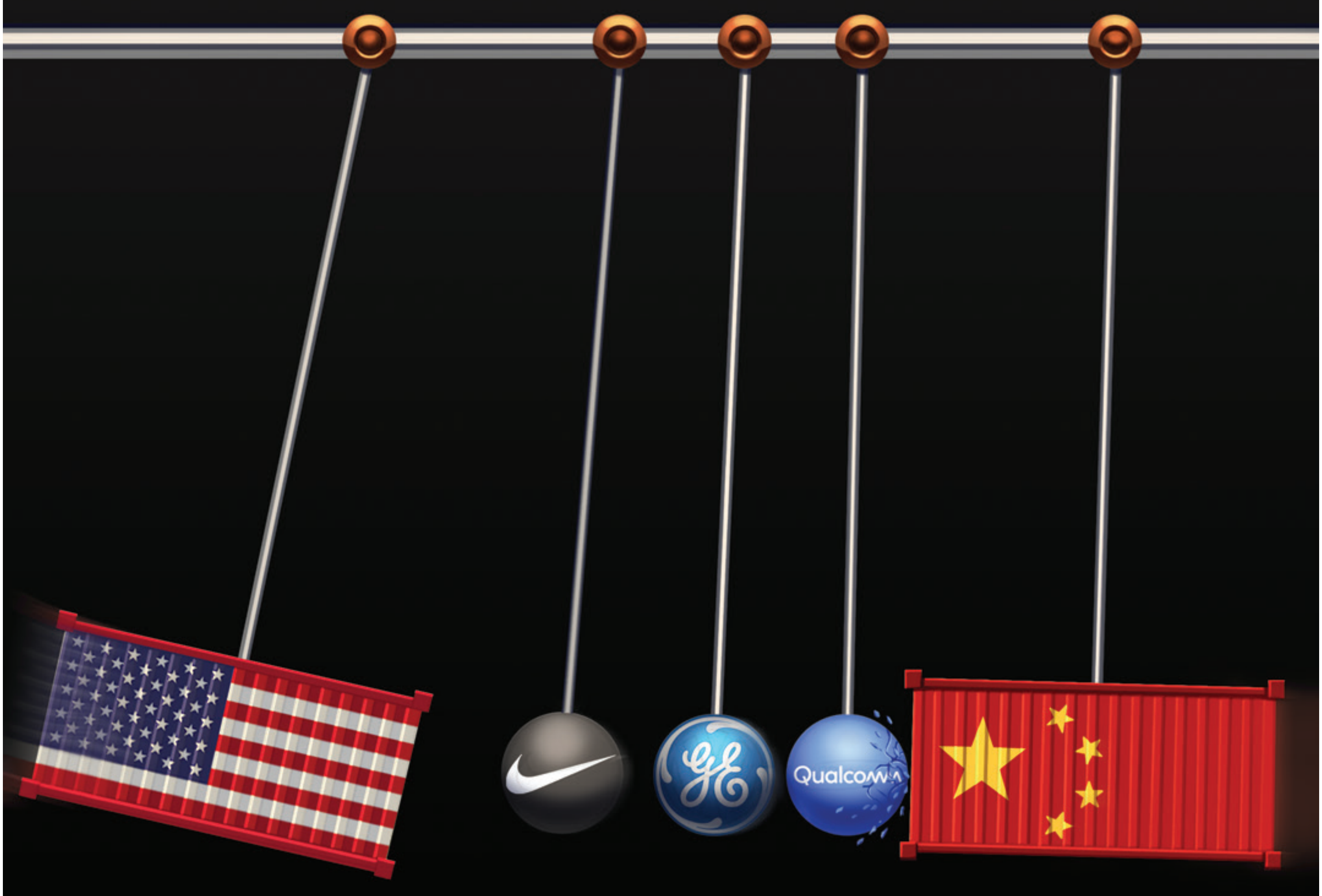
A. That is probably inevitable. We have seen some statistical evidence of that during the opening months of 2018. China is slowly but surely going from a model that draws on surplus savings to fund infrastructure and exports to a different approach that absorbs the surplus saving in order to fund a safety net that its consumers and families need to be more active drivers of internal demand. If China continues to go down that road, its current account could easily go into deficit and stay there for quite some time.

That has consequences for the US because China, as the world's largest surplus saver, has played an important role in buying the Treasurys—precisely what a savings-short America needs to fund its chronic budget deficit.

Q. Can America continue to fund its deficit without China buying up large volumes of US Treasurys?

A. We will fund the deficit; the question is on what terms. To the extent that we don't have savings at home, then there are consequences as to how that external funding occurs, consequences that may have an impact on the dollar and interest rates relative to foreign interest rates. We saw a bit of that in late 2018 in the backup in longer-term Treasury yields, but hardly a sharp increase that might have the potential to tip the US economy back into recession.

STUCK IN THE MIDDLE



The United States' trade tariffs have exacerbated a tough business climate in China for multinational companies

By Matthew Fulco

Image by José Luna

The Sino-US trade tussle has had the greatest impact on multinational corporations in China—precisely the group that the US started out trying to support. Many have begun considering radical courses of action to stay in business

As the Sino-US trade war heated up in the fall, the International Monetary Fund warned that the entire global economy would suffer if things got serious. But the group that has felt the effects most severely so far is the one that the United States is ostensibly trying to help: the many multinational companies doing business in China.

Apart from reducing the bulging bilateral trade deficit of the US, the Trump administration's main justification for launching the trade war has been to force China to improve its treatment of foreign firms. Businesses continually complain of inadequate intellectual property protection, forced technology transfers and heavy subsidies for state-owned domestic competitors.

"The end goal of the US is to press China to abide by its World Trade Organization commitments and accept the norms of global trade," says Tom Sun, an analyst at the Hong Kong-based consultancy Risk Advisory.

Yet the trade war has hit multinationals hard, with many forced to absorb much of the extra costs imposed by American and Chinese tariffs. "The trade war is having a profound impact on us—the tariffs on steel imports really hurt," said an Asia-based executive of a global automaker, who spoke to *CKGSB Knowledge* on condition of anonymity.

More than 60% of the 430 US companies responding to a September survey by the American Chamber of Commerce in China (AmCham China) and AmCham Shanghai say that the first round of tariffs on $50 billion in goods adversely affected them.

Nearly 75% foresaw negative consequences to the second round of US tariffs on $200 billion of goods, and about 68% expect to be hurt by retaliatory Chinese tariffs on $60 billion of imports. More than half of the respondents to the survey expect the tariffs to result in a loss in profit, while 47% expect production costs to rise.

The trade tussle is hurting European firms too. A September survey by the European Union Chamber of Commerce in China (EUCham) found that 53% of the organization's members view the US tariffs negatively, while 43% frown on the Chinese tariffs. One in five respondents say that they were holding off on expansion or additional investment because of the duties.

"The effects of the US-China trade war on European firms in China are significant and overwhelmingly negative," Mats Harborn, president of EUCham, said in a September statement. "We share the concerns of the US regarding China's trade and investment practices but continuing along the path of tariff escalation is extremely dangerous."

The Relocation Game

Several firms have responded to the trade war by accelerating plans to shift part of their supply chains out of China, a trend that began several years ago amid rising labor costs on the mainland. In most cases, the companies are moving production of low value-added goods like textiles or toys to lower-cost markets, including Southeast Asia or India.

China is not opposed to this, says Kent Kedl, Managing Director risk analysis firm Control Risks in Northeast Asia. "They're OK with letting the cheap stuff go."

US President Donald Trump has repeatedly stated that the trade war will help revive the American manufacturing sector, tweeting in late November: "If companies don't want to pay Tariffs, build in the USA." However, there is scant evidence that this is happening.

Just 6% of AmCham China and AmCham Shanghai's members are considering moving production facilities back to the US, the organizations say. By contrast, around 30% of the two groups' members are trying to source components or assemble products outside both China and the US.

Taiwanese technology hardware firms, who produce many of the world's consumer electronic devices in mainland Chinese factories, are shifting some production back to Taiwan "as the trade war is going to last for a while," says Eddie Han, an industry analyst at the Taipei-based Market Research & Consulting Institute (MIC).

Han notes that Taiwan's Hon Hai Precision Industry Co, commonly known as Foxconn, the world's largest contract electronics manufacturer and the primary assembler of Apple's iPhones, has production bases in India, Indonesia, Vietnam and Europe as well as mainland China.

"They may only need to adjust their capacity [at different plants] to alleviate the impact of the trade war instead of relocating supply chains to the US," explains Han.

Foxconn is building a factory in Wisconsin with the help of a $4 billion package of tax breaks and incentives from the state government, but that facility was planned well before the outbreak of the Sino-US trade conflict.

Some multinationals that have moved production away from the US have no plans to bring it back—regardless of the trade war's outcome.

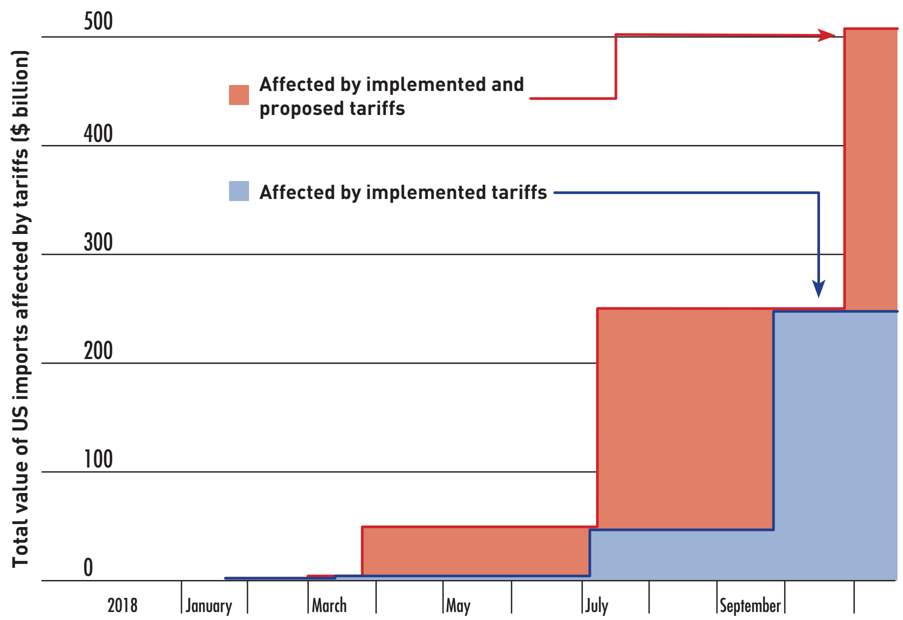
"It's not profitable for us in many cases to manufacture vehicles in the US," the Asia-based auto executive says. While the person's company still makes some luxury autos in the US, which it sells to the Chinese market, if the trade war drags on, the firm may consider shifting production of those vehicles to China.

To be sure, a prolonged trade war could force some multinationals to shift manufacturing out of China. Yet many firms will not take those steps right away. Even if they want to move production elsewhere, many alternative locations lack China's state-of-the art infrastructure: the roads, ports, airports and advanced production facilities themselves.

"China is still the go-to place for assembly," says Sun from Risk Advisory.

MORE PAIN TO COME?

Washington has threatened to implement even more tariffs if China and the US do not reach a trade deal



Source: SinoMedia calculations

Carrots and Sticks

At the onset of the trade clash, some observers worried that nationalistic Chinese consumers would retaliate against US-based multinationals by boycotting their products. Foreign brands had faced that kind of backlash before.

In 2012, when Japan and China became embroiled in a territorial dispute, Chinese consumers put the brakes on Japanese auto purchases. It took months for Toyota and Honda sales to recover. Acts of vandalism against Japanese businesses also occurred.

Fortunately, given Beijing's desire to keep relations with Washington on an even keel, no boycotts have materialized so far. "I think we are still far from this, but if these kinds of boycotts started and I were still living in Beijing I would be very nervous," said longtime China watcher Bill Bishop in an October edition of the *Sinocism* newsletter.

Still, Beijing has other ways to signal its displeasure with American tariffs, such as not allowing US firms to take advantage of opportunities in the China market. In some cases, that may to be the benefit of European firms. In December, Switzerland's UBS became the first foreign bank to receive approval to take a majority stake in its securities joint venture under new rules announced in 2017.

Beijing may play favorites in the financial sector, analysts say. "We shouldn't be surprised if a small number of initial applicants receive expedited approvals whether because the institution is based in a country with friendly bilateral relations ... or because the applicant institution enjoys a strong relationship with regulators," says Ross Feingold, a Taipei-based attorney and political risk consultant.

At the same time, Beijing is dangling carrots to some US firms. In October, electric carmaker Tesla secured land near Shanghai for a $5 billion factory, its first outside of the United States. Significantly, Tesla will retain full ownership of the facility, making it the first foreign firm ever to operate a plant without a local partner.

Producing cars locally will be essential to Tesla's future in China, its largest market outside the US. The brand's cars are currently subject to China's 15% import tax for autos, plus an extra 25% tariff that Beijing applied to US cars in a tit-for-tat move earlier in 2018.

China has said it will get rid of this extra charge on January 1 while the two sides negotiate a trade deal. However, it has made clear that the tariffs will return if no agreement is reached.

Uncertain Future

Beijing and Washington have been in talks to avert a further escalation of the trade

> If tariffs rise, most global companies doing business in China will be more interested in moving production to Southeast Asia
>
> Darson Chiu
> Vice President
> Taiwan Institute of Economic Research

war, but it is still far from clear what the outcome will be. Other multinationals are girding themselves for market uncertainty.

For most firms, according to Control Risks' Kedl, it is "pretty much a wait-and-see" situation. "[The uncertainty is] coming at a challenging time when many companies are making plans for 2019 and beyond," he says. "To have a potential hit like this hanging over your heads, and budgets, is not a comfortable position to be in."

At the G-20 meeting between President Trump and his Chinese counterpart Xi Jinping on December 1, China agreed to a limited series of concessions. These included cutting tariffs on US automobiles, buying an unspecified number of goods to reduce its bilateral trade surplus and cracking down on exports of the toxic opioid fentanyl, which killed nearly 30,000 Americans in 2017.

However, it may be much harder to make progress on the thornier parts of the dispute—and the ones most relevant to multinationals in China—such as market access for foreign firms, forced technology transfer and special treatment for state-owned enterprises.

China has made moves to open more sectors to foreign businesses in recent months, though many of these reforms would have happened anyway. In June, Beijing reduced the number of restrictions on foreign direct investment from 63 to 45 in its latest so-called "Negative List."

Among the most significant changes was the removal of foreign shareholding restrictions on commercial and passenger vehicle manufacturing by 2020 and 2022 respectively, according to Feingold.

Beijing also appears to be accelerating opening its financial markets, says Zennon Kapron, founder of Shanghai-based research firm Kapronasia. "We are finally seeing action behind the talk" in the banking and capital markets, he says. "How far the reforms go still remains to be seen, but the initial progress seems positive."

There has also been growing speculation that Beijing may make more substantial concessions on issues including the Made in China 2025 industrial strategy. Many multinationals view this as a tool for squeezing out foreign competition in a range of high-tech industries.

In December, the *Wall Street Journal* reported that Chinese officials were drafting a new strategy to replace Made in China 2025. President Trump previously claimed in a news conference that "China got rid of their China '25 because I found it very insulting."

If substantial changes are made to Made in China 2025, it would be celebrated as a big win by many foreign firms in China. EUCham has been particularly vocal in its criticism of the policy, calling it a "large-scale import substitution plan aimed at nationalising key industries" or "severely curtailing the position of foreign business."

But any changes to the strategy could prove cosmetic. Though several liberal commentators in China have used US pressure as an excuse to push for more market reforms, others have used it to justify current policies. In a June commentary, Liu Chuntian, a law professor at Renmin University, argued that US complaints that companies were forced to hand over technology to Chinese partners to continue operating in China were misplaced.

"The transfer of technology by US companies to Chinese companies is a normal business activity," said Liu. He added that companies handed over technology not due to government pressure, but "independently."

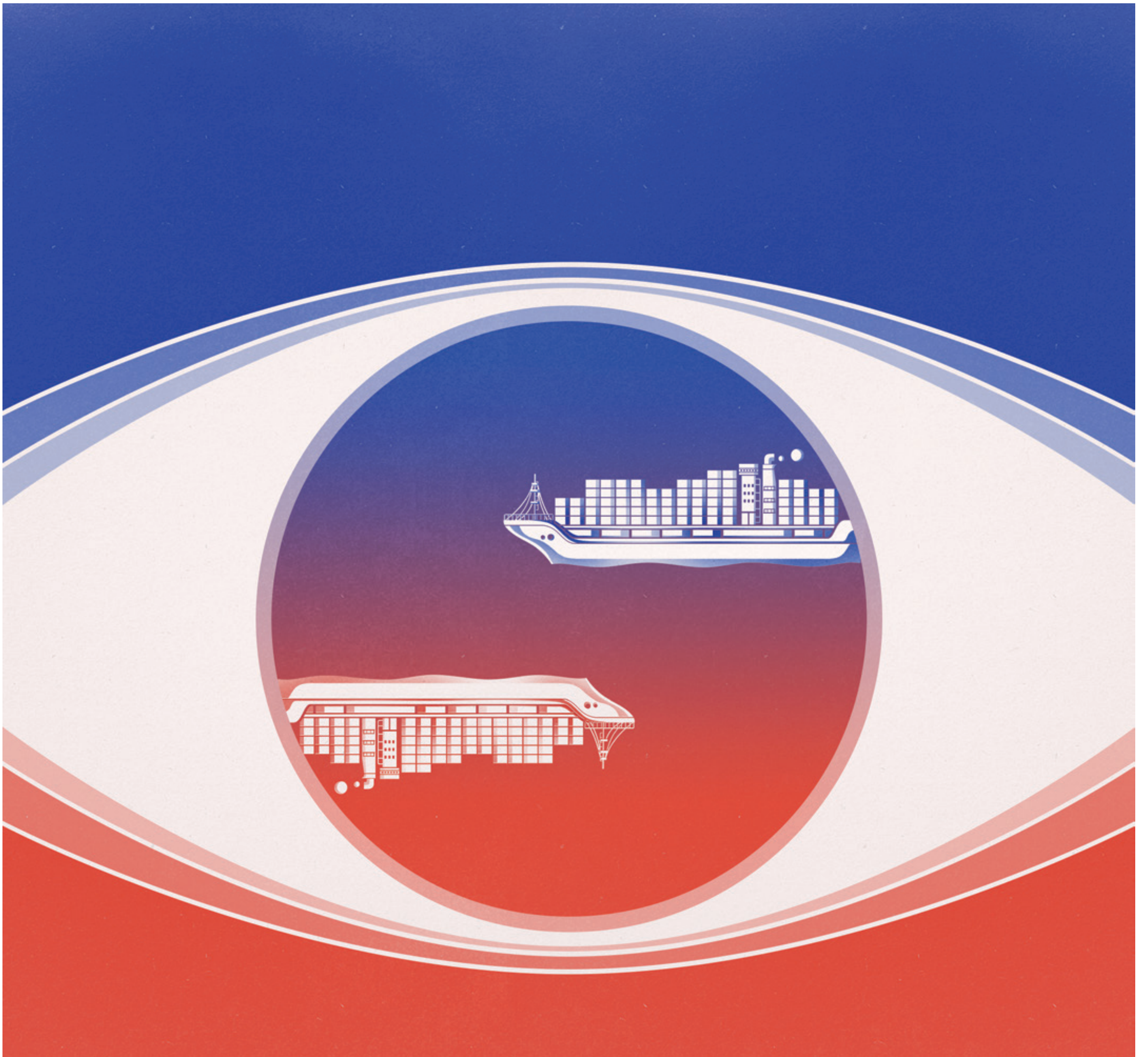
Unless China proposes substantial and verifiable market reforms, it is possible that the US negotiating team—led by the hawkish US Trade Representative Robert Lighthizer—would reject a deal and move forward with more tariffs.

A worst-case scenario would be the US upping its tariffs on $200 billion of Chinese imports from 10% to 25%. A spike in the tariffs could accelerate the relocation of some supply chains to Southeast Asia, says Darson Chiu, Vice President of the Taiwan Institute of Economic Research, a think tank.

If the tariffs hit 25%, "most global companies doing business in China will be more interested in moving production to Southeast Asia," from where they can still supply the US and China, he says. "Exports to the US from Southeast Asia can avoid the tariffs on Chinese goods, while exports from Southeast Asia to China can take advantage of the China-ASEAN free trade agreement."

Foreign firms generally remain keen on the China market but are disillusioned with the slow pace of economic reforms. For China, the best way to regain the confidence of this key group—which provided $135 billion of investment in 2017—would be to make good on longstanding promises to reduce trade and investment barriers.

"Now that it is the world's second-largest economy, China can afford to open its doors all the way," Kenneth Jarrett, President of AmCham Shanghai, told Agence-France Presse in November.



THE VIEW FROM BEIJING

To solve the trade war, the United States may need to look at issues from China's point of view

By Dominic Morgan

Image by Wei Bingnan

Some argue that US tariffs will force China to make large concessions on trade. But there is a risk that the growing pressure will make Beijing less, not more likely to compromise on key issues

President Xi Jinping set a hard tone for China's intensifying trade war with the United States back in June when he met with a high-powered group of American and European executives in Beijing. The US had just threatened to impose tariffs on $200 billion of Chinese goods, and the Chinese leader warned his foreign guests that this action would have consequences.

"In the West, you have the notion that if somebody hits you on the cheek, you turn the other cheek," Xi reportedly told the assembled CEOs. "In our culture, we push back."

The message Xi was sending was clear. After decades of hiding its strength and biding its time, Beijing had decided to go toe-to-toe with Washington on issues it considered central to its interests.

In the months since, many analysts have been waiting for Beijing to abandon this hardball approach. As US tariffs began to inflict economic pain, Beijing would be forced to soften its stance to secure a much-needed end to the trade war.

The implementation of the $200 billion round of tariffs in September did accelerate China's economic slowdown, though domestic factors were possibly more important. As winter rolled on, business sentiment plummeted, the stock market continued its precipitous decline, and exports, retail and property sales all took a hit.

However, there have been few signs of a change in Beijing's negotiation tactics. According to Zhang Baohui, Director of the Centre for Asian Pacific Studies at Lingnan University in Hong Kong, Xi's team is unwilling to make meaningful concessions on two issues in particular: the government's support for large state-owned enterprises (SOEs) and for high-tech companies in emerging industries through initiatives like the Made in China 2025 industrial strategy.

"The Chinese have said that they can make concessions. They will stop forcing American companies to transfer technologies, do better to restrain cyber theft and open more service sectors—these are not big deals for China," says Zhang. "But they have stood firm on the most controversial issues."

Several senior figures in the Trump administration, including US Trade Representative Robert Lighthizer, view forcing Beijing to cut back its preferential policies for SOEs and domestic high-tech firms as a key goal of the trade war. It was assumed that any deal to roll back tariffs would include Chinese pledges on these structural issues.

Yet, those expecting a Chinese climb-down have continually been disappointed. After a crunch meeting between Presidents Trump and Xi at the G-20 summit in Buenos Aires on December 1, both sides released statements summarizing discussions and the issues for further negotiation. Neither version mentioned SOE reform or Made in

> **Beijing will stop forcing US companies to transfer technologies, restrain cyber theft and open more service sectors—these are not big deals for China**
>
> Zhang Baohui
> Director, Centre for Asian Pacific Studies
> Lingnan University

China 2025.

A few days later, Xi delivered a speech in the Great Hall of the People, which he was expected to use to unveil eye-catching reforms designed to address US concerns. Instead, he extoled the party's achievements and declared, "no one can be the master (*jiaoshiye*) of the Chinese people."

The US is sure to keep pressuring China to make changes on SOEs and Made in China 2025, which the country believes hands Chinese companies an unfair advantage. Lighthizer discussed China's industrial strategy with Vice Premier Liu He during a call shortly after the G-20, the *Wall Street Journal* reported.

But reports that the Chinese leadership plans to abandon the policy appear wide of the mark. "Beijing does not talk about Made in China 2025 anymore, but things haven't changed much on the ground," one Chinese entrepreneur told *Nikkei Asian Review* in January. "I don't think the government will ever pull back their support."

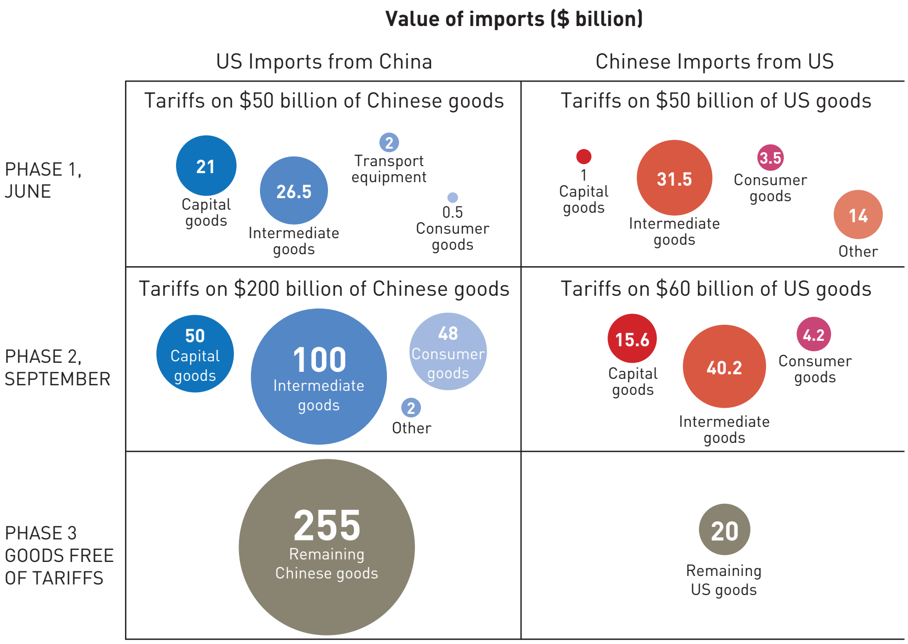
An economic crisis or another escalation in the trade war could still force Beijing to backtrack, and Lighthizer may lobby to raise tariffs further for this reason. "If [Lighthizer] thinks he's not going to get a good deal, he'll be content keeping the tariffs on," a senior lobbyist told the *Financial Times* in November.

But the theory that China can be pressured into abandoning centrally-controlled industrial policies may be a miscalculation. American discussions of the trade war have focused on the costs for China of not doing a deal, without considering how China weighs up the other side of the ledger.

Capitulating to Washington would have profound political consequences for the Chinese government. Ideology is a foundation of the party's position, trumping all other issues.

On top of that, there is a long history, largely forgotten in the US but studied keenly in the corridors of Zhongnanhai, the leadership compound next to Tiananmen Square, informing China's trade war strategy. And this history makes China cautious of acceding to US demands.

STRIKING BACK | From the start of the trade war, Beijing has not hesitated to hit back at US tariffs with tit-for-tat measures



Source: Peterson Institute for International Economics, US Census Bureau

Japanese Lessons

For many in Beijing, the trade war confirms long-held suspicions that the United States is determined to thwart China's rise as the world's next superpower.

"More and more in China's elite circle now think Trump's trade war is not just about fair trade and trade balance," Zhang told *Bloomberg* in September. "Rather, it is a containment program to change China's long-term power trajectory."

As a result, US demands that China abandon Made in China 2025 have tended to be viewed by Beijing as being motivated not by concerns over fair competition, but by a desire to make sure America keeps its lead in the global innovation race. Public statements from senior figures in the Trump administration have fueled these concerns.

"When I came [into office], we were heading in a certain direction that was going to allow China to be bigger than us in a very short period of time," the president said at a West Virginia rally in August. "That's not going to happen anymore."

When asked last year whether the administration's trade policy aimed to prevent China becoming a world leader in high-tech industries, Peter Navarro, Director of the White House National Trade Council, replied: "Exactly."

Beijing views the trade war not as an isolated incident, but part of a longer history of US attempts to undermine rival powers. According to Richard McGregor, Senior Fellow at the Lowy Institute, China pays particular attention to the trade dispute between America and Japan in the 1980s.

"I know from talking to Chinese officials that they have studied the Japan-US example thoroughly," says McGregor. "The Chinese saw the Plaza Accord as a deliberate effort by the Americans to hobble a competitor, and they're determined that they won't allow it to happen to them."

The Plaza Accord was a 1985 agreement between Washington and Tokyo under which Japan promised to revalue its currency to lower its trade surplus with the US, a move that many argue created Japan's bubble economy. "Most Japanese don't see it like that," points out McGregor. "But it's like a catechism inside the People's Bank of China."

China and the US have largely moved on from arguments over the value of the RMB, but the distrust of American intentions lingers. Another lesson Beijing appears to have drawn from the Japan-US dispute is that capitulating to American demands simply embolden US negotiators to ask for even more.

As McGregor explains in his book *Asia's Reckoning*, which charts the history of China-Japan-US relations, the Reagan administration pressured Tokyo for years to limit exports of semiconductors to the US market and buy more American chips. Japan eventually agreed to a deal guaranteeing US chip companies 20% of the Japanese market.

"While Japan insisted the deal was a one-off, the United States would later try to use the agreement as a template for demanding similar targets for market share of American goods in other sectors," McGregor writes.

Comments from Chinese officials involved in negotiations with the US suggest that Beijing fears a similar situation today. "Will the US side keep coming back for more after we strike a deal?" one policymaker asked the *Wall Street Journal* in January.

The upshot is that Beijing may not see striking a deal with Washington as a way to gain relief from US pressure. Rather, it may see the cost of surrender as even higher than that of carrying on the fight.

As a result, if Washington wants to secure a lasting agreement with Beijing, it may first have to convince it that its intention is to protect a rules-based system, not undermine China's long-term development, as many in China fear.

Escaping the Trap

This will be a tough sell on the issue of Made in China 2025, as Beijing considers this policy crucial to China's future. There is an enormous gap between how China and the United States perceive the strategy, which aims to make China globally competitive in several high-tech industries.

American reporting on the policy often describes it as China's plan to "dominate" the industries of the future. The Council on Foreign Relations, an influential Washington think tank, has described Made

US Trade Representative Robert Lighthizer

in China 2025 as a "real existential threat to US technological leadership."

Lighthizer appeared to be alluding to this analysis when he commented in March: "There are things that if China dominates the world, it's bad for America."

For Beijing, by contrast, Made in China 2025 is considered the only way to counter an existential threat to its own economy: rising labor costs in the country's manufacturing sector. Factory wages rose 64% between 2011 and 2016, according to Euromonitor. This is undermining the competitiveness of Chinese manufacturers, which have been the engine of China's growth for decades and still generate nearly 30% of the country's gross domestic product (GDP).

These trends are of concern to Beijing because many countries have followed a similar growth trajectory to China in the past but ended up losing their economic dynamism and falling into what economists call the "middle-income trap."

According to the World Bank, there were 101 economies considered middle-income in 1960, meaning that their per capita GDP was between $1,000 and $12,000. By 2008, only 13 of these economies had managed to achieve high-income status.

With a per capita GDP of $8,827 as of 2017, China is right at the most challenging stage in the development cycle. Failing to make the transition to a high-income economy is a real prospect.

"The top leadership is highly concerned about the middle-income trap," says Zhang Jun, Dean of the School of Economics at Fudan University.

Making the transition to a high-income economy will need increasing productivity across all sectors, but also moving up the value chain to high-end manufacturing and technology. This is what Made in China 2025 is designed to achieve.

"Made in China 2025 is crucial to leading the Chinese economy out of the middle-income trap," says Zhang. "You have to keep upgrading manufacturing over time."

For this reason, China is unlikely ever to agree to roll back Made in China 2025 completely: the potential long-term economic costs are simply too high.

Finding Common Ground

The US is more likely to convince China to

> **Made in China 2025 is crucial to leading the Chinese economy out of the middle-income trap**
>
> Zhang Jun
> Dean of the School of Economics
> Fudan University

China remains dependent on foreign technology such as advanced industrial robots

make changes to the strategy if it focuses talks on the technicalities of the policy, rather than China's technological ambitions more generally.

"However this trade conflict ends, I don't think it's going to involve much of a climb-down by China from what it regards as its sovereign right to pursue the objectives laid out in Made in China 2025," says George Magnus, former Chief Economist at UBS and author of *Red Flags: Why Xi's China Is in Jeopardy*. "The two sides will have to agree on rules, perhaps with regard to industrial policy."

Beijing will understandably point to examples of other major countries pursuing industrial policies, such as Germany, with its Industrie 4.0 plan for advanced manufacturing, to justify its use of a state-led development model.

But the US may be able to shift Made in China 2025 onto a more market-friendly trajectory. The trade war and the sudden economic slowdown have forced Beijing to rethink assumptions about its growth model, according to Zhang of Fudan University.

"The top leadership is reviewing the package of policies that was created over the past couple of years," says Zhang. "They now specify that China should continue to make the system more open [to foreign competition] and to continue with structural reform."

This may allow Washington to press Beijing to open Made in China 2025 for more participation by foreign companies. The strategy currently sets targets that 70% of core components in key technologies should be domestically-made by 2025, and the foreign business community has repeatedly complained that this is leading local governments to prevent overseas firms from bidding for contracts.

China's large-scale government support for research and development and startups, however, is likely to be nonnegotiable. Beijing's overall support for innovation is almost certain to increase, not decrease. The past year has driven home to Beijing, just as much as Washington, that relying too much on foreign technology could have national security implications.

In November, the US Department of Commerce revealed that it was considering trying to curb exports of a wide range of strategic technologies from fields including artificial intelligence, robotics, microprocessors and quantum computing.

If this policy became law, it would have profound consequences for the Chinese economy. China is still highly dependent on foreign technology in several areas. The country buys 27% of the world's industrial robots and imports $260 billion of semiconductors per year.

Even the risk of a US export ban or other restrictions on China's access to key technologies will force Beijing to accelerate the development of domestic technology firms.

"It's quite obvious that the threat from the US will reinforce the commitment of the Chinese leadership to put more emphasis on domestic innovation," says Zhang. "China would mobilize resources to support development work on several of the key technologies, including microchips."

How Washington would react to remains to be seen. There will be those urging the White House to hit Beijing harder, in the hope of extracting further concessions. On this issue, however, the extra pressure may simply lead China to retreat further into its shell.

Banking on Beijing

Despite the current tensions, there has never been a better time to be a foreign bank in China, says Eugene Qian, President of UBS Securities in China

Mao Zedong is once said to have remarked: "Everything under heaven is in great disorder; the situation is excellent." This famous quip could easily describe the state of play in China for global banking giant UBS.

Last year, headwinds from the China-United States trade war buffeted most foreign businesses, while large parts of the Chinese financial sector struggled to cope with the fallout from a major crackdown on risky lending practices. Yet, both these disruptions brought unexpected benefits for the Swiss bank, according to Eugene Qian, head of the group's operations in China.

Beijing has reacted to US pressure by fast-tracking reforms to open up the financial market, enabling UBS to become the first foreign bank to receive approval to take a controlling stake in its China securities joint venture in December. Meanwhile, the clear-out of lenders in the shadow banking sector should make it easier for conventional banks to claw back market share.

In this interview, Qian explains how UBS plans to take advantage of these strategic opportunities, and how he expects the Chinese financial sector to change over the coming years.

Q. How did UBS first enter the Chinese market, and how has your business evolved since then?

A. Switzerland was the first Western country to recognize the People's Republic diplomatically in the mid-1950s, and UBS started indirectly doing some bullion trading in China shortly after. We also set up our first operations in Hong Kong in the 1960s. In 1989, we set up our first representative offices in Beijing and Shanghai.

Our breakthrough in onshore business came in 2005, when Beijing Securities got into trouble financially. Instead of just injecting cash to bail out the enterprise, Beijing municipal government assembled a committee of foreign investment banks to help turn around the firm, and UBS was selected to be the main partner. Beijing gained the support of the People's Bank of China (PBOC) and China Securities Regulatory Commission (CSRC), and went to the State Council to get special approval for a pilot project. As a result, we merged during the restructuring of Beijing Securities and became the sole manager of the new entity. We inherited the company's entire license and were even able to change the name to UBS Securities, even though overall foreign ownership was capped at 24.99%.

To this day, we are still the only foreign firm to successfully inherit a full license of a domestic securities firm and run it as sole manager. That allowed us to become a market leader, because we were the only firm with such onshore and offshore capabilities.

Q. What is the scope of your operations today?

A. Outside of Switzerland, UBS focuses on three core businesses: wealth management, where we are number one globally with $2.5 trillion of assets under management; investment banking, where we specialize in areas including equities and cross-border mergers and acquisitions; and institutional asset management.

In China, investment banking is our champion business. UBS Group became a first-batch Qualified Foreign Institutional Investor (QFII) quota recipient in 2003, and since then we have participated in bringing foreign investment into Asian markets. Now, there is also the Hong Kong-Shanghai and Hong Kong-Shenzhen Stock Connect, which allows investors to trade offshore in Shanghai and Shenzhen. We play a key role in the northbound Stock Connect, where international money flows through Hong Kong into the mainland. That is because we essentially run investment banking Hong Kong and investment banking China as one entity, which gives us a unique competitive advantage.

Q. How do you plan to expand your onshore presence further?

A. Right now, the strength for us onshore is investment banking through UBS Securities. Our focus is on expanding our relatively new businesses onshore: wealth management and asset management.

For wealth management, we set up a wholly-owned foreign enterprise (WOFE) bank in 2012, called UBS (China) Ltd, and we recently received fund distribution and insurance product

The UBS offices at the One Peking tower in Hong Kong

distribution licenses. We are already ramping up our onshore wealth management.

In asset management, UBS was one of the first foreign banks to receive a WOFE private fund management license in the Shanghai Free Trade Zone, and we have already launched three funds. Private fund management has a lot of potential, because it will help increase the institutionalization of the local financial market.

Q. How important is the Chinese market for UBS at this point?

A. UBS Group sees China as one of the key growth markets globally, and that is based on three observations. Firstly, China is the largest wealth creation center in the world and could remain so for decades, which is key for us as the world's number one wealth management major. Secondly, China is continuing its market opening reform. When those markets open, there will be huge appetite for international capital to flow into China, and over time Chinese capital to go abroad. This will play to our strengths in the cross-border business. Thirdly, there is the digitalization of finance, where we see opportunities across investment banking as a sell-side service provider.

Q. How much more market opening do you expect to see over the next few years?

A. In April, President Xi Jinping announced that China was going to pursue a new phase of opening in the financial sector. That same day the governor of the PBOC, Yi Gang, gave details on plans to open up the securities, fund management and life insurance markets. He stipulated that foreigners would be allowed to take a 51% controlling stake in businesses in these areas by the end of 2018, and a 100% stake by 2021. This is a breakthrough because in the past reform has been focused on opening new areas to allow foreigners in, rather than allowing foreigners to take control of a Chinese entity.

Q. What will the ability to take full ownership of your business do for UBS?

A. Although we have been in China from an early stage, we are still learning how we can best operate here. We don't necessarily need full ownership: it is not 100% or nothing. We value our Chinese partners and view each joint venture on its own merits. Having said that, moving to 51% ownership is a no-brainer. At the moment, there is a major economic asymmetry, given that the company is called UBS Securities and we have been running it as sole manager, yet our economic return remains only 25%. We expressed our desire to raise our stake long ago, and usually we take the maximum stake allowed. Once we achieve 51%, we will be happy and will continue to run the business with no major changes. Beijing municipal government has proven a valuable partner for us.

Q. There has been a lot of reform in China's financial sector recently. What challenges remain in operating in this market?

A. The challenges are abundant and we have learned a lot of lessons. This market is massive, both in terms of its absolute size and in terms of its massive growth pace. So, anyone entering this market must be relatively humble. We cannot expect to become the market number one in no time. But we can leverage our global number one position and the fact that we have been serving affluent and ultra-high-net-worth Chinese clients for years. Now, we can apply all those advantages to onshore. We

> International players need to have a collective voice pushing for more reform and opening

believe this market requires more than one or two players; there will be a number of domestic and foreign leaders. Our ambition is to become the leading foreign player, and potentially one of the leaders overall.

There is also the challenge of how to plan our expansion. Do you aggressively build your onshore presence, even without being profitable? Or do you balance growth with running a solid business? We lean toward the latter, which we call a disciplined growth strategy. We don't just start hiring aggressively from our competitors for the sake of becoming big overnight, but, given the current supportive policies, we see no reason not to roll out our growth plan. In 2016, UBS Group set out its China 2020 strategy, which set a target of doubling our onshore staff head count by 2020. We are on track for achieving that target.

Q. China's financial markets are often described as an entirely different animal to those in the West. How different are they in reality?

A. The differences are still pronounced. The capital markets here remain retail-oriented, while markets such as New York, London and Hong Kong are much more consolidated and institutionalized. China is now moving to the direction of becoming more institutionalized.

In the last five years, there has been too much peer-to-peer (P2P) and online finance. As a regulated entity, we always viewed this with suspicion. We are not envious, but we have pointed out to regulators that there is a major regulatory arbitrage here. Someone can overnight attract vast amounts of consumers' savings with little regulation and no requirement to place a reserve with the PBOC. Now, we are seeing the clampdown and we welcome that.

The other big difference is the position of foreign firms. Foreigners can hardly operate in the retail space. It does not mean that we cannot participate indirectly by being the service provider to the service provider. However, the domestic players are size-wise much bigger than foreign players. I do not think it is going to be easy to take back market share in a big way from domestic players. Instead, foreigners will continue focusing on their strength, which is cross-border serving the largest Chinese institutions and bringing foreign institutions into the country. It is a growing pie and there is enough room for everyone.

There are so many international players coming in right now. They are often competitors, but more often they are also partners. We need to have a collective voice to push for more reform and opening. This is where China is slightly different, because foreigners here need to accept that we are minority players size-wise.

Q. How did Beijing's efforts to clamp down on risk in the financial sector impact on your business in 2018?

A. In many ways, it has been positive. Wealth management products (WMP) had been the dominant product in the internet finance sector. They are now under much closer scrutiny and are much harder to find. As a result, we should benefit because we are a properly regulated entity. All our products are pre-registered and pre-approved by the regulators, and we are very conscious of investor suitability. Cleaning up the system benefits us—it is a more level playing field.

When the market was flooded with WMPs, we stepped back and decided not to onboard those products because they didn't pass our smell test. Everyone was promising returns of up to 9% without telling investors that underlying it were loans to real estate companies or mining companies without cash flow.

Q. Some worry that the clampdown on risk could create a snowball effect, leading to a wider financial crisis. Is that a concern you share?

A. On the P2P side, there will continue to be failed platforms. Last year, every month there were hundreds of failed platforms. The government seems to be doing the right thing and asking the regulated asset management firms and commercial banks not just to come to the rescue but evaluate the risk of some of these platforms. This should help stop a run on the remaining platforms because if that were to happen even the better-run companies with better liquidity would not be able to survive. Then the banks would be in trouble too.

Apart from P2P, we haven't seen many signs of the start of a crisis. The clampdown on structural risks to the economy has been going on for four or five years now. China has been cutting tens of millions of tons of excess steel and coal capacity per year and the system seems big enough to absorb it. Banks are taking on non-performing loans worth tens of billions of RMB per year, but they also make RMB 100 billion ($15 billion) of revenue. That is why you see those Chinese banks coming to the market every year to replenish their capital. We are playing to that space, acting as a capital-raising bank for many of our clients.

State Advances, Private Retreats

As China's state-owned enterprises enjoy a resurgence, private firms are growing anxious about their future

By Colin Peebles Christensen

Image by José Luna

An explosive blog post by a self-styled financial veteran briefly knocked the wind out of the Chinese business community in September. In the piece, the author, Wu Xiaoping, argued that the country's private firms should step aside and allow the state to increase its dominance of the economy.

The private sector has "basically fulfilled its task of assisting the state-owned economy in achieving its rapid development," Wu wrote. "China's private sector should not blindly expand."

The article went viral on social media, sparking a storm of criticism from entrepreneurs, as well as support from left-wing commenters. When China's online censors failed to step in and stop the debate, this was interpreted by many as an implicit government endorsement of Wu's views, sparking more panicked speculation among businesspeople and investors.

Under normal circumstances, a blog by an obscure middle manager at a state-run investment firm would never garner so much attention. But Wu's post touched a nerve. These are tough times for private firms, which have borne the brunt of China's economic slowdown, as well as a series of government policies designed to clean up the environment and reduce risk in the financial sector.

In October, CKGSB's Business Conditions Index (BCI), which tracks sentiment among small- and medium-sized enterprises, fell to 41.4. This is the lowest reading ever recorded since the monthly survey began in 2011.

There is a creeping fear among executives that the adverse operating conditions they are facing are a sign that the health of the private sector is no longer Beijing's top priority. The saying "the state advances, the private sector retreats" (*guo jin min tui*) has again resurfaced in public debates.

The State Strikes Back

Mixed messages on the role of the private sector have been a common theme since Xi Jinping became head of the ruling party and president. When he assumed office in 2012, many expected Xi's new administration to introduce sweeping market reforms.

At a key summit the following year, party leaders appeared to fulfill this expectation by, for the first time, stating that the market should play a "decisive role" in the economy. However, they also affirmed that the state should remain "dominant."

A 2015 blueprint for reforming debt-ridden state-owned enterprises (SOEs) sent similar signals. The policy aimed at making SOEs more competitive, while also reinforcing their position as a pillar of domestic stability.

Crucial to the SOE reform has been "mixed-ownership reform," which has seen Beijing coax leading private companies to invest large sums to take minority stakes in state conglomerates. Between 2013 and 2017, the private sector invested RMB 1.6 trillion ($233 billion) in SOEs, covering fields including civil aviation, defense, energy and telecommunications.

The policy was designed to make SOEs more dynamic through an injection of entrepreneurial know-how, but the reality has looked more like an enormous wealth transfer from private to public sector, with little visible effect.

"There have been few examples of investments through mixed-ownership reform that have led to anything other than just a mixing-up of capital," says Thomas Gatley, China Corporate Analyst at Gavekal Research. "There's not a lot of appetite for plowing a bunch of funds into a firm where that private money gains no control over management and can't drive any increased efficiency."

Other reforms have also strengthened the state sector at the expense of private firms. In the northeastern Rust Belt, China's antipollution campaign has led to thousands of smaller private producers being shut down, handing greater market share to the large SOEs. The state's share of national steel capacity increased from 60% to 67% just last year, while the government now controls 80% of coal, up from 45% in 2010.

This resurgence of the state sector, particularly in industry, appears to be the result of an intentional policy by Beijing. Xi himself has described the goal of SOE reform as being making SOEs "bigger, better and stronger."

According to Lin Jiang, Professor of Economics at Sun Yat-sen University, Beijing has been happy for the state sector to expand because it views SOEs as crucial to meeting the government's policy goals.

"SOEs are the main support to the Belt and Road Initiative and are the main sources of fiscal revenue for the central government," says Lin. "The Made in China 2025 plan also relies on SOEs because they control most of the science and technology resources and expertise."

Private Struggles

The picture has darkened for the private sector since the start of 2018, as firms across the economy have started to struggle.

In August, the year-on-year growth of private firms' assets had fallen to just 2.3%, compared to 2.5% growth for SOEs, according to Shan Guo, an analyst at Rhodium Group focusing on SOE reform. This is the first time that SOEs' assets have been growing faster than those of private firms since the 1990s.

The private sector has been disproportionately hit by Beijing's deleveraging drive, launched in 2017 to reduce risk in the financial system. The crackdown on shadow banking has cut off a vital source of funding for firms, as banks prefer to lend to SOEs, regarding them as lower-risk.

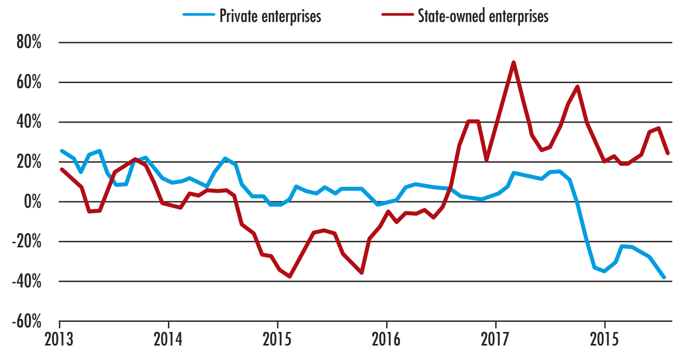
Starved of funds, many private firms have been pushed into riskier borrowing practices, raising capital through stocks, bonds or by pledging equities as collateral for bank loans. These practices came back to bite businesses this year, as China's stock market began to struggle. Driven by worries over the impact of the US-China trade war and the deleveraging drive, the Shanghai bourse fell more than 25% during the first 10 months of the year.

With their stock pledged as collateral for loans, a number of private firms were forced into defaults. And many of these firms ended up in the arms of the state. More than 30 companies listed on the Shanghai and Shenzhen exchanges sold controlling stakes to central, provincial or

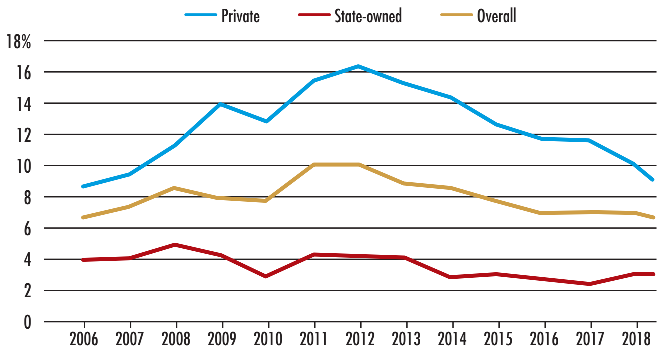
RETURN OF THE STATE

Since 2016, state-owned industrial enterprises have clearly benefited at the cost of more profitable private firms

Profit growth of industrial firms (year-on-year change)



Return on assets for industrial firms (%)



Source: Council on Foreign Relations, National Bureau of Statistics, Haver Analytics, CEIC

city-level governments in October alone, raising concerns about a wave of "re-nationalization."

It was in this context, with the stock market taking a battering and a growing number of private firms going bust, that fears of a return to state control such as that described by Wu Xiaoping spread. But Wu's post also tapped into another vein of suspicion among entrepreneurs: that Beijing would increase the dominance of SOEs in order to ride out a messy trade war with the United States. Wu appears to make this argument explicitly in his article.

"If we fail to concentrate the power of the state but instead allow the market to dictate and move toward a path of complete economic liberalization, … the results we have gained could gradually be lost," he wrote.

As Andrew Polk, the co-founder of consultancy Trivium China, explains, Beijing has often turned to SOEs in times of economic turbulence. They can be trusted to steer clear of mass layoffs in times of trouble and to faithfully execute Beijing's policy goals.

"SOEs are a buffer," says Polk. "They help cushion the economy on the way down, but they also don't operate as efficiently as they normally would on the way up, and so they function to some extent as a social lever. It's much easier to keep people employed at SOEs during the down-cycle."

Official Denials

Beijing appeared to wake up to the severity of the situation in September. That month not only saw the furor over Wu's post; it also coincided with the US's move to slap tariffs on $200 billion of Chinese imports. The same month, the CKGSB BCI plunged more than 10 points to 41.9, its lowest ever reading at the time.

During the fall, senior officials almost daily tried to reassure businesses of the government's support for the private sector. "Any words and practices that negate and weaken the private economy are wrong," Xi Jinping said in a letter to private entrepreneurs in October.

At a symposium the following month, the president doubled down on his "unswerving" support for private firms, and presented a six-point list of free-market measures, including promises to level the playing field and create an "environment of fair play."

The government has also cut taxes, encouraged banks to lend to SMEs, introduced tax payment deferments and set up credit enhancement funds, says Polk. Meanwhile, the People's Bank of China has earmarked RMB 10 billion ($1.45 billion) for private sector bond issuance in order to sooth financing difficulties for the increasingly credit-starved sector.

It is easy to see why Beijing is concerned. Despite the recent growth of the state sector, private enterprise remains vital to the health of the economy. The private sector employs 340 million people and creates 90% of new jobs, according to the All-China Federation of Industry and Commerce.

The measures outlined so far have at least done enough to reassure entrepreneurs that Beijing wants to see a thriving private sector. "The advancement of state firms has been largely an unintended consequence of China's broader deleveraging campaign, rather than a deliberate statist intention of policy," says Guo, of Rhodium Group.

However, it is still unclear whether the moves will be enough. "I think people see the government is trying, but aren't quite sure if the measures are going to be successful," says Polk. "There's just too much uncertainty to say that it has fundamentally improved sentiment."

Despite Beijing's talk of "level playing fields," it is clear that systemic biases remain in the financial system that favor SOEs. As Guo emphasizes, state firms also appear consistently to be "hurt less" by environmental campaigns.

And some doubts remain over Beijing's attitude toward the private sector. Polk from Trivium China points out that even as the government moves to provide relief to struggling firms, the party is inserting itself more actively into private businesses to ensure they uphold party goals.

Even some official statements in support of the private sector have appeared to confirm, rather than assuage, suspicions that Beijing is deliberately strengthening

Beijing's anti-pollution campaign has hit private industrial firms particularly hard

the role of the state. In a news conference on October 19, Vice Premier Liu He rebuked critics of private enterprise, but he also sketched a vision for an economy effectively split between an SOE-led industrial sector and a consumer sector populated by private companies.

"SOEs are mostly in the upper stream of the industrial chain, playing a leading role in the fields of basic industries and heavy manufacturing," Liu told reporters. "Private enterprises are increasingly providing manufactured products, especially consumer goods. These two are highly complementary, cooperative and mutually supportive. In the future, the Chinese economy will continue to improve in this direction and move toward high-quality development."

Such a frank statement in favor of more state control may come as a shock to many. But, then again, the idea that China is steadily moving toward an American-style market economy has largely been a Western one.

"It's difficult to argue that the Chinese leadership ever wanted a completely free, market-driven economy," says Guo.

Chinese policies have long emphasized state dominance over "key" and "pillar" industries. The problem for private firms, as Guo notes, is that the definition of what entails a "key" industry is frequently redefined.

"There hasn't necessarily been a philosophical change in Beijing's view of state versus private sectors in the economy," says Leyton Nelson, a senior research analyst at China Beige Book, an independent data analysis firm. "The government is not looking to drive the private sector out of existence. They're looking to keep economic stability. Given the control that the state exerts over SOEs, they're the easiest way to do that."

"China will never abandon its state companies," says Cheong Kee Cheok, co-author of *China's State Enterprises: Changing Role in a Rapidly Transforming Economy*. "At the same time, the state recognizes the dynamism of private entrepreneurs, especially in high-tech sectors."

The Red-brick Road

Whatever Beijing's reasons, it seems clear that the state sector will remain large, and may even continue growing, for the foreseeable future. This could have consequences for economic growth.

The effects of prioritizing the needs of SOEs can be seen in the industrial sector. Less competition from private firms has helped boost SOEs' profits significantly since 2016. This is helping state firms pay off their enormous debts, which have risen to an astronomical $16.5 trillion, according to Ministry of Finance data. But the cost has been a decrease in productivity in the industrial sector, as SOEs generate less than half the return on assets achieved by private firms.

"The economic slowdown is a stark illustration of how Beijing cannot rely on SOEs alone to juice economic growth," says Nelson. "Policymakers are not blind to this reality."

Continuing to favor SOEs could also have consequences internationally. In November, the European Union, Japan and the United States jointly submitted a package of proposed reforms to the World Trade Organization that would strengthen rules designed to prevent states from handing out large subsidies to firms. The target was China's hand-outs to state-owned companies.

China can block these reforms if it chooses. But to do so would be to abandon its adopted stance as defender of the global trading system. Instead, Beijing would be forced to isolate itself as the lone defender of a state-directed model.

It is too early to judge how Beijing will respond. But there are tentative signs that it is starting to address some of its partners' concerns. In December, the central government appeared to step up plans to deal with the large number of loss-making "zombie" SOEs.

Local officials were handed a three-month deadline to submit a list of "zombie" firms in their area. They will then have to wind up or restructure these enterprises by 2020. Of course, this may simply lead to a wave of mergers, producing a smaller group of very large SOEs. But if these firms are viable corporate entities, it will at least be a step forward.

And in the long term, Beijing is likely to allow the private sector to take the lead in most downstream industries, particularly those related to technology.

"As China moves up the value chain through technological upgrading, the role of the private sector will expand," says Cheong. "The government recognizes that it cannot keep pace with these new technological innovations and has shifted strategy to supporting high-tech startups."

Private Issues

Recent history teaches us that a flourishing private sector is essential to the health of China's economy. More measures are needed to restore private firms' confidence in 2019

By Professor Li Wei

The latest BCI may leave readers a bit frustrated. Aside from the main BCI index dropping to 44.9, the costs and prices sub-indices have also fallen. The corporate investment index reversed on last month's rebound. Disconcertingly, recruitment confidence continued to drop as well. Although still above 50, this index is now at the lowest since the survey began in 2012. As rumors of layoffs at prominent firms have circulated online, it is well to consider that there is normally no smoke without fire. For specifics, please see this month's BCI report (page 60).

Last month, we took stock of new central government policy that was favorable to the development of private business in China. This month marks the 40th anniversary of China's reform and opening up era. On December 18, President Xi Jinping spoke at a celebration, upholding what we know to be true: that this policy marked the start of a great new economic direction for the country. His speech was peppered with confidence for the future.

As economists, one of our key academic topics is economic development. Indeed, reform and opening up was a huge development, no matter how you measure it. Before the industrial revolution, the gap between East and West in terms of economic development was marginal. But since the West took the lead in industrialization, Western economies shot ahead, growing rapidly. Economists call this moment the "Great Divergence." Despite the efforts of the late Qing dynasty's Western Affairs Movement and the modernization efforts during the Republic of China era, China was unable to catch up with advanced countries of the world for a long time. And while the PRC's establishment enabled the Chinese to stand up in politics, diplomacy and culture, the road to economic development would see many more twists and turns. By 1978, China's miserable economy and low living standards were common knowledge.

The reform and opening period felt like a rescue effort when it began, but became a trigger for enormous economic enthusiasm in the country. High-speed economic growth ensued, and living standards improved. China was no longer the scene of a great divergence; global economics has finally leveled out.

Reform and opening up has worked for many reasons. There is mostly consensus on the reasons for its success, but still some are debated. We want to explore one of the reasons on which most agree: the role of private business. Why? The reason is simple. The Chinese economy has recently suffered domestic and international pressures, which have been felt the most by private firms. Some have argued that the economy holds no place for private business and that they should quit the market, or at least be coupled with the state in "new public-private partnerships." Yet private enterprises have contributed more than 50% of tax revenue, 60% of GDP, 70% of innovations, 80% of urban employment, and 90% of enterprises, and the central government has affirmed the positive role of private enterprise in China's economy and stressed its "unwavering encouragement, support and guidance for the development of the private economy."

In terms of actual economics and policy direction, it appears that private business is recognized as key to growth and prosperity. So why are critical voices still so popular?

The Red Hats

To understand this, we need to examine the history of private firms in China, especially since 1978. The founding of the PRC led to an extremely tight restriction on capitalism. After three major transformations in the 1950s, the private economy was by and large eliminated. Given the successive political movements since then, the private economy had little opportunity to establish itself. In 1979, reform and opening up

A poster of former leader Deng Xiaoping, who was instrumental in legitimizing the private sector, stands in Shenzhen, southern China

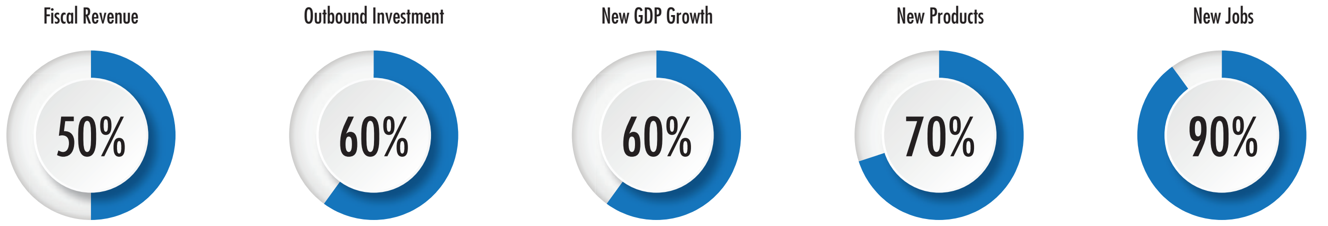
began just as a large number of educated youths who had been sent to the countryside returned to the cities. There were not enough jobs for them. Those who returned were unemployed (known as "awaiting employment" at the time). They were seen as a social problem and became a headache for the government.

According to the National Bureau of Statistics, the number of people awaiting employment in 1979 was 15 million in urban areas. The number of unemployed registered with the Labor Department was 5.68 million. Urban, registered unemployment was 5.4%. In 1980, the Party Central Committee proposed a "three-in-one" employment policy, and adopted a series of policy measures that introduced a combination of jobs recognized by the labor department, "voluntarily organized" work, and self-employment. In other words, the government recognized the legitimacy of self-employed and forms of private economy. In three short years, these policies resolved the employment issues that had built up during the Cultural Revolution. By 1982, the urban registered unemployment rate had fallen to 3.2%, and in 1984 it fell again to 1.9%. In much of the country, urban unemployment had all but disappeared.

From this, we know that at the start of the reform and opening up period, the government recognized the legitimacy of the private economy and allowed its development, and that this was not a strategic decision, but a practical solution. We could even call this the mission of the private economy at the time. However, for many years afterward, the private sector operated in a gray or even illegal area. Small individual businesses and the self-employed needed to expand their business and employ others, but one question loomed: would this be considered "exploitation of labor?" As no official statements were

> Without a strong and stable property rights system, businesspeople will not dare to invest, recruit, or operate enterprises, just as in the 1980s

PRIVATE ECONOMY | Despite the recent expansion of the state sector, private companies play a crucial role in driving growth



Source: All-China Federation of Industry and Commerce

made on this, law enforcement varied from place to place. Small-business owners and self-employed individuals expressed their worries all the time, and in a quest to provide clarity to this new private economy they alerted the designer of the reform and opening up policy, Deng Xiaoping.

In this context, some very Chinese phenomena emerged, such as the "Red Hats." These were private entrepreneurs who feared policy would change suddenly and their businesses would be liquidated. Therefore, their own enterprises were linked to public units, and thus became state-owned or collectively owned when ownership was registered. This was like putting a Communist hat on a private company that would act as a shield. This bred other risks. When ownership laws changed, all rights were cemented according to the law. This resulted in property disputes, which lost countless private entrepreneurs their companies.

Shoring Up the Foundations

To this day, China has never been the same. Private entrepreneurs can be upright public citizens, invited to participate in all sorts of political discussions. Their recruiting and investing activities are rewarded, and entrepreneurs are often guests of local government leaders. But problems remain, and the most important is the issue of property rights. The Party Central Committee has repeatedly stressed a construct known as the "two unwaverings." The Property Law clearly states that "the state implements a socialist market economy and guarantees the equal legal status and development rights of all market entities," but in operational terms, discrimination on the grounds of ownership keeps occurring. For example, it is far more difficult for private enterprises to obtain bank loans than state-owned enterprises.

Property rights are the cornerstone of a market economy. Without a strong and stable property rights system, businesspeople will not dare to invest, recruit or operate enterprises, just as in the 1980s. Therefore, how can the economy of a country achieve growth and prosperity?

Not only are protecting property rights important, another key to a vibrant market economy is fair competition. Let efficiency determine the outcome, not ownership. If state-owned enterprises are low cost and easy to finance and private enterprises hard to finance and high cost to run, this is clearly not a level playing field. The final result may not be the survival of the fittest, but more a case of throwing good money after bad investments. In this kind of competitive system, how can efficiency be improved and economic growth sustained?

For any country, total economic statistics are extremely important, but for ordinary people, employment is the most important statistic. With jobs, people have the income to support their families. From a societal point of view, employment is the biggest stabilizer. When people have jobs, there is little need to make trouble. In fact, the history of the entire reform and opening up period is also a history of employment transfer. In 1978, according to the National Bureau of Statistics, apart from a small percentage of self-employed "*getihu*," China's urban population was 99.8% employed by state-owned and collective units. By 2017, private enterprises and the self-employed accounted for more than half, 31.4% and 22.0% respectively, while the proportion of employed people in public organizations such as state-owned, collective, joint-stock and solely state-owned enterprises had fallen to 17.4%.

Battling the Ill Winds

Private businesses are now so important to China's economy that policymakers cannot ignore them. Whether it is the idea that private business should quit the market or the theory of the "new public-private partnership," the essence is to diminish private enterprises in ideological terms, manufacturing an unequal property status and suggesting private enterprises should be coupled with state-owned enterprises. We need not discuss these ideas further, but what lies behind them deserves our vigilance and attention.

The "two unwaverings" of equality of the state and private economic rights, opportunities and rules, the Constitution and the Property Law all confirm the state's support. So why do these arguments threaten the sector? In the early days of reform and opening up, private businesses were often considered "expedient measures." Does this idea remain so today?

It seems that we really need to carefully reassess the status of private enterprises in the Chinese economy from a legal and ideological perspective. Otherwise, whenever the ill winds pick up again, private businesses will be swept away. And if this happens, who will invest and who will recruit? We should ensure that this month's lowest-ever BCI recruitment index is the lowest it ever gets.

Li Wei is Professor of Economics at CKGSB

Reading the Tea Leaves

Renowned economist Shen Jianguang shares his predictions for the Chinese economy in 2019

A new year is a time for fresh starts and new beginnings. At least, that is what policymakers in Beijing will be hoping. The second half of 2018 produced an avalanche of negative headlines on the economy as a domestic deleveraging drive and the intensifying trade war with the United States slowed growth and undermined confidence.

Will these headwinds continue battering the Chinese economy this year, or will Beijing be able to engineer a recovery? There are few people better placed to answer this question than Shen Jianguang. Currently Chief Economist at JD Digits, the leading data and technology firm spun off from e-commerce giant JD.com, Shen is one of China's most respected economic analysts. His career has included stints at the European Central Bank, International Monetary Fund and OECD, as well as China International Capital Corporation and Mizuho Securities.

In this interview, Shen explains that analysts are right to be concerned about the health of China's economy, but that many are not paying attention to the greatest risk of all.

Q. How would you describe the overall state of the economy in early 2019?

A. I think the Chinese economy is facing serious challenges. In 2018, there was an external shock, which was the China-United States trade war. Domestically, the deleveraging policy resulted in overtightening in the financial system. On top of that, there was also a severe antipollution campaign, which has created challenges for many small- and medium-sized companies.

Q. Which of these factors has had the greatest impact on the economy: the trade war or the domestic policies?

A. Primarily it has been the domestic factors that have weighed on the economy. Despite the trade war, if you look at the hard data, Chinese exports to the United States have increased faster in 2018 than in the previous year. So, the impact of the trade war has been more psychological than anything else.

Of course, 2019 will probably be more challenging than 2018, because a lot of companies have been afraid of the impact of the trade war and have tried to avoid the 25% tariffs [in September, the US government introduced 10% tariffs on $200 billion of Chinese imports and said duties would increase to 25% on January 1, though this move has been put on hold while Washington and Beijing negotiate a deal], and have been frontloading their products for the US market. This will have an impact on firms in 2019, even if the 25% tariffs do not go ahead.

On the other hand, domestic factors, such as the deleveraging and the shutdown of polluting companies, have had a much larger impact on business sentiment and the overall economy. Profit levels in the private sector have dropped significantly, and confidence weakened in the third quarter. I am working for JD Digits, which is associated with the e-commerce firm JD.com, so I see a lot of big data on consumption. Looking at this data, it is clear that consumption has weakened since the third quarter.

Q. If the US were to raise tariffs on $200 billion of Chinese goods to 25% as it has threatened to do, what impact would that have on the economy?

A. I think the impact would be profoundly serious and I suspect that is the reason behind the change in Beijing's stance toward trying to reach an agreement with the US. I did a study on how the performance of Chinese exporters had been affected by the 25% US tariffs on $50 billion of goods [which were announced in June and took effect in August], and I saw a sharp decline in the growth rate of their business with the US.

I think that is the reason why the Chinese government has tried everything to avoid that happening. But I think the Trump administration also understands that these tariffs will also have a

Investors gather outside the offices of Quark Finance, a peer-to-peer lending company from Shanghai that folded in August

significant impact on US consumers. In some sectors that would be affected, such as furniture, China accounts for around 50% of US imports.

Q. As you mentioned, possibly the most important factor influencing the economy in 2018 was Beijing's deleveraging drive. How did this policy come about, and how has it impacted the economy?

A. The deleveraging drive was primarily focused on shadow banking. In China, shadow banking is a huge sector. Estimates vary, but most put the size of the market at around RMB 100 trillion ($14.5 trillion). The bank wealth management products alone are worth around RMB 30 trillion.

The deleveraging drive led to a sharp contraction in the shadow banking sector and that dealt a serious shock to private firms, especially small- and medium-sized businesses, as they heavily relied on lending from shadow banking channels. Deleveraging also resulted in a sharp decline in the stock market, which had a further impact on many private companies that had mortgaged their shares. Those companies were forced to sell their shareholdings, causing a chain reaction on stock prices.

The main impact of the crackdown on shadow banking was felt by SMEs, but consumers also felt the effects due to the decline in the peer-to-peer lending industry.

Q. What role did the peer-to-peer (P2P) lending industry play in the economy?

A. Consumers mainly used P2P products as a place to store their savings. Online P2P companies generally offered much higher interest rates than banks, so consumers often put their savings there to earn more interest. Normally, P2P companies also act as facilitators by lending to consumers, but in China some P2P companies instead used the money they raised to lend to the corporate sector. Then, when the government tightened liquidity conditions, this caused a wave of bankruptcies among those P2P firms. Nearly 2,000 P2P companies went bankrupt or closed down. A lot of consumers lost their savings, and this had an impact on consumption as well. That is one of the main reasons why the economy is so weak right now.

Q. What will happen with regard to the deleveraging drive in 2019?

A. I think the deleveraging campaign has already ended. Yi Gang, Governor of the People's Bank of China, announced in October that the country's debt levels have stabilized and the Chinese government has made no mention of more deleveraging in recent statements. Instead, they have introduced cuts to banks' reserve requirement ratios (RRR) and reduced the seven-day repo rates. We also know that overall interest rates

> My main worry for 2019 is not deleveraging or the trade war, but a liquidity trap

have been declining. So, in a way monetary easing has started already.

The government also moved to cut personal income tax rates in October and has pledged to introduce more tax cuts. In 2019, policies should be very accommodative. But this is unlikely to be enough to revive growth in the short term because it will take time for these policies to work through the economy.

Q. How far do you expect Beijing to go in terms of introducing stimulus measures to boost growth in 2019?

A. Stimulus measures may improve things a bit, but my main worry for 2019 is not deleveraging or the trade war, but a liquidity trap, just as happened to Japan in the 1990s. The Bank of Japan at that time had accommodative policies and even undertook some quantitative easing (QE), but businesses still struggled to borrow, and banks were reluctant to lend. So, I think this could be a risk for China in 2019.

Q. Beijing has introduced several measures designed to boost lending to the private sector. What more does the government need to do to avoid a liquidity trap?

A. I think the impact of the current policies will be limited. The key is not monetary policy, but furthering structural reform. For example, whether the government can really ensure equal treatment for state-owned enterprises (SOEs) and private companies. The banks are always willing to lend to SOEs. So, rather than just urge banks to lend more to the private sector, the government should treat SOEs and private firms equally. This is what PBOC Government Yi Gang meant when referring to "competitive neutrality."

Q. The US has also been pushing China to introduce structural reforms removing special treatment for SOEs. How far will Beijing be willing to go in this regard?

A. The Chinese leader recently gave a speech at an event celebrating the 40th anniversary of the reform and opening up era. Judging from that speech, I am more optimistic regarding the "opening up" side than the "reform" side. The government already expressed willingness to open the financial sector more to foreign institutions. Regarding reforms such as SOE and land reforms, I saw few signs from that speech that large moves in these areas are imminent.

Q. There have been quite a lot of negative news stories about China's economy in recent months. Are there any positive trends that are going underreported?

A. First of all, I expect that the growth rate will slow down in 2019, but I believe that even a 6% growth rate is good enough. Even if it goes down to 5%, so what? That would still be among the highest in the world, in the world's second largest economy. I think pursuing a high growth rate would be dangerous.

I think there are two positive signs going into 2019. The first is that the trade war with the United States will probably be resolved. I believe that the negotiations will bear fruit and the two sides will reach an agreement. I don't think the extra 25% tariffs will be introduced. That would remove a lot of uncertainty from Chinese exporters. Secondly, the introduction of more accommodative policies will mitigate a lot of pain in the economy.

Q. You mentioned that consumption slowed during the second half of 2018. What has been driving this slowdown?

A. Firstly, there has been a general slowdown in the economy, which has resulted in a slowdown in income growth. Secondly, there is the wealth effect: the decline in stock prices and stagnation in the housing market.

Q. Do you expect consumption to continue to drag in 2019?

A. I think the overall trend is downward. There has been quite a fast decline in the growth rate. In September, the growth rate of retail sales was 9.2%, but by November it had fallen to 8.1%. Reviving the economy will take at least six months, or two quarters. The government has already started this shift toward accommodative policies.

Q. There has been a slowdown in property sales in many cities. What developments can we expect in the real estate market in 2019?

A. The policy appears still to be not to allow property prices to fall further. I think it is also quite clear that the Chinese government has concluded that there is a huge bubble in the property market. That's why they have this policy of not allowing prices to decreasing any more. But I think the pain in the market will continue; I don't see a recovery next year. It will probably remain stagnant.

Q. What will be main focus for China's policymakers this year?

A. I think the number one issue will be reaching an agreement with the US regarding the trade dispute. Of course, even though I see these negotiations ultimately being successful, it will still take a lot of effort from the Chinese side. Second, will be reviving the economy through tax cuts.

UNPLUGGING AMERICA

China is determined to reduce its reliance on foreign technology. But is the country ready for the consequences?

By Jens Kastner

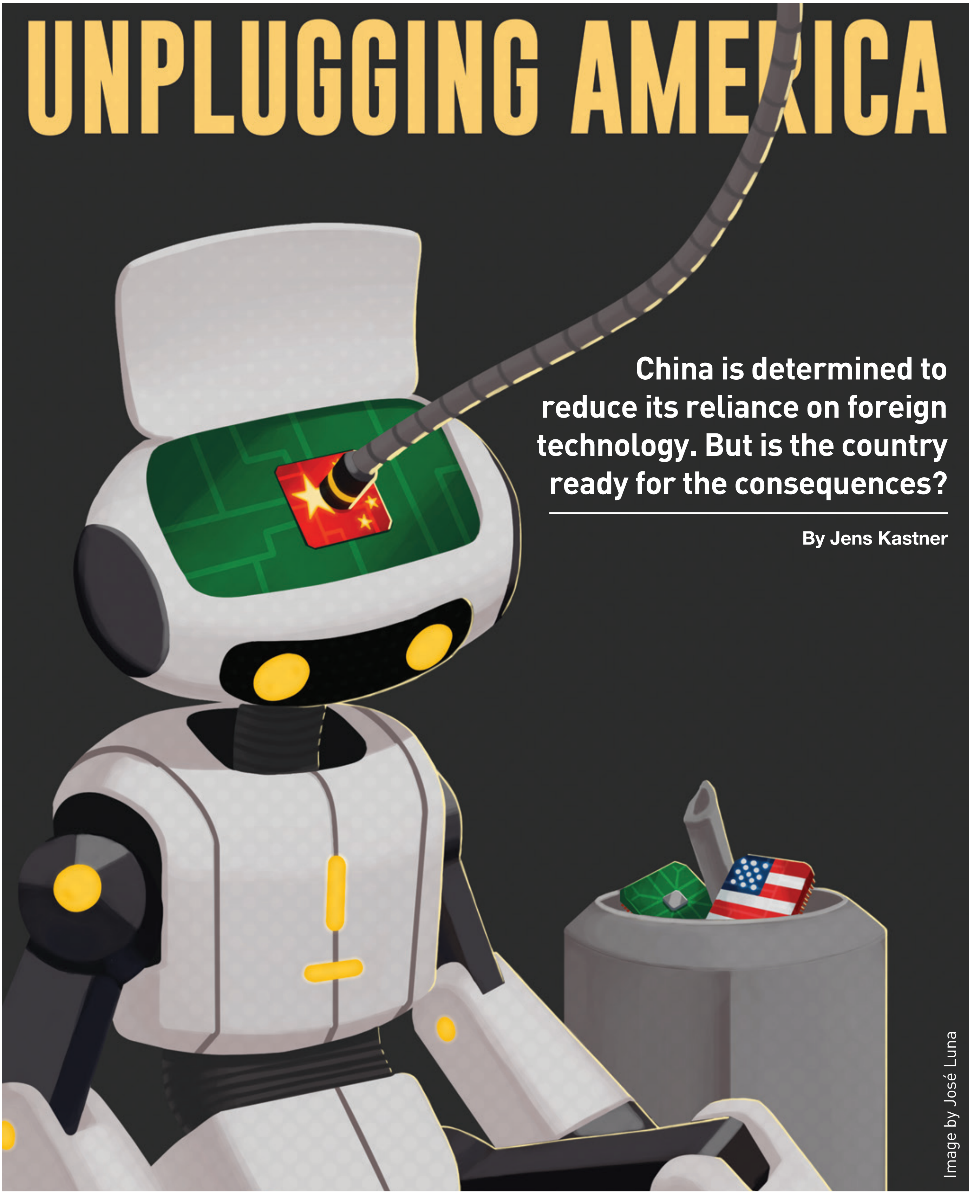


Image by José Luna

The Landspace ZQ-1 rocket begins its failed mission as it blasts off from the Jiuquan Satellite Launch Center in northwest China

Saturday, October 27 was supposed to be an historic day for China's growing aerospace industry. Landspace, a Beijing-based startup, was set to become the first private Chinese company to launch a rocket into outer space.

At 4 p.m., Landspace's ZQ-1 rocket blasted off smoothly from the Jiuquan Satellite Launch Centre in Inner Mongolia. Spectators watched the ZQ-1 shed its first two stages as it cut through the pristine blue skies.

Then, something went wrong. At 6.40 p.m., a fault occurred during the third stage. Soon after, Landspace declared the mission a failure. The company will have to wait until 2020 for its next shot at history.

A few weeks later, Elon Musk's SpaceX completed its 20th successful launch of 2018. The US company's Falcon 9 rocket delivered cargo craft Dragon into orbit before landing back on Earth, ready for its next mission.

It is unfair to draw sweeping conclusions based on the performance of just two companies. SpaceX, after all, was founded in 2002, while Landspace was established only in 2015. But the enormous gulf between the firms' capabilities does serve as a reminder of how far China has to go before it rivals the United States as the world's leading technological power.

Such a reminder is useful at a time when several US, and a few Chinese, commentators are describing China as a rival to US dominance in innovation. As recently as 2014, arguments that China was somehow incapable of producing groundbreaking research were commonplace in the English-language media. The Harvard Business Review famously ran with an article titled "Why China Can't Innovate."

But this viewpoint has been flipped on its head in the past two years. In 2017, USA Today asked "Why China Is Beating the US at Innovation." A year later, Washington think tank the Council on Foreign Relations declared China's Made in China 2025 industrial strategy "the real existential threat to US technological leadership."

The shift in mindset is leading to rapid changes in policy on both sides of the Pacific, as Washington and Beijing gear themselves up for a long-term "tech war." The US has moved to restrict China's access to sensitive technologies, leading to a 92% year-on-year drop in Chinese direct investment in US firms as of July, according to Rhodium Group. The Commerce Department is also considering extensive restrictions on exports of "emerging technologies" on national security grounds.

Chinese President Xi Jinping has in turn made indigenous development of core technologies a key priority. "It is becoming increasingly difficult to gain access to leading technologies, and China will ultimately have to rely on itself," Xi said in September.

The effort to make China self-reliant on core technologies is understandable. But the drive appears to be also creating a misleading impression that China is on the verge of eclipsing the US in science and technology. The reality is that China is still a long way from catching up with America, let alone overtaking it.

Smoke and Mirrors

Spurring innovation has become a central policy focus for Beijing as the drivers that propelled China's economic miracle—abundant cheap labor and surging investment—continue to weaken.

In a 2015 report, McKinsey found that for China to maintain a fast gross domestic product (GDP) growth rate, it would need to generate at least two percentage points of this growth through innovation, broadly defined.

President Hu Jintao continually called on officials to make boosting "indigenous innovation" a key priority during his time in office. Xi Jinping has placed an even greater emphasis on this area since taking over in 2012. These calls have produced a surge of investment in research and development (R&D), catapulting China up the global innovation league tables.

China's total investment in R&D rose to 2.1% of GDP last year, up from just 1.4% in 2008. The country's level of investment now rivals those of the US, which has held steady at just under 2.8% of GDP for a decade, and Germany, at 2.9% of GDP. According to a report by PwC published in October, 145 Chinese companies are now among the world's top 1,000 R&D spenders, up from only 14 a decade ago.

In 2016, China's State Intellectual Property Office received an extraordinary 1.3 million patent applications, more than double any other country, according to data from the World Bank. China has also overtaken the US as world leader in terms of the total number of scientific papers published, according to statistics released in January by the US National Science Foundation.

The country is now home to more R&D researchers than any other country. China produces 1,177 researchers per million people, three times the level recorded in the 1990s. The US produces 4,321 researchers per million, but this is more than offset by China's much larger population.

These statistics paint a picture of a China surging toward global dominance. And the progress it has made has indeed been impressive. At the time Harvard Business Review's article was published, Chinese companies with truly world-class technology were still rare. Now, China is at the cutting edge of a whole host of fields, from smartphones and drones to financial technology.

Alternative Statistics

Yet, the devil is in the details. As Nick Marro, China Lead Analyst at the Economist Intelligence Unit, a London-based think tank, explains, a large number of Chinese firms file patents simply to help them qualify for government subsidies as "high-tech enterprises."

"We see this phenomenon in other jurisdictions as well, but it is particularly pronounced in China," says Marro.

A Bloomberg investigation in September found that more than 90% of design patents filed in China are abandoned within five years, suggesting that they have little commercial value.

Despite its vast number of patents, the number of truly groundbreaking innovations coming out of China appears to be relatively modest. Of course, it is difficult to quantify "groundbreaking innovation," but one way is to look at China's share of triadic patents—corresponding patents filed at the European, Japanese and US patent offices, which are often called the "gold standard" of patent families.

In 2015, China accounted for 5.2% of global triadic patents, a big increase on its 1.6% share in 2008, but still far below the 26.7% of the US, 31.2% of Japan and nearly 20% of the major European economies. Many of China's top officials have themselves complained about the poor return Beijing's vast investment in R&D has produced.

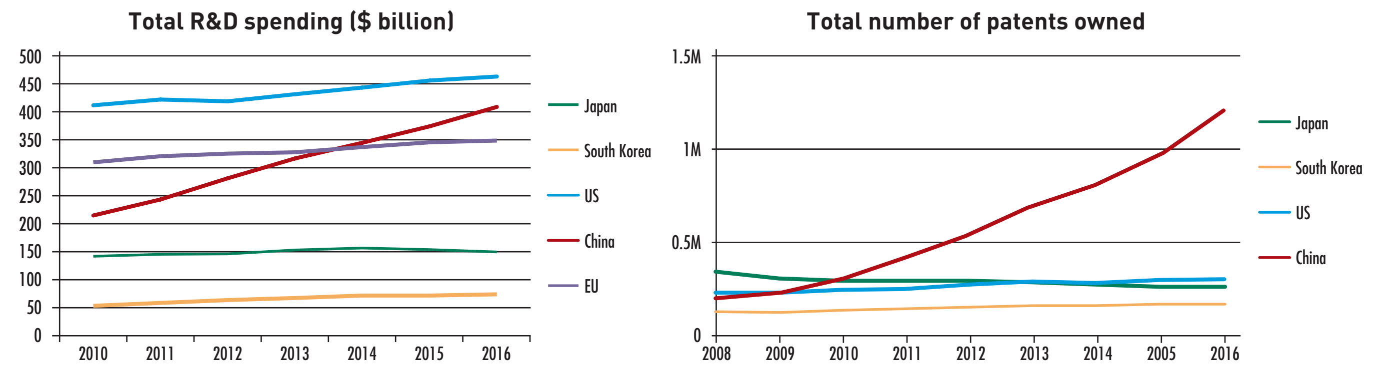
"Major scientific research in China mainly consists of imitation. Original innovations are relatively few and weak, and high-level talent is still scarce," said Ning Jizhe, Director of the National Bureau of Statistics, in February.

A large chunk of the country's research investment is still funneled through local governments and state-run research institutes, leading to inefficiencies and waste.

Most of the leading Chinese companies, by contrast, do not spend nearly as much on developing new technologies as their American counterparts. The PwC study of the world's top 1,000 publicly-traded companies in terms of R&D spending found that US companies accounted for 37.7% of total spending, while Chinese firms made up just 7.8%.

The research budgets of national champions such as Baidu, Alibaba and Tencent are dwarfed by the likes of Alphabet (parent of Google), Amazon and Apple. Alibaba spent $3.6 billion on

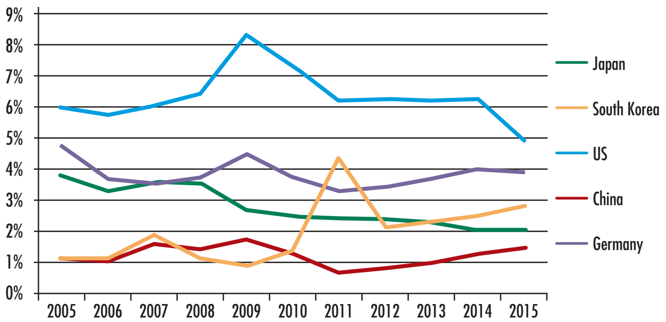
INNOVATION EXPLOSION | China has rocketed up global league tables in R&D spending and number of patents



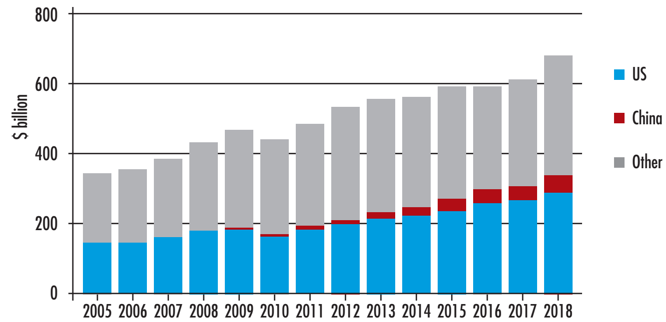
Source: OECD, World Bank

REALITY CHECK | Though China's R&D spending is rising, the US's top companies still spend far more than Chinese peers

Corporate R&D spending as a percentage of revenue



R&D spending of top 1,000 listed companies by country



Source: Bloomberg, PwC

R&D in 2017, for example, while Amazon invested $22.6 billion.

Digging Deeper

The main reason for this discrepancy, according to Edward Tse, head of Gao Feng Advisory Company, which works with firms both inside and outside China, is that many Chinese have different priorities from their Western peers.

China's leading companies tend to excel at "applications of existing technology, rather than original research," Tse told the Wall Street Journal. Many of the most high-profile Chinese success stories of recent years have followed this pattern, with mainland firms taking a Western technology and then using an innovative business model to create a hugely dynamic business.

Tse cites the examples of digital payment services like Alipay and instant messaging apps such as WeChat. Others could include ride-hailing giant Didi Chuxing or online service provider Meituan Dianping.

Kai-Fu Lee, the founder of leading venture capital firm Sinovation Ventures, uses a similar argument to explain China's success in the field of artificial intelligence.

We are currently living through an "age of implementation" in AI, Lee argues in his book AI Superpowers, as companies focus on finding commercial applications for one core technology: deep learning. Chinese firms have proved particularly adept at creating and rolling out businesses based on deep learning algorithms.

Kaiser Kuo agrees that Chinese companies have a natural advantage in this field. As Editor-at-Large at SupChina and a former Director of International Communications at Baidu, the search company that has been named one of China's four national AI champions, he is in a position to know.

"Deep learning entails the sifting through oceanic amounts of data to find patterns, and China has this key advantage of owning more data than anyone else," says Kuo.

"This is due to China turning earlier and more decisively to smartphone-based ordering of food delivery, ride-sharing and so on, which gives us a clear understanding of consumers' habits."

The sheer scale of China's market has had a similar effect on domestic companies in many other industries too. Trying to make new breakthroughs is unnecessary and inefficient. The name of the game for many brands is simply to work out how to get large numbers of products to consumers as quickly as possible.

However, many companies are starting to change their approach as the Chinese market becomes more saturated. Differentiating yourself from your competitors through innovation is increasingly a focus.

According to Shobhit Srivastava, a technology analyst at Counterpoint Research, this trend can be seen in the smartphone industry.

"There was a turning point around three years ago, when the Chinese brands began coming up with indigenous innovations to compete as global players," says Srivastava. "China's market was becoming increasingly competitive, and innovation was needed to compel consumers to replace their phones in ever shorter intervals."

Brands such as Huawei, Oppo, Vivo and Xiaomi are now rivaling Apple and Samsung in the design stakes. The Vivo X series recently became the world's first phone with an in-glass fingerprint sensor, while Oppo's Find X introduced a slide-out camera to allow for a true full-screen display.

China's automakers are trying a similar transition as the domestic market matures, but they are starting much further behind their foreign rivals, explains Heiko Rauscher, a partner at consulting firm Oliver Wyman that focuses on the auto industry.

"Ten years ago, most Chinese were buying a car for the first time, and affordability and churning out large volumes were the main criteria for car production," says Rauscher. "But things are changing now. Consumers increasingly appreciate new tech features."

At the moment, Rauscher can point to few examples of Chinese brands with "truly innovative" products, even in the electric vehicle market that China is promoting so heavily. "However, it is amazing how fast Chinese automakers are catching up," he adds.

Remaking Made in China

But as Beijing is well aware, much of this progress has been built on parts and equipment designed abroad. China's world-leading smartphones cannot function without cutting-edge foreign microchips, and the Android operating system used almost exclusively comes from Google. The country's rapidly developing auto makers, meanwhile, depend on German and Japanese industrial robots.

This was made brutally clear in early 2018, when the US banned American companies from doing business with telecommunications firm ZTE, due to the Chinese firm having violated sanctions on Iran.

ZTE is one of China's most feted companies. It supplies telecom equipment to dozens of countries and sold 45 million smartphone handsets in 2017. Yet the firm was crippled by the US sanctions and would have gone out of business had President Donald Trump not reversed the ban.

"The case was the starkest of a long series of wake-up calls for China's policymakers," comments Marro of the EIU.

Reducing China's dependence on core technologies is a central aim of the Made in China 2025 strategy. The policy aims to make China a leading player in virtually all high-tech sectors that drive economic growth in advanced economies. Areas targeted include automobiles, aviation, machinery, maritime, robotics and railway equipment, as well as electric vehicles, information technology and medical devices.

The strategy has generated huge controversy abroad, not least because the policy sets specific goals for raising the market share of domestic companies in many industries. It also makes clear that Made in China 2025 is designed to prepare the ground for Chinese tech companies to enter global markets.

If the policy achieves these ambitious goals, it would certainly impact other advanced economies, though calling the policy an "existential threat" may be stretching it. The reality, however, is that China is still a long way from taking the lead in most of these industries.

Zhang Jun, Dean of the School of Economics at Fudan University, has pointed out that the industries targeted by Made in China 2025 are precisely the ones in which China lags furthest behind the West.

"There is a big difference between applying digital technologies to consumer-oriented business models and becoming a world leader in developing and producing hard technology," Zhang wrote for Project Syndicate in June.

"China probably remains 15-20 years away from matching the R&D input of, say, Japan or South Korea," he added. "When it comes to output—the more important factor—it is much further behind."

A demonstration of the challenges China faces is the aviation sector, where Shanghai-based aircraft maker Comac remains far behind industry leaders Boeing and Airbus. Comac has been developing a long-haul jet, the C919, since 2008, and the plane is due to go into service in 2021, though experts expect it will be delayed until 2024. The jet is built using Western original equipment manufacturers' systems acquired through joint ventures, and only around 50% of the components are made by domestic suppliers.

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>
> Zhang Jun
> Dean of the School of Economics
> Fudan University

"The Western JV partners typically didn't bring their latest technology into China, meaning that if the C919 goes into service after 2024 it will be well behind its time, with technology from the 2000s," says Jonas Murby, Principal at aviation consulting firm AeroDynamic Advisory.

Doubling Down

All this means that moving toward technological self-reliance, as President Xi is calling for, will be slow and painful for China. However, the realities of the US's hardened attitude will force Beijing to do everything it can to fast-track this process.

"The trade war will push China to double down, especially as the ZTE case showed policy makers that the very company at the forefront of Chinese technology innovation was incredibly vulnerable to foreign action," says Marro.

At the same time, Beijing is doing everything it can to avoid having China's access to foreign technology further choked off. China recently moved to please Germany by weakening the country's joint venture rules, allowing BMW to become the first foreign automaker to take a 75% stake in its Chinese production business.

Xi has also become more vocal in pledging to increase protections for foreign firms' intellectual property. This is a move obviously designed to counter Trump's accusation that China is stealing America's trade secrets.

China is taking steps to do this by reorganizing its State Intellectual Property Office to bring it in line with international practice. It will no longer merely act as a patent office but will also be responsible for managing trademarks and geographical indications of origin.

Whether this is enough to appease China's Western partners remains to be seen. But one thing is certain: on this issue, the balance of leverage is with Washington.

Finding the CEO in You

Elena L. Botelho, co-author of best-seller *The CEO Next Door* and a partner at leadership advisory firm ghSMART, explains why people misunderstand what it takes to get to the corner office

Many people aim to climb the corporate ladder even though the responsibilities of a CEO are immense, and their failures can be embarrassingly public. What does it take to become the CEO of a top company or simply advance to your full potential professionally?

Endless business magazine profiles and hagiographic biographies reinforce the tropes of the corporate high-flier: charismatic, manically committed, out-of-the-box thinker. It all suggests that unless you can measure up to Richard Branson, do not even bother applying. But Elena Botelho says that conventional wisdom and larger-than-life public profiles are misleading.

For more than 10 years, Botelho has led a study into what it takes to get to the top and succeed called the CEO Genome Project, working with ghSMART's database of 18,000 C-level executive assessments and 13,000 hours of interviews. Her conclusion, as she and co-author Kim Powell set out in their book, *The CEO Next Door*, is that "much of what we hear about who gets to the top, and how, is wrong."

In this interview, Botelho shares the four behaviors that differentiate successful CEOs and can help anyone accelerate their career.

Q. In* The CEO Next Door*, you say that conventional wisdom about who makes it to the top is incorrect. How are we getting it wrong?

A. We think we know the leaders of today. We read about them in the paper, we see their presences online—they are very much in the public eye. But in fact, what we know about them is only skin deep. We have access to their public profiles, and we are fed representations of them so they either get idealized or get demonized. I believe that power always fascinates, but does not attract a great deal of fact, so leadership is often shrouded in myths such as "to be a successful leader, you need to be a charismatic extrovert."

However, when we looked at the data that we collected that idea falls apart. Seventy percent of CEOs did not set a goal to become a CEO until much later in their tenure, which is great news for those currently at different levels in their careers. Surprisingly, the data also revealed that charismatic extroverts did not have any performance advantage over other personality types. There are in fact many introverted leaders that have built up a tremendous followership.

Conventional wisdom is dangerously wrong as it causes the wrong leaders to be chosen for top roles. Even more damaging is that it causes many talented future leaders to assume that top leadership ranks are not for them because few people see themselves in these larger-than-life, picture-perfect images.

Q. The creation of the CEO Genome Project database was no small feat. How did it come about?

A. ghSMART has been in the leadership advisory business since 1995. Leading industrial boards and CEOs rely on our firm to help them select, groom and coach potential leaders. So, all data used in the book and in our research is data from companies we worked with and the same data our clients relied on to make key decisions. We are able to help companies predict a candidate's performance with about 90% accuracy.

For every executive recorded in the data set, we have a minimum of six hours' worth of data and analysis on their entire career, their behavior, the results they have achieved, their motivations and the career choices that they made. In some cases, it is supplemented with predicted data on the executive as well. So, the depth of that data is unique, while most leadership research or research on CEOs is limited to the public profiles of Fortune 500 CEOs.

The breadth of the data is distinctive as well, as it covers many companies of various sizes, in every industry code. Our data set is more heavily focused on companies in the United States, but about 15%-20% of it has been sourced from international teams.

Q. The book argues that the key to becoming a successful CEO is following four behavioral traits. What are these?

A. An easy way to remember them is through the acronym DARE. "D" stands for decisiveness, "A" stands for adapting proactively, "R" for relentless reliability, and "E" for engaging for impact.

The interesting thing about decisiveness is that we imagine successful CEOs to be able to make better-than-average decisions. We assume that it is about quality—that they are able to be more exact in their decision making that others. What surprised us when we ran the analysis of the data was that what really sets CEOs apart is the speed of their decision making. These people are often quick to make decisions, often from a young age.

When it comes to adapting proactively, many assume that strong adapters are just those that have a natural talent for predicting what the future holds. What is interesting is that when we assessed CEOs on how adaptable they are, one of the features that set them apart was that they were willing to let go of the past even while it was still profitable. There are a lot of companies that do not adapt, precisely because their human habits or business processes are linked to the old way of doing business, and so they allow themselves to become obsolete. The leaders who stood out for their proactive adaptability were those who were willing to challenge themselves before it was too late.

We have had about 17,000 people take an online self-assessment tool used to assess these four behaviors, and reliability has consistently been the lowest scored behavior. So, while being reliable may sound simple, it is actually hard. These four behaviors are associated with high performance, and what's fascinating is that only reliability can double your chances of getting the job. It is therefore arguably the most powerful behavior, and one that we can all improve on.

Finally, engaging for impact is about asking yourself who your stakeholders are, engaging with them and asking how you are going to work with them to move your enterprise toward the objectives that you have. Leadership is about getting results—not necessarily being liked.

Q. Do you think the keys to success as a CEO are changing due to shifts in technology?

A. I would say that technology is improving transparency but also increasing noise levels, which affects how a leader performs. In the book, we give the example of how United Airlines mishandled a passenger. In the past, only other passengers would have witnessed it. But now, in an instant it is transmitted to the entire world, leading United Airlines to lose nearly $1 billion in market value as a result. Improved transparency also creates a higher bar for leaders, so that they must be even more decisive, adaptable, reliable and able to engage in the right way.

At the same time, technology can better support these behaviors. CEOs today have faster, more insightful tools to

> **We imagine successful CEOs to be able to make better-than-average decisions. But what really sets them apart is the speed of their decision making**

> Seventy-five percent of CEOs we interviewed admitted their number one mistake was not ensuring they had the right team around them

support their decision making and better processes and technology to rely on to build an organization. Technology is raising the stakes. Boards expect CEOs to be technology-savvy no matter the industry.

Q. What common mistakes do CEOs make that harm their performance?

A. One of the common pitfalls that leaders at every level struggle with is ensuring that they have got the right team around them. CEOs must consider how well their team is spread out to achieve the objectives that have been set. It is important to not just accept the team as is, but to think about what skills are needed to deliver on the organization's expectations. Seventy-five percent of CEOs we interviewed admitted that their number one mistake was when it came to this.

Q. What advice would you give an ambitious MBA student on how they can quickly climb the career ladder?

A. I would recommend them to excel in their current role and to start practicing the four behaviors. To consistently excel reveals reliability. Be someone that everyone can always count on and great things will happen.

In the book, we talk about three sets of career accelerators, which helped leaders become CEOs faster than average. The book explores three career catapults that all involve risk-taking. It is natural to be afraid to make a mistake, but it is important to not only deliver results, but to have the visibility that is needed to move up quickly.

Q.* The CEO Next Door *says that for people looking to advance their careers, "sometimes it is better to go small in order to go big." Could you unpack what you mean?

A. "Go small to go big" is one of the three career catapults. When we analyzed CEOs that got to the top faster, about 60% had an experience in their career that at the time looked like they were taking a step backward. An example is someone leaving a headquarters job at a big-name company to run an underperforming division, or someone that was given an HR function that was not considered a high-pedigree role.

Typically, these roles come up because there is a problem that needs solving. They may look unglamorous, but they provide a degree of freedom to step up and take a greater level of responsibility. That is why these "go small to go big" catapults are so effective, because in a smaller environment you often have a bigger opportunity to prove yourself at an early age.

Q. Are there people that you would recommend not to pursue the corner office?

A. Being a CEO is not for everyone. There are many ways to have tremendous impact on the world. If you do not like to be counted upon by others, then being a CEO is not for you. Leadership is really about others counting on you to take them places that they would not manage on their own. While the position may look like it is the main person in charge all the time, their role is ultimately about being responsible toward others. If the primary motivation behind being a leader is for personal advancement or a sense of glory, it will be a painful task to accomplish.

Q. Did your research reveal differences between male and female executives in terms of the career paths or the behavioral traits that they display?

A. What we found in our research is that when comparing candidates that have equal levels of capability, women were less likely to get the job. We also found that the four behaviors apply across genders. If you look closely at a leader's style, there is often a greater difference between how two male or two female leaders lead than the difference between leaders of the two genders. While women may go about things differently or while it may look different, fundamentally high-performing female or male CEOs are highly-decisive, adaptable, reliable and engage for impact. It is important to note that women and minorities do face unique obstacles on their way to the top, including higher hurdles and challenges. In the book we touch on some of these and ways to overcome them.

Q. Where do you plan to take your research on executives next?

A. Our focus now at ghSMART is to use the results with boards and CEOs, to allow for its full impact. CEOs and boards bring us in to help them get full benefit from the lessons in the book. We want to help leaders become even more successful in their organizations. In terms of future research, we will also be doing further analyses on women.

BLOCKCHAIN CHICKEN

Can blockchain technology fix China's food safety problem?

By Timothy Ang

A decade on from the 2008 tainted formula scandal, food safety remains the number one concern for China's consumers. Could blockchain technology be the key to bringing transparency to the country's scandal-ridden food industry?

On a remote farm nestled deep within the mountainous region of Daozhen, in China's southwestern Guizhou Province, thousands of chickens are being watched very closely.

Aided by surveillance cameras and distance-tracking ankle tags, every step, meal and sip that the chickens take inside their free-range paddock is uploaded in real time to an online platform. The Guizhou farm, along with hundreds like it across China, is part of GoGo Chicken, a program that gives consumers a direct data trail from egg to plate. Launched by the technology arm of online insurer ZhongAn in 2017, it aims to boost transparency in China's food supply chain.

The technology behind GoGo Chicken is blockchain—decentralized digital logbooks that record data, such as the many steps in a complex supply chain. More and more companies, including e-commerce giants Alibaba and JD.com, are developing blockchain-based supply chain solutions in a bid to shore up customers' trust in the source and contents of their products.

In China, where public confidence has been damaged by a string of high-profile food safety scandals in recent years, consumers are willing to pay a high premium for peace of mind. GoGo chickens sell for RMB 238 ($35) each.

"China is *the* best place to apply blockchain to solve food safety issues, says Billy Chan, CEO of DropChain, a blockchain solution startup. "The scale of the food industry, combined with the country's general tech readiness, is making this an exciting space to watch."

In the Shadow of Sanlu

Chinese companies have good reasons for embracing new supply chain solutions. Despite significant investment by government and firms in recent years, public trust in the food industry remains close to rock bottom.

According to an annual survey run by Tsinghua University and *Xiaokang* magazine, food safety has ranked as the number one concern among Chinese citizens for the past five years, topping environmental pollution, social security and medical safety.

To a large extent, China is still dealing with the legacy of a devastating safety scandal in 2008, when six infants died and 300,000 others were hospitalized after drinking milk formula contaminated with the chemical melamine.

The scandal encapsulated the chronic issues plaguing the Chinese system. Poor technology, huge pressure to cut costs, inadequate regulation and local corruption combined to create the conditions for a huge crisis.

Staff at dairy company Sanlu Group added melamine to raise the protein level of the formula to comply with government standards. The firm's senior managers then colluded with officials to cover up the scandal for weeks after becoming aware of the contamination.

"Had the technical capacity of the domestic industry been up to par with global competitors, the issue wouldn't have occurred," says Paul O'Brien, Regulatory Analyst at ChemLinked, a consultancy that focuses on China's food and chemicals sectors.

Beijing has taken real steps toward cleaning up the food industry in the decade since. In 2013, the government created China's first ministerial-level food safety authority, the China Food and Drug Administration. This was merged into the State Administration for Market Regulation in 2018.

The new body has streamlined China's dense food safety regulatory framework, cutting thousands of overlapping standards. "The mess of the previous system stymied rational enforcement and hindered industry compliance," says O'Brien. "Now, it's more coherent, but finishing this reform campaign is vital."

Private companies have gone to great lengths to shore up their own safety standards. After KFC was accused of using chickens from suppliers that had injected birds with high doses of growth hormones and antiviral drugs in 2013, the fast-food chain's parent company, Yum China, culled over 1,000 suppliers from its network. It also made huge land purchases to establish its own network of farms.

But much work remains to be done. China currently ranks 46th on the Global Food Security Index, which is produced by *The Economist*. There are also vast areas of the country where enforcement of regulations remains inadequate.

"There is a huge disparity between the capacities of authorities in the top-tier cities in the East, and the third- and fourth-tier cities in the West," says O'Brien.

Meanwhile, fresh scandals continue to emerge, further denting consumer confidence. In July, parents across the country erupted in anger when a major drug producer, Changchun Changsheng, was found knowingly to have issued 250,000 sub-standard child vaccines.

Consumers have become so sensitive to food scandals that it has even spawned a fake news industry devoted to spreading "food rumors" on social media in order to drive web traffic. In 2017, a bogus video claiming that snack makers were making "fake seaweed" out of plastic bags caused the wholesale price of seaweed to tumble 50% within days.

Workers prepare to destroy melamine-tainted milk powder in 2008. The scandal still casts a shadow over China's food and beverage industry

Backing Blockchain

Blockchain evangelists believe that they can bring the transparency and trust that consumers and retailers crave to China's food industry.

Companies have been using track-and-trace technology to oversee their supply chains for decades. But the systems are far from perfect. Each member of a supply chain normally only has access to data from its immediate supplier or customer. This means that if a problem emerges, it can take a company days or weeks to identify the source, especially in a large global supply network.

Blockchain has the potential to solve these issues. "There are three key elements of blockchain technology that are going to separate blockchain-based supply chains from traditional supply chains: immutability, traceability and transparency," says Chan, of DropChain.

The journey of a product can be monitored in real time via blockchain. The system is also neutral, rather than being controlled by a central intermediary. When a new "block" of information is entered onto the shared ledger, it first needs to be cleared by the parties involved. Once cleared, the block is stored forever and cannot be altered. This makes it much more likely that issues will get flagged quickly.

"Imagine it like this: a group of people record some data and they all compare their findings with one another," explains Tomaž Levak, a co-founder of Origin Trail, a blockchain startup. "If there is a discrepancy in one person's data, this will get spotted by everyone else and it will get rejected or corrected."

Beijing has become an enthusiastic backer of blockchain. Developing the technology was included in China's 13th Five-Year Plan, along with other emerging fields such as artificial intelligence. The government has invested more than $3 billion in blockchain projects in 2018 alone, and is encouraging local authorities to establish their own initiatives.

China tops the global leader board for new blockchain patents. Chinese firms and institutions filed 225 of the 406 successful applications worldwide in 2017, according to the World Intellectual Property Organization, compared with 91 by the United States.

The government's attention has created a bandwagon effect, with firms scrambling to be tied to what has been called "the next generation of the internet." According to database site Qixin.com, over 3,000 companies with "blockchain" in their name registered in the first half of 2018, a sixfold increase from the year before.

"We've seen an amazing number of small firms start to build models based on blockchain, knowing that sourcing funds will be a lot easier if you have that buzzword somewhere in the description," says Zennon Kapron, CEO of consultancy Kapronasia.

Many of China's retail heavyweights are also pushing blockchain aggressively. Alibaba Group, which accounted for 10% of global blockchain patent filings in 2017, is piloting a tracking system in New Zealand called the Food Trust Framework in partnership with Fonterra, a dairy giant, and Blackmores, a health supplements maker.

Rival e-commerce player JD.com has launched several blockchain-focused research laboratories. The JD Open Blockchain Platform went online in 2018 and helps customers develop their own blockchain solutions. The firm is also using the technology to track all sorts of products, from diamonds to sea cucumbers. It even has a competitor to GoGo Chicken.

Foreign companies are increasingly playing a role too. In early 2018, Walmart and IBM began logging pork and mango shipments to China via blockchain as part of a collaboration with JD.com and Tsinghua University. A second pilot is being rolled out for the US market.

"There is a lot of convergence between China and the US," says Žiga Drev, also a co-founder at Origin Trail. "China wants to learn from the US, and we have seen a lot of American food safety experts come to China to educate Chinese officials on how to properly regulate food products."

Missing Links

Though many operating in the space are bullish about the future of blockchain-based supply chains, the industry still has a long way to develop.

Mitchell Weinberg, founder of food-fraud investigation company INSCATECH and a blockchain skeptic, warns that the technology still cannot accurately trace products that are chopped up or blended. This is a significant drawback given that so many food safety cases involve drinks or added ingredients.

The supply chains of many agricultural goods begin from hundreds of small farms, which pass on their products to middle-men nicknamed "coyotes," Weinberg explains. They are then taken to a processing station, to be juiced or ground down, for example, before continuing on the supply chain. Blockchain solutions are not currently able to track such a complex system.

As a nascent industry, China's blockchain industry is still a Wild West for new projects. The average life span of a blockchain startup is around 15 months, with over 90% of projects failing, according to the China Academy of Information and Communications Technology.

"Nothing you build is future-proof. The technology is always updating," says Chan. "Whatever system you create today is going to be outdated by tomorrow."

Despite the flood of companies labeling themselves blockchain startups, the scope of the technology is still poorly understood, according to Levak and Drev of OriginTrail.

"Many of our clients have an 'I'll take one blockchain, please' mindset," says Levak. "Only once those on the industry side fully understand not only the benefits of blockchain, but also its limitations, does the value kick in."

The industry is also facing new regulations published by the Cyberspace Administration of China in October. The rules require all blockchain service providers to register with the CAC and take responsibility for their users' data and identification.

"The rules will likely put too great a pressure on smaller blockchain startups, concentrating control in the hands of larger competitors and the government," says Robert Van Aert, founder of China Blockchain Partners. "The eternal irony with China is that it wants to be a leader in innovation, but is reluctant to give the freedom to let this happen."

"Businesses that are using blockchain for harmless purposes, such as tracking inventories across their stores, will face the choice of just working on existing databases or take on blockchain but have more dealings with the government," says Kapron. "There are alternatives to blockchain to deliver on a business's needs."

> Food production has to be policed, and it has to be policed by human beings
>
> Mitchell Weinberg
> Founder
> INSCATECH

Others believe the momentum is too strong to be stalled by the new regulations. Chan, of DropChain, agrees that startups will have "more headaches," but insists that blockchain will march on, though in a different direction to the industry in the West.

"It's much like the internet: China has decided to go its own way in how it operates the internet within its borders," says Chan. "They're doing the same thing with blockchain—using greater accountability to the government to build an isolated ecosystem."

But most experts admit blockchain will not be a panacea for China's food safety issues. The technology, once matured, may offer an additional tool for necessary verification measures. But this needs to be backed by firmer enforcement of existing regulations.

"By adding more layers with which you can cross-check data, you slowly chip away at the potential for human error or bad actors," says Levak. "If you attach forensic results, such as DNA analysis, on top of this, you not only have a consensus check between points on the supply chain, but also between auditors and laboratories."

"China needs to view food fraud as the crime that it is, and start holding food producers within its borders to a higher standard," stresses Weinberg. "Food production has to be policed, and it has to be policed by human beings, just like any other crime."

For now, at least, it looks like China is still testing the waters regarding blockchain's wider applications. Most analysts believe that it will be another year or so before the first attempts to use blockchain in supply chains go large-scale, and several more until it is applied industrywide.

"The technology is not mainstream yet," says Drev. "The existing companies are breaking the ice for smaller companies to follow. The true 'Year of the Blockchain' will come when we're no longer hearing about it. We'll just see it adding value to our everyday lives."

RISING TO THE TOP

How Chinese women are breaking the glass ceiling in the male-dominated tech sector

By Lu-Hai Liang

Image by José Luna

Gender inequality remains a serious problem in China, and by some measures it is getting worse. Yet, there are more women running major technology companies here than in almost any other country

When Sarah Zhang left her hometown in central China to begin a master's degree in information technology in Australia, the 30-year-old remembers being shocked by the lack of diversity among her classmates.

"In the graduation photo, there are whole rows of boys, and in that year, there were only a few girls," Zhang recalls. "In Zhengzhou, it was more balanced—around 30% girls, 70% boys."

When she went on to work for Google, first in Sydney and then in London, it was the same. "In the London office, I brought the diversity level of my team up from 0% to 14%. I was the only female, the youngest and Asian," she says.

Zhang decided to return to China after her time in the United Kingdom and has now been working for ByteDance, one of China's most valuable tech companies, for eight months, where she says there are several more women on her team.

Many Chinese women share Zhang's experience. Despite its apparent disadvantages relative to the West, multiple studies have found that more women in China are getting into tech—and rising to the top—than almost anywhere else.

A study conducted by Silicon Valley Bank on around 900 of their clients across China, the United Kingdom and the United States revealed how women currently fare in leading positions. When asked about the number of women that held C-level positions in their respective companies, 54% of US companies and 53% of UK companies answered "one or more," while an impressive 80% of Chinese companies had the same answer.

In the venture capital scene, it is even more extreme, as *Bloomberg* reported in September 2016. According to their numbers, among the top firms in the US, women make up 10% of investing partners and only half of the firms have any female investing partners at all. In China, 17% of partners are female and a stunning 80% of firms have at least one female investing partner.

This reflects a wider trend of Chinese women breaking into the business elite—and amassing vast fortunes in the process. In the latest Hurun Global Self-made Women Billionaires List, Chinese women made up two-thirds of the total.

"About 30% of the most successful male entrepreneurs in the world are Chinese, [so] Chinese women entrepreneurs are twice as 'successful' as their male counterparts," said Rupert Hoogewerf, Chairman at Hurun.

Chinese women also led the pack on the Forbes' World's Self-Made Women Billionaires List, taking up 37.5% of the list.

Holding Up Half the Sky

These findings are all the more remarkable considering the stark social and economic differences that separate China and much of the English-speaking world. Zhang's home province of Henan, for example, has a per capita gross domestic product (GDP) of just $7,000. That is seven times lower than the level in New South Wales, where her university was located.

Despite Mao Zedong famously proclaiming that women "hold up half the sky" more than half a century ago, traditional gender roles continue to exert a strong influence in many parts of the country. Lots of young girls still grow up learning the old Chinese saying that "it is better to marry well than study well."

These old-fashioned attitudes often bleed into the workplace too. A survey in 2015 by the state-run All-China Women's Federation found that 87% of female university graduates experience discrimination when seeking employment.

Hiring practices are often a sexist affair. Job ads in the country routinely request the applicants' age, gender and marital status, while some require women to have certain physical attributes in relation to height, weight, tone of voice or appearance.

A recent report by non-governmental organization Human Rights Watch found that the state wasn't exactly leading by example either, with one in five job advertisements for China's national civil service in 2018 called for "men only" or "men preferred."

Samantha Kwok, founder of the Beijing recruitment firm JingJobs, told Reuters that clients often provided her with two job descriptions: one to be shown to the public, and an internal one with detailed requirements regarding age and gender. "They already have a very set candidate profile in mind," she said.

Chinese law has made discrimination against women illegal, but there is no set definition of what constitutes discrimination. As a result, the law is rarely enforced.

Though generally more progressive than traditional industries, the tech sector has also faced several discrimination scandals. E-commerce giant Alibaba recently got into hot water for publishing job ads promising male programmers the opportunity to work with "beautiful girls."

Social media and gaming powerhouse Tencent, meanwhile, sparked a backlash last year after videos emerged of a company event in which female employees were encouraged to unscrew bottle caps held between their male co-workers' legs using their mouths.

Struggling Against the Tide

Yet, despite all these obstacles, many women are attracted to the relative freedom of China's startup scene, where getting the job done matters more than the presence of a Y chromosome.

Wang Lijuan, 33, began her career in a coal company in the north-western Rust Belt province of Shaanxi before moving to Shanghai. There, she moved into the tech sector, before going on to found a startup providing customer-relationship management software. The culture in this space has been a breath of fresh air, she says.

"Many companies view women as unemployable because of things like possibly having to give them maternity leave, but you enjoy more freedom in the startup world," says Wang. "They don't have much money, so they welcome anyone who can help. It's more open."

She says a lot of women entrepreneurs are attracted by the relative lack of discrimination in the industry.

Many women have followed a similar path to Wang by setting up their own businesses. According to the State Council, more than 55% of tech startups have female founders, compared to only 22% in the US.

Other studies have disputed that finding. One study by tech firms Netease and IT Juzi claimed that just 16% of tech startups in China were founded by women. But there is plenty of anecdotal evidence to suggest that the number of women getting into tech—whether as a founder, coder or executive—is high even compared to developed nations, let alone countries with a similar income level.

For Diana Kam, a Singaporean who has spent 12 years in China and is a board member at AngelVest, a Shanghai-based angel investment group, it is "absolutely apparent" that there are more women in tech in China than anywhere else.

For Kam, the sheer dynamism of the startup world here makes it easier for women to take the plunge. "No other country can compete in terms of how quickly ideas can be generated and executed," she says.

Jill Tang, co-founder of Ladies Who Tech, a network that supports female tech workers, agrees. "China is a relatively easy place to start something yourself; it's cheaper to fail here than anywhere else," she says. "China is doing better compared to the US in this area, for sure."

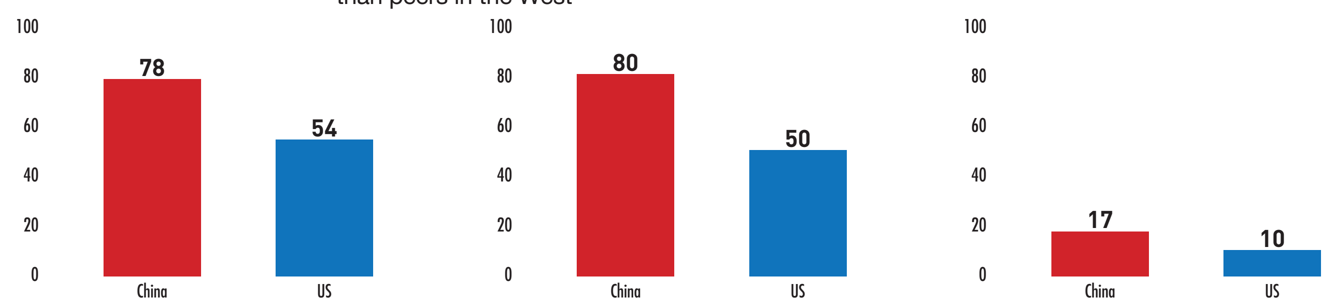
Chinese women also benefit from a much wider pool of role models than their peers in the US, where Facebook Chief Operating Officer Sheryl Sandberg remains a lonely figure.

By contrast, a number of China's most famous companies are run by female CEOs. Jean Liu helped ride-hailing giant Didi Chuxing run Uber out of China, while Jane Sun has built Ctrip into one of the largest online travel firms in the world. Peng Lei was a co-founder of Alibaba alongside Jack Ma, before taking over Southeast Asia's largest e-commerce firm, Lazada.

Many experts have pointed to the legacy of communism as an unlikely factor contributing to the number of women setting up companies and breaking the glass ceiling.

Chinese women hold up more than their fair share of the sky—women are typically expected to be the main care-giver and domestic worker, as well as holding down a full-time job—while receiving a smaller slice of the financial reward. However, an upshot of this pressurized culture is that China has one of the highest female labor force participation rates in Asia, with 61% of women in employment, according to the World Bank.

RISING HIGH | Women in China's tech industry are finding more opportunities to attain the top jobs than peers in the West



Tech firms with "one or more" woman in a C-level executive role (%)

Venture capital firms with at least one female investing partner (%)

Percentage of female investing partners at VC firms

Source: The Atlantic, Bloomberg

LEADING LIGHTS | Women are driving change in many of China's most high-profile technology firms

Peng Lei
A co-founder of e-commerce giant Alibaba Group, Lei recently became head of Lazada, Southeast Asia's top online retail platform, which is backed by Alibaba

Cindy Mi
After completing her MBA at CKGSB, Mi founded online education startup VIPKID, which is now valued at over $3 billion

Anna Fang
Fang is the CEO of ZhenFund, China's leading early-stage venture capital fund with more than $3.5 billion of assets under management

Liu Qing
Liu is the president of Didi Chuxing, the world's second-largest ride-hailing firm, and a former COO of Didi Dache

Jane Sun
Sun has been a leading executive at China's largest online travel firm, Ctrip, since 2005, taking over as CEO of the company in 2016

Then there is the legacy of the one-child policy. This was a disaster for women's reproductive rights but had the unintended consequence of making parents focus their resources and expectations on their only daughters. As Mei Fong points out in her book, *One Child: The Story of China's Most Radical Experiment*, 30 years on from the introduction of the policy women made up half of master's degree students in the country.

Tang, of Ladies Who Tech, also believes that the controversial policy has led to more women getting ahead. "If you have a daughter, you can only support her," she says.

Carrying on the Fight

An increasing number of Chinese women are becoming conscious of the collective challenges that women in the tech industry are facing, as well as the potential that women and a more gender-diverse industry have. This realization has inspired many to establish organizations and start initiatives centered on supporting women and promoting gender equality in the workplace.

Ladies Who Tech, which Tang founded on International Women's Day in 2017, is one such organization. They aim to challenge the status quo in the tech sector by encouraging more women to discover their potential in science, technology, engineering and mathematics (STEM) careers.

The enterprise now boasts a network of around 10,000 women from all over the country. "We are the largest and first women's platform focusing on STEM in the country," says Tang.

"We are not an incubator, nor a source of funding," Tang clarifies. "Our priority is in ensuring a gender-balanced ecosystem, fair socio-cultural norms and making role models more visible."

The #MeToo movement has also played a role in helping women realize the power they have in numbers and that sexism was in fact a widespread issue, despite the widespread censorship activists face.

"There is no industry where this isn't happening. These are not isolated cases," Yi Xiaohe, a Shanghai-based producer who accused a well-known journalist and commentator of sexually harassing her in 2011, told *the Guardian*. "A single spark can start a huge fire."

Tang aims to provide more opportunities to women in the future. "It's a great era for women to shine," she says. "We need to include more women in full-time jobs, and to shift them toward higher productivity work. If they choose family over work, but the company has a flexible working policy, they will still be able to produce more. They need more flexibility."

Many of the companies that have recognized the benefits that women can bring to the bottom line are reaping rewards, which will hopefully grab the attention of other industries and cause them to follow suit as well.

Jessica Lam, a Canadian who runs air quality monitoring technology firm Kaiterra in Beijing, is one business owner that has seen the benefits of having a diverse team. Sixty percent of Kaiterra's leadership team is female, and Lam says that this greater mix of voices has been crucial to the company's product development.

"Diversity does help," she says. "With more different backgrounds, it makes for a product that's more globalized and doesn't ignore a certain customer base."

The Chinese tech industry is setting a higher bar when it comes to gender diversity in the workplace, which matters more now than it did several years ago, as companies in the sector are now competing internationally. For new concepts and female role models, perhaps it is to the East that people should turn.

For Tang, the tech industry presents women with more opportunities: "In the past women had to stay at home. But now, because of technology, women can do anything, anywhere."

Standing Up for Women

Dame Barbara Woodward, British Ambassador to China, explains how the UK and Chinese governments are working together to promote gender equality

By Liu Sha

When Dame Barbara Woodward was named British Ambassador to China in February 2015, she became the first woman ever to hold this position. Conscious of her status as a trailblazer and role model, Ambassador Woodward has made a special commitment to promoting gender equality since assuming office.

A key part of this effort has been the launch of the UK Government in China's Be Yourself: Pledge for Progress campaign, which encourages British and Chinese companies to take practical action to promote gender equality in the workplace. Fifty companies have already joined the campaign so far, including Ctrip, Deloitte and Lloyd's China.

In this interview, Ambassador Woodward discusses the purpose of the campaign and the pledges companies have made so far.

Q: What inspired you and the embassy to launch the Be Yourself: Pledge For Progress campaign?

A: As you know, the UK has a strong tradition of gender equality. We had strong queens as role models and our second female British Prime Minister Theresa May. We've now got 29% of our board members being female, and that's a high representation. That's all very good, but there's still so much more to do.

What we wanted to do was build on the work that we've done in our Be Yourself campaign in China over the last few years, which is generally focused on encouraging women to realize their career and personal aspirations. This year with Pledge for Progress, we have put a specific focus on the business environment. Drawing on our experience in the Foreign Office, the UK's foreign ministry, we realized that having specific targets and quotas can help, but pledging to take specific actions is what really makes a difference.

So, with Pledge for Progress, we have specifically encouraged companies to look at their own company, at what they're trying to achieve, and to make a very specific pledge for their own business. Everybody shares the umbrella of being part of Pledge for Progress, but this allows the company to take a specific step forward to encourage and promote gender equality.

Q: How much progress has been made on the campaign so far?

A: We've already had 50 companies pledging for progress and another 20 are lined up. We've held a number of events around Pledge for Progress to encourage people to sign up. I've been very impressed by the pledges, around flexibility in the workplace, commitment to training, commitment to proportions of women in various cohorts of a company's activities. We've had pledges that will impact huge numbers of women. Ctrip, for example, is part of the campaign, and its 15,000 employees have been affected. I hope that will have a knock-on effect as well.

Q: Why is the campaign titled Be Yourself?

A: The whole point about the campaign is that we want to encourage women to realize their own ambitions and their own dreams. We are not prescribing what women should want to do. Anything is fine, so long as they feel they have the space and the support to do that. So that's why it's called Be Yourself. It works in English. And of course, it works in Chinese.

Q: What are the obstacles for women to be themselves?

A: I think there are a range of internal and external obstacles, and many of them probably aren't too different from obstacles that men face too. But I think women face them more strongly. Of course, Sheryl Sandberg has encouraged us all to "lean in," which is thinking about the ambition that you have as a woman and making sure that you aren't self-censoring that ambition, because of what you think about your own abilities or what you think others expect of you. So, there are strong internal obstacles for us to overcome.

But then, of course, there are external obstacles. Some of them are culturally and historically dependent. Women can be expected to hold certain roles in society as caregivers, homemakers and caring for elderly relatives, caring for children, supporting a husband or spouse in their own career, or just in their lives, feeling that they should be subordinate to other people. So, it's quite important to be able to challenge and change some of those societal expectations as well.

Q: With so many companies joining the campaign and making the pledges, how do you make sure they fulfill their promises?

A: The Pledge for Progress campaign is not a police force. We think the companies are inspired and reliable. And when we talk to them about their pledges, it's clear that they are not making pledges simply to get a headline or something like that. It's something that they genuinely want to do to make a difference. And of course, I expect some companies will overachieve on their pledges because they'll get momentum.

Some companies made ambitious pledges, or pledges where it will take time to see the results. One company has pledged, for example, that half of the graduate engineer recruits will be women. Now, that's a great pledge, but actually we won't see the results of that until the program is finished. We're not policing it. But what we're trying to do is provide support and encouragement to companies to realize their pledge and get ideas from other companies.

Of course, some pledges will take time to see through. It's not about achieving results purely in the six months of the program, but about helping to catalyze a long-term change toward gender equality.

Q: What kind of help can companies get from the British embassy in terms of realizing their goals?

A: The idea of the campaign is that we provide a platform for experiencing and sharing best practice. We don't ourselves have all of that best practice. And we've learned a lot from working with the companies. But by providing a platform, we hope that we can catalyze change. We've organized a number of supporting events to allow people to share ideas, come together and discuss particular challenges along the way. And then we've tried to link everything up. For example, there is our Inspiring Women program, which starts in primary school and middle school to help change attitudes towards careers for women.

So, we hope that we are making a contribution both here in China and in the UK and internationally to promoting gender equality and overall economic growth.

Dame Barbara Woodward speaks at the 2018 Women in Leadership Forum co-hosted by CKGSB and UN Women in November

Q: You are the first woman to serve as the UK Ambassador to China. How do your efforts on this campaign relate to your personal working experience?

A: I was very honored to be appointed Ambassador to China, and lots of people pointed out to me that I was the first woman to hold the role. So, when I came here, I made a personal commitment that I would commit to working on gender equality in addition to all of the other many things we do in the United Kingdom-China relationship.

I have made a particular commitment to gender equality because I think people see me as a role model in that area. And it is an important area. I hope I can make a personal contribution. But I've been hugely supported by my colleagues in the embassy, who have taken up and supported the campaigns that we've started with great energy.

Q: How important is it for China and the UK to collaborate on projects to empower women?

A: I think it's hugely important that we collaborate on these projects. First of all, because we are two big economies, and a lot of that growth has already been powered by women.

But because of the gender pay gap, there are trillions of dollars at stake if we cannot move to equality of gender pay. Our economies are structured quite differently. So, we've seen, for example, a strong surge of women coming through in business in China as role models, while in the UK we've had to work much harder to achieve that success. On the other hand, in the UK we have probably had more successful female politicians in the very top jobs than we've seen in China.

So, we've got huge scope to learn from each other as we take our economies forward. I think it's really valuable for us to collaborate at government level and have policy initiatives. That's why we have a memorandum of understanding with the All-China Women's Federation. It's valuable for our businesses to collaborate as well as have people-to-people collaboration, which offers chances to talk about these issues and share best practice. I think that's valuable.

RETAIL REVOLUTION

Can facial recognition transform China's retail sector?

By James Lord

You may not recognize the name SenseTime. But if you have spent time in China recently, SenseTime will almost certainly recognize you.

Founded just five years ago by a group of data researchers at the Chinese University of Hong Kong, the startup has rapidly established itself as China's leading provider of facial recognition technology. Its face-scanning software is used everywhere from smartphones to office blocks and police stations.

China has embraced the brave new world of biometric identification. The government is aggressively promoting the development of domestic companies in this field as part of its plan to make China a world leader in artificial intelligence (AI) by 2030.

SenseTime has been a major beneficiary of support from Beijing. In 2018, the firm was named China's fifth national AI champion, alongside Alibaba, Baidu, Tencent and voice recognition player iFlytek.

The same year, the company raised a staggering $1.2 billion from investors including Chinese e-commerce giant Alibaba Group, US chipmaker Qualcomm and international fund Temasek Holdings. It is now worth an estimated $4.5 billion, making it the most valuable AI startup globally.

As with its rival Megvii, SenseTime is generating much of its revenue through lucrative government contracts. Local authorities across China are using the company's face-scanning software to track down suspects. But the firm's influence already stretches far beyond surveillance, as Jeff Shi, Vice President at SenseTime, makes clear.

"We are trying to service more industries," says Shi. "The philosophy of our founder, Professor Tang Xiao'ou, is to empower as many industries as possible to make people's lives richer, healthier and more secure."

Though around 40% of SenseTime's income comes from the Chinese government, the company's revenue from corporate clients grew more than tenfold in the 12 months up to May, according to the firm.

The company's software is already deeply embedded into the daily lives of Chinese citizens. Bank customers verify their identities with SenseTime-powered face scanners. Live-streamers alter their appearance on camera in real time using SenseTime's technology. Similar features help Oppo and Vivo smartphone users unlock their handsets and touch up their selfies.

But the sector in which SenseTime may be driving the deepest changes is retail. In this space, the company's technology has the potential to be a game-changer.

> We have nearly 200 Ph.Ds. working for us but meeting the demand would probably require 2,000
>
> Jeff Shi
> Vice President
> SenseTime

Know Your Customer

For retailers, the key attraction of facial recognition is that it promises to recreate in-store many of the efficiencies offered by e-commerce, according to Gabriel Bianconi, founder of AI consultancy Scalar Research.

"When a customer comes onto a brand's online store, the company can see everything they do while they are browsing, while advertisers and other sources also provide a huge amount of data about who that person is," explains Bianconi.

E-commerce stores like Amazon and Taobao, run by Alibaba Group, have been able to use this data to boost sales dramatically. They can accurately target product recommendations based on a customer's age, gender, purchase history and other metrics, as well as streamline payment processes based on past user behavior.

In physical stores, however, most brands have nothing approaching this level of insight. Until recently, the best customer-monitoring solution on the market for brick-and-mortar stores was heat map technology, which tracks the number of customers and their movements inside a store.

Facial recognition allows stores to supplement this tracking data with more detailed information about each individual, according to Shi. He says the company's technology can add up to 10 data points for each face, such as age, gender, whether the person is a repeat customer and even "whether you are happy or not."

Brands can use this information to improve performance in a number of different ways—from designing stores to make it easier for customers to find items they need, to positioning promotions in areas frequented by the kind of customers they are targeting. "It's like a website—you guide the traffic to the right place," observes Shi.

Over time, these changes can boost efficiency significantly. Research firm Business Insider Intelligence forecasts that integrating AI technology will increase profitability in the retail and wholesale industry by 60% by 2035.

According to Bianconi, several leading retailers in the United States have integrated facial recognition technology into their stores for analytics purposes. SenseTime began exploring opportunities in China's retail sector in late-2017, and the company quickly found that local companies were equally keen on the technology.

"We have very limited bandwidth," says Shi. "We have nearly 200 Ph.Ds. working for us but meeting the demand for our services would probably require 2,000."

The company has had to pick and choose clients for this reason. "If you look at retail in China, there are mall owners, convenience stores, luxury brands and then large chain stores," says Shi. "For each category, I would say that at least two of the top three players are our customers.

Collecting Faces

SenseTime aims to go far beyond simply providing retailers with demographic information on in-store customers. The goal is to identify each customer's specific identity.

"With our technology, we can help retailers to connect their offline data to their online database," says Shi.

This would allow brands to see each customer's entire purchase and browsing history both online and offline, giving them new levels of insight. It would also allow staff instantly to identify VIP customers or known shoplifters when they enter a store.

Creating a face ID for customers remains controversial, particularly in Europe and the United States, where privacy concerns run especially high.

A customer pays via facial recognition at a Suning Biu store in Shanghai

According to Bianconi, the only Western retailer that is applying facial recognition in this way is Amazon, through its Amazon Go stores. The sheer convenience of its automatic payment system appears to have convinced consumers to hand over their face data, though Amazon only operates nine Go outlets as of 2018.

Alibaba Group sees huge potential for this model in China, which is why it led a $600 million Series C funding round in SenseTime in April.

"We're working very closely with Alibaba," explains Shi. "We're providing all the computer vision engines to their retail solutions. And through Alibaba, we're also servicing a lot of retail clients."

SenseTime's technology is likely to be rolled out on a large scale by Alibaba due to the way it is expanding into brick-and-mortar retail.

"In the US, brick-and-mortar retailers are mostly trying to catch up and compete with Amazon in e-commerce," says Charlie Poon, an analyst at global retail think tank Coresight Research. "The situation is different in China, where Alibaba and the other top tech giants are using a more cooperative approach."

Alibaba's strategy, dubbed "New Retail," focuses on integrating online and offline retail into one ecosystem, making both more efficient. The e-commerce company has invested enormous sums to realize this vision.

Deals have included a $4.6 billion investment in electronics chain Suning in 2015 and $867 million for a 15% stake in furniture retailer Beijing EasyHome Furnishings. Alibaba also plans to open 2,000 outlets of its Hema supermarket chain within three to five years.

Meanwhile, it is creating a vast network of convenience stores, which already encompassed 600,000 outlets as of 2017. Alibaba provides its members with access to a big data platform called Ling Shou Tong, which allows stores to gain insights into their local customer base gleaned from Alibaba's database of hundreds of millions of users.

SenseTime appears to be well-placed to support these ventures. In terms of in-store analytics, the company's technology has the potential to be rolled out rapidly, according to Shi.

"Our algorithms are quite powerful and advanced, so we don't have any specific requirements with regard to the cameras," he says. "Any generic cameras, like the security cameras already installed in stores, will work."

SenseTime is already integrating its technology into Suning's larger stores to help the retailer become more efficient, according to an announcement by the two companies at the CES 2019 exhibition in January. The company is also rolling out facial recognition payment systems that closely match the frictionless experience of Amazon Go.

Suning has launched a new chain of small stores under a sub-brand called Biu, which allow customers to pay simply by scanning their face at the exit. According to *TechNode*, the system identifies items using RFID tags rather than image recognition software, but the entire process takes just a few seconds.

The Biu stores show the potential benefits facial recognition could bring to Alibaba. Once a customer has created a Biu account, as they move around the store they receive targeted advertisements recommending products they might like to buy based on their browsing habits and past purchase history. If the items are not in stock, the customer can pay in-store and have the product delivered.

According to Shi, SenseTime is working on a similar Amazon Go-style store with a multinational client, which will use service robots that will offer customers coupons based on their previous purchases.

Changing the Culture

How successful these concepts prove to be will depend on how willing consumers are to sign up for an account with each store and hand over their face data. This may prove a hard sell in some markets in the short term at least, as Shi acknowledges.

"Many customers, especially in Europe, think we're creating a large database of face photos," he says. "But that's not the truth. Actually, we only store a map of 240 dots showing the contours of a person's face. We don't have access to the photos on our clients' databases."

The company is confident that these doubts will subside as the technology becomes normalized.

"[The resistance to facial recognition] is probably just a perception," says Shi. "Our personal credit card information, address and payment history are all stored somewhere. But some people are still saying no to storing face data."

In China, this process of acculturation appears to be moving much faster than elsewhere. This is partly due to government support, but also the result of consumers' general willingness to try new things and sign up for any service that makes life more convenient in the country's ultra-crowded urban spaces.

Ant Financial, an affiliate company of Alibaba, launched a facial recognition payment system called "Smile to Pay" in 2017. This service is now used by tens of thousands of merchants in 300 Chinese cities.

This system will become widely available in 2019, as Ant Financial recently released a major upgrade called Dragonfly. The technology is now installed in a small hand-held device rather than a large point-of-sale terminal, reducing the cost for merchants by 80%, according to *China Daily*.

Commuters in Guangzhou already have the option of entering the subway through facial recognition scanners, though some social media users have complained about potential privacy concerns. SenseTime is developing a similar system for the Shanghai metro.

There is even the possibility that China may create a national "face ID" database. Singapore announced it was creating a National Digital Identity system in October, which is designed to make it quick and easy for users to enroll in facial recognition-enabled systems. United Arab Emirates is reportedly considering a similar initiative.

Scanning the Market

These projects suggest that China will not be the only country pushing forward with facial recognition. SenseTime is already exploring opportunities in several overseas markets. In 2018, it partnered with Japanese automaker Honda on self-driving vehicle technology and jointly set up several research institutes with partners in Singapore.

> The decline in funding is hitting startups that weren't able to prove a business model to investors, but SenseTime is not much affected
>
> Charlie Poon
> Analyst, Coresight Research

According to Shi, the company has been well received in these new markets. "Surprisingly, the demand for our solutions in countries like Japan and Singapore is as high as in China," says Shi. "The concept of face ID is getting a lot of traction in Asia."

The company sees the international market as becoming an important source of revenue growth.

"Traditionally, software has been undervalued in the Chinese market," says Shi. "Although people recognize the value we provide, I have found that we could probably sell the same product for four or five times the price in Japan or Singapore."

In these markets, SenseTime must compete directly against large Silicon Valley players and retail technology incumbents like Johnson Controls. But the company feels that it already has an edge over its Western rivals.

"In terms of software, we feel that we are ahead in a number of areas," says Shi. "We have the confidence to say that because our clients overseas are free to select technology from us or the US players."

Recent contests indicate that the Chinese players' technology rivals that of US firms. In 2017, global AI companies took part in the Face Recognition Prize Challenge organized by the US National Institute of Standards and Technology. The face search competition was won by Shanghai-based startup Yitu Tech, which was able to identify one person from a database of a million images 80% of the time.

According to Shi, SenseTime's algorithms now have that capability, and the technology is evolving rapidly. By the end of 2019, the company forecasts it will be able to pick one face out of a database containing 100 million people.

Barring a black swan event, SenseTime's rise appears unstoppable. Despite a recent downturn in China's AI venture capital market, SenseTime plans to raise another $2 billion in 2019, according to *Bloomberg*.

"The decline in funding is hitting startups that weren't able to prove a business model to VCs, but those with a clearer future like SenseTime are not much affected," says Poon of Coresight Research.

The greatest risk to SenseTime appears political, rather than economic. In November, the United States Department of Commerce released a proposal to restrict exports of strategic technologies, including artificial intelligence-enabled microchips.

The move is far from confirmed and would be sure to receive pushback from American businesses. But SenseTime would be vulnerable to any restrictions, given its reliance on hardware from US technology firm Nvidia to drive its supercomputers.

Shi prefers to remain sanguine about the situation, pointing to the Chinese firms, including Alibaba and smart chip startup Cambricon, that are attempting to develop their own AI-powered hardware.

"I don't think it would be a smart move by the US—you're just forcing your potential competitors to move faster," he says.

CKGSB BUSINESS SENTIMENT INDEX

Industrial Recovery Continues

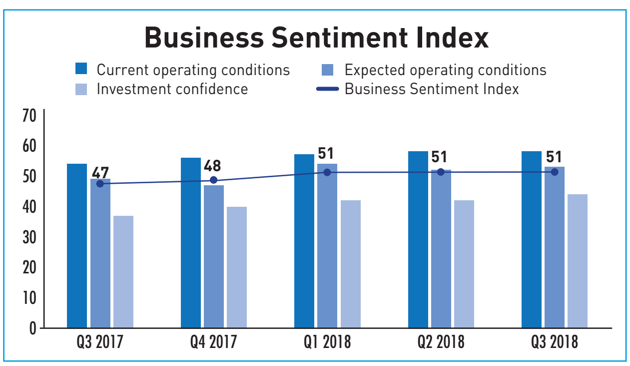
The trade war has had little impact on the industrial economy, which performed strongly in 2018

The BSI project is directed by Gan Jie, Professor of Finance at CKGSB

The CKGSB Business Sentiment Index stood at 51 in the third quarter of 2018, unchanged from the previous two quarters. This is the first time that the BSI has remained above the benchmark score of 50 for three consecutive quarters since the survey began in 2014, suggesting that Beijing's structural reforms have helped improve conditions in the industrial economy.

Introduction

This report is based on data collected from our quarterly surveys of around 2,000 industrial firms in China. Conducted through telephone interviews, this study is now in its fourth year, having launched in the second quarter of 2014. If we exclude the agricultural, real estate and financial sectors from China's gross domestic product (GDP), the industrial sector accounts for 50% of the non-agricultural economy.



Our survey design ensures that our sample fully represents industry, region and company size. As a result, we are able to construct business indices that are, to the best of our knowledge, the most informative ones available about the Chinese economy.

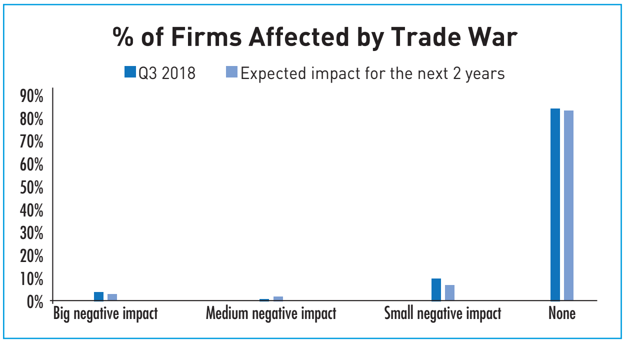
Key Findings

- Operating conditions in the industrial economy continued to improve. The score of 58 was the highest in three years.
- The trade war has had limited impact on China's industrial firms. Only 15% of companies reported being affected by the tariffs, while 4% said the tariffs were having a "large impact" on their business.
- However, investment in industrial sectors remains sluggish and overcapacity prevalent, with two-thirds of firms reporting that their industries had significant excess capacity.

Analysis

There was plenty of positive news in the third-quarter survey. Operating conditions for industrial firms continued to improve and reached a 3-year high (58). The diffusion index for investment timing also increased by one point, to a historical high of 44, though still below the turning point of 50. Other signs of improvement included a slight expansion in production, electricity consumption and domestic orders.

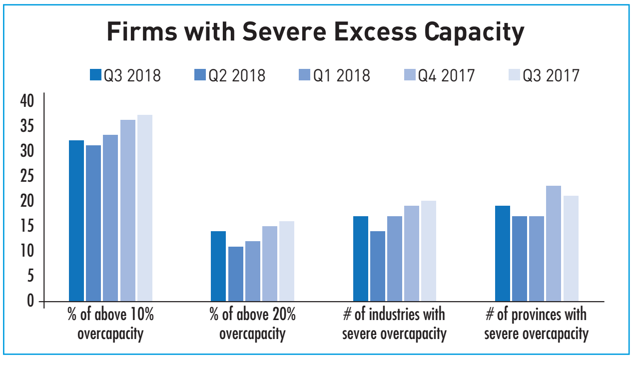
This quarter's expansion was mainly driven by state-owned and foreign firms, with the diffusion indices being



60 and 56 respectively (Q2: 59 and 55). Investment was still weak and only 4% of the firms made expansionary investments (Q2: 3%).

Unit costs continued to rise in Q3, though slightly more slowly than in the previous quarter. Twenty-nine percent of the firms reported increased unit costs (Q2: 35%), while 6% of firms said their costs had risen significantly compared with the previous quarter (Q2: 7%). The rises in costs were driven mainly by the increasing cost of raw materials.

Businesses started to feel the impact of the Sino-US trade war in Q3, but the impact was limited overall. Export orders fell from a slight expansion in Q2 (diffusion index: 51) to a slight contraction in Q3 (diffusion index: 49).

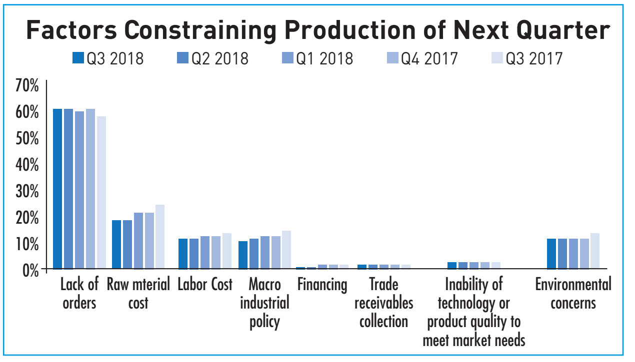


The firms affected were mainly export firms, which account for 31% of our sample. Among export firms, 29% were affected by the trade war and 8% reported a significant impact. The most affected industries included Rubber & Plastic Products, Petroleum & Nuclear Fuel Processing, Textiles and Paper Products.

Weak demand is still the biggest challenge for the industrial economy, with 62% of firms surveyed citing a lack of orders. Costs were the second largest issue, with 19% of firms citing high raw material costs as a constraining factor.

Oversupply remains a severe problem in the domestic market. The diffusion index in Q3 of 82 (Q2: 82) is close to the all-time high for this survey. In fact, the severity of the overcapacity problem appeared to increase slightly in Q3. Thirty-two percent of firms reported that excess capacity in their industry was above 10%, up from 31% in Q2.

Weak demand has not caused inventory problems as most Chinese companies use an “order-based” production model. In Q3, 47% of firms said they did not have significant levels of inventory, while 83% said they expected to use up their inventory within three months.



Industrial firms have been laying off workers at a much reduced rate since the peak in 2016, but there was a slight uptick in layoffs in Q3. The proportion of firms reducing their workforce by more than 10% was 1.1% (Q2: 0.7%). We estimate that 700,000 jobs were cut in Q3.

Low profit margins also remain a problem, as the prevalent overcapacity means that firms have little pricing power. As many as 19% of firms surveyed had gross margins below 10%, while the proportion of firms with gross margins above 15% was 33% (Q2: 36%). Low margins may make it difficult for firms to invest in R&D and industrial upgrading.

As our surveys have consistently found, financing is not a bottleneck for industrial firms. Only 1% cited lack of access to funds as a constraining factor, and only 2% reported having insufficient funds. This contrasts sharply with other sectors of the economy, where private firms experience great difficulties accessing capital for investment.

Conclusion

Overall, based on our industrial survey and macro data, the current market pessimism is less driven by the economic fundamentals, but rather is mainly caused by sentiment due to the trade war, the effort to deleverage and thus reduced liquidity.

The current situation calls for a new round of economic reform and institutional building. China still has a number of areas with great potential that, if properly developed, could sustain the country’s long-term growth. These areas include domestic consumption, technology innovation, urbanization and reform of state-owned enterprises. We remain optimistic about the long-term prospects of the Chinese industrial economy.

CKGSB BUSINESS CONDITIONS INDEX

A Darkening Outlook

Confidence among private firms continues to fall as the Chinese economy ends 2018 on a pessimistic note

The BCI is directed by Li Wei, Professor of Economics at the Cheung Kong Graduate School of Business

After a slight rebound in November, the CKGSB Business Conditions Index (BCI) unfortunately turned negative again during the final month of 2018, falling from 47.6 to 44.9.

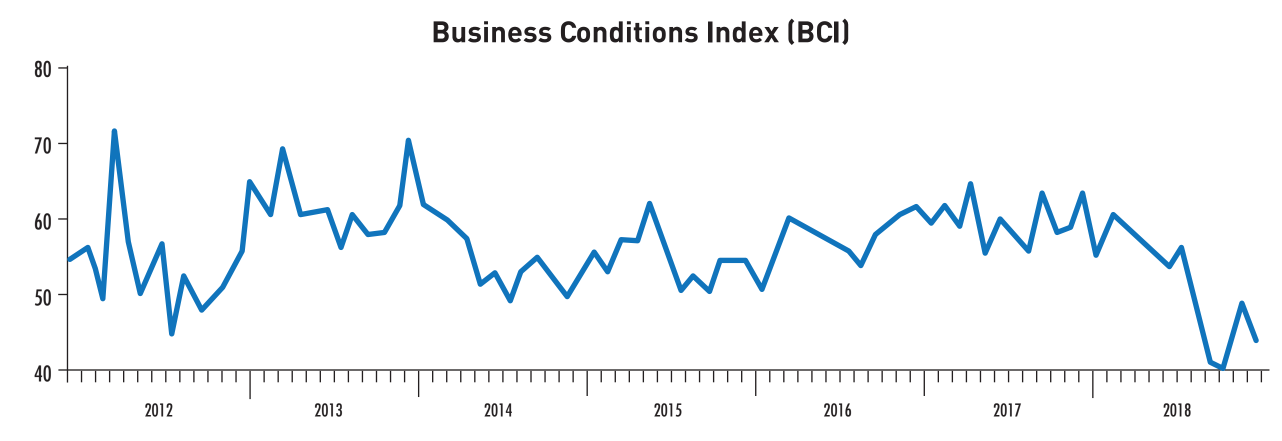
Introduction

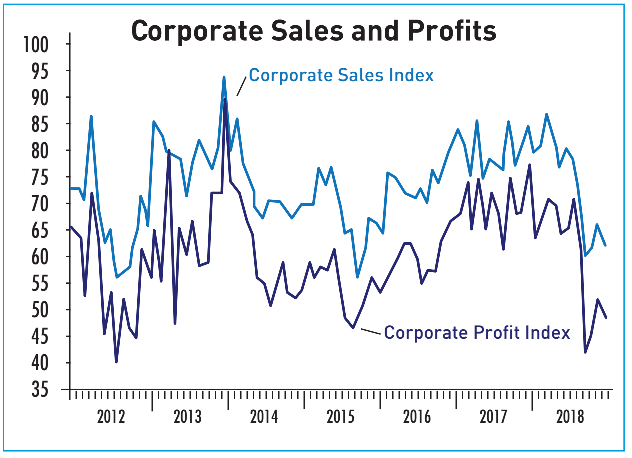
Since June 2011, CKGSB has conducted a monthly survey of executives about the macro-economic environment in China called the Business Conditions Index (BCI). The BCI is skewed toward small- and medium-sized enterprises (SMEs) that are competitive in their industries, and so provides a reliable snapshot of business sentiment among successful private companies. The BCI is a set of forward-looking diffusion indicators.

The index takes 50 as its threshold, so a value above 50 means that the variable that the index measures is expected to increase, while an index value below 50 means that the variable is expected to fall. The BCI uses the same methodology as the PMI index.

Key Findings

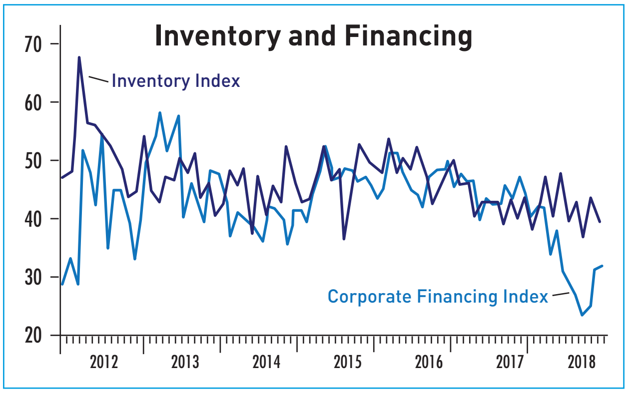
- Firms' confidence regarding corporate profits fell below the confidence threshold to 48.9, indicating that executives expect profits to decline in 2019
- The score for financing rose slightly to 32.0 following a string of government measures designed to help private firms access funding, but the score remains well below the benchmark of 50.0
- There has been a worrying decline in the recruitment index, which fell to 54.7 in December. This could indicate that weakness in the employment market is increasing





Analysis

The CKGSB BCI comprises four sub-indices for corporate sales, corporate profits, corporate financing environment and inventory levels, three of which measure future prospects and one, the corporate financing index, measures the current situation.



This month, three of the sub-indices fell and one rose. The corporate sales index fell from 65.3 to 62.7, and the corporate profit index fell from 50.9 to 48.9, crossing back below the confidence threshold of 50.0.

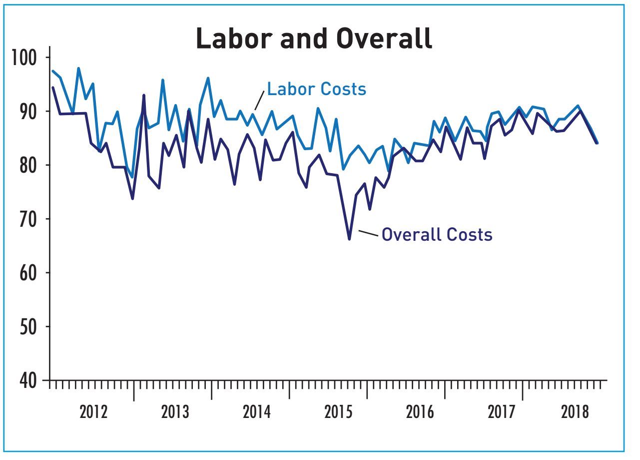
This month's corporate financing index rose somewhat from 31.5 to 32.0, still well under the confidence threshold.

The inventory index fell from 43.9 to 39.4, a clear drop on last month's more promising figure.

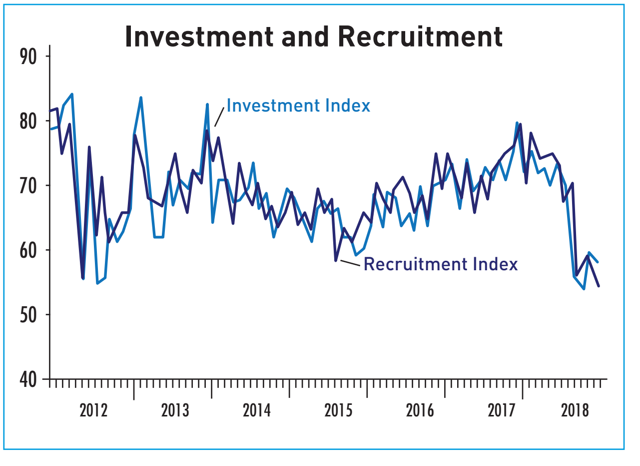
Aside from the main BCI, we also forecast costs, prices, investment and recruitment demand over the next six months. Let's begin with costs.

While business conditions have been tough these past months, labor and overall cost forecasts have continued to rise. This month, the labor costs forecast was 84.6 and the overall costs forecast was 84.3, high on the scale but slightly reduced since last month. It is a bit of a conundrum that no matter how the economy is performing, these two indices remain stubbornly high, and neither is expected to fall any time soon.

The BCI's consumer price forecast fell somewhat in December, from 51.0 to this month's 49.3, under the confidence threshold. The producer prices index fell slightly from 47.2 to 46.9.



We now turn to investment and recruitment. These two indices have consistently remained at the more confident end of the scale since we began the BCI. In recent months, their fortunes have reversed. This month's investment index fell to 58.1, and the recruitment index fell marginally to 54.7.



Finally, we include an index recording our sample's relative strength in the marketplace. As our sample mostly comprises of CKGSB alumni firms, we can be assured that their competitiveness is higher than average (50.0 points) for their respective industries. This is confirmed by the results of this month's survey, which gave a competitiveness index score of 72.0. As a result, we can be sure that Chinese industry as a whole will be experiencing tougher conditions than our sample firms.

BEIJING COOL

China's millennials are key to the future of fashion, and they are demanding designs that resonate with their heritage

By Mark Andrews

In years to come, New York Fashion Week 2018 may be remembered as the moment China arrived as a creative force in the world of fashion. As the snow came down on a chilly February morning, a clutch of emerging Chinese designers unveiled their latest ranges in the festival's first ever China Day.

Hosted by the Council of Fashion Designers of America in partnership with online retail powerhouse Tmall, the event was a success and a second China Day was promptly held in September. Hailed by many as a Chinese attempt to catch the eyes of Western consumers, the reality was, in fact, somewhat different.

"It was very successful, but not in the way people necessarily think," says Simon Collins, the founder and CEO of fashion education platform WeDesign and a former creative director at Nike. "Really, China Day was there to market to people in China."

In many ways, the event highlighted that China's emergence in the fashion world will not be a process of Chinese designers adapting to international tastes. Rather, it will be a case of the rest of the world adapting to trends in China.

China's importance as a market to the global fashion industry continues to grow. In 2018, the country's clothing and apparel market is worth \$311 billion, just behind the US on \$326 billion, according to data company Statista.

In the luxury market, China is already the largest market, accounting for 32% of global sales. Perhaps surprisingly, the country only makes up one-tenth of the luxury fashion market, but this is rising rapidly. Luxury fashion sales are growing by double-digit percentages every year, far higher than rates in Europe and North America.

The mascot of e-commerce site Tmall

Much of this increase is being driven by Chinese millennials, a key demographic that is changing the way the fashion industry operates. As the success of China Day showed, this cohort is outward-looking but also keen to buy brands that reflect their heritage. Li Ning, a featured sportswear label, saw its share price rise 8% on the day.

At the same time, a new generation of designers is emerging that is eager to satisfy this demand for a more Chinese aesthetic.

From Mao to Moncler

The arrival of China on the global fashion stage is all the more remarkable given the country's history. Until Deng Xiaoping began slowly to reform and open up the socialist economy in 1978, the concept of fashion barely existed in the country.

Most of the populace preferred to don the utilitarian *Zhongshan* suit, often called a Mao suit, to avoid undesirable political labels during chaotic times such as the Cultural Revolution. But as consumers became wealthier, interest in fashion grew. This interest in fashion has gone through several stages. Ten to 15 years ago, consumers tended to save up to buy statement items like Louis Vuitton handbags.

"During the first phase of luxury purchases, people focused mainly on heavily logoed brands which they viewed as 'safe' purchases," says Ben Cavender, Principal at China Market Research Group.

But as consumers have grown more comfortable and sophisticated, the focus has shifted, according to Anastacia Plastinina, founder of Shanghai fashion consultancy CityJ.

"The consumers that have tried LV bags and the like are now tired of them," says Plastinina. "Consumers today want quality, not just brand recognition and a shiny logo. They understand the ratio of quality and price."

As a result, consumers are far more open

> Consumers today want quality, not just brand recognition and a shiny logo
>
> Anastacia Plastinina
> Founder
> CityJ

> **A Chinese superbrand is coming, but it depends on who can master international luxury strategies, theories and practices**
>
> Pierre Lu
> Professor of Luxury Brand Management
> University of Paris Dauphine

to different brands, including relatively new ones. This has opened the door to local designers, who are increasingly studying at the world's elite fashion schools.

Chinese Threads

When Collins, the former Nike director, became Dean of the School of Fashion at Parsons, the elite New York design college, in 2008, South Koreans made up the majority of international students at the school. But this changed rapidly during his time there.

"By the time I left in 2015, the majority were Chinese," he says. "That's because the talent was there. Parsons is a very hard school to get into."

Despite burgeoning talent, few Chinese names have made a mark internationally so far. Designers such as Vera Wang, Jason Wu and Alexander Wang are all US-based and largely US-raised.

One of the few mainlanders who have received much international attention is Guo Pei. She became famous after pop star Rihanna appeared in a stunning yellow gown designed by her at the 2015 Met Ball.

Part of Guo's success has been down to her incorporation of Chinese elements into her designs, which have found a willing market among wealthy older Chinese. With the growing ascendancy of China and renewed national pride, many young designers are also incorporating such elements.

"There is a definite sense that being Chinese and Chinese heritage are cool again in China," says Cavender. "We are starting to see Chinese themes feature more heavily in design. This often manifests in references to cultural heritage or to China's history of craftsmanship."

Angel Chen, widely recognized as one of the rising stars, incorporates Chinese elements such as tiger motifs into her designs.

Designer Chen Xing's brand Bifu takes a similar approach. Each collection is inspired by an aspect of traditional culture, which, given Chen's background in cultural heritage preservation, is hardly a surprise. His first season drew inspiration from a painting of a royal hunting scene dating back to 300 A.D., which influenced the colors and shades of the pieces.

"When I look into all the luxury brands, whether they are from France, Italy or Britain, the reason they have these luxury brands is that they really respect their own heritage no matter whether it is the culture, climate or the people," says Chen.

Designers need to be careful, though. Collins warns against designers simply proving they are Chinese by incorporating Chinese elements.

"Whatever you do is coming from your background," he says. "If you work for LV, you don't need to prove it's a French brand. Just be the designer you are. If that means there are Chinese elements in there, then great, why not?"

Millennial Fashion

Whether the rest of the world embraces Chinese-style collections or not, the trend is a testament to the growing influence of local consumers.

"Ten years ago, Chinese consumers were important in terms of spending but an afterthought in terms of the design direction that brands took. This is no longer the case," emphasizes Cavender. "Today, a new collection will live and die on whether Chinese consumers like the product."

In the past, Chinese buyers typically favored international luxury brands, even if the products themselves were produced domestically. However, there are signs that this is starting to change too. Collins notes that in Chinese luxury malls, domestic brands now make up 30-40% of the outlets, a visible change from a few years ago, when home-grown brands were rarely seen.

According to Jenny Yang, the founder and creative director of an eponymous shoe line, as consumers have become more sophisticated, they have become less in thrall to foreign trends.


A design by Guo Pei is displayed at a show in Melbourne, Australia, in March

"Girls born in the 1980s and 1990s have traveled abroad and they've often studied in places like London and Paris," says Yang. "They're not blindly following luxury. They don't care who you are—whether you're a Western designer or not. They just want to be different. They want to make themselves a superstar."

This desire to be different is also influencing the way millennials consume fashion. Limited edition items and drops—new arrivals inserted into existing ranges, often on a temporary basis—used to be associated more with streetwear than high fashion. But luxury brands are now using these techniques on a regular basis, to appeal to young consumers' desire for exclusivity.

"The scarcity element elevates demand and desirability," explains Plastinina, noting that special items to coincide with festivals like Chinese Lunar New Year are now a common sight in China.

Millennials are also demanding instant gratification and unique retail experiences. A noticeable feature of China Day was that the lines were immediately available for people to buy online, whereas normally a runway show would showcase upcoming collections.

The fashion industry has long been suspicious of China's e-commerce platforms, which often house counterfeit products and are thought to cheapen a brand's image. But with millennials now driving 30% of luxury sales in China, international labels are overcoming this aversion.

Gucci, Hermès and Louis Vuitton have all recently set up e-commerce portals, while Moncler, Richemont and Valentino have signed up with Alibaba's new Tmall Luxury Pavilion.

"China is actually leading some of the trends we are seeing globally," says Cavender. "Consumers are now very focused on the retail experience, not just on the product. If their expectations are not met, they'll move on."

Chinese Superbrand

Despite the dramatic development of the fashion market, a Chinese label with the kind of brand recognition enjoyed by many European and American luxury companies is yet to emerge.

There are tentative signs that certain Chinese designers are gaining influence in the West. Plastinina notes that Angel Chen's Chinese-influenced designs have gained her an international following, while JNBY has a growing presence in the US and Russia.

"A Chinese superbrand is coming, that is for sure, but who will be the one depends on who can master international luxury strategies, theories and practices," says Pierre Lu, Visiting Professor of Luxury Brand Management at University of Paris Dauphine.

According to Collins, Chinese fashion firms often still lack understanding of brand awareness and equity, something that European and American brands have been cultivating for decades. As Chen Xing acknowledges, this is often a matter of heritage and time.

The reality is that a superbrand may appear in a very different manner. "It will definitely happen, but while it will be a Chinese brand, it might not be owned by Chinese," suggests Plastinina.

One of China's best-known luxury brands, Hong Kong's Shanghai Tang, has been in the hands of European investors for several years. Shang Xia, helmed by Jiang Xiong but 90% owned by Hermès, is another mainland startup known for its Chinese aesthetics that falls into the model.

There is also the possibility that a superbrand may appear online rather than in the form of a flagship store. Fashion label Ms. Min, for example, began life as a store on online retail platform Taobao in 2010, before expanding into the offline world. Its clothes are now sold at Saks on New York's Fifth Avenue, among other locations.

Though it is remains uncertain when and how it will emerge, Collins is sure that it is just a matter of time before a Chinese brand joins the ranks of the fashion elite.

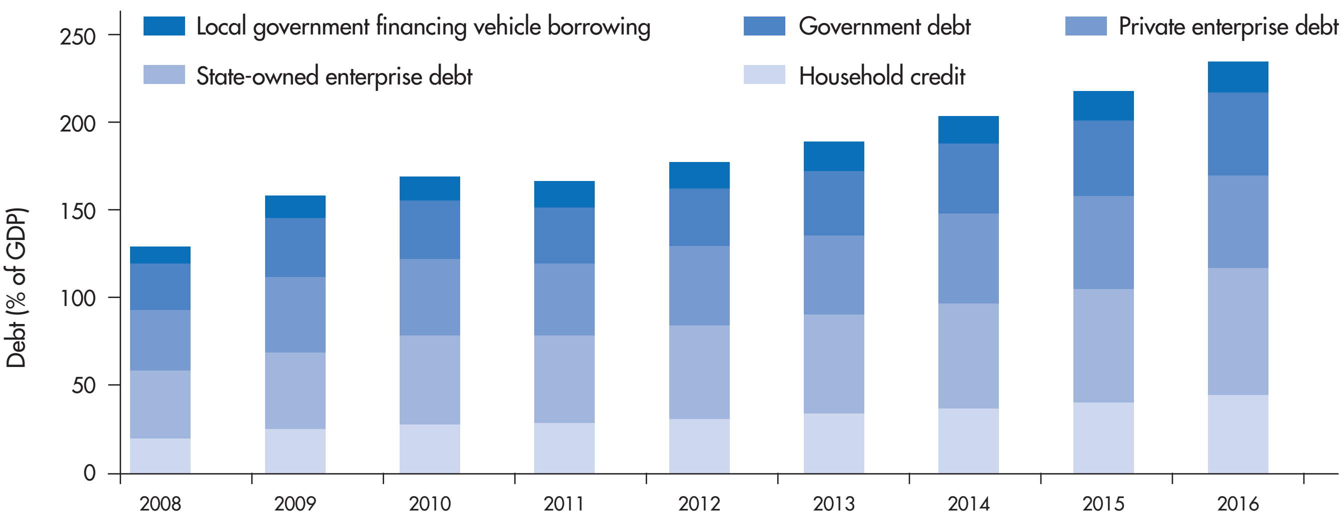
"It's going to be five minutes before we have one," he says. "If you look at some of these Chinese brands, they're opening up outposts all over the world."

A Debt Time Bomb?

China's debt burden is rising rapidly, but may be less unstable than some assume

The Breakdown

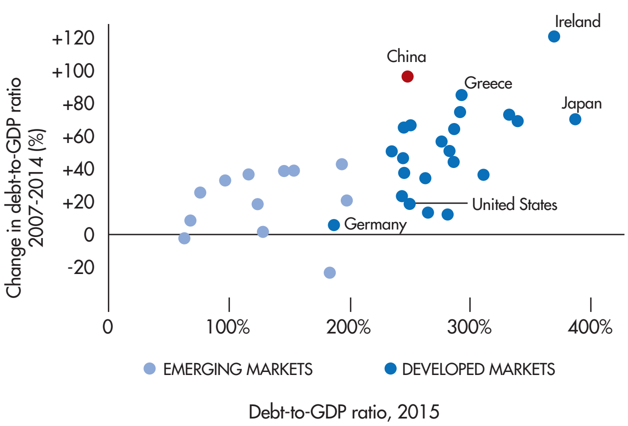
China's total debt has nearly doubled since 2008, rising to 259% of gross domestic product (GDP) in 2017. This increase is mainly being driven by rapidly expanding corporate debt.



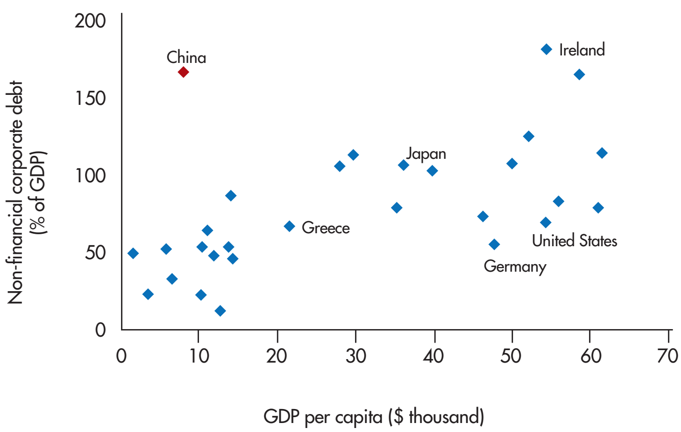
The Context

China's debt-to-GDP ratio remains relatively moderate by global standards. But what worries analysts is the speed at which this debt has built up, especially in the corporate sector.

Increase in debt burden by country



Corporate debt compared to income level

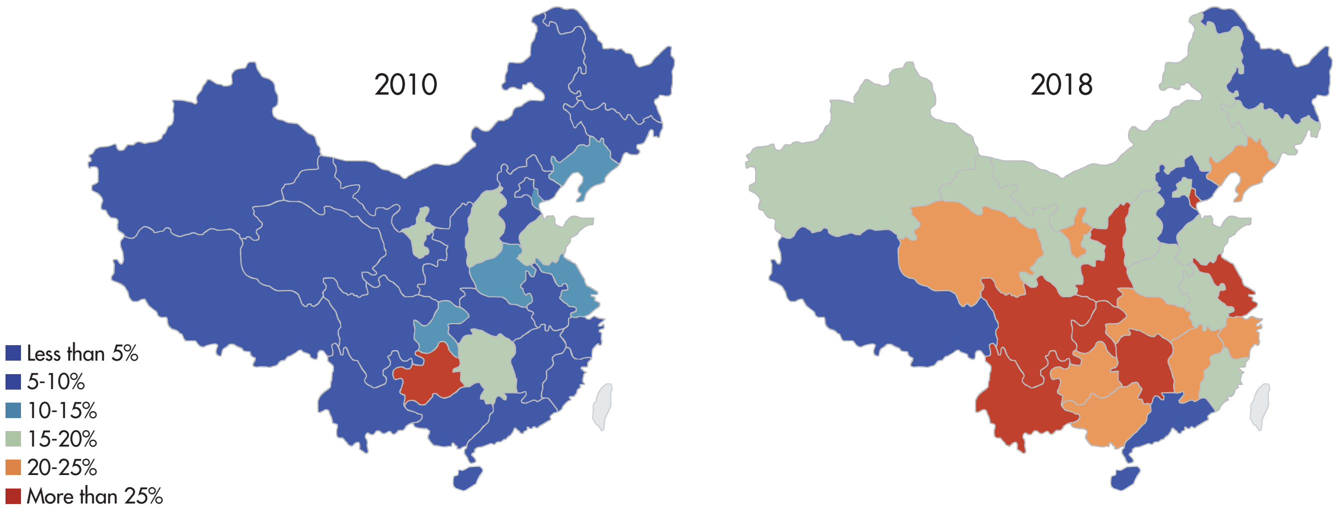


Source: Bank for International Settlements, IMF, World Bank

The Geography

Another worry is how this debt is distributed. The least competitive regions are the ones that have accumulated the highest debt burdens.

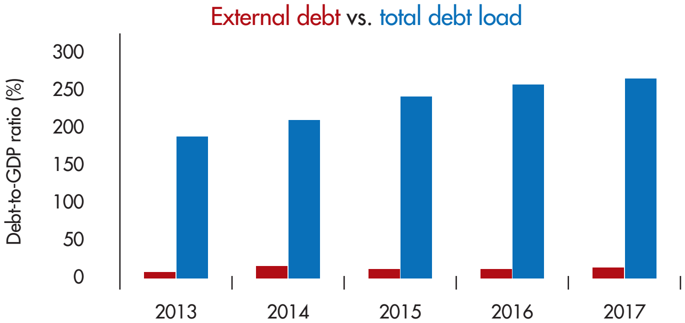
China debt risk by region



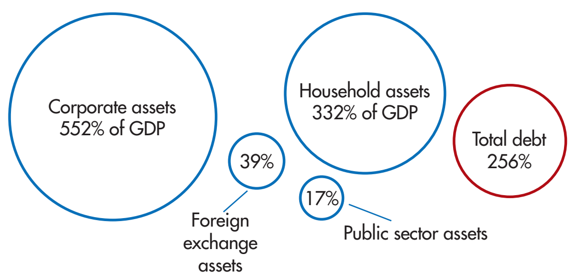
The Upshot

Though the increase in debt is concerning, China may be more insulated from a hard landing than many assume. Only a tiny minority of the debt is owed to external lenders. China also has vast assets that can be used to pay off debts if necessary.

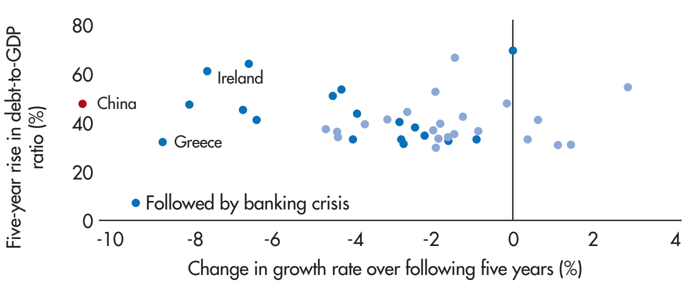
External debt vs. total debt load



Assets vs. total debt load



Historical instances of rapid buildups in debt



However, history suggests that this debt build-up will almost certainly have consequences. Of 43 countries that experienced similarly rapid increases in debt-to-GDP ratios, 38 subsequently suffered serious economic disruptions.

Source: Bloomberg, IMF, Stratfor, Trading Economics

CHINA data

The stats you need to know

Macro

Unemployment uncertainty

Government figures suggest the unemployment rate fell to **3.82%** in late 2018, but job agency Zhaopin reported a **27%** year-on-year decline in vacancies. Openings in internet-related sectors were down **51%**.

Source: South China Morning Post

Falling fertility

China's birth rate is set to decline for the second consecutive year in 2018 despite parents now being able to have two children. Due to population aging, the number of women of childbearing age is falling by **5-6 million** per year.

Source: China Daily

Chemical reaction

China's chemicals output was down more than **3%** in 2018. Chemicals are considered a key leading economic indicator, and so the decline could signal tough times ahead in 2019.

Source: Financial Times, pH Report

Business

Stalling auto market

Auto sales are set to fall in 2018 after growing **14%** per year on average between 2008 and 2017. A main reason for the decline is Beijing's credit tightening, with auto loans down **30%** year-on-year in June.

Source: Fitch, wdjz.com

Solar cooling

Installations of new solar capacity were down **20%** in 2018 after Beijing slashed industry subsidies. The government owes **$17 billion** in payments due to a massive build-out the previous year.

Source: Caixin

Red tape revolution

China rose from **78th** to **46th** on the World Bank's ease of doing business league table. The biggest improvements were in cross-border trading, accessing electricity and tax procedures.

Source: Financial Times

Spare memory

Beijing's push to boost less developed regions by locating large data centers there has produced huge imbalances. In Beijing, demand for data storage outstrips supply by **19%**, while in central and western China centers are running at just over **50%** capacity.

Source: Financial Times

Technology

Folding phones

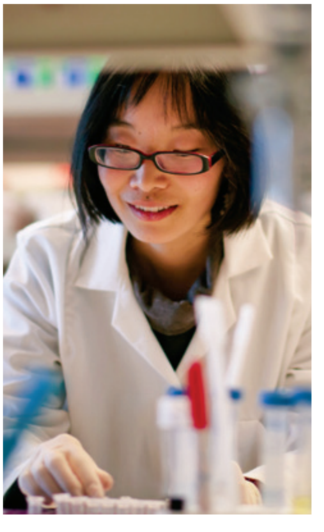
Chinese tech firm Royole has created the world's first foldable smartphone that can be bent more than **200,000** times without breaking.

Source: South China Morning Post

Papers and promotions

More than **90%** of Chinese academics say career advancement was their main motivation for publishing research papers. The "publish-or-perish" culture inside colleges is a hot topic following several high-profile retraction scandals.

Source: South China Morning Post



Antarctic ambitions

China is building its first airport in Antarctica as it seeks to become a leading polar power. The country has **five** Antarctic research stations and spends more on the continent than any other nation.

Source: Financial Times

AI Boom and Bust

China became the world's largest market for private sector investment in artificial intelligence in 2017 with over **$5 billion** raised. During the first half of 2018, however, Chinese funding reached only **$1.6 billion**, less than **one-third** the US total.

Source: Financial Times

Consumer

Beefing up sales

Young Chinese are developing a taste for beef, with sales of the meat forecast to rise **40%** from 2015 levels by 2025. Consumers currently favor pork, which accounts for **60%** of meat sales.

Source: Caixin

Surge in super-rich

Hong Kong overtook New York as the city with the largest "super-rich" population. The number of people worth more than $30 million in Hong Kong rose **30%** to around **10,000** last year.

Source: Bloomberg

Shared bikes lose their sheen

The popularity of bike-sharing services is declining as the hype dies down and companies rein in massive discount programs. Mobike's monthly users declined from a peak of 40 million in June 2017 to **20.7 million** a year later.

Source: MacroPolo

BOOKSHELF

Finding a Fresh Perspective

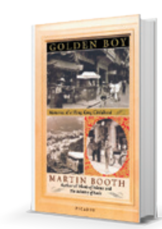
Leyton Nelson, Senior Research Analyst at consultancy China Beige Book International, recommends books that question readers' assumptions about China

Leyton Nelson is the analytics manager and an economist at China Beige Book International, a data analytics and economic forecasting company that focuses on the Chinese economy. A graduate of the University of Michigan and Johns Hopkins School of International Studies (SAIS), he is also the co-author of *China's Changing Legal System: Lawyers & Judges on Civil and Criminal Law*. In this interview, Nelson explains why it is important to look beyond modern history to truly understand China, and suggests some underappreciated books that will change your perspective on the Middle Kingdom.

What would be your number one book recommendation for someone looking to learn more about China?

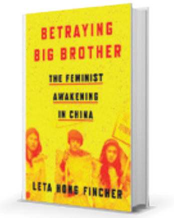
I would recommend ***Wish Lanterns: Young Lives in New China*** by Alec Ash. For readers who aren't too familiar with China to begin with, I think it's an excellent book because it uses interviews with individual young people growing up in China. Learning about national politics or economic policies is obviously vital to understanding China. But to somebody who is relatively new to the topic, those high-level perspectives can be a little difficult to connect with. *Wish Lanterns* is a great way to learn more about current Chinese society in a way that feels more tangible.

What book on China have you re-read the most?



Probably ***Golden Boy: Memories of a Hong Kong Childhood*** by Martin Booth. I spent a year in Hong Kong after college and first read the book on the plane ride over. As soon as I landed, I was greeted with a version of Hong Kong that seemed totally different from the one of the author's childhood. Throughout my time in Hong Kong I came to learn more about how Hong Kong has changed and what it retains from that era, and I love rereading the book because it reminds me of how dynamic the city is.

What are you reading currently?



I'm currently reading ***Betraying Big Brother: The Feminist Awakening in China*** by Leta Hong Fincher, which is a very interesting exploration of feminist movements in contemporary China. Gender equality has had such an important place in Chinese revolutionary rhetoric, and I'm finding it enlightening to read about how feminists in present-day China are working to realize their goals, as well as the challenges they face.

What book totally changed your perspective on a certain topic?

Empress Dowager: Cixi by Jung Chang, which offers a considerably more sympathetic portrayal of Cixi than I had previously read. I don't necessarily agree with everything in the book, but it broadened my perspective on one of the most fascinating people in China's recent history. More broadly, the book is a useful reminder of maintaining an open mind when reading about China, both in terms of current events and historical accounts. Conventional wisdom can always be challenged.

Which China book do you think is most underappreciated?

In general, I think that people reading about China place too much of an emphasis on post-1949 history. That's obviously a big part of the picture, but I also think it's important to get a sense of China's longevity and historical development in order to put today's issues in a better context. I enjoy ***China: A History*** by John Keay because it gives an excellent foundation of China's history spanning thousands of years in a way that is enjoyable to read and doesn't feel rushed.