CKGSB KNOWLEDGE

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WIDENING CRACKS

With the ongoing differences, are China and the US decoupling?

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· A look into China's soon-to-be-released national digital currency

· The rise of self-made female billionaires in China

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Zhou Li

Senior Editors
Marcus Ryder and Greg Langley

Managing Editor
Mable-Ann Chang

Coordination
Chen Manting

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

Business Trends

Company

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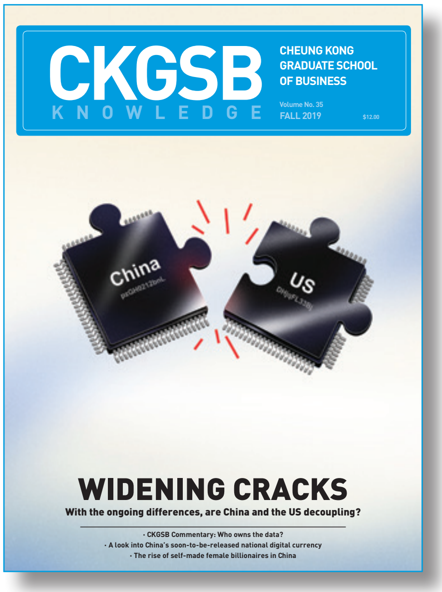
Downtime

Widening Cracks

The world has watched over the past couple of years as the range of issues dividing China and the United States has grown. After four decades and more of relative calm in the relationship and generally aligned strategic goals, the shift has been a shock, and raises the question of whether a full decoupling of the two systems is actually a possibility.



In this issue of *CKGSB Knowledge*, we explore the prospects for the China-US relationship in our cover story "**Are China and the US decoupling?**" (page **11**) and examine ways the unfolding drama is affecting a wide range of issues from movies to semi-conductors. We also interview Alan Beebe, President of the American Chamber of Commerce in China (page **16**), who discusses how US companies are faring in China in this new climate.

Two of the key areas where the world is being divided are technology and finance, and these come together in two articles. China is far ahead of any other major country in terms of moving into the era of digital cash, and "**A Digital World**" (page **7**) looks at the impact of plans announced by the country's central bank to implement a national digital currency. In "**China's Bet on Smart Cities**" (page **19**), we also look at the fast rollout of Smart Cities, the centralized means of administration of urban areas that makes full use of the developing elements of our tech-dominated world, artificial intelligence (AI) and the Internet of Things (IoT). More than half of the world's smart cities so far are in China, and the country has lessons to teach on the implementation and integration of these technologies into our lives.

Other great interviews in this issue include a conversation with Ting Lu, head of China research at Nomura, who talks about the challenges facing the Chinese economy and makes some forecasts on the country's economic development (page **40**), and Rebecca Fannin, Fannin, founder of media and events platform Silicon Dragon Ventures and author of *Tech Titans of China*, who looks at how the US and China are racing to lead the global tech industry (page **32**). Bruno Roche of US confectionary giant Mars talks about the company's Economics of Mutuality program and how it has matured into a breakthrough management innovation model (page **23**).

As usual, we look at key developments in China's economy. In our article "**Crossing the Street**" (page **27**), we explore the reasons for the withdrawal of foreign supermarket chains from the Chinese market after a couple of decades in which they dominated the space, while in "**Taking First Place**" (page **35**) we look at why China now has more self-made female billionaires than any other country. In this issue, we also explore the huge growth of coffee drinking in China's cities, in "**Freshly Brewed or Overly Roasted**" (page **43**). Can a new Chinese competitor, Luckin Coffee, push Starbucks off its perch as the China coffee king?

In "**Secondhand, First Choice**" (page **47**), we look at how China's slowing economy is affecting consumer behavior and making them more willing to consider saving money and buying secondhand goods. Our corporate profile, "**TikTok Shock**" (page **51**) looks at ByteDance, the owner of the app TikTok that has exploded in popularity around the world in the past two years. Our Downtime section looks at the world of online gaming in "**Alternate Reality**" (page **62**), and how even here, a divide between China and the rest of the world has become apparent.

Our Snapshot (page **66**) explains how waste flows around the world are changing due to a decision by China to stop buying bulk garbage from elsewhere, leaving much of the rest of the world with a massive cleanup problem.

As always, this issue of CKGSB Knowledge presents 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*

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A DIGITAL WORLD

China is close to releasing a national digital currency. How would such a currency run by a central bank work?

By Kevin Livingston

China is where paper money was first invented a thousand years ago, and it might be where paper as a proxy for value also fades from the world stage

China's central bank, the People's Bank of China (PBoC), announced in August that it would soon roll out a national digital currency to replace cash. If it does, China would be the first major country to do so, and would set a trend that has the potential to upend the entire global financial structure.

Some experts have speculated that China's digital currency will be a crypto currency similar to Bitcoin, which is built on a blockchain model allowing for vastly dispersed control and anonymous transactions, but most indications are that it will rather be a centralized currency that looks and acts much the same as what already exists in the marketplace, except in a digital form.

China is able to lay claim to being the birthplace of paper money, during the Song Dynasty a thousand years ago, and it may soon be where paper as a proxy for value also begins its retreat from the world stage. The country is already at the forefront of the shift away from banknotes with Alibaba's Alipay and Tencent's WeChat Wallet leading the way. Both services process far more digital payments than any other digital payment alternative around the world and are now a part of daily life for most Chinese people.

According to the *China Daily*, the number of mobile and online payment transactions in China in 2018 reached RMB 57.01 billion ($8 billion), up from RMB 23.67 billion in 2013, while the value of all transactions more than doubled to RMB 2,126.3 trillion ($297 trillion). Just about everything can now be paid for with digital payment swipes from a mobile phone, including coffee, cars and charity payments to beggars.

But an official China digital currency would take this trend to a whole new level.

Why now?

Although the concept has been in the works since 2014, the official announcement of plans to launch a digital currency came around the time that—for the first time in years—the Chinese RMB fell below the threshold of RMB 7 to the US dollar. That was in early August and was also around the time that Facebook announced its plans for a global digital currency, called Libra. There has been intense speculation in the markets as to just what the Chinese authorities are planning and how it will affect both China's economy and that of the world.

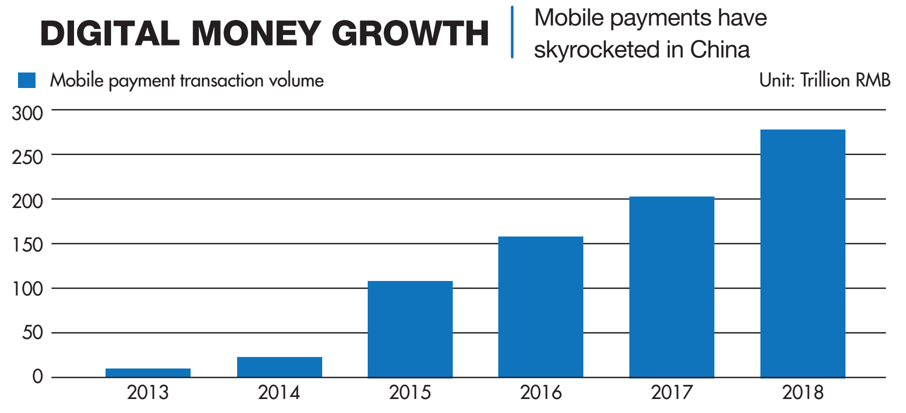
The PBOC's digital currency chief is Mu Changchun, who was appointed head of the central bank's digital currency research subsidiary in September. In August, he disclosed at a forum in Beijing, that the Bank was now ready to launch a digital currency, and some experts saw the announcement as being aimed at offsetting the momentum created by Facebook's statements around Libra.

"Where we are now is just like in a horse race, when several designated institutions are taking different technical routes for developing the digital currency and electronic payment," Mu was quoted by the *China Daily* as saying. "The winner will be the one who has the best approach, accepted by the public and the market. So that is a process of market competition."

Mu added that any digital currency must be under central bank control, and that would seem to rule out a blockchain kind of option.

Ting Lu, chief China economist at

> What they are trying to do is bypass the dollar-based system
>
> Michael Stout
> Cyber security and fintech expert



Source: People's Bank of China, Caixin Data, CEIC

Nomura, says the main goal of a national currency would be to strengthen state control over the banking system and China's national currency, and it would not be a crypto-like currency. "I don't believe that any central bank in the world would allow the private sector to create money," he says. "I don't think the central bank is trying to compete against crypto currencies."

Addressing the rampant speculation about a digital currency, PBOC governor Yi Gang told a news conference in September that more "research, testing, trials, assessments and risk prevention" was needed before it could be launched.

"In particular, if the [sovereign] digital currency involves cross-border use, it will involve a series of regulatory issues regarding anti-money-laundering, anti-tax evasion, anti-terrorism financing as well as know-your-client protocols," Yi added.

A power grab

And while cross-border, international trading of a digital Chinese currency is a major consideration, the first concern for financial officials and the markets is how it would affect China's domestic economy.

"The number one factor here is control," says Christopher Balding, an associate professor at Fulbright University in Vietnam, who has studied China for more than a decade. According to Balding, it would provide the state with an enhanced ability to monitor private-sector companies and increase tax revenues.

"Five years ago, China was a cash-based economy," he says. That is no longer the case. Most people, even in remote regions pay for goods through private banking systems like Alipay and WeChat Wallet. That amounts to trillions of dollars in payments."

It would also have the impact of restricting corrupt transactions. "It is much harder to be corrupt if China understands your finances in real time," says Balding.

Push for centralized control

Beijing has been strengthening the government's oversight of all corporate affairs in recent years, even though the role of the state has been a key issue in the China-US trade talks over the past two years. "They are definitely trying to integrate much more with the private sector," Balding adds.

The looming launch of Facebook's Libra currency is one of the factors putting pressure on the PBoC to step up its plans. Libra doesn't exist yet, but Facebook's announcement sent shock waves through central banks around the world, because it raised for all of them the specter of a loss of control of the basic building block at the heart of the economies they oversee—money.

Libra, due to be launched in 2020, has been pitched as mirroring real-world assets, and being backed by a basket of sovereign currencies, with US dollars making up 50% of the basket. The Libra basket does not include China's RMB, which, unlike other major world currencies, is not freely convertible.

The PBOC's Mu Changchun said in August that China's digital currency would "bear some similarities" to Libra, but he did not elaborate. He also said that the currency would aim to "strike a balance between anonymous payments and preventing money laundering."

The advantage of a central bank-issued digital currency over payment platforms controlled by private companies like Alibaba and Tencent, he said, is that such commercial platforms could go bankrupt and cause users to lose money.

China UnionPay is the state-backed financial organization that provides the basis for all Chinese bank card operations and controls all bank teller machines throughout China. Its chairperson Shao Fujun, a former PBOC official, was quoted by *China Daily* as saying the precise form the digital currency would take was still under discussion, but added: "It will have lots of positive impacts, including tracking the money flow in economic activities and supporting making monetary policy."

A true crypto won't work

China would not be the first country to establish a digital currency. A number of small countries including Cambodia, Estonia and Singapore have announced plans to establish such currencies, and are at various stages along the road to launching them. None of them have so far gone as far as the Marshall Islands, a tiny country in the South Pacific with just 53,000 people and a treaty relationship with the United States.

The Marshall Islands is going all-in on a bitcoin-based currency to be called the Sovereign or SOV. It will run in parallel to the US dollar, which is currently the only legal currency in the islands.

That may make sense for the Marshall Islands, but China, the world's second-largest economy with a population of 1.4 billion people, is an entirely different situation.

Any blockchain-based currency involves to some extent decentralization, but China's model is the exact opposite—the centralizing of control, says Balding. "This has to do with managing risks and measuring the economy. This just gives them more information. More than anything it gives China the ability to channel resources. They can see what companies are doing."

Beyond that is the question of what impact a Chinese digital currency could have on global finance and trade flows, and some people see it as having the potential to undermine the US dollar's dominance. The Chinese government has been trying for years to get the RMB accepted as an international currency, but has had only limited success.

"It [a digital currency] circumvents the global economic structure that is now in place," says Michael Stout, a London-based cyber security and fintech expert who consults for governments. "What they are trying to do is bypass the dollar-based system."

"When a central bank makes a play like this, they are attempting to create price equalization," Stout adds. "It creates price stabilization between the dollar and the yuan (RMB). It's not tied to an exchange rate. What they want to do is control the price of trade."

The RMB exchange rate has increasingly been under pressure during 2019 to some extent because of the China-US trade war.

"China has an incentive because they can move off the dollar," Stout says. "They [would be] no longer reliant on traders and they can shut down the blockchain if they want to. The currency allows them to operate without the oversight of the United States."

A digital fiat currency

The PBoC governor, Yi Gang, said that the central bank plans to make its digital currency available through four state-owned banks—Agricultural Bank of China, Bank of China, China Construction Bank and the Industrial and Commercial Bank of China—as well as the online payment platforms operated by tech giants Ant Financial, a unit of Alibaba, China UnionPay and Tencent.

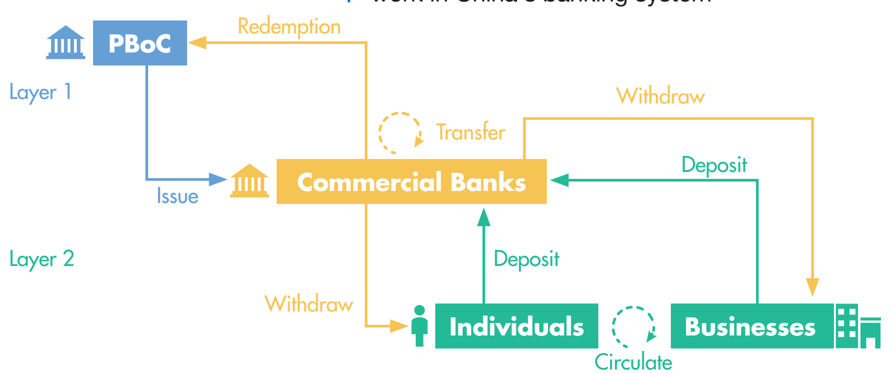
The PBoC's Mu said the currency would be based on a system similar to that used to produce minted money, with the PBoC producing and managing the currency, then issuing it to commercial banks and other entities, which would then circulate it to consumers.

A research report from crypto exchange Binance said that China's digital currency will be backed 1:1 by the RMB, as well as follow a two-tiered structured system with the commercial banks, and retail market participants.

"The first tier will connect the PBoC with commercial banks for currency issuance and redemption," Binance said. "The second layer will connect those commercial banks with the greater retail market." Binance says that the PBoC's system could allow fund transfers without the need for a bank account.

"The end goal for the CBDC is to display a turnover rate as high as cash while achieving 'manageable anonymity'," Binance said in the report. "In other words, in the first-layer network of the CBDC, real-name institutions are expected to be registered while the transfer in the second-layer network would be anonymous from the perspective of users."

A PROTOTYPE | How a national digital currency would work in China's banking system



Sources: People's Bank of China, Binance

Chasing Libra

The extent to which the impending launch of the Libra could be influencing the Chinese financial authorities is not known, but it is clearly not an irrelevant factor, despite the gulf that exists between the Chinese and international financial systems. The PBoC's research director Wang Xin, quoted by the *South China Morning Post*, said the Libra might reinforce the US dollar's influence over the global financial system.

"If [Libra] is widely used for payments, cross-border payments in particular, would it be able to function like money and accordingly have a large influence on monetary policy, financial stability and the international monetary system?" Wang Xin asked at a conference in July, adding that the new digital currency could have a major impact on monetary policy and financial stability.

Stability is a strong requirement of the Chinese authorities. Economic growth has been slowing in recent years, and is forecast to fall further in 2020 due to a combination of systemic and international issues.

"A rapidly aging population, a falling birth rate, a tightening Federal Reserve and a slowing global economy have combined to put the brakes on China's economy," Balding says.

A digital currency could help offset some of these risks, but in some ways, China is already a long way down the road to having an economy underpinned by digital payments.

"What's the difference between the PBoC using digital money and WeChat? Digital currencies are already used on such a wide scale that it makes no difference," says Nomura's Lu.

Fulbright University's Balding agrees. "If you think of the trillions of dollars in RMB that are transacted digitally today," he says, "they are already a cashless society." Will China go completely cashless? "Sure, in five to 10 years."

ARE THE US AND CHINA DECOUPLING?

Given their ongoing differences, what will the future of China-US relations look like?

By Mable-Ann Chang

Image by Raciel Avila

After more than 40 years of growing ties, the economies of China and the US are now deeply intertwined, and decoupling to any degree would mean a disentangling of enormous complexity

The ongoing trade war between China and the United States has claimed an unexpected casualty: China's burgeoning film industry. Projects that involve American actors and plot lines that take place against a US backdrop are suddenly out of favor and Chinese movie producers are killing projects and firing US thespians, citing concerns over an uncertain future between the two countries.

A big-budget film about Chinese students in the US, *Over the Sea I Come To You*, was abruptly canceled even after a Beijing launch party was held. A number of other productions have also been cut, postponed or proceeded with Russian and German actors in place of the originally-chosen American ones, and films about fighting the Americans in the Korean War in the 1950s are hot again.

China's film industry is just one of a long list of industries and sectors feeling the impact of what many people think might be the "new normal," which is leading some to raise the question of whether the world's two largest economies are heading for a breakup. And if they do, what would be the impact on each of them, and on the rest of the world?

Some people are referring to it as a "decoupling."

Causes for friction

After more than 40 years of growing ties, the economies of China and the US are now deeply intertwined, and decoupling to any degree would mean a disentangling of enormous complexity. But the list of issues that are effectively pulling the two apart is long and getting longer.

The US has accused China of currency manipulation, forced technology transfers, hacking, IP theft, lack of reciprocity on a wide range of business issues, restricted market access for US companies in China, tech backdoors and an unfair advantage for companies owned or supported by the Chinese government.

Contributing toward tensions are also a range of geopolitical issues, including disagreements between China and the US on the East China Sea, Iran, North Korea, the South China Sea and the presence of US military forces in East Asia overall.

Many of these issues have been in existence for years, but they have come to a head since Donald Trump won the US presidency in 2016, partially on a platform of "getting tough with China," and they are placing many countries in the uncomfortable position of having to choose between the world's first and second-biggest economies.

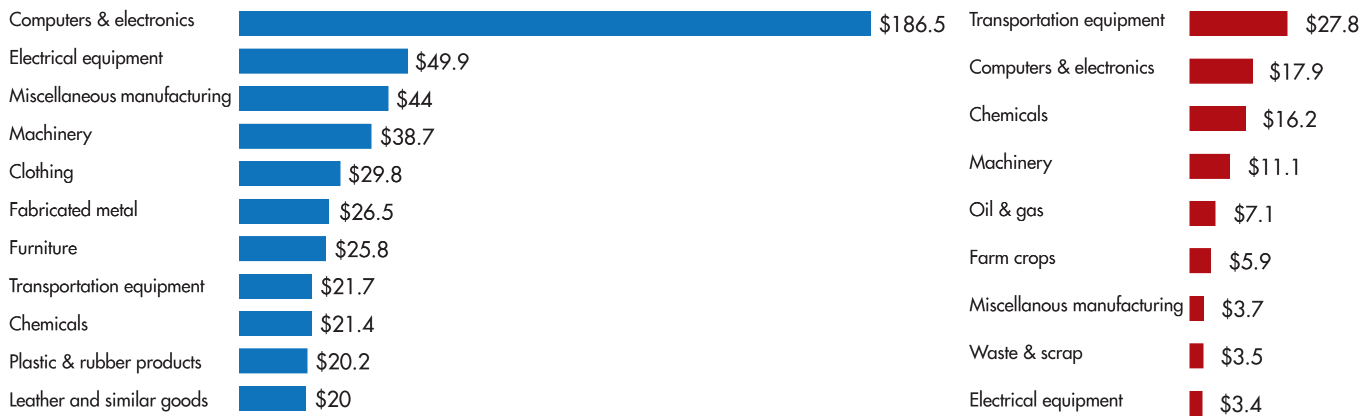
Ever since US President Richard Nixon's trip to China in 1972 through to recent times, the general consensus in the US has been that as China becomes more integrated into the global economy, it would fall more into line with international structures and norms. In particular, the decision to allow China into the WTO in 2001, which enabled it to become the "factory of the world," was

Google restricted Huawei's access to its Android system after the US added Huawei to a trade blacklist in May

WHAT'S AT STAKE | Goods that the US imported from and exported to China in 2018

US imported $529 billion in goods from China in 2018, including (figures in billions)

US exported $120.3 billion in goods to China in 2018, including (figures in billions)



Source: MarketWatch, US Census

based on commitments that Chinas would over time move to become a "market-based" economy.

But the current US administration takes the view that this hasn't happened, and it has been using tariffs as a weapon to try to get China to shift its economic policies. So far, China's leaders have declined to accede to demands for any major structural changes to its economic-political system that underlies the differences.

"China…has challenged the assumptions we held for quite some time … that if we welcome China into the WTO, helped it establish a network of trade and relationships, it would become healthier," said former CIA director and US General Petraeus in an interview in August. "It would inevitably become more open, more transparent and frankly more like us (the West). These assumptions are no longer as valid as they once were and we need to operate with a somewhat different set of assumptions."

China's largest trading partner today by a big margin is the US, and the US's largest trading partner is China. Research from independent research provider Rhodium Group shows that US companies invested over $250 billion in China between 1990 and 2017, while Chinese companies invested around $140 billion in the US over the same period. Many Chinese companies are listed in New York, and big US brands like Coca-Cola, McDonald's and Starbucks are popular in China.

"Business used to be the ballast in the relationship," says James McGregor, Greater China chairman of public relations company APCO Worldwide. "China and the US disagreed on many issues, and the systems have many incompatibilities, but the business and trade relationship held things together. Now the business and trade relationship is the cause of great friction as both countries are in a head-to-head competition for all the important technologies of the future."

Out of all the industries that show signs of decoupling, the tech sector is the biggest, and some analysts have likened the standoff in this area to a technology Cold War. Online, China and the US have almost become two separate universes, with apps, social networking sites and even tech companies being built to serve the China market or the US market, but rarely both. China's biggest telecommunications firm Huawei has been largely blocked from the US market since May, while Dropbox, Facebook, Google and a host of other US companies are blocked from the China market.

A recalibration

"In recent years the [US-China] relationship has shifted to rivalry as the goods and services produced by Chinese firms now compete with and sometime dominate markets for high-value-added goods and services in the US," says Steven Cochrane, chief APAC economist at Moody's Analytics, a financial intelligence company. "The US is the late 20th century economic power; China is the emerging economic power of the early 21st century."

The growing sense of a decoupling is affecting many business aspects. US and foreign investment into China are down and China investment into the US has plummeted. Many US firms want to shift production out of China to other countries. China firms looking to buy American assets are facing tougher scrutiny from US regulators, and China wants to reduce its reliance on US food supplies and tech.

The relationship between China and the US has already been fundamentally recalibrated from being one of strategic cooperation to one of strategic competition.

"What is clear is that China-US relations are at a paradigm shift, that it is not just another downturn in relations," says McGregor.

"What people sometimes miss is that both China and the US actually want to decouple," says Andrew Polk, co-founder and head of economic research at consultancy Trivium China. "The US does not want to provide technology that will fuel China's rise and China doesn't want to have to rely on the US for core technology.

The main difference between the two is the preferred timeline. China would prefer a slower decoupling because they're not quite ready to stand on their own two feet in terms of technology, while the US wants it to happen more aggressively."

Polk says the question is how the two economies are going to interact with each other. "The bottom line is that China rose to become the world's second largest economy while maintaining its single-party political system, and the US began to feel apprehensive." He believes that China's political system is a crucial factor. "What concerns people is the political side," he says. "If China was not a one party state, we wouldn't even be having this conversation."

Tit-for-tat

Washington is viewed by most as having thrown the first punch in the trade war, imposing a wave of tariffs on $34 billion worth of Chinese goods in July 2018. To date, the total amount of US tariffs applied exclusively to Chinese products stands at $550 billion, while Chinese tariffs applied to US products is at $185 billion.

The tariffs and the prospect of decoupling have had an impact on the US economy, and over the past year Wall Street has reacted daily, sometimes dramatically, to reports of progress or problems in the trade talks.

The trade war with the US is just one of a number of problems the Chinese economy is facing, however. Economic growth has been slowing for several years, corporate and government debt levels are at record highs, the financial sector contains the potential for instability from non-state "shadow banking" players, and there are calls for structural reforms to provide more room for non-state investment.

China's economy grew at only 6.2% in the second quarter of 2019, down from 6.4% in the first quarter, according to the National Bureau of Statistics, the lowest since the 1970s.

"It is more difficult to estimate the impact of the trade war on China, because its economy had already started to slow due to constraints placed on the shadow banking system beginning in 2017, with impacts on employment and revenue growth," says Cochrane.

But who's to blame?

The question of where the fault lies in the downturn in the relationship between the China and the US that were so calm for four decades is a complex one.

A commentary by China's state news agency Xinhua in September reflected the robust position of the Chinese government clearly: "The first lesson is that China is an unbent nail in face of US tactics of maximum pressure. The second thing those White House tariff men should learn is that the Chinese economy is strong and resilient enough to resist the pressure brought about in the ongoing trade war."

Trivium's Polk says the US "has a legitimate complaint in that China has not lived up to the agreements that it signed on to when it comes to things like market access and competition under the rules agreed in the WTO." But he adds, "On the flip side, China's complaint is that these rules were forced upon them in the post-World War II era when they were a small economy with very little power. Now that they have grown, they want to change the rules to reflect more of their own priorities."

Fraser Howie, co-author of *Red Capitalism: The Fragile Financial Foundations of China's Extraordinary Rise*, feels that many of the issues raised against China are justified, and that the problems we are seeing today have been compounded over a long period of time.

"If you're going to look at who is to blame and try to understand where the problems have come, then the scale falls on the Chinese side," he says. "There is a lot of evidence across a number of sectors that China has deliberately not played by the rules."

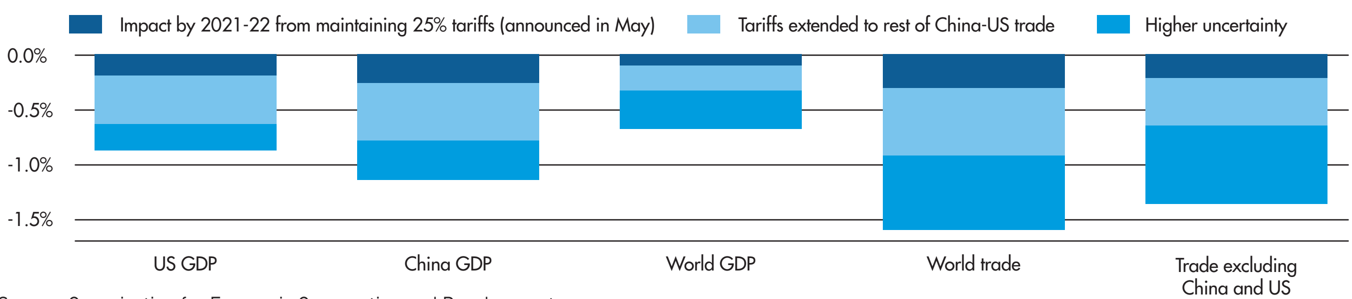
China's position is that it still needs more time to effect a transition to a market economy.

"For a developing economy as big as China, it is not easy to fix problems overnight," Xinhua said. "The world will find it worth waiting for the real changes to come. Meanwhile, all countries should improve the investment environment and treat Chinese enterprises, overseas students and scholars fairly."

Stephen S. Roach, American economist and former chairman at Morgan Stanley Asia, sees many of the allegations from the Trump administration as being based on weak or exaggerated evidence, and says a key cause of the trade deficit is the low US savings rate in recent years.

"In 2018, the domestic savings rate of the US fell to 2.4% of national income and that compares with about a 6.2% average in the final three decades of the 20th century. So, lacking in savings and wanting to grow, the US must import surplus savings

COLLATERAL DAMAGE | Higher tariffs on China-US trade could hit growth further, says OECD



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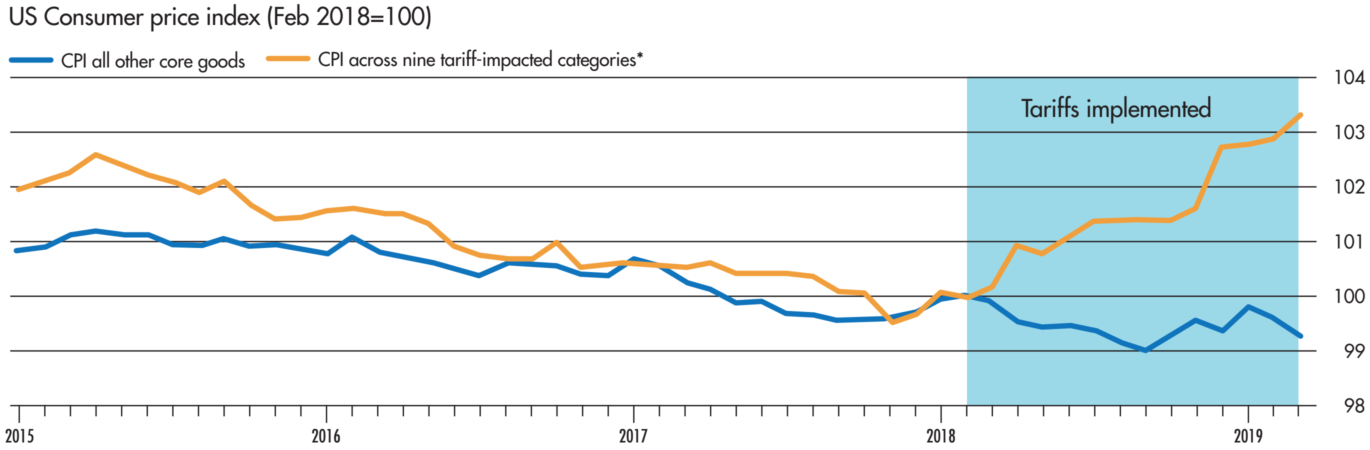
CONSUMERS PAY | Tariffs have had a noticeable effect on consumer prices



* Includes laundry equipment and other appliances, furniture, bedding, and floor coverings, auto parts, motorcycles, and sport vehicles, housekeeping supplies, and sewing equipment and materials. Weighted by CPI relative importance.

Source: Goldman Sachs, Financial Times

from abroad and ends up running massive current account deficits," he says.

"Both sides are quite domestically driven economies," adds Polk. "They're both a part of the global financial system and are highly intertwined with each other, but at the same time they're mostly driven by their domestic engines. China sees globalization and integration as hugely positive for its development. It just wants to calibrate it and do it in a managed way so that the Chinese companies don't lose out."

The process of decoupling is having an impact far beyond just China and the United States, and other countries are looking for ways to offset the impact.

"Export-driven economies around the world and many regional economies have slowed as demand from China and the rest of the global economy has slowed," says Moody's Cochrane.

On the other hand, the shift in production from China to elsewhere by companies looking to avoid impact from tariffs is having a positive impact on a number of countries, including the Philippines and Vietnam.

"Vietnam benefits from a shift in some productive capacity from China to Vietnam," says Cochrane. "This shift means little so far for the large Chinese economy, but is an important support for growth in the small Vietnam economy, to the point that there are some strains on infrastructure emerging in Vietnam. The Philippines economy is much less reliant upon trade but does benefit modestly from rising exports of goods and services."

Co-dependency

But can decoupling actually happen? Roach believes that the US and China are now interconnected to the point of no return. "The US and China are in a co-dependent relationship, and we are now in what I would call the classic conflict phase of co-dependency, where one partner turns on the other and blames the other for problems largely of its own making," he says.

"Decoupling from China is not a real policy option for the US, it would be impossible," says Andy Rothman, investment strategist for Matthews Asia. "China's economy is deeply integrated with the US economy and with the global economy. It has gone from economic irrelevance just a few decades ago, to now accounting for one-third of global economic growth every year, larger than the combined share of global growth from the Europe, Japan and the US. How do we decouple from that?"

"There is a limit to the extent with which decoupling can happen," Polk agrees. "Just because this is the trend right now doesn't mean that will always be, as the overarching trend is still ongoing globalization. The greatest likelihood is that it's going to create more defined spheres of economic influence."

The solution to the problem, Roach says, could lie partly with China implementing a more open and diverse structure. "China continues to cling to a model where state-owned enterprises drive an important part of economic activity," he says. "Many other nations, especially the United States, have a problem with this—arguing that it is at odds with the protocols of China's 2001 WTO accession. This is an important area of contention that must be addressed if the US and China want to move out of the conflict phase of co-dependency."

"Ultimately, most countries would say that the costs to the global economy far outweigh any benefits," says Polk. "It's not just the US and China battling it out, it's a whole global community—including Europe, the rest of Asia and Africa—trying to figure out how they're going to accommodate China's rise."

Despite the mountain of differences, experts say that the world's two largest economies will have to find a compromise to work with each other.

"The future of China-US relations will be an adventure, one that is unpredictable and fraught with danger," says McGregor. "But it also can lead to opportunity if both sides get over themselves, sit down and work things out. It is important for the world for them to do so."

Unpredictable Underpinnings

Alan Beebe, president of the American Chamber of Commerce in China, looks at how US companies are faring in the current environment

With no immediate end in sight for the trade war between the world's two largest economies, and with no signs of a fundamental easing of tensions between China and the United States, how are American companies in China caught in the crossfire coping?

The American Chamber of Commerce in China, led by president Alan Beebe, is a non-profit, non-governmental organization whose membership includes 4,000 individuals from 900 companies operating across China. The Chamber's nationwide mission is to help American companies succeed in China through advocacy and business support.

Beebe joined AmCham China from Ernst & Young (EY). He has also held executive positions with The China Greentech Initiative, IBM and management consulting firms A.T. Kearney and PRTM. He has 20 years of management consulting experience in China, other Asian countries and the US, helping clients develop and implement sound business, operations and technology strategies.

In this interview, Beebe explores how the China-US trade war and China's economic slowdown have affected US businesses operating in the country.

Q. What is the overall Chinese macro-economic environment like for US companies today compared to five years ago?

A. It's much different now, with a number of trends from a macro perspective impacting US companies operating in China. The Chinese economy has been going through an adjustment period, with slower growth and a transition toward a more consumer-led service economy. But the major factor in how things have changed is the China-US trade conflict, which is now well into its second year.

We conduct an annual business climate survey of our members and we have around 900 member companies from across all sectors. Last year, 69% of our members were profitable, but that number is down slightly from 73% in 2017.

Q. What impact has the trade war had on American businesses operating in China? Are there any specific examples you could provide?

A. The trade war has had a significant impact on US companies operating in China in a variety of ways.

The first is the psychological impact. Companies generally don't like unpredictability, which is something that the trade dispute has caused. We recently conducted another survey with our AmCham Shanghai colleagues, and over 75% of respondents said that the trade war was having a negative impact on their business. It's raised costs and has resulted in lost sales because they must either pass on those costs to their customers, or absorb them. Our members indicated some of their customers now prefer to deal with European, Japanese or companies from other countries where they don't have the extra cost and unpredictability.

At the same time, one-third of companies surveyed are canceling or delaying investment decisions. Nearly 40% are adjusting—or considering to adjust—their supply chains, especially in light industrial manufacturing, where companies are accelerating their shift from China to lower-cost countries.

But, interestingly enough, nearly 70% of the companies surveyed who were considering moving manufacturing out of China, indicated that they were considering shifting manufacturing to other Asian countries; only a small percentage said they were considering moving back to the US.

Q. Between the trade war and China's economic slowdown, which of the two issues has been of more significance to US companies?

A. I would say that the effect of the trade dispute has been much more significant. A lot has to do with predictability, or the lack thereof. The slowing economy obviously impacts on a company's investment plans, revenue growth and profitability. But companies can plan ahead for slower economic growth, whereas the trade dispute is extremely unpredictable. Nobody can really say what's going to happen from one day to the next, or whether tariffs and tensions will escalate or not.

Q. At the heart of the trade war is a discussion about a potential disconnect between the Chinese system and the US dominated international system. How different do you see the Chinese system being from what is acceptable to the rest of the world?

A. China's political economic model is unique and it has worked well for China for decades, but it's become increasingly incompatible with the US system as well as with liberal democracies such as in Europe or Japan.

There's a growing recognition that there are incompatibilities between the two systems. It's hard to imagine China making large, systemic changes to a model that's worked for the country for so long. On the other hand, the US is—relatively speaking—already a very open market. The question is to what degree is China willing to make reforms, so it is more consistent with how other developed markets operate. It's definitely going be a challenge.

In those areas where China is willing to make reforms then we'll probably see more progress than in the areas where it is less willing, such as the dominant role of state-owned companies in the economy or providing a level playing field for technology and media companies. Without changes, I think we're going to see other countries begin to introduce or escalate protectionist policies as a result.

Q. The authorities have talked about loosening controls on foreign investment for foreign companies in China. To what extent are US companies seeing changes as a result of that?

A. There has been considerable talk of reform and opening up and that's been the mantra for the Chinese government for some time. In virtually all the meetings that we have with China's central government ministries and agencies, there's always a firm commitment that China is on an irreversible path of reform and opening up. The question on the minds of AmCham China and our member companies is really the pace and extent of reforms.

There have certainly been reforms beneficial for our members, particularly in the financial services sector. There have also been commitments that China will gradually relax joint venture requirements in the auto sector, so there are signs of progress. The new foreign investment law that was passed in March 2019 is a sign that China remains committed to its goals of opening up; we are now looking forward to the implementing regulations to ensure that the law is interpreted and enforced consistently across the country.

> It's really in the technology sector that there is still a lack of a level playing field

But it's really in technology-related sectors where there is still a lack of a level playing field, which is at the heart of our advocacy efforts. It's also at the heart of significant issues that have been identified by the US government and remains a great source of friction.

Q. The Made in China 2025 project is something that underlies many parts of the China business discussion. How does AmCham see Made in China 2025 today in terms of its significance and impact?

A. First, it's important to note that the Chinese government no longer refers to Made in China 2025 publicly. The country's unifying of industrial policies to develop industries of the future has become more subtle, but is still definitely alive.

Some of our member companies benefit from Made in China 2025, but many more, in the medium to long term, remain quite concerned about the plan. The main reason is that in terms of industrial policy, China has essentially been using the same state-led model since entry into the WTO in 2001, to develop national champions and to channel subsidies and other types of policy incentives to Chinese companies that inherently disadvantage foreign companies. So, taking the aluminum, renewable energy and steel sectors over the past decade, for example, there have been major distortions, not just for companies operating in China, but globally as well. The model is now being extended to technology sectors, whether advanced materials, cloud computing, electric vehicles or semiconductors. It's a big concern.

Q. To what extent is the maturity of Chinese businesses also a factor in the problems that US businesses are facing? In other words, now that many Chinese businesses have learned the ins and outs of the trade and are able to do more themselves, how has it affected foreign businesses?

A. Competition is always challenging, but by and large our member companies welcome competition. They've been able to compete in the US and compete globally, so China should really be no different.

The problem is when Chinese competitors have what many regard as an unfair advantage, because of state-led support and intervention, such that it becomes difficult for US companies to compete, or in some cases even participate, in the China market. It's one thing to compete against a company, it's another thing entirely to compete against a country.

Q. At the heart of the Chinese system is the position of state-owned enterprises. In the US, companies are operating without that special relationship with the government. How important is that difference from a global perspective? And what is the answer to it?

A. It is a significant issue. The scale of China today, as the second largest economy in the world, makes the incompatibility of the two systems more striking. As an example, if Chinese companies are looking to make acquisitions overseas, I think in some cases it's not simply market forces that are at work, so it really becomes a growing concern. Foreign or US companies cannot compete on an even basis.

The answer to that is to remove that special relationship and allow market-driven forces to do their work. But until that happens, it's fair to say that calls for protectionism are going continue. It's also not just the US that we're seeing that in. We're also seeing that in Europe and, to a certain extent, in other parts of the world.

Q. There are those who say that China has become the factory of the world and that the country's developed manufacturing system and supply chain means it is now irreplaceable. What is your comment on that?

A. There's no doubt that China has done an incredible job at developing its manufacturing capability over the last few decades, making it a major factory of the world. For some industries China would be difficult to replace, but for others less so, at least in the short term. While we do not like to see supply chain shifts due to non-market forces such as the trade tariffs, for some industries—such as those in labor-intensive light industry manufacturing—it's natural that they migrate to lower-cost industries as China moves up the value chain.

Of our member companies that are thinking about reconfiguring their supply chains, a third are adopting what we refer to as an 'In China, for China' strategy. These companies will maintain a significant manufacturing supply chain footprint in China, but when it comes to using China as a base for exports, whether that's to the US or to other parts of the world, they're working to gradually diversify.

At the same time, China has exceptional opportunities to upgrade its manufacturing capability by becoming an innovation-led economy, whether that is investing more in R&D or adopting technologies to raise productivity. However, to do that successfully there's a need for policy reforms to ensure that changes happen in a market-oriented manner and China further integrates into the global economy.

Q. What growth areas do you see in US businesses coming into China in terms of sectors and industries? And why are those sectors seeing growth?

A. US companies, much like Chinese companies and many companies from all over the world, are focused on the massive opportunities in China's rising middle class and its growing consumer power.

Significant areas of opportunity are in health care and education. These are sectors that are consumer-oriented and experiencing rapid growth. Part of the opportunity is pure economics, but another part of it is also where the policy environment is liberalizing in ways that create new market opportunities. Using health care as an example, we see very significant growth opportunities for our healthcare-related companies, such as pharmaceutical and medical device equipment manufacturers, where globally compatible policy reforms can literally change and save lives. Our members are trying to balance their strategies to tap into those market opportunities, while at the same time navigating the complexities and unpredictability of today's China-US relationship.

Q. To what extent do you think reciprocity, as a general concept, should be used in the business relationship between the US and China?

A. It's becoming much more of a topic of discussion among policy makers, at least in the US, to consider reciprocity. Our member companies, and most policymakers that I speak to, don't like tariffs for obvious reasons. But from the US government's perspective, if tariffs as a tool are not leading to the desired results, then reciprocity has its appeal.

In our interactions with the Chinese government, there is sometimes a misinterpretation of what reciprocity really means. Chinese will often refer to it as "mutual benefit," not reciprocal treatment for an industry or sector as US policymakers see it. For example, if Chinese technology companies can offer cloud computing services in the US without onerous restrictions, why can't US companies provide their cloud services in China without special licenses and a Chinese partner? If WeChat is available in the US, why isn't WhatsApp allowed in China? If joint ventures or equity caps in a given industry are not required for Chinese companies in the US, why are they required for US companies in China? It comes down to the principle that if Chinese companies in a given industry have open access to markets in the US, then US companies should be able to enjoy a similar level of market access in China.

You can go across most industries and easily see where inequities lie. They are glaringly obvious, especially in the technology sector. So I think we can expect to continue hearing about reciprocity as a concept to level the playing field, especially if the trade talks don't produce sustainable results.

Image by Wei Bingnan

CHINA'S BET ON SMART CITIES

China, home to half of the world's Smart Cities, is rapidly enhancing its technology to upgrade urban management

By Jens Kastner

With the imminent rollout of the Internet of Things (IoT), Smart Cities featuring a centrally-controlled approach to just about everything, are becoming a reality, and China is leading the way

In the eastern city of Hangzhou, Chinese conglomerate Alibaba's "City Brain" technology has been, quite literally, stopping traffic. It controls nearly all traffic lights in the city, thereby helping first responders to reach emergency scenes in half the time it took in the past and shortening daily commutes for drivers.

In the capital of Beijing, American-born resident Shaun said the city's air has improved so much that "Beijing's air is no longer a deal-breaker," to living there. The better air quality can be attributed to a variety of factors, including new digital technology such as the Blue Map smartphone app. Created by the Institute of Public and Environmental Affairs, Blue Map is used by city officials in real time to take steps that include forcing factory shutdowns to reduce pollution.

There is still debate over exactly what a "smart city" is. Definitions range from a cities' management mechanisms being optimized by digital means to a city where robots do repetitive chores and people commute in autonomous vehicles to work. But, there is no doubt that China is absolutely at the forefront of developing and implementing the concept.

Managing traffic and pollution are the most visible forms of the running of a Smart City and they already have the ability to improve lives. But they are just the beginning.

The imminent rollout of the Internet of Things, (IoT), where everything will be connected to the Internet through 5G telecoms networks, will speed up the process further. Smart Cities are going to take a centrally-controlled approach to energy distribution, health care logistics, manufacturing, public services, residential site management, social administration, traffic and even entertainment services. So basically, life in general.

"One major push is driven by environment-related grievances, with cloud-computing solutions being used to monitor pollution flows," said Nick Marro, a China analyst with the Economist Intelligence Unit. "This then feeds into China's efforts to adjust its overall industrial structure, as reflected by smart city goals being mentioned in virtually all the important policy documents since the middle of this decade."

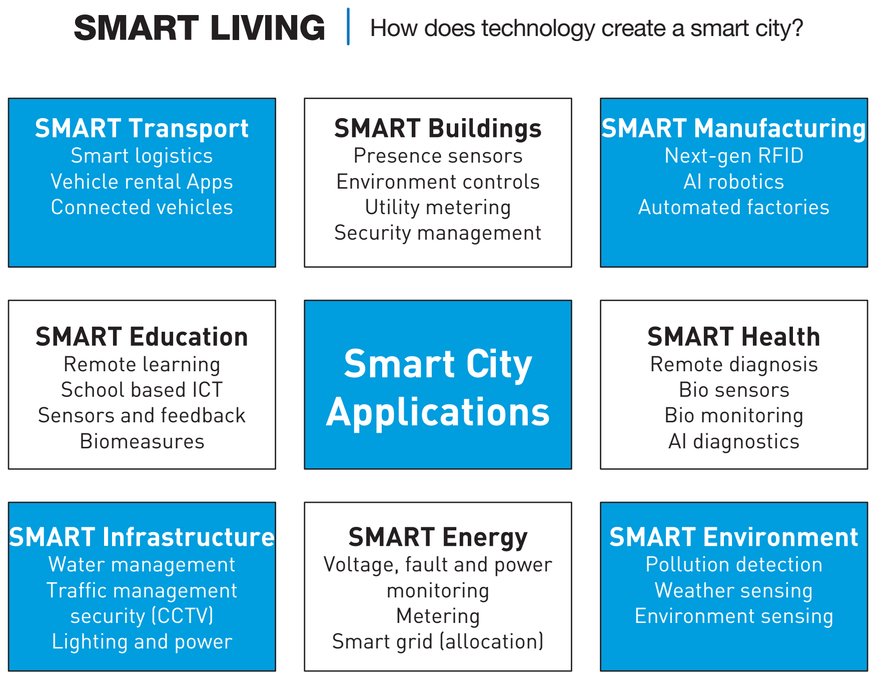
Flexible definitions

Pretty soon, every door, faucet, plug socket, car, refrigerator, traffic light, air-con, turnstile—in short, every item in our lives—will be interlinked, creating data and operating according to instructions from some central control unit. Cash is disappearing fast as all transactions turn digital, and cameras keep an eye on every street and doorway. Government is turning into e-government under which, for instance, official services are delivered to the populace via smartphone apps as opposed to the counters of local government offices where one once lined up.

"Smart city technologies facilitate the streamlining of services on the municipality and regional levels and allows stake-holding companies and individuals to interactively connect with these," says Gisela Loehlein, head of the Department of Architecture at Xi'an Jiaotong-Liverpool University in Suzhou. "For individuals, it's time-saving and convenient to do bureaucratic tasks with a smartphone app, which frees them from cumbersome encounters with authorities."

More than 500 Chinese cities have submitted proposals to make themselves "smart," and the Chinese government has designated 90 of them as pilot projects. According to business intelligence provider Frost & Sullivan, more than $2 trillion will be spent globally per year by 2025 on devices, software and systems associated with smart city development, and half of Asia's smart cities will be in China. These cities will generate an estimated $320 billion for the Chinese economy, with advanced driver systems, artificial intelligence, distributed energy generation, personalized health care and robotics to be its cornerstones.

The trend toward smart city is driven by China's economic growth, growing consumer spending and, of course, rapid urbanization. China's urban population has grown from 37% of the total at the turn



Source: EUSME Centre

of the century to 59%, with predictions of 71% and 80% for 2030 and 2050, respectively.

A recent report, entitled "Smart Cities China—shaping sustainable growth," argues that smartification of cities is crucial to turn China from the world's low-cost factory to the world's high-value adding innovation powerhouse. "Cities and smart technology will be essential to shifting the economic focus from a nation that 'makes' to one that 'creates'," the report says.

Issued by a group of German organizations and companies led by Siemens, the report concludes that, "Harnessing innovation and scaling up activity across all urban areas will be important in meeting the demands of urbanization."

Smartification in the making

The Ministry of Housing and Urban-Rural Development, China's main authority in charge of urbanization and urban planning, started selecting cities in 2013 to experiment and implement smart city initiatives. With China at that point not being as far up the ladder of technical prowess as today, policymakers and local governments initially tended to embrace foreign companies, such as US-based technology conglomerates Cisco and IBM.

"We were involved in smart city projects in South Korea in 2009 when Chinese senior city officials came to look at what we were doing, and they invited us to contribute to similar projects in China," says Caspar Herzberg, Cisco's former vice president Asia Pacific, China and Japan.

"Many projects at the time were primarily about attracting foreign investment to new greenfield business parks with help of the best possible infrastructure, including smart security and building energy management solutions as well as preemptive maintenance of office buildings."

Herzberg says that the installation of networks of surveillance cameras was associated with the goals of crime prevention, disaster recovery and traffic management. Energy management solutions entailed the adjustment of air conditioning, heating and lighting according to the actual presence, or absence, of people in the rooms.

It is still a major technical challenge to scale such solutions up to a city level, he says, but energy savings of up to 40% are often achieved in buildings. "Similarly, new digital solutions are reducing water leakage from pipe systems of up to 80% as well as optimizing the pumps' electricity consumption," Herzberg says.

Convenience & convenience

In terms of traffic management, the Hangzhou "City Brain" project, created by Alibaba, has since 2016 been using camera systems and sensors across the city to collect data on road conditions in real time. According to Alibaba, the data are fed to an artificial intelligence (AI) hub, which then manages traffic signals at 128 intersections.

As a result, Hangzhou's daily accident reporting increased, and response time decreased. In Hangzhou's Xiaoshan District, for example, average travel speed on roads with automated traffic signal control increased by 15%, reducing the average travel time by three minutes. The emergency vehicle response time was shortened by 50%.

Meanwhile, in Shanghai, the city government is backing a multitasking app called Citizen Cloud that allows citizens to pay for water, gas and even traffic violations via a few clicks online. Beijing has been pioneering the use of mobile payments for public transport and retail, and even the capital's street hawkers have accepted and been integrated into the technology.

Hospitals in Ningbo, Guangzhou and other cities, meanwhile, have launched one-stop online platforms where citizens can make appointments, pay hospital fees and access other health care services. They can also use WeChat Pay to have prescription medicines delivered to their home.

Still, among the challenges for smart cities over the world is privacy. Many AI devices and technologies are not yet really reliable or safe. Examples are autonomous vehicles and smart robots.

"Although AI technologies have been widely used in social governance, face recognition and marketing, they still have a long way to go to reach perfection," said Xu Chengwei, a Singapore Management University research fellow with a focus on China's smart city development. "We may feel more convenient in terms of smart life, but there's no such thing like a free lunch," he added.

Early birds catch worms

Given that most of China's smart city projects are government-owned and operated, companies that are approved for involvement are obviously in a sweet spot with the Chinese authorities.

Some Chinese companies benefit more than others, especially smart device manufacturers such as Huawei and ZTE. Internet companies like Alibaba, Baidu and Tencent have also profited from the growth of smart cities, as have delivery services companies such as Didi Chuxing and SF Express, as well as video surveillance product suppliers like Hikvision Digital.

In September, Huawei unveiled the world's first genuine 5G smartphone chip that will play a crucial role in connecting China's citizens to the smart city solutions of the future. Specifically, Huawei's Kirin 990 5G combines a 5G smartphone-system-on-chip (SOC) with a 5G modem, unlike its competitors from Qualcomm and Samsung Electronics that use a 4G SoC together with a 5G modem. This technical breakthrough makes Kirin 990 5G, the fastest, the most reliable and the most power-efficient on the market.

The development of 5G is rapidly helping to unleash IoT's full potential. As this technology grows, so will its role in the build-out of smart city functionality. Gartner, an IT research and consultancy company, estimates that 20.4 billion items will be connected around the world by 2020. Current wireless infrastructure does not have the capacity to accommodate so many devices or support such a large amount of information exchange.

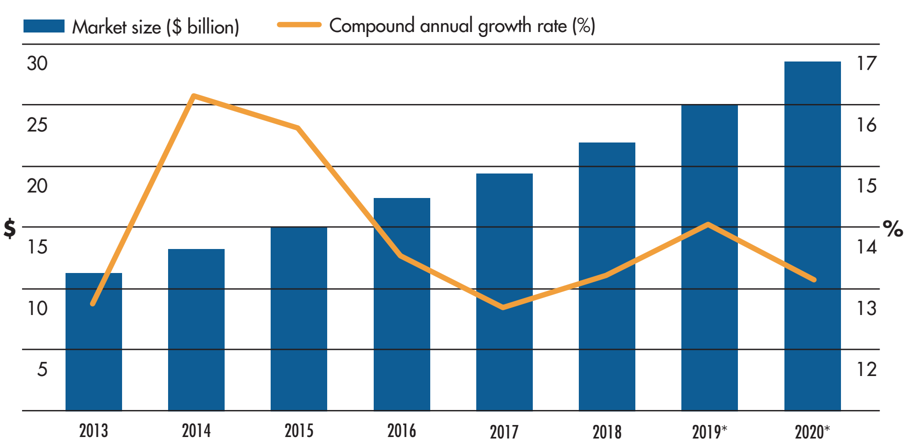
In the past four years, Chinese startups involved in AI, which is the concept at the heart of all the technology that allows smart city devices to make instant decisions, have raised $6.1 billion from venture capital funds. This is 70% more than what their US counterparts collected in the same period, according to Lux Research.

Same but different

Chen Fei, a senior lecturer at the Liverpool School of Architecture, who was born in China, sees smart city technologies as presenting huge opportunities for public space design. As he explains, decisions no longer have to be based on what officials and experts think but can rather develop naturally from the data created by the individuals who use various facilities and spaces.

"Data on humidity, temperature and light collected from cameras and sensors can be used to adjust a public space's floor surface, heat- and light-reflective surroundings, greening, lighting and ventilation, so that it becomes more welcoming to citizens," Chen says.

DIGITAL MARKET | China's Smart City IT market size continues to grow



Sources: IDC China, South China Morning Post *Forecasts

"This is in line with the government's urban policy quest of moving public life away from gated communities to the streets. Indeed, to encourage people to see streets as social spaces rather than purely for traffic is a core aim of urban planning, and China is an ideal testbed for this."

On a policy level, China's smart city strategy appears not so different to what other countries have been doing. For example, the US government's Smart City Challenge, launched in 2015, and the European Union's Horizon 2020 work program on Smart Cities and Communities (2018-2020) both funnel support and funds to a set of early-adopter cities.

Herzberg, meanwhile, says that China's smart city policy approach is like that of South Korea in the sense that efforts are encouraged top-down by the central government. Projects are then actualized by strong, agile local and regional authorities able to go through the decision-making processes swiftly.

Beyond the horizon

"For all those who have lived in China, it is clear that the country's smart cities are leading the world," says Loehlein. "In China we have taken the advantages that smart cities provide for granted. When I go back to Germany and want to call a taxi, I might have to wait for 30 minutes to an hour, which is something that doesn't happen here."

"In the future, the focus will be on ensuring that buildings are smart and can deal with all of the information coming in and that individuals themselves can operate the building," she says. "There will be an interface between the individual and the building, as well as between the individual and the city."

And she has an answer for those who are wary of the implications of the implementation of smart city functionality for individuals. "A huge positive of smart cities is that they will potentially give each of us 10-20% of our time back," says Loehlein. "The challenge is in the control and safety involved in consistently updating the systems."

The Economics of Mutuality

Bruno Roche, chief economist and Catalyst managing director for global food producer Mars, explains how the "Economics of Mutuality" can benefit businesses all over the world

For more than five decades, Mars Incorporated—a multinational family-owned company, makers of iconic brands like M&Ms, Mars, Snickers, Dove, Uncle Ben's, Pedigree, Royal Canin, Wrigley's and more—has invested in Catalyst, its internal think tank which provides insights on leadership capabilities and develops business solutions to ensure Mars is always at the forefront of what it calls "the thought leadership space."

Bruno Roche has led Mars Catalyst globally from Brussels since 2006. Under his leadership, Catalyst has developed ground-breaking methodologies in the areas of marketing effectiveness and M&A integration. It has also expanded geographically from its United States and European bases to become truly global by covering Asia and Africa.

Spurred by a question posed in 2007 by the leadership of Mars Incorporated—"What is the right level of profit for a corporation?"—Catalyst developed the Economics of Mutuality (EoM) program which has matured into a breakthrough management innovation and disruptive model for inclusive growth. EoM aims to empower businesses to adopt a more complete and mutual form of capitalism that is fairer and more efficient than the dominant profit-maximising business models.

Bruno Roche also co-created the Mutuality in Business Lab at Oxford University in 2014, joined the World Economic Forum in 2015 and co-authored *Completing Capitalism* in 2017. In this interview, Roche walks us through how EoM encompasses the world's fourth economic cycle—the digital age—and how it developed.

Q. How does the Economics of Mutuality fit into our current climate of rapid technological change?

A. Over the past 150 years the world has gone through three economic cycles. We are now about to start the fourth one. The first was the agricultural economy where land was considered an asset. The second was the industrial economy where underlying assets were in the means of production. The third wave, which started in the early 1970s and is now coming to an end, is what is known as the service economy, where financial capital are the underlying assets. We are now moving into a new economic cycle, known as the knowledge economy or the digital age. This is where underlying assets are essentially human and social capital, powered by digital technology.

Our argument in the EoM is that there are two forces actioning the drift away from financial capital. The first one is based on the definition that economics is a "science which deals with the social management of scarcities." Fifty years ago, financial capital was scarce, while natural capital and social capital were overly abundant. Today, financial capital is overly abundant, so it doesn't make any sense at all to create more financial capital. Therefore a new economic model is required to deal with this new form of scarcity. This alone justifies the shift in economic models, from a pure financial capital-based model to a social capital-based model. The second is based on the fact that, in the knowledge economy or digital economy, for companies to be successful, they don't need a lot of cash but rather a lot of other forms of capital, essentially the relationship between individuals.

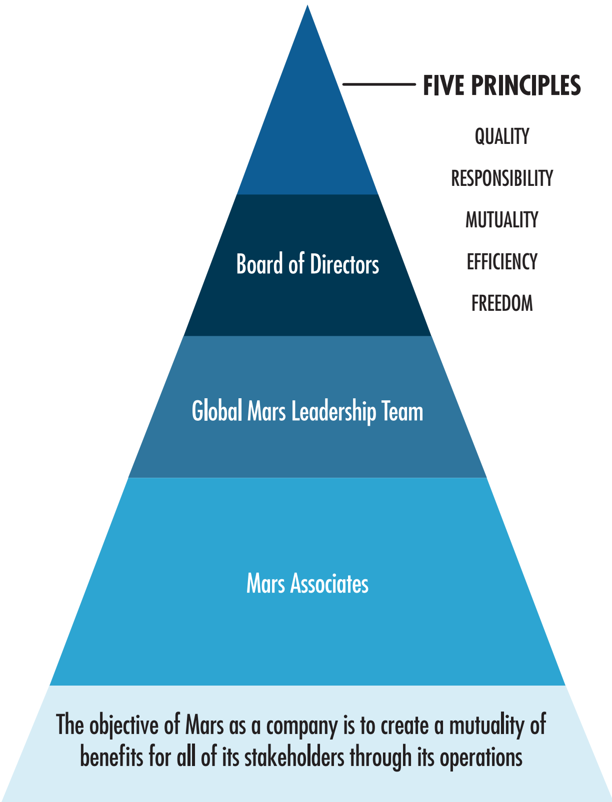
Even large companies like Facebook, Google and WeChat are companies that are based on the production and commercialisation of social connections. So the EoM is a good fit to actually appreciate and frame these new norms of value creation, which is based on human and social capital.

Q. How does the Economics of Mutuality and the concept of "reciprocity" play into the US-China trade war?

A. Over the last 12 years, EoM has been tested at a business-

UNITED BY THE FIVE PRINCIPLES

The principles that reflect the values of Mars, one of which is Mutuality



Source: Mars Inc.

unit level across a wide range of business situations and locations. What we have demonstrated supports the idea—both academically and in practice—that companies which include EoM in their decision-making not only become more responsible and have a bigger positive impact on society and the environment, but are also more performant financially. Part of their decisions should involve setting up a purpose as a strategy (i.e., solving people and/or planet problems profitably and at scale, not profiting from creating problems for the planet and/or its people), enlarging the ecosystem in which they operate, managing business performance using financial and non-financial capital metrics and new modes of profit construction while making the strategic decision to develop a reciprocal relationship with their key stakeholders, instead of just focusing on transactional relationships.

This is actually a real breakthrough innovation because it shows that a business model that is based on mutuality, when others prosper around you, is more performant than a model which is based purely on profit maximisation.

We have not tested this hypothesis yet on the relationship between nations. But my intuition tells me that it is also a principle that would be applicable to trade relationships between countries. As long as reciprocity is maintained, shared benefit will endure. So if there is a lack of equilibrium in a relationship between two parties, then there is less mutuality and reciprocity. This usually leads to tensions.

Q. EoM started with the question 'what is the right level of profit?' Why is that such an important question to ask?

A. For the last 50 years, the response to this question has been based on Milton Friedman's view that "there is one and only one social responsibility of business (...) to increase its profits". That economic model has worked very well, primarily for financial capital holders, but increasingly at the expense of the environment and many other stakeholders. I can understand why it was such an important and relevant concept in the 1970s due to the lack of financial capital in the West—as the system, globally, needed more cash to increase liquidity and in turn to facilitate exchange. But today, with financial capital being overly abundant (with negative interest rates becoming the norm) and the emergence of other forms of scarcities (in social, human and natural capital), that economic model has become unsuitable, increasingly dysfunctional and even destructive.

I would say that the crises we had in 1987, 1994 and 2001 were early alarm bells, while the 2008 crisis was truly a wake-up call. Ever since then, alas, the system has continued to focus on creating financial capital for capital holders, with the consequence that only a small portion of the world truly benefited from the system, and with a visible negative impact on the environment.

Therefore the question of the right level of profit is, in my view, the core question as it goes straight to the core of the purpose of the company—which is to create profitable solutions to the problems of people and planet.

Q. How does the answer to that question compare to the kind of profit that corporations are seeing today, particularly Chinese corporations?

A. At the moment there is an increase of profits not only in China, but also across the world. And while this race is not necessarily bad, the only purpose that companies have is to make more money just for the sake of making more money. This is not a healthy or sustainable game.

In the EoM, when profit-making has a purpose which goes beyond just making a profit, there is a possibility of even increasing a company's bottom line. I am not challenging the level of profit in any economy, I'm challenging the purpose of profit-making. If profit-making doesn't have a purpose, it will lead to predatory behaviour and eventually will not last. Once profit-making has a purpose, including solving problems that we're seeing on the planet and with people, then that's how a business can re-connect with new growth levers and can become, in turn, truly sustainable.

Q. You've spoken about the role of business in society. What in your opinion, are the pros and cons of the current business-society relationship in China?

A. I was amazed to see dragonflies a couple of weeks ago on Fudan University's campus in Shanghai. It really revealed the power of the government in China and how they have managed to drastically reduce levels of pollution. It's interesting, because the West doesn't have the same level of power in involvement.

It's clear that the relationship between business and society in China needs to take place in the context of the government's vision and planning. This could to some extent be a catalyst to improve or enhance the value of business in society. But this actually requires an alignment of business, society and government behind the pain point that needs to be addressed in society.

As China becomes an incredibly rich and increasingly sophisticated economy, I would be very interested to see how the commission of business, government and society will address this phase of prosperity in society, with their own values in mind.

Q. What are the biggest economic challenges that China's leaders are currently facing?

A. The challenges that we face globally are in fact very similar, whether you are in the East, the West or in Africa. Climate change and the rise of inequality are challenges that the world will have to face as a whole.

And while these challenges are global, there are going to be, in my view, two broad ways to approach them. One system will be based on Western values while the Chinese system will be based on their own Confucian culture and statist approach.

And the two are facing the same challenges, with similar levels of resources, but two very different ways in approaching the problems.

One of the greatest challenges for the Chinese economy will be to organize the second system to address global challenges in a way that will also act in harmony with the Western system, so that both systems would be able to benefit from one another.

Perhaps the constitutional principle "one country, two systems" formulated by President Deng Xiaoping for the reunification of China during the early 1990s will be a source of insights to organize the global economy of the 21st century along the principle "one global economy, two systems".

Q. Mars' products are generally aimed at the middle class and their disposable income. How do your company's products and their sales reflect changes within Chinese society? What is the difference between the middle class in China and elsewhere?

A. We have been in China since 1989, so for a total of 30 years now, and China is really an important market for Mars. We have many factories and associates based in China.

My view is there are in fact many similarities between the middle class in China and middle classes in the rest of the world. Just like how there are a lot of similarities between the ultra-rich, no matter where they come from. Human beings just tend to have very similar needs around the world. And to an extent, I think that the middle class in Europe and the US are actually under economic pressure, what with the concept of how the rich become richer and the poor become poorer. It is to the benefit of Mars that the middle class in the countries we are operating in continue to grow, which is something that is still happening in China.

The real wealth of a country doesn't comes from the elite. It comes from the prosperity of its middle class. So I firmly believe that the protection of the middle class is the key to ensuring prosperity in our nations.

> **Because China's economy is so integrated with the rest of the world, any challenges occurring in China would have major repercussions for countries globally**

Q. There's been a great deal of talk about China's economic slowdown recently. What impact do you see the slowdown having within the near future?

A. I think because China's economy is so integrated with the rest of the world, any challenges occurring in China would have major repercussions for countries globally.

You could argue that there is a lot of anxiety at the moment and there is a fear of there being another economic crisis. And I think that the slowdown of the Chinese economy in that context could trigger such an event from happening because of its high level of involvement with the rest of the world.

The economic slowdown, as well as the US-China trade war, are conducive to even more conditions of protectionism. We are at a time where the limits of economic liberalism have become very clear and there are many voices around the world that goes against the doctrine. The trade war between China and the US is an expression of this change in philosophy.

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CROSSING THE STREET

Foreign supermarket giants are losing their dominance in the Chinese market to local competitors

By Shi Weijun

Image by José Luna

The retreat of foreign supermarkets is reinforcing China's reputation as an infamously difficult market to break into

On a midsummer's day in late August, Chinese shoppers went to war with each other at the opening of Costco's first store in Shanghai. Widely shared videos on WeChat, China's popular social media app, showed security guards struggling in vain to hold back impatient shoppers from entering the packed store, and a crowd fighting over a piece of raw meat at the butcher's counter.

The throngs of shoppers cramming into the US-based bulk-buy emporium, which forced it to close early on its opening day, were in stark contrast to the steady flow of foreign supermarket operators exiting China.

In June, French supermarket giant Carrefour became the latest to wave the white flag—announcing it would sell an 80% stake in its China stores to local e-commerce retailer Suning for €620 million ($685 million). Other players that have either closed or sold their operations to local companies include Britain's Tesco, German wholesaler Metro and Spain's Dia.

The story of foreign supermarkets has reinforced China's reputation as being an infamously difficult market to break into. The exodus also raises questions over the prospects of remaining foreign supermarket giants, especially Walmart and now Costco, in a country where retail shopping has been completely reshaped by domestic tech titans offering online shopping options that Chinese consumers love.

"The foreign companies are not going against domestic retailers, they're going against technology companies," says Shaun Rein, founder and managing director of China Market Research Group. But whoever the competition is, China is a consumer market that foreign players cannot ignore—it is predicted to overtake the US this year in total grocery sales, reaching $5.63 trillion compared with $5.53 trillion for the US.

Supermarket history

Supermarket chains are a relatively new development in China. Consumers in North America started buying their groceries at supermarkets in the 1950s, and the trend spread worldwide especially in the 1990s when intense competition and rising customer acquisition costs spurred supermarket chains to look abroad for growth.

This coincided with China's opening-up and embrace of market reforms. In 1995, the State Council allowed foreign companies to enter the food retail industry via joint ventures. In that year, Carrefour opened its first hypermarket in Beijing. Other early entrants included JUSCO from Japan, Parkson from Malaysia and Walmart from the US.

"There was an opportunity for the early foreign big box retailers because before they arrived, most Chinese were buying meat from small butchers, fruits and vegetables from people on the street corner or from a wet market," says Rein. "But as people got wealthier, they started demanding safer, better quality, more hygienic food. And that's when the foreign companies came in."

Western chains swept into China on the back of their pristine reputations—a crucial competitive advantage, as serious sanitary scandals often impacted local markets, says Remi Blanchard, research project leader at Daxue Consulting. "It was a time when Chinese consumers firmly believed that a Western brand was better than a local one," he says.

Foreign supermarkets benefited from a prestigious image too, due to their "exotic" image and relatively high prices. Buying groceries in foreign stores became a status symbol, and foreign chains still benefit from this. With Costco, the parking lot at the Shanghai store is the company's largest in the world—capable of holding 1,250 vehicles—as the US retailer assumed most of the outlet's customers are wealthy enough to own a car.

Over time, multinational operators adjusted the supermarket concept to embrace uniquely Chinese elements. British group Tesco, for instance, made headlines back home by selling live turtles at its first own-brand store in China. In fact, all the foreign supermarket operators localized and incorporated wet markets offering loose vegetables and live seafood.

Large numbers, small profits

Western brands quickly built up their

presence as they vied for a slice of China's retail market, which was the second largest in Asia after Japan in 2005 and already worth $240 billion that year. Carrefour, in particular, showed superior operating savvy and a greater tolerance for risk.

By forging alliances with local governments to set up its stores, the French giant circumvented many Beijing restrictions on foreign investment in the retail sector and created a network of 23 hypermarkets in 15 major cities—including Beijing, Chongqing, Shenzhen and Shanghai—by late 2000. By the time Carrefour announced its sale to Suning in June, the French retailer was running 210 hypermarkets and 24 convenience stores.

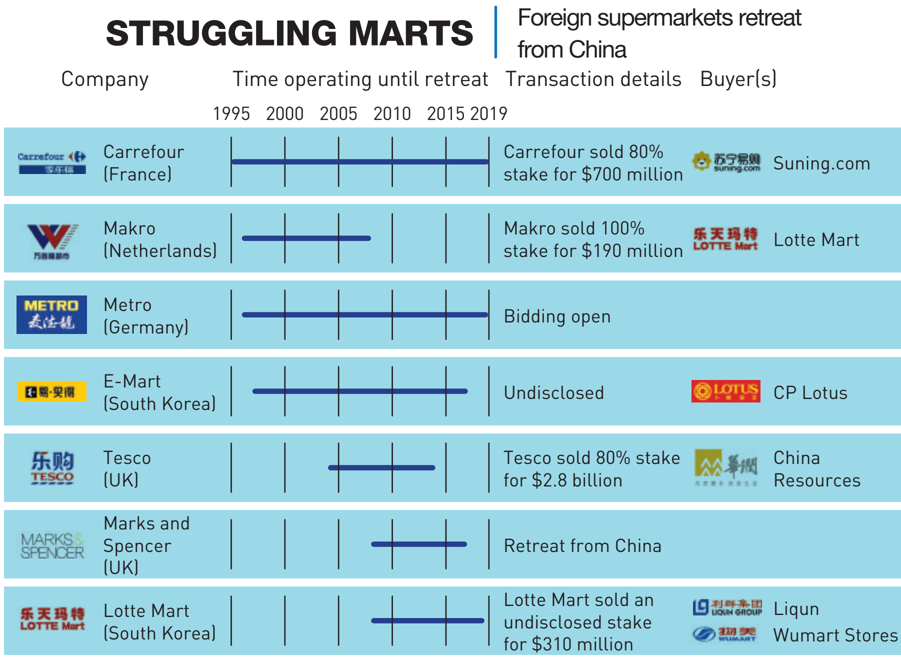
Walmart played it safe, teaming up with the central government to soften its landing. By May 2005, a decade after entering China, Walmart had 46 supercenters in the country, and now runs around 400, along with 26 Sam's Club stores (an American chain of membership-only retail warehouse clubs owned and operated by Walmart) and 20 distribution centers.

Sales growth for years was brisk. Walmart's sales in 2004 jumped 31% year-on-year to RMB 7.6 billion ($1.1 billion), while those of Carrefour were up by 20%. Those were the golden days. But in the past decade, things have gotten tougher, and foreign retailers have seen their footprint shrink.

Carrefour's market share declined from 8% in 2010 to 3% in 2018, while Walmart's share decreased from 11% to 5% over the same period. Data from Kantar Worldpanel showed Carrefour and Walmart both continuing to face shrinking market share since then.

China has not contributed meaningfully to the bottom line of foreign retailers. Walmart's China sales in 2004 made up less than 2% of international sales and an even smaller share of global sales. There has been marginal improvement over the past 15 years—Walmart China earned net sales of $10.7 billion in the 12 months ending January 2019, representing 8.9% of international sales and 2.4% of global sales.

"For some companies, China was never a big deal as it was 1-2% of revenue. But now China is a massive retail market for all sorts of goods, especially groceries. So that failure at the start of the industry has become a bigger issue," says Rein. "If you can't control China retail, then you're in trouble globally."



Source: Caixin

Declining attraction

In the US, Walmart may be the 800-pound gorilla, but in China, it is only one of many chimps jostling for market share. While Western chains have had success, none of them—nor their Chinese rivals—have come close to dominating China the way Walmart dominates the supermarket business in America.

The primary reason is that both Chinese and foreign brick-and-mortar operators have struggled to adapt to the rapid shift in consumer habits wrought by the rise of e-commerce. In China, where young internet-savvy consumers are now accustomed to delivery services and shopping for virtually everything on their smartphones, retailers are also competing with technology conglomerates.

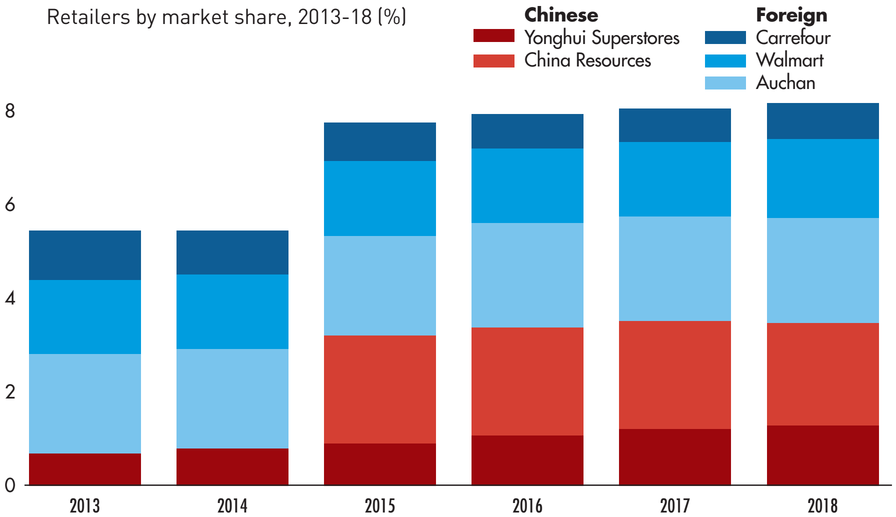
"The models that Carrefour and Walmart adopted were suitable for brick and mortar shops but it requires large foot traffic to keep costs low," says Wang Dan, a consumer analyst with the Economist Intelligence Unit (EIU). "E-business with its convenience of home delivery, abundant varieties and low cost has gained substantial market share from physical stores, especially foreign chains, because Chinese chains are often smaller in scale and thus more flexible in their models."

China's e-commerce trade volume reached RMB 31.6 trillion ($4.4 trillion) last year, with more than RMB 9 trillion spent in online retail and online payment exceeding RMB 200 trillion, according to a report released at this year's China International Big Data Industry Expo in May. The failure to capitalize on China's online shopping boom is particularly glaring for Carrefour, which missed the opportunity to digitize its business from the bottom up before e-commerce giants like Alibaba, JD.com and Tencent gained a huge influence on consumers' purchasing behaviors.

"Western chains lost the battle to the local e-commerce behemoths," says Blanchard. "The emergence of Alibaba and Tencent, as well as data-driven companies completely reshuffled the cards of the grocery retail market after years of uncontested Western dominance."

The line between pure e-commerce and traditional retailers has blurred as

CHINESE GROWTH | Chinese supermarkets now have a bigger market share



Source: Euromonitor, Financial Times

tech companies have invested in new sales models. Alibaba, for instance, is the undisputed leader in adopting and developing new models in food and non-food sales through acquisitions and partnerships. The company's homegrown Freshippo grocery retail chain (known as Hema in Chinese) has taken China by storm, offering a hybrid of online and offline shopping.

Blanchard says the consumer data that Alibaba and JD.com (which operates 7Fresh) harvested for two decades through their e-commerce platforms helped them acquire an in-depth understanding of local consumers' needs and preferences. Alibaba and JD.com then used this to set up their grocery platforms, disrupting the less sophisticated Western chains.

"In any industry, barring regulatory barriers, the prospects of domestic versus MNC (multinational corporation) players depend fundamentally on whether the primary sources of competitive advantage are local-for-local or global-for-local," explains Anil Gupta. A professor at the University of Maryland's Smith School of Business, he has been researching and writing about China for 25 years.

"The supermarket industry is at the extreme end of local-for-local. That's why, in this industry, you see very few successful MNCs, not just in China but also elsewhere, like the EU, India and the US," says Gupta.

Today, Western competitors have no choice other than partnering with China's local leaders. Walmart initiated a strategic partnership with JD.com as early as 2016, and France's Auchan with Alibaba.

While most foreign retailers seem to be leaving, Walmart and Costco are exceptions. Walmart has made steady progress through brick-and-mortar stores. Since 2000, the company has added an average of 20 stores every year and it jumped into Chinese e-commerce earlier than rivals by investing in online grocery store Yihaodian in 2011 and establishing a strategic alliance with JD.com in 2016.

Last December, Walmart opened what it dubbed a "next generation" store in Chengdu that is smaller, more digitized and allows for same-hour delivery. The company also announced in July that it would invest RMB 8 billion ($1.1 billion) to build or upgrade 10 logistics centers in China over the next 10 to 20 years.

"Walmart has been upgrading its supply chains and community supermarkets, leveraging on its previous advantage in warehouses. However, local companies like JD.com seem to have an edge over Walmart, especially with the aggressive adoption of automation and big data," says the EIU's Wang.

Rein, too, is unconvinced about Walmart's outlook. "I think they're going to struggle along, but I don't see them being able to take the country by storm," he says.

The implications

Wang believes this is all evidence that domestic chains have learned how to do grocery retail and so no longer need foreign players as chaperones. "The consumer market has a low barrier of entry in terms of technology, so when Chinese companies learned the tricks in chain management, logistics and services, foreign supermarket will have a hard time to maintain their advantages," she says. "On the contrary, by using Chinese e-business and social media platforms like Taobao and WeChat, Chinese companies are creating new barriers for foreign competitors."

"China is 5-10 years ahead of the rest of the world when it comes to innovation and retail. It's clear Alibaba and Tencent have absolutely no need for Western expertise. They've learned how to deal with the cold chain and the supply chain. They've learned that from the Western companies, and now they've developed faster logistics and superior technology techniques."

The recent rush of foreign supermarket owners out of China points to tougher times for those remaining. "It's going to be rough in the coming decade, because they will have to adjust to dealing with almost-monopolistic players like Alibaba and JD.com and understand how to sell to their ecosystems," says Rein. "It's going to be hard, frankly, for a lot of foreign retailers—unless they can understand how the Chinese consumer is adjusting and evolve."

As for Costco, it made headlines around the world with its high-profile Shanghai store, but it will have to prove whether it can stick around for the long haul, which will largely depend on how well it adapts to e-commerce. After the blow-out first day, there were reports of many shoppers handing back their membership cards, but over the following weeks, business is reported to have remained solid. It could be that the Chinese consumer's love of a good deal might even allow Costco to buck the trend.

A Rising Rivalry

Rebecca A. Fannin, founder of Silicon Dragon Ventures and author of *Tech Titans of China*, looks into how the US and China are racing to lead the global tech industry

The United States is the world's technology leader, but China is catching up at a fast pace. Various factors have contributed to the Asian country's growth, including the government's ambitions to make the country a tech superpower, and investment in "unicorns"—China now has 86 startups valued at $1 billion or more, compared with 151 in the US.

China already has the world's largest internet and mobile communication markets, the highest number of STEM graduates, at 4.7 million, the most scientific academic papers published and more supercomputers than any other country, according to Fannin's new book, *Tech Titans of China*. It is also in second place in patent filings globally, at 21% of the world total, just behind the US at 22%.

Rebecca A. Fannin is a leading expert on global innovation. Following the flows of venture capital money, she became one of the first American journalists to write about China's entrepreneurial boom, reporting from Beijing, Shanghai and Hong Kong.

Fannin's first book, *Silicon Dragon: How China is Winning the Tech Race*, profiled Jack Ma of Alibaba and Robin Li of Baidu, and she has followed these Chinese tech titans ever since. Her second book, *Startup Asia*, explored how India is the next up-and-comer, again predicting a leading-edge trend. In September, her latest book, *Tech Titans of China: How China's Tech Sector is Challenging the World by Working Harder, Innovating Faster & Going Global*, was released. In this interview, Fannin discusses China's new wave of tech giants and what we can expect to see coming out of the country's tech sector in the future.

Q. What inspired you to write* Tech Titans of China *and what is its purpose?

A. My first book, *Silicon Dragon* was published in 2008 and documented the early China internet revolution and the entrepreneurs who were behind it, such as Jack Ma and Robin Li. The book followed the rise of Alibaba, Baidu and Tencent, but much has changed over the last decade since these companies took center stage. As China developed, a whole new group of newcomers have emerged, such as ByteDance, Didi, DJI, SenseTime and Xiaomi. In addition, the whole venture capital market has changed.

I felt I needed to tell the story of how much the tech system has transformed in China, as well as how fast it's all changing now and how advanced it has become. If you look at the statistics, there are many indicators that reveal how China's market is gaining on Silicon Valley.

When my first book was published, nobody could believe that China's tech sector was advancing quickly, except for those who were following it closely, so there was a lot of pushback from Silicon Valley. And now, the growing power of China's tech world has progressed so far that it's become a challenge to Silicon Valley. Chinese companies are producing new business models that are in some ways more advanced than what is available in the Western world. It's been a remarkable journey really.

Q. What are the most important ideas that readers should take away from your book?

A. Silicon Valley remains the global technology leader in many ways, but China is rising quickly. Just as the Western world has Amazon, Apple, Facebook and Google, China has its own tech titans, dominating their market. Chinese tech giants are also expanding into all kinds of new markets, away from their original core business such as from search, e-commerce and social networking toward new areas like AI, biotech, fintech and robotics. These companies are not just giants, they continue to be innovative.

Meanwhile, a whole new group of tech newcomers have sprung up in China and these fast-charging startups have become unicorns very quickly.

China is now the world's second largest venture capital market, as well as home to the world's second largest number of patent applications and patents in use. It recently came close to surpassing the US on national spending.

A talent base has grown up in China, and these entrepreneurs are more confident than any generation before them. They are aggressive, they're hardworking, they're innovative and always pushing to scale up and branch into new sectors.

So many changes have been taking place not just in the internet market, but also in AI, mobile apps, robotics and social commerce—and China is advancing in all of these.

There are other areas where China is innovating, such as in electric vehicles where the country is getting ahead. This is partly because of the government's push to develop its own industries, but there is a lot of venture capital money and talent behind it too. Numerous private companies have developed as a result.

Q. What is there for Western tech companies to learn from the development and operational models of Chinese tech companies?

A. Chinese founders are very aware of what is happening on the ground at a grassroots level. They're competitive and able to withstand challenges without going back and automatically looking for new funding. They're able to last longer on the original capital that they raised, which I think is something that entrepreneurs in Silicon Valley can learn. In many Chinese startups, they first make sure that they have the China market sewn up before they look elsewhere, which is another key lesson.

A significant difference is also in the two countries' working habits. China is known for its 996 entrepreneurial culture (working from 9 a.m. to 9 p.m., six days a week), which some say is not necessarily a good thing. In Silicon Valley it's more like eight to six, five days a week. There used to be more of an entrepreneurial flair in Silicon Valley during the dotcom rush, but China has surpassed the US when it comes to entrepreneurial energy.

Because the pace of work in China's tech sector is so fast, innovation is also happening quickly. China has been able to leapfrog the personal computer age right into mobile. Being able to do so was a huge advantage for China.

The headquarters of China tech titan Tencent, in Shenzhen

China's mobile market is much more advanced than in the Western world.

Overall, Chinese entrepreneurs can stretch capital to last, they're grassroots hungry, driven and very passionate because the opportunity is huge and they want first-mover advantage.

Q. What are some misunderstandings that people have about Chinese tech companies?

A. The biggest misunderstanding is that people think it's all just about copying, but there's a lot of innovation going on, particularly around business models. For instance, a revenue source that really took off in China that didn't become popular in the West is the sale of virtual goods to support a website or mobile app.

Another innovative business model comes from TikTok, the 15-second video app developed by ByteDance, which has become popular not just in China, but internationally.

Q. Are there any Chinese tech companies that you are particularly excited about right now?

A. There are a few that stand out. The drone company DJI, based in Shenzhen, is solid and innovative, although it's faced some security concerns in the US as a Chinese-originated company. DJI has more than half the world's market share in drones and the company has a visionary entrepreneur.

SenseTime is another company that the world should watch.

> The US simply doesn't adapt to new technologies as swiftly as the China market does

SenseTime has solid backing as well and is obviously working in a hot area right now—AI. China's AI sector is growing like crazy, particularly in tech involving security and surveillance, though some challenges have been placed on this sector by recent US restrictions on sales to Chinese AI companies.

Pinduoduo, in the sector of social commerce, is also a company to watch. Social commerce is another idea that originated in China and hasn't reached the same level of popularity the US. Pinduoduo has combined social commerce and gaming, which I find incredibly interesting.

Q. What do you see for the future of the China-US race to lead tech?

A. We have the two superpowers racing with one another, with the China-US tech and trade wars escalating. If this continues, we'll start seeing separate spheres of influence develop and less cross-border activity, investment and fundraising. We'll see these two spheres develop separately, and this trend will escalate.

Q. From the US perspective, do you feel they are on the defensive about China's rise? How so?

A. Yes, there is a certain level of fear involved from the side of the US, which feels threatened by China's rise. The Huawei restrictions are a clear indication of the US pushing back. There are also stricter regulations on Chinese investments in America. US regulators and policy makers are keeping a much closer watch on Chinese companies doing business in the US. These are all friction points, for sure.

Q. Why haven't mega China apps, such as Alipay and WeChat, exploded in the same way in the US they have in China?

A. The US simply doesn't adapt to new technologies as swiftly as the China market does. The China market is younger and more digitally savvy than the typical Western consumer.

To use WeChat and Alipay in the US, you must have a Chinese bank account, so that's an automatic deterrent. Alipay and WeChat are not going to really take off in the US unless banking regulations change.

Moreover, Apple Pay is not nearly as commonly used as WeChat and Alipay are in China. Mobile payment in the US has not caught on to the extent that it has in China. People in New York City still use cash, which is sometimes hard for me to wrap my mind around.

It's interesting to see how other industries such as e-retail have taken off in China, but have been slow to catch on in the US. Super apps are much more developed in China than anywhere else in the world. We don't have anything like Meituan (a food delivery app) in the US—the closest thing would likely be Uber and Uber Eats.

Q. What business opportunities do you predict will arise from the race to lead tech?

A. Both sides will have to strengthen their own capabilities and just like anytime you have two competitors, each of them tries harder, right? It could spur innovation because each side is under pressure to produce and innovate faster.

Q. What role is there for outside investment in China's tech sector?

A. There are a number of startups that are on the leading edge and they need capital to grow and to get to the next level. More funds are raised recently at substantial amounts to invest in China's tech sector, primarily from a core group of firms that have an established track record of Chinese investing.

The primary source of funding for China's tech sector is from China funds that have a Silicon Valley anchor, those that have a China base, as well as several new funds that are offshoots of long, established players. At the top is Sequoia Capital China, which has the largest funding levels in China and is among the most active investors.

Venture capital funding globally has been centered on China and the US, but now more money is starting to flow into Southeast Asia and other emerging markets in light of the recent China-US tech and trade frictions.

Q. What can we expect to see coming out of China's tech sector in the future?

A. We will definitely see autonomous driving developing to a much fuller extent than it is now. Smart cities with self-driving cars, self-driving buses and self-driving trucks will soon become a reality. We're going to have cities that are entirely powered by AI. I believe China is going to lead in that.

Transportation is one of the sectors that has been totally disrupted. All of the tech developed for smart cities, such as big data and sensors, go together to form the basis of super smart cities, which is one area where China is headed and could take the lead in.

TAKING FIRST PLACE

More than half of the world's self-made female billionaires are Chinese. What sets them apart?

By Mable-Ann Chang

Image by Raciel Avila

China has the greatest number of self-made female billionaires in the world. Why are they so successful?

Wu Yajun once worked in a factory for a meagre $16 a month, but she is now one of the world's wealthiest women, after creating a property empire worth a staggering $9.4 billion. She is one of dozens of women in China who have leveraged the economic boom of the past few decades to become very, very rich.

In fact, according to this year's Hurun Rich List, a ranking of wealthy individuals, more than half of the world's self-made female billionaires are Chinese. Of the 89 self-made female billionaires on the list, 57% come from China. To put that in context, China is home to only 20% of the world's total number of women and 16% of global wealth.

Second was the United States, with 18 self-made female billionaires and the United Kingdom comes in third with six. When ranked by city, five of the top six cities for female billionaires are all in China, led by Beijing, It's thought this has provided a boost to those cities' economies.

"The concentration of super wealth-creating women in cities like Beijing, Shanghai and Shenzhen has a ripple effect for creating more such entrepreneurs," said Rupert Hoogewerf, chairman and chief researcher at the Hurun Report.

When taking the massive population of nearly 1.4 billion into account, there is now one female billionaire for every 13.4 million women, which is not far off the US number of one for every 9.1 million American women.

Chart toppers

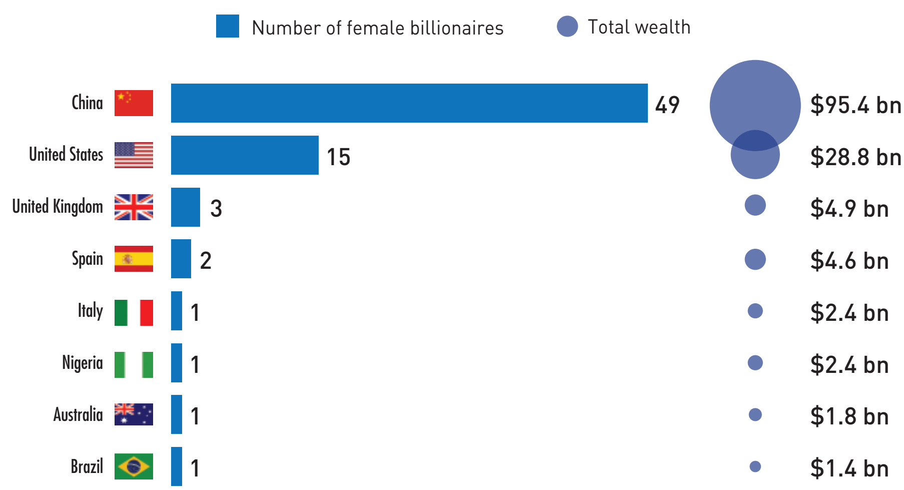
Topping the list of self-made female billionaires in the world in 2019 is the 55-year-old "Property Queen" Wu Yajun. Originally from Chongqing in the southwest and now a resident of Beijing, the billionaire spent years working in a factory and then as a newspaper reporter before establishing the real-estate development company Longfor Properties with her ex-husband. The company, which is listed on the Hong Kong stock exchange, last year reported sales of $30 billion, up 29% year-on-year, and has 20,000 employees.

Second is the 78-year-old "Beijing Real Estate Queen" Chen Lihua. She has a fortune of $7.5 billion and is best-known for owning a large chunk of downtown Beijing. Chen is an exception in that her background links her to the Manchu elite which ruled until 1911, but she was close to destitution in the early 1980s when she moved to Hong Kong. It was there that she built a diversified business empire, Fuwah International Group, originally on the basis of antique furniture trading and real estate.

"Paper Queen" Zhang Yin, aged 62, came in sixth on the global list and third in China, with $5 billion, down 28% from the

Female Billionaires | Nowhere comes close to China

Female self-made dollar billionaires and total wealth by country in 2015



Source: Hurun Report

Wu Yajun, left, chairwoman and executive director of Longfor Properties and currently the wealthiest self-made female billionaire in China, speaking at a press conference in Hong Kong in 2011

year before. Her company, Nine Dragons Paper Holdings Ltd, is the largest paper maker in China and the largest producer of environmentally friendly paper in the world. It has long imported massive quantities of paper from the US to recycle as cardboard for use in packaging, and last year it bought two more integrated pulp mills in America.

"Touch-screen Queen" Zhou Qunfei, was a former factory worker from Hunan province, who now commands a workforce of about 60,000. She was last year's number one, but has since dropped down 13 places to 14th, as her net worth plummeted 63% to $3.4 billion on the back of a share price fall.

The ingredients

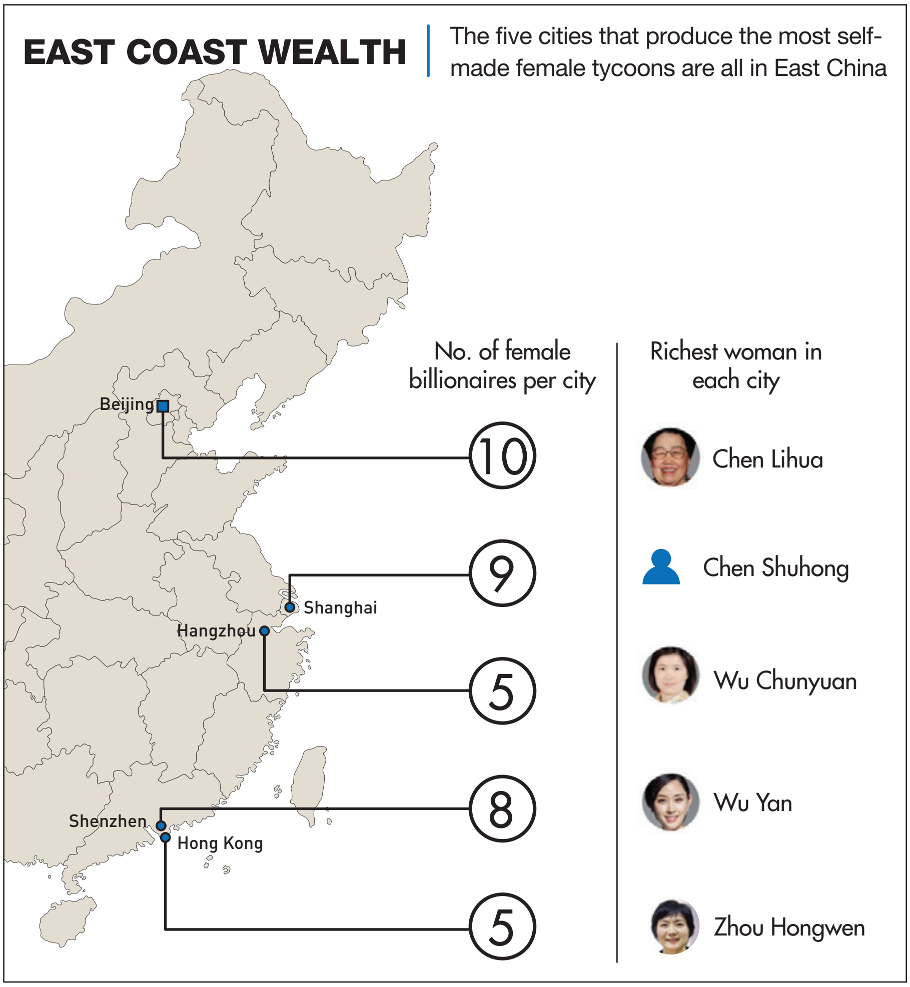
China's booming economy over the past three decades has provided opportunities to launch businesses and make money in ways that just did not exist before. And importantly the role of women in business has grown enormously.

"A lot of credit goes to China's reform and the entrepreneurial spirit of women," says Grace Wu, founder of the wellness industry investor WE Solutions.

"With the start of the reform and opening-up era, the economy experienced a new economic model in which entrepreneurs, both male and female, could test the waters and experiment in their own way," says Chenni Xu, a gender consultant working with NuVoices, a media organization dedicated to promoting the work of women in the arts and media sector. "This new sphere had fewer gender constraints, than say, in the traditional home, or at the state level. So it allowed female entrepreneurs to succeed where they might not have in other areas of society."

The extreme social disruption of the political campaigns culminating in the Cultural Revolution of the 1960s and 1970s also played a role by overturning gender-based assumptions and creating dynamics that allowed women to aspire to stand on their own and build their lives and businesses without having to defer to men. The shift from the Maoist period to the 1980s is characterized for many by the qoute from Deng Xiaoping that "to get rich is glorious."

"A lot of them were born during the Cultural Revolution, which was a blank slate," says Roseann Lake, author of *Leftover in China*, a book about the problems faced by high-achieving Chinese women. "When you're born at such a time,



Source: Hurun Research Institute 2017

you see many things are possible, that significant changes can happen, and you don't really think that men and women are very different."

Another factor that seems to have significantly contributed toward the number of super-rich women in China, is the one-child policy, enforced by the government from the late 1970s. The policy was abolished in 2015, but during those decades, unprecedented levels of care, attention and education were provided to only-daughters across the country because all the hopes for the future of the family rested on their shoulders.

It also chimed with the famous quote from the founder of the People's Republic of China, Mao Zedong, who declared that "women hold up half the sky."

"In a certain way, support for gender equality makes females relatively independent," says Wu. "Also, the one-child policy doesn't offer many choices to a family, therefore parents raise kids without gender differentiation and even females would receive higher education, at least in the cities."

Claire Gerard, project leader at the market research and management consulting firm Daxue Consulting, says the sudden rise of self-made female billionaires in the world's second-largest economy can be largely explained by societal and economic factors, which have helped to give women better prospects in business management than in the West.

"The past decades of evolution in the economy has influenced education and family structure at a very fast pace," she says. "These factors have led to a fast empowerment of businesswomen, that may have been different in Western countries, where women leadership and influence in their personal life is not that developed."

China's constitution guarantees women "equal rights with men in all spheres of life," and over the last decades, women have enjoyed notable gains. Life expectancy and literacy rates, for instance, have risen as the economy has developed, although this progress has to some extent been outpaced by the rest of the world.

"In terms of women in the workplace, China places higher than other East Asian countries such as Japan or South Korea, but that doesn't mean there is gender equality in all areas of society," says Xu "That being said, Chinese women are encouraged and expected to join the workforce, and do so in droves. The problem is in the 'leaky pipeline.' The number of women at entry level jobs is above 50%, and slowly declines as they rise up through the ranks to less than 1% representation at the board level. This is a structural issue that needs the input of all those involved, not just women, to make a difference in advancement and opportunities that women receive."

"Instead of saying society is more gender-balanced, I'd rather say that Chinese society provides more flexibility for women to develop," says Vivian Miao, manager at a leading travel company. "As long as women are prepared when chance favors them, we will have the opportunity to stand on this stage."

Shared traits

China's rich women tend to share certain characteristics—they mostly come from hard-working backgrounds rather than the elite class, and they are strongly independent-minded in a society that is still largely male-dominated.

"They are fearless and they speak their mind," says NuVoice's Xu. "They are similar to any 'self-made man' except it was probably much harder for them, considering the externalities they had to face in their journey to the top."

"They tend to be motivated by the pull of great opportunities, to start younger, are better-educated and not afraid to fail," adds

Wu from WE Solutions. "Their tolerance, sensitivity and attention to detail are advantages when it comes to operating a huge business."

There is also a strong correlation between female billionaire numbers and booming property markets—property development is at the heart of most of China's wealth today, based on the usage-rights lease arrangement which started only in the early 1990s, although all property is actually owned by the state.

The property market growth across the country over the past two decades and more provided an opportunity for women to lead and prosper that other industries did not. The finance sphere is largely owned by, or closely integrated with, the government, mostly has men in leading positions, and as in the West, the movers and shakers in the tech world tend to be men.

"Women in China always had some power and influence. Even when they were taking care of the household, they were managing budgets or making decisions for the family," says Gerard. "They are used to being in charge in their personal lives, and so they've applied the same power and leadership dynamic to their professional lives."

Another common feature of female billionaires and Chinese business leaders generally is their ability to manage risk, says Miao. "The difference is that women naturally are more careful when it comes to risk, and tend to be more practical and detailed-driven than male counterparts," she says.

"It's difficult to generalize, as each individual is different, but women are amazing multi-taskers and can hold a lot on their plate while attaching great importance to responsibility," says Xu. "For risk-taking, it might be more prudent for there to be more balance, taking into consideration the types of financial crises that have occurred in the past 20 years."

Grace Wu from WE Solutions, however, sees female billionaires as being just as willing to take risks and entrepreneurial leaps into the unknown. "In the past it was 'Necessity Entrepreneurship' while now it is 'Opportunity Entrepreneurship,' but I don't think there is [any] difference in the way that female billionaires handle risk and responsibility."

> **There is definitely a trend of female involvement in high-level business in China that I believe will continue**
>
> Chenni Xu
> Gender Consultant
> NuVoices board member

Wu Yajun, co-founder of Longfor Properties, certainly doesn't lack nerve. She made her money from property and that is where most of her wealth is still held, but her private wealth management company Wu Capital, is reported to be aggressively investing in technology companies including Uber and Evernote.

Onward and upward

The likelihood is that women are going to play an ever-greater role in the economy and society in the future, but at what point will the power structure change to reflect the growing economic power of women in the country? Only one member of the 25-member Politburo, the top body of the ruling Communist Party, is currently a woman, and the leadership of the state-owned enterprises which dominate large sections of the economy is overwhelmingly male. "Historically, leaders were soldiers, and the military is not really a gender-balanced environment," says Wu. "In the Union Nations ranking of women in politics in 2019, China only came 73rd among 193 countries. Improvement has been slow and I don't expect much of it to change."

"There is definitely a trend of female involvement in high-level business in China that I believe will continue," says Xu. "That's a no-brainer. As Christine Lagarde [Chairman of the International Monetary Fund] pointed out, this is an opportunity for growth for everyone as well as the economy. What needs to be discussed is the double work duty that women have at home. Men have long since had a 'subsidy' in the form of an at-home worker in childrearing and caretaking."

But the world of business provides a freedom and flexibility for women that politics lacks, and the female billionaires of today are in the vanguard of a much wider engagement by women in the economy.

"Trends in education have also seen women attend university in increasing numbers with many courses now having a higher ratio of women than men," says Gerard. "Reaching a gender-balanced society still need decades, but women are working hard on this and powerful business women are having a great impact on this transformation."

Female involvement in high-level business will increase in the future," adds Gerard. "We have already seen fast growth and Chinese women are hard working, ambitious and want to be successful. They have gained independence in their lifestyle and successful women are role models for many other women in the cities."

The example set by China's female billionaires has a huge potential impact on society, Gerard says. "The societal and economical environment is evolving much faster than in Western countries, and the potential for women to be involved in business is increasing. Women have seen other women succeeding, and starting young and from scratch, they are willing to follow the same path and are not afraid to take risks."

Looking Forward

Ting Lu, managing director and chief China economist at Japanese investment bank Nomura forecasts China's economic development

With the People's Republic of China having just turned 70, there are plenty of reasons to review the impact of the explosive growth of the past few decades and consider what can be expected in the near future. That is the job of Ting Lu, chief China economist at Japanese investment bank Nomura. He joined Nomura in May 2018 from Huatai Securities, where he was chief economist and global head of research. Prior to that, he was head of Greater China economics at Bank of America Merrill Lynch.

As an economist, Lu has been highly ranked in many surveys including No.1 in Institutional Investor's All-Asia surveys in 2013, 2014 and 2015. While at Huatai, he helped build the research, equity sales and trading teams in Hong Kong, and significantly improved the company's research and sales teams in mainland China. This contributed to Huatai's 4th and 5th rankings in the 2017 Institutional Investors All-China Research and Sales Teams surveys, the highest rankings ever achieved by a Chinese securities house.

In this interview, Lu considers the likely trajectory of investment into China, as well as how significant the nation's debt issue is.

Q. How would you describe the status of China's economy at present?

A. Overall, I think that China's economy can be considered safe. The country is far from a financial crisis or any big economic crisis, but I do believe that a slowdown of economic growth is inevitable, particularly over the next couple of quarters. Sometimes people ask me whether I see it developing into some sort of crisis, but I don't believe that it will happen. I do think, however, that during the slowdown, we may see more bank defaults as well as other issues.

Q. What would the impact of the gradual slowdown in China's economic growth be?

A. Over the next couple of quarters, the slowdown may not in fact be as gradual as many believe. I think it will pick up pace. If that is the case, then I expect growth to slow to below 6% for the rest of this year and as for next year, I expect growth to slow to below 6%.

One major impact of this slowdown will be in employment. More people will struggle to find full-time employment. Over the next year, it will become more difficult for college graduates to find jobs, which could be a big issue, seeing as we currently have over 7 million college graduates being added to the job market each year.

A more serious impact will be on the financial markets. We will likely see stock prices not performing well and, again, an increased number of bank defaults. Exchange rates will also be affected, with a depreciation in RMB exchange rates. We're currently at around RMB 7.15 to the dollar, which when compared to last year's RMB 6.3, shows that depreciation is not slow.

As a backdrop to all of this is the US-China trade war, which I believe will escalate even further. It will make China's exports sector very challenging. It's likely for us to see a deep contraction of China's exports within the next 12 months, which is another downward pressure on exchange rate.

Q. What is the likely impact of the US-China trade dispute in the short- to medium-term?

A. In the short term, the direct impact has been and will continue to be on China's exports. Exports are very important for the Chinese economy based on its contribution to the country's Gross Domestic Product (GDP), estimated at around about 13%. An indirect impact of the trade war is if some multinationals decide to move their factories out of China. That's why over the past year we have seen a slowdown in exports, but we also have observed a slowdown on manufacturing investments, especially for sectors linked to exports.

But we all know that this trade war is not just about trade, it's also about high tech. Some Chinese companies have been affected, such as Huawei. So in this regard, I think it will be more difficult for Chinese companies, especially high tech companies to attain technology know-how and more sophisticated technology components from the US, which could—in time—improve China's high-end manufacturing sectors.

Beyond trade and tech, another impact may be a decoupling between the US and China. A decoupling would impact geopolitical relations and have social effects.

Q. How far could a decoupling between the US and China go?

A. That's a very good question, but also quite a challenging one to answer at this stage. I certainly hope that decoupling between the two countries doesn't take place, as it is still possible to prevent decoupling from happening. But given the reality of the current situation, I think that it is more likely than not to happen, but it will be a relatively slow process.

In the best case scenario, both sides will sit down and negotiate with a certain level of good will. Ideally they would be able to find some common ground. I believe that for the US, engagement is still the best strategy and China needs to realize that it is still a middle-income country with a GDP per capita of below $10,000 with still a long way to go to catch up. It still makes sense for China to keep a low profile as there is still a lot to learn from the US and other Western countries. Other than trade, there are also benefits when it comes to learning new tech. There's a lot to learn, even on topics such as social governance.

But on the part of the US, engagement as an approach makes sense. They should give more time to China and also recognize that China is a country with its own long history, with a population of 1.4 billion. It's very difficult to run a country of this size.

Q. To what extent do you see China opening up its sectors, including the financial sector, to foreign companies? And what opportunities do you see for foreign companies coming from that?

A. There are still many opportunities, even now that there is a risk of decoupling. China itself is a very big economy and even if some kind of decoupling were to take place, China may still be able to maintain a growth rate of around 4%-6% over the next few years. After another decade, the size of China's GDP may be very close to that of the US.

There are also many structural changes taking place in China, such as a rising middle class. Chinese people are still working very hard and still want to do business with other countries across the world. That's why I believe that there are still a lot of business opportunities in China for foreign firms.

I definitely see China opening up its sectors even further, but of course there will be sectors in which China will still be more conservative. I strongly believe that China welcomes multinational companies, and global banks.

One area that I think will be very difficult for the government to ease its grip on are capital controls. Of course capital inflows will still be welcome, but capital outflows will remain quite difficult. So that's why for these global financial companies, when they set up shop in China, they need to know the opportunities available to them, but also the limits that will be placed on them. It is likely that they will soon receive the same opportunities as Chinese banks and Chinese brokers, but they will also be placed under the same constraints as Chinese companies when it comes to capital outflows. It's very difficult to move money out of China.

I truly believe that China will open up to global companies, particularly in sectors such as manufacturing. The financial services sector, however, is much more backwards than manufacturing so that may take longer.

Q. What has the impact of Made in China 2025 been?

A. We all know that the policy has been criticized, but putting politics aside, for China it's understandable in its goal to climb up the value ladder. The Chinese government knows that it's very important to build its own system for protecting IT. So it's really in the interests of China to do high-level manufacturing on its own. Of course, in the meantime, learning from other countries and importing new technologies are also part of the plan. The development of high-end manufacturing and narrowing the gap between China, Japan, the US and Germany is an important goal in this regard. That is the starting point. I believe that Made in China 2025 is a kind of national strategy, and it's not just top-down but it's also bottom-up for Chinese companies to catch up with global players.

And then of course in this process, I believe that given the trade war, China will have to adjust its strategy to put more emphasis

> **Over the next year, it will become more difficult for college graduates to find jobs**

> The real problem is that over the past couple of years, China has rapidly accumulated foreign debt

on IP protection and R&D. In this process, it's also extremely important to improve China's legal system.

I don't think all of this is happening as a result of US demands, as it really addresses the needs of China. Its aim is to make China a country driven by research and development. I think Chinese people are very smart, hardworking and innovative, so I'm really optimistic about its success, especially if China can really focus on IP protection and increase its investment in R&D.

Q. What do you see as the likely trajectory of ODI and FDI into China in the future?

A. FDI will be growing, albeit at a slower pace than it was before because of economic uncertainty around the slowing growth rate and trade tensions. I don't see any significant contraction in FDI in the near future because of all of the investment you can see still coming into the country, such as for Tesla's new factory to be set up in Shanghai. China is still the world's largest market for many products and it has a huge consumer base.

ODI on the other hand will be more difficult for two main reasons. The first reason is that for the next few years, it's likely for China's current account to reach a deficit. In the past, China accumulated a lot of US dollars in its current account surplus which it could use to make ODI. Going forward, it's likely that we will start seeing a current account deficit as China's export growth slows. On the other hand, however, China will have to import a lot of items such as copper, just to maintain domestic consumption and investment. So ODI will be faced with a natural barrier with the current account balance.

The second reason is regarding the same capital controls that I mentioned before. Then, of course, due to a possible decoupling, China is likely to be distanced from the US—possibly even other Western countries as well. In the past, some ODI targeted high-end manufacturing and high-tech companies, but moving forward, the situation around ODI will likely become more sensitive and become more of an issue. I expect in the future that the barrier around ODI will not just be about money, but about whether or not Chinese companies are allowed to make investments of that nature.

Q. People talk about China's debt issue. How significant is it and how could it manifest itself?

A. First of all, I do believe that debt has become a real concern, but I find that many observers, economists and investors became worried too early—in around 2010—as they believed that China would collapse. But China didn't collapse. The economy has grown relatively quickly over the past decade. But now the problem is with a declining current account surplus in the past couple of years. And with the renminbi depreciating, China has actually been accumulating a large amount of foreign debt. This will become a big problem.

In my view, if a country constantly runs a current account surplus to accumulate a large amount of foreign exchange reserves, and if most of the country's debt is from its own government and corporations and the debt's denominator is its own currency, then it's not really such a big issue. Because, in the worst case scenario, it's always possible for the country's central bank to print more money to solve the problem.

But now, the real problem is that over the past couple of years, China has rapidly accumulated some foreign debt. In economics we say that when a country runs both a fiscal deficit and a current account deficit—a twin deficit—then we should be more cautious. China is very close to such a situation. We have been running a fiscal deficit for a long time and we will be running a current account deficit very soon.

So the key point here is that the debt itself is not really that big of a problem, but it's becoming a problem and the problem became bigger and bigger over the past four years, since 2015, because of this accumulation of foreign debt and declining current account surplus.

Q. People talk about a lack of transparency of the China system. To what extent is transparency a problem from your perspective of an economic analyst trying to read China?

A. First of all, it's important to say that over the past decade the government has become much more transparent than before. We have many more statistics available and more press conferences are being held. A lot more data has become available to us, such as the data you can find on Chinese government websites.

We now have a lot of associations that collect sector-level data for us and we also have many groups in the private sector that are conducting surveys. So for economists, we have much more data to analyse now than before.

But compared to the quality of statistics that can be found in the US or other advanced economies, there is still a big gap. I of course hope for that gap to be narrowed in the future. The Chinese government could still learn from the practices of advanced economies around the world.

FRESHLY BREWED OR OVERLY ROASTED?

Chinese startup Luckin Coffee is expanding at a breakneck pace. How will Starbucks and other coffee players respond?

By Mark Andrews

Starbucks had coffee lovers in China's main cities wrapped up until Luckin arrived, but is the market big enough and growing fast enough for both and more coffee vendors?

In years to come, the opening of the Starbucks' Reserve Roastery in Shanghai in December 2017 may be seen as the zenith of the Seattle-based coffee chain in China. It was the largest Starbucks in the world when it opened, and the constant line-ups of fans outside the door showed how business was booming in the Middle Kingdom.

Back then, Luckin Coffee had just started, and few people predicted its meteoric rise. Luckin is the first Chinese challenger to Starbucks, which for nearly two decades was the only major coffee chain in China. In May 2019, Luckin raised $561 million with an initial public offering (IPO) on NASDAQ. It is now opening stores at a furious rate and aims to have more China outlets than Starbucks by the end of 2019.

Luckin is hoping to beat Starbucks with the sheer number of stores. In big cities such as Shanghai, many young Chinese cannot live without their daily cup of "joe," but the average coffee consumption for the whole country is just six cups per person a year, which provides huge potential for future growth. Luckin's prospectus says that Hong Kong, Japan and Taiwan all have per capita coffee-consumption of over 200 cups per year.

"China still ranks low in coffee consumption," says Michael Norris, strategy and research manager at AgencyChina, a China-focused marketing and sales agency. "Yet, total consumption grew at an average annual rate of 16% in the last decade, significantly outpacing the world average of 2%, according to the International Coffee Organization."

Tea or coffee?

China's coffee market was valued last year by Euromonitor at $5.8 billion, up from $2.7 billion in 2014. Luckin in its IPO statement cite figures from Frost and Sullivan, a business consulting firm, showing growth of coffee consumption from 4.4 billion cups in 2013 to 8.7 billion in 2018, with a projection of 15.5 billion by 2023.

Starbucks first entered the market in 1999 when it opened a store in Beijing. In 2017, the company controlled 80% of the coffee market and by April 2019, had 3,789 stores with plans to add 600 more within the year—a rate of one every 15 hours.

Luckin, in contrast, had nine stores in operation at the end of 2017, but is now opening on average one every 3.5 hours. By January 2019, it had 2,380 stores, about 60% of Starbucks' total. The battle for who takes the lion's share of future growth in the Chinese market is on, but numbers only tell part of the story.

Tea is the drink normally associated with China and it has been drunk here for over two thousand years. Dave Seminsky, founder of Shanghai-based Sumerian Coffee, estimates current tea consumption at around 95 cups a year per person. Many tea varieties, such as Longjing, are famed for their quality and supposed health benefits, but China is also among the top 20 coffee producers. Cultivation picked up in the late 1990s, mostly then for export. Coincidentally, it was at that time that companies started trying to sell the drink to Chinese consumers in the developed coastal cities.

Seminsky sees the expansion of the coffee business in China in three waves: mass brews, quality mass brews and finally boutique brews. "In the first wave, roasters focus on broad distribution over coffee quality and sourcing transparency," he says, citing as examples instant coffees such as Maxwell House and canned coffees like UCC.

The chain gang

The second wave has been driven by Starbucks, along with some other foreign-based brands such as UK-based Costa and US-based Peet's. This created a fad in China's larger cities, especially among fashionable young people who yearn for a more internationalized way of life. Coffee is a proxy for that. Starbucks offers not just coffee but also an aura of coolness.

"They introduced artisanal elements to the industry, through increased quality, origin transparency and differentiating roasting styles," says Seminsky.

In the early days after Starbucks' initial launch, there were plenty of copycat brands using circular green logos and vaguely similar names. But few made a serious attempt at expanding the business to chain scale. One of the few, Mellower Coffee founded in 2011, only has 80 outlets.

Until Luckin appeared, the most concerted competition to Starbucks came from Costa Coffee. The British chain, now owned by Coca-Cola, aims to have 1,200 stores across China by 2022, which the parent company hopes will help offset falling demand for soda drinks.

In China, Starbucks and Costa mainly operate in larger cities, whereas Luckin is branching out into smaller inland cities. Starbucks is dominant in Hangzhou, Shanghai and Suzhou, while Luckin has the edge in Beijing, Guangzhou and Shenzhen.

Starbucks coffees are more expensive, and it appears Luckin is using the money it raised to build market share by keeping prices low. In terms of quality of brew, some drinkers say the two are similar, while others see Starbucks quality as being ahead.

But there is a crucial difference between the two. Currently 95% of Luckin outlets operate on a takeout/delivery-only model with no seating available. Almost all Starbucks stores provide seating and table space. "Vibe-wise, Starbucks offers a place where you can relax, work or meet people," says Shanghai-based marketing manager and coffee consumer Fu Siru.

Many Luckin stores are in office buildings. "That, in combination with the amount of money it's been able to raise and throw at its expansion, puts it in a commanding position to take advantage of morning and afternoon caffeination occasions for office workers," says Norris.

The problem for Luckin is that more sophisticated coffee consumers do not buy into the idea that the company is comparable to Starbucks. A survey by UBS of 1,000 coffee drinkers reported only a 23% overlap of customers with Starbucks. Dedicated Beijing coffee drinker Helen He buys two or three cups of coffee a day, usually from Starbucks, and has only tried Luckin once. "I'm not impressed," she says.

"Luckin provides a similarly priced alternative to convenience store coffee that is billed as being better quality," says Ben Cavender, principal at China Market Research Group. "The reality, though, is that Luckin's coffee quality isn't always better than what is on offer at convenience stores."

"Luckin is certainly hurting Family Mart (a Japanese convenience chain with more han 1,430 stores) with a constant 50% off promotion and speedy service," says Professor Diana Derval from DervalResearch. "In terms of a seated experience and appealing to other personas, the real competitors to watch are Taiwan-inspired bubble tea players like HeyTea."

Luckin recently announced plans to create a standalone tea chain and seems more willing than Starbucks to compete in the wider beverage market. And most Chinese coffee drinkers certainly seem to still enjoy tea. "It really depends on who you hang out with," says Allen Hua, based in Changzhou, Jiangsu Province. "I do both." For him, Luckin "feels like a cheaper version of Starbucks. Other than that, they taste the same."

Luckin to the future

Despite its market value of nearly $5 billion, Luckin is running at a loss. Figures filed for the IPO show operating expenses are nearly three times total revenues. More disturbingly, the costs of materials and store rental exceed total revenues. Starbucks, by comparison, has been profitable for more than a decade. Last year, its global gross profit was $4.5 billion on revenue of $24.7 billion.

Another major difference is that Luckins' outlets are all cashless, with orders only accepted from their mobile phone app. "Luckin definitely shows how far ahead mobile wallets and digital wallets are in China compared to the rest of the world," says Cavender.

Norris believes the Luckin model particularly appeals to lower-level white-collar workers earning less than RMB 15,000 ($2,117) a month. They want a certain lifestyle but find Starbucks coffees too expensive. Starbucks prices in China are often higher than in many Western markets.

"If Luckin can make inroads toward profitability, it has the opportunity to be the beneficiary from China's emerging 'java' habit. The ultimate bull case for Luckin is it becomes the coffee of choice for white collar workers, especially those entry-level professionals who are earning RMB 4,000 ($560) to 8,000 a month," he says.

The future landscape of the big coffee sellers in the China market will largely depend on how long it takes before Luckin can achieve profitability. The other question

COFFEE'S UP!

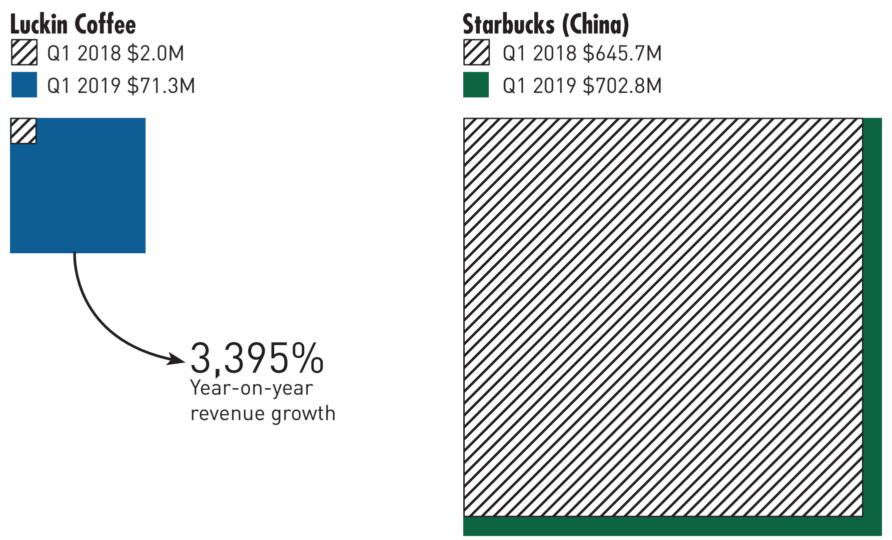
The number of Starbucks and Luckin stores in each city

City	Starbucks Locations
Shanghai	682
Beijing	298
Hangzhou	207
Suzhou	181
Hong Kong	160
Guangzhou	158
Shenzhen	154
Chengdu	126
Nanjing	105
Ningbo	99
Wuhan	99
Tianjin	97

City	Luckin Locations
Beijing	364
Shanghai	355
Guangzhou	196
Shenzhen	178
Hangzhou	153
Nanjing	134
Chengdu	122
Chongqing	119
Wuhan	97
Xi'an	67
Changsha	56
Zhengzhou	56

Source: Thinknum

RISING REVENUES | Starbucks' revenue vastly exceeds that of Luckin, but Luckin shows massive growth



Source: Bloomberg

is how effectively Starbucks responds to this threat to its position as China's king of coffee.

"What Luckin represents is a firm driving for significant scale over physical assets," says Norris. "In winner-take-all or winner-take-most markets, the payoff for this 'going big or go home' approach is enough to justify the risk of an Ofo-like financial meltdown."

Ofo is a rent-a-bike startup that spectacularly crashed. In some ways Luckin fits the model of private Chinese companies whose business models uses large amounts of debt to fund growth to become dominant in the market with little regard for profitability.

But other factors, including technology and big data, are impacting the way the battle is being fought, so profit on each cup of coffee is not Luckin's only consideration.

"Luckin operates more like a technology startup than a traditional retail or F&B (food and beverage) company. I think its business model is indicative of what we see happening in China's overall retail landscape, that is, fusing mobile wallets, on-demand services and traditional retail experiences," adds Cavender.

"Luckin was the first to apply these technology trends to coffee on a large scale." In its IPO prospectus the company used the word "technology" five times more often than "bean," something not missed by more astute coffee drinkers and investors. "The company positioned itself as a 'tech company,' so I guess collecting consumer data is more important than serving quality coffee," says Fu.

Smelling the coffee

As with countless other industries in China, coffee has to an extent become a proxy war between the tech giants, Alibaba and Tencent. Starbucks has teamed up with Alibaba on delivery to counter Luckin's delivery model. Luckin has received support from Tencent. It is also a battle between more established Western ways of doing business and emerging Chinese models that allow for faster reactions to market shifts. "The fundamental question is whether morning and afternoon caffeination occasions are enough to sustain Luckin's expanding footprint. Their latest quarterly earnings report suggests not," says Norris.

Then there is the third wave of coffee—small independent quality coffee houses, a phenomenon already seen in China's larger cities. These outlets amplify elements of the second coffee wave and add "emphasis on hand brewing methods, lighter roast profiles that introduce new exotic flavors and publishing of roasting dates to ensure freshness," says Seminsky.

Some consumers such as Fu, educated in part by Starbucks, have graduated onto independents for their coffee fix. "Competing against Luckin and Starbucks is not something that keeps me up. Large chains lose the ability to quickly adapt, are slow to implement new offerings and lose control of the customer experience," says Seminsky.

Ultimately, the market may be ripe enough for such a massive expansion that there will be no need for a winner-takes-all result. Between 1963 and 1970, Japan's coffee consumption increased 3.2 times to 42 cups, and there is no reason to assume China won't follow a similar trajectory, with some regional differences. Derval cautions, "In order to accurately estimate the coffee market potential, we need to talk about taste buds and provinces."

Meanwhile, Starbucks released figures in April showing same-store sales in China increasing 3% year-on-year, indicating Luckin's emergence has not had a big impact. Luckin, meanwhile, is looking to expand overseas after inking a deal with the Kuwait-based Americana Group to introduce outlets into the Middle East and India.

"Over the longer term, Luckin will struggle to make money," says Cavender. "Companies like KFC are now competing aggressively on price and the value of their existing menus to make a strong value play that won't be easy for Luckin to answer. Meanwhile Starbucks is struggling due to its price position in lower-tier markets but still has a strong entrenched position in the premium space."

Luckin has benefited from being a Chinese brand at a time when consumer pride in "Chineseness" is increasing, as well as its broader product mix and tech-heavy approach to operations. But its main advantage is just the massive potential for growth in coffee sales. "The coffee market is huge for those able to adapt to the Chinese palate. Luckin coffee by its flexibility and customer-centricity is a strong contender in the battle with Starbucks, but the door is open for even better targeted brands," says Derval.

SECONDHAND, FIRST CHOICE

Sales in China's secondhand market are booming. What is driving the trend away from new?

By Timothy Ang

Image by José Luna

Buying a used car or anything else secondhand is still unusual in China, where consumers have a deep desire for the new. But low prices, online convenience and a slowing economy are changing things

He Bin, like many men his age in China, started his search for a car on the showroom floors of car dealerships. It quickly became clear, however, that the shiny coupes he was eyeing had a few too many zeros at the end of their price tags. He Bin could just not afford to buy a brand-new set of wheels. That is when he decided to turn to the secondhand car market for a better deal.

With a wife, two young children and a job based 45 minutes away from his rural home in Fujian, the southeastern province opposite Taiwan, the 26-year-old is now the proud owner of a secondhand Volkswagen.

"My dream was always to have my own brand-new sports car," He Bin says. "But now is not the time. Luckily, I found my current car at once. It looks great and was a fraction of the original price."

To people from developed countries, buying a used car, or other secondhand items, is perfectly normal. But for China, buying used bargains is still the exception and not something that you would necessarily want to brag about. Despite a deep cultural distrust toward anything that is not new, shoppers now have access to a number of efficient and accessible online platforms that offer big-brand items at low prices.

The value of recommerce

According to the China Center for Internet Economy Research, RMB 500 billion ($70.5 billion) was spent on secondhand goods in 2017 by 76 million active online users. This is a modest figure compared to Western economies—the used goods market in the United States is roughly four times as large—but as with many economic sectors in the world's second-largest economy, growth is the real issue.

The number of users of online secondhand platforms in 2017 was up 55% year-on-year, as households latched onto the trend. Some analysts, such as investment firm Cyanhill Capital, predict that used goods will be worth RMB 1 trillion industry by the end of 2020.

"Secondhand is still a new thing," says Ben Cavender, managing director of China Market Research Group. "It's gone from zero to where it is now really fast. We can expect a lot of growth in the next three years."

Like He Bin in Fujian, many buyers' first experience is on one of the so-called "recommerce" apps. Given the centrality of mobile phones to Chinese commercial activity, from online payments to food delivery, it is not surprising that bright, appealing apps have become the epicenter for the secondhand market's rise.

The platforms usually vary by product specialization, but three companies together occupy 90% of the market. Uxin targets the car industry, while industry leaders Zhuanzhuan ("Pass on") and Alibaba-owned Xianyu ("Idle Fish"), have become the main trading posts for used bags, clothes and unwanted cosmetics from across the country.

"I use the app to find limited editions of lipsticks, mascaras and sometimes t-shirts," says Zhixin, a recent graduate from Hebei. "I have a student budget, but I can normally still buy what I want."

Young users like Zhixin are the engine of the recommerce trend. Not as hampered by the stigma surrounding used goods, a study by the Sootoo Research Institute found that half of recommerce users are under 24 years of age, with another third between 24 and 30. For the Xianyu platform, millennials under 30 constitute around 60% of the user base. The number is slightly lower for vehicle platform Uxin, for which the 30-and-under demographic contributed just 18% of total sales in 2018.

"Most of my friends use these apps. I'm trying to encourage my mom and dad to sell their old things on it," says Zhixin. "They're a bit resistant to downloading another thing that they have to figure out how to use."

In the auto sector, while sales of new cars have fallen, secondhand car sales have been steaming ahead. There were roughly 13 million used cars sold in China last year, according to official figures, compared to new car sales of around 28 million. In the first half of 2019, sales grew by 17.8% from a year earlier, with 2.04 million units sold in June alone.

"Secondhand car sales used to grow at a slower pace compared to the new car market, which until recently was growing at double digits," says Jochen Siebert, managing director of auto market consultancy JSC Automotive. "But since last year, we've seen the reverse taking place."

But Siebert adds that China still lags industrialized nations when it comes to resales as a proportion of the total market. In the US and Western Europe, secondhand car sales are typically double new car sales.

"The figures are large gross numbers because of the Chinese market, but we have to think in relative terms," says Siebert.

The millennials

The rise of the circular economy comes at a time when many consumers, particularly the millennials, are increasingly strapped for cash. Media coverage tends to focus on the loaded pockets of China's urban elites, but such people make up a small section of the population and are concentrated in a handful of coastal cities.

"The younger generations are not so sure about their economic prospects," says Cavender. "However, they still want to live what they consider authentic lives and make certain purchases, so that's where the secondhand platforms come in."

Looking outwards to the rest of the country has proven to be a great e-commerce strategy. The success of Pinduoduo, since its founding in 2015, was in part due to 65% of its customers coming from smaller cities inland. Pinduoduo reached RMB 100 billion ($14.3 million) in gross sales after just three years, twice as fast as market leader Taobao took to reach the same milestone.

A tightening of consumer purse strings has, however, been balanced by the powerful drive of the younger generation to embrace consumerism. Smarter shopping is not only a matter of price and increased acceptance of used goods among youth—it also offers a solution to the impact of more extreme shopping habits. Xiangshan, a law student from China's northeast, uses apps such as Xianyu to sell excess junk she accumulates over the year.

"I am addicted to online shopping, especially makeup," Xiangshan jokes, saying she spends several thousand RMB per month on such goods. "These apps let me redeem at least some of my money. So, it removes more of the risk out of shopping in the first place."

A key driver for Western consumers buying secondhand has been concerns about the environmental implications of buying everything new. The cultural legacy of excessive consumption that has dominated China may not be so easily done away with. However, some people see the beginnings of a heightened social awareness around the industrial footprint created by purchases amongst China's middle class.

Market consultancy Mintel found that, in urban areas, over half of customers listed environmental concerns among their top reasons for going for secondhand products. This rose to 63% among the well-educated demographic, where environmental issues surpassed affordability as the number one factor.

"The trend has been aided by policy directions such as rubbish sorting and the explosion of shared economies, which are all app-driven," says Ashley Dudarenok, Chinese marketing expert and the CEO of social media consultancy Chozan.

The secondhand auto market will be one to watch, though not for reasons of sustainability. The central government is working to free up the domestic used-car market, realizing that otherwise top tier cities will become overloaded with sellers unable to shift their vehicles. It has already passed legislation prohibiting protectionist policies by provincial governments, and in early 2019 green-lit the export of secondhand cars abroad. Despite this, the market still has a long way to go to reach maturity.

"A big problem is trust," says Siebert. "Buyers generally trust vendors less than in the US or Germany. They are much more likely to assume they're crooks than give them the benefit of the doubt."

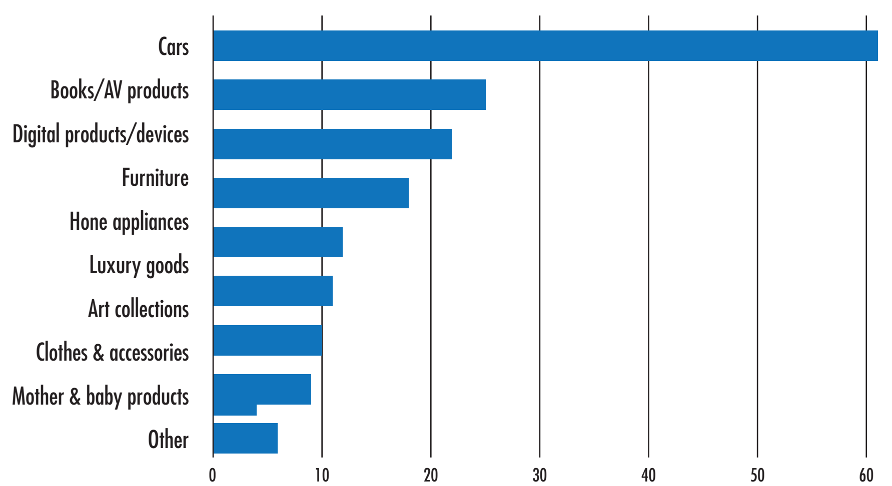
That suspicion is well-founded. Even used-car directory Uxin was implicated in fraud earlier this year. This followed a damning report accusing it of overstating its transaction volume and charging extortionate operator fees. Uxin's owner Dai Kun denied all claims.

Everything goes

Companies working in the secondhand space vary from trillion-yuan giants to community-level flea markets. Market leader Xianyu, for example, became

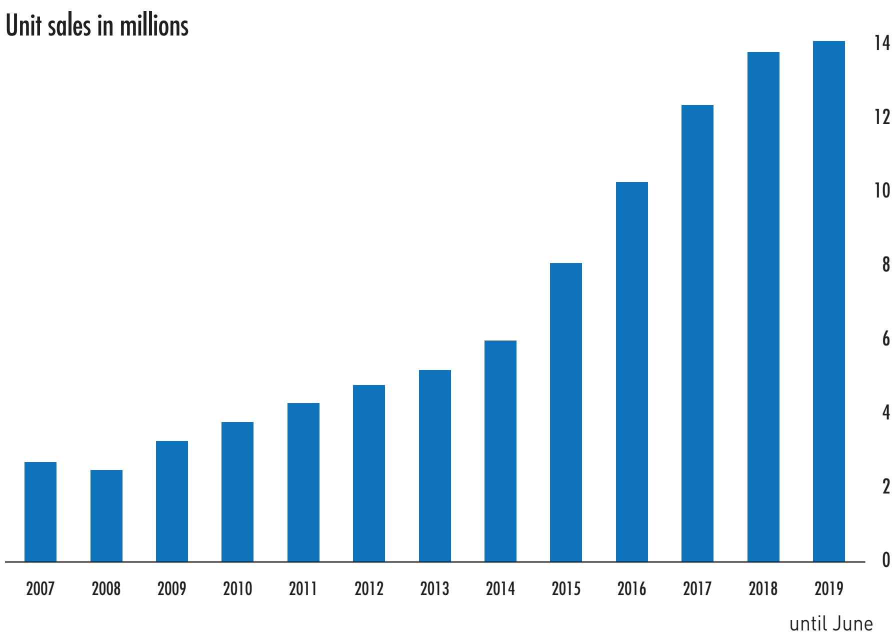
BUYING PRE-OWNED | Popularity of secondhand goods among younger internet users in China

% surveyed who said they had bought secondhand, or rented*



*Those aged 20 to 49, as at Oct 2018
Source: KuRunData/Mintel

A SET OF WHEELS | Rapid growth in China's secondhand car market



Sources: Wind, Financial Times

Alibaba's third business to break the nine-digit dollar valuation in 2017, after Taobao and Tmall.com. While yet to go public as a spin-off, Xianyu's expansion to over 100 Chinese cities and continuous opening of new product channels, state clearly its ambitions.

Industry rival Zhuan Zhuan has tried to keep up. After its founding by online ad giant 58.com in 2015, Zhuan Zhuan has grown to 10 million user transactions annually, according to China Knowledge. Earlier this year, 58.com joined forces with Tencent to sink $300 million of investment into the business, indicating recommerce may be the next battlefield for China's tech giants.

"The big players so far are all reliant on the e-commerce titans to some extent," says marketing guru Dudarenok. "At this stage, market share is more important than profitability, so we may expect plenty of price competition."

This association gives these apps the added advantage of being able to closely interweave their platforms with others under the same parent company. Unlike in the West, where sales and payments are provided by separate companies, a shopper in Chengdu browsing Xianyu can link her account to her Alipay account and WeChat wallet. She can also use the shortcut to Alibaba's credit platform, Ant Financial, to quickly make short-term loans to fund purchases. Taobao, Tmall and Xianyu are all interconnected, like extensions of the same site.

Uxin is one of the few secondhand platforms to have gone public. Listed on the Nasdaq, its growth has been astronomical with revenue climbing 70% year-on-year in 2018 to $438.1 million, though, as mentioned earlier, the platform's credibility has come into question. It counts Huasheng Capital, Tiger Global and Warburg Pincus among backers and has tallied $1.2 billion in venture capital funding.

Smaller companies, meanwhile, are trying to break into the market, often through diversification. Kogi is a fashion recommerce startup that has been in business since August 2018. The "Pinduoduo for younger generations," as the company's chief operating officer has labeled it, Kogi lets top brands set up their own in-app channel to sell out-of-season or left-over stock at steep discounts.

Many of the successful apps have social networking functions popular among young Chinese users. The clearest example are Xianyu's yutangs ("fishponds"). These are gatherings of users based on shared product interests and geographical proximity. Shoppers interested in vintage handbags living in the district of Pudong in Shanghai, for example, can form chat groups and share reviews of purchases.

As Alibaba's company blog Alizila pointed out, there is even a fishpond for recently dumped boyfriends and girlfriends, eager to shed gifts and ex-partners' clothes.

Up-and-comer Xiangwushuo (or Happy Sharing to international customers) has created its own credit system for regular users. Its 25 million active monthly users can clock up "Little Red Flowers" every time they give away products, which can then be used as currency for future purchases.

Then there is the government's view. The circular economy is a new trend and has so far enjoyed the same growth and freedom many nascent industries do. However, the clear potential threat to a manufacturing sector may trigger concerns of government regulation down the line, like the crackdown on peer-to-peer lending in 2018 after years of unbridled growth.

"This is a new tech play, and the government tends be 'hands-off' on these things until negative effects arise," says Cavender. "But remember that recycling and sustainability are big focuses for the government, so it's unlikely to be too interventionist."

Early days

It is too early to pinpoint the repercussions of a booming secondhand market. In many key product categories, China lags well behind Western counterparts. Nevertheless, experts expect continued growth, and the main downside, on manufacturers, is yet to become evident in the data.

Take He Bin in Fujian. A few years ago, he would not have considered checking out the used market for his first car. "Now, I don't understand why everyone isn't doing it," he says. Well, maybe soon they will be.

TIKTOK SHOCK

ByteDance, an almost unknown Chinese company, is taking over the world

By Mark Andrews

TikTok is the first Chinese app to take the world by storm, and its owner is now rubbing shoulders with the likes of YouTube and Facebook

TikTok's latest viral challenge has the world's teens gluing up their top lips with eyelash adhesive to achieve a poutier look, while parents and health experts look on in dismay. Risking scarring and skin problems, depending on what adhesive is used, it is all worth it for young users eager to gain an online audience.

TikTok is a mobile app that allows users to post short videos of usually 15 seconds, contributing to what is known in the industry as "fast entertainment." It has an impressive 500 million active monthly users, is available in 155 countries and has teenagers who have downloaded the app spending an average of 52 minutes using it every single day.

Most noteworthy of all, however, is that TikTok is the first app from a Chinese company to take the world by storm. Its owner is ByteDance which has suddenly shifted from being a top Chinese online company to a top global player, rubbing shoulders with the likes of Youtube and Facebook.

For a typical user such as South African Jaco Ludewig, the attraction of TikTok is its inconsequential nature. "I just love TikTok because I enjoy making people laugh, so it's a cool app to do exactly that," he says.

"TikTok democratized video content creation," says Michael Norris, strategy and research manager at AgencyChina, a marketing and sales agency. "Just like photo-editing apps before it, TikTok made complicated video effects and transitions simple. This gave a huge range of would-be content creators the tools and freedom to make the type of video content they wanted, without the hassle of cutting, editing and re-touching."

The app is all about providing users with an endless stream 15-second "brain bursts"—cute, pretty, weird, funny or strange video snippets that superficially stimulate and fill up time. Users compete to produce and post small videos of themselves dressing up, putting on makeup, doing outrageous things and generally trying to impress their peers.

"The social platform just makes the most of human competing and dating instincts," says Professor Diana Derval of DervalResearch who goes on to cite the 'chameleon effect', the instinct of everyone, but kids especially, to want to emulate the coolest people around.

TikTok crossed 1 billion downloads on Apple's App Store and Google Play in February 2019. Around 633 million of these downloads occurred in 2018, compared to 711 million for Facebook and Instagram's 444 million. In August 2019, TikTok was the world's most downloaded social media app with nearly 63 million downloads. India accounts for around a quarter of all downloads of TikTok to date, but TikTok was also the second most common non-gaming app download in the US that month with 4.2 million installs—a 54% year-on-year increase.

"There are two reasons why TikTok has gained great success in such a short time," says Zhang Mengmeng, a research analyst at Counterpoint Research. "First of all, before launching TikTok, its Chinese variant Douyin, already gained wide popularity and proved to be a successful product locally. ByteDance was able to carry its experience from Douyin into TikTok. Secondly, ByteDance acquired a competing video sharing site called Musical.ly, which has most of its user base in the United States. By acquiring Musical.ly, it was able to expand its user base for TikTok quickly."

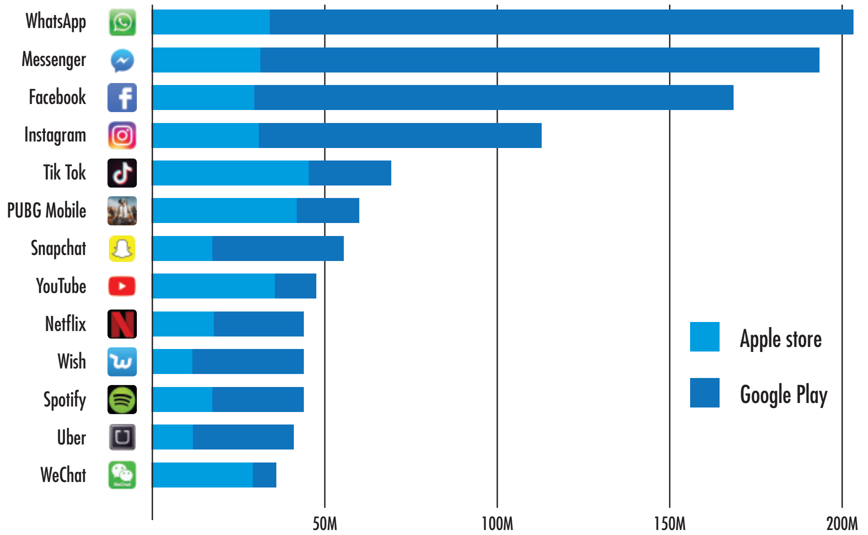
Fandango

Former Microsoft engineer Zhang Yiming, now aged 36, founded the parent company ByteDance in 2012. The first app he launched was Jinri Toutiao, which supplies AI-curated news content personalized for users. Douyin launched in 2016 with the international version TikTok following in 2017. ByteDance really went international in 2017, after it acquired the US-founded app Musical.ly, and then merged it with TikTok in 2018.

Although ByteDance now operates in more than 100 countries, Norris says that beyond China the company concentrates on India, Japan and the United States. "Outside those three markets, it's had a

CLIMBING UP | Apps by worldwide downloads

TikTok was also the most downloaded app on the IOS app store in Q1 of 2018.



Sources: Sensor Tower, Factor Daily

hard time converting downloads to active users. Earlier this year, it was alleged that ByteDance spent $3 million per day on existing social media platforms to encourage downloads, but these rarely resulted in loyal users," he says.

But they are not doing at all badly. ByteDance has more than a billion monthly active users spread over eight apps. Like most China technology companies including Baidu and Tencent, its corporate structure is that of a Variable Interest Entity, which would allow it to list overseas, even though foreign investors are not allowed to own shares in such Chinese companies. But it has yet to be listed. Estimates put the value of the company at $75 billion, making it the world's most valuable startup and it counts the likes of General Atlantic, KKR & Co., Sequoia, Softbank and Susquehanna as investors. The founder, Zhang Yiming, appears to own the majority of the shares.

"ByteDance is quite promising from a financial perspective as it generates sizable income through advertising. With a portfolio of apps with high DAU (daily active users), its monetization capabilities are strong and justify its high valuation," says Zhang.

Breakdancing

ByteDance is one of a new wave of Chinese tech companies challenging the older and more established Chinese players, led by BAT (Baidu, Alibaba, Tencent). The founders of these new companies are all at least 10 years younger than those of BAT and are also focused on mobile rather than computer-based platforms.

"It rode the wave of mobile internet brought on by the wide adoption of smartphones as well as the rapid economic growth of the past decade in China," says Zhang. "Other new Chinese tech companies like Didi, Kuaishou and Meituan also emerged at around the same time. These new founders are not only more ambitious but also have a better international perspective."

With the huge popularity of TikTok globally, ByteDance is the first Chinese tech company with a serious chance when it comes to competing with the American social media giants such as Facebook and Instagram. It has been able to gain traction internationally in a way that the BAT companies so far have not.

"Seen through the lens of user experience and product design, the emergence of ByteDance—and Douyin in particular—represents a seismic shift in the Chinese startup space," says Kendra Schaefer, Trivium China Head of Digital Research. "Alibaba, Tencent, and many of China's other tech giants are good at creating products that meet the needs of their local market, but they started out copycatting, and then gradually employed their user data to hone those products. Douyin jumped out of the gate with a largely original interface that not only spoke to Chinese users, but had a more universal appeal."

For many young Chinese people, Douyin is a way of killing time. "When you're waiting for buses or the subway, you can use the app," says Versa Yang a user of Douyin. And it seems that this, plus its ease of use and entertainment factor, are what makes it popular. While Douyin manages to appeal to a wide range of age groups in China, internationally TikTok largely appeals to young people, particularly teenagers.

Last waltz

A key feature of this kind of app is the high potential for it to fade as fast as it grows. ByteDance is not waiting around for that to happen and is spending substantial amounts on research and development.

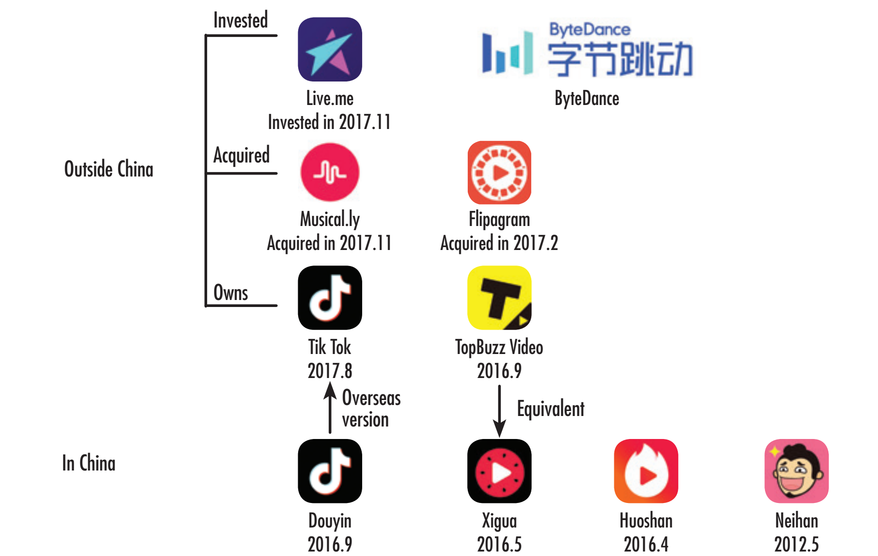
"We already see stagnating growth for ByteDance's Jinri Toutiao news app, with growth for Douyin also likely to hit a ceiling at some point," says Zhang. "Therefore, ByteDance has been putting a lot into R&D to incubate the next hit product and diversify its current business."

Despite having one of the world's most popular apps, the company doesn't even feature anywhere close to the top of list of global apps in revenue terms. Encouragingly, however, TikTok's in-app purchases reached $11.7 million in July, a 290% increase from the same time a year before.

"Douyin's foray into e-commerce is an important part of ByteDance's monetization efforts, and I'm sure that they're pleased with the domestic brand uptake of the integration between short video and e-commerce," says Norris. Vine, an app similar to TikTok founded in 2012 and bought by Twitter, ceased operations in 2016 due partly to an inability to monetize its offering.

In anticipation of the ceiling and as a means of becoming even bigger, ByteDance

THE BYTEDANCE EMPIRE | The apps that make up ByteDance



Source: GGV Capital, Cheetah Lab

has already set its sights on other potential areas that it can expand into.

"ByteDance is considering becoming a bigger contender in the music streaming service and strengthening its social media position by launching its own smartphone," says Derval. "Combining hardware and AI sounds like a smart world domination plan." The company has also tried to diversify through the purchase of two gaming companies and various smartphone patents, along with the creation of other business units such as education oriented Gogo Kid, and workplace tool Lark.

Dancing on a tightrope

In the US, TikTok has been accused of a predator problem with pedophiles allegedly using it to groom teenagers via messaging. The Federal Trade Commission fined the company a record $5.7 million in February for collecting information on children under the age of 13. The UK is currently investigating the app for similar reasons, while Indonesia banned TikTok, accusing it of blasphemy and pornography.

Many parents are worried about TikTok having too much influence over their children's lives and that teenagers are spending too much time on the app. Another thing that parents find worrying is that the app only offers two privacy settings, either private or entirely public. There is no middle ground as on other social media platforms that allow users to share only with their friends or selected contacts.

More concerning for ByteDance is that it has come under intense scrutiny in India. Available in 15 Indian languages, TikTok has 120 million monthly active users in the country. After a wave of government employees made videos on the app, including gun-wielding SWAT teams, it caught government attention with political worries about data security as well as the apparent danger that the app posed to teenagers in the country.

Indian lawmakers said that the app was encouraging the spread of explicit content among teenagers and banned the app in April 2019. The ban only lasted for a week, but ByteDance claimed that it suffered up to $500,000 in financial losses every day that the ban was in effect. It is still unclear as to what eventually swayed the court, but ByteDance highlighted in its defense how it uses tech to keep nude content from being uploaded onto TikTok.

Later, ByteDance tried to sue online Chinese news site Huxiu over an article discussing news apps in India which included a reference to another of ByteDance's apps, the news sharing app, Helo. Writer Elliott Zaagman compared Helo's CEO to a drug dealer and said that fake news on Helo had influenced the Indian election.

ByteDance's Helo is available in 14 Indian languages and uses AI to drive content to users. "It's built on clicks and engagement rather than news," Zaagman wrote. "The incentive system is Facebook on steroids with nowhere near the level of take downs. In order to fuel their growth, ByteDance often looks for vulnerable populations. Helo is tailored to uneducated masses who are not digitally literate and because it is based on engagement and you have cultural and political factors in India it creates dry tinder for violence."

Byte back

Some experts see ByteDance's massive growth as being not so much a failure of Western tech companies as indicative of China's rise. "ByteDance's success shows that Chinese tech companies are capable of making hit products and achieving scales on par with and sometimes even surpassing Silicon Valley companies," says Zhang, going on to cite leadership in mobile payments and AI-based facial recognition.

The big challenge now for ByteDance is how to monetize its apps to justify its current valuation. Internationally, Zhang actually sees the popularity of TikTok amongst teens as a hindrance to this.

"ByteDance is quite promising from a financial perspective as it generates sizable income through advertising," says Zhang. But according to Norris, much of this advertising is being poached from Baidu and ByteDance will need more revenue streams to support its multiple business units. Most of the income comes from Douyin and Jinri Toutiao, "the rest, at this point in time, is ecosystem building."

While ByteDance may be facing challenges, it is now a major player globally. "Douyin and TikTok will remain important growth drivers for ByteDance," says Zhang. "However, ByteDance knows that it cannot sit on its current glory and is very aggressive in overseas expansion and finding the next 100 million (user) product."

CKGSB RESEARCH REPORT

The key question for the new economy: Who owns the data?

The "fourth industrial revolution," defined by artificial intelligence, has begun. But with it comes a new problem: How can we protect our privacy while utilizing data as an asset?

By Xu Chenggang

Property rights have been crucial to society since time immemorial, but as technology evolves, rights too are changing, and creating new challenges.

We are in the throes of the 'fourth industrial revolution', driven by advances in, and the proliferation of, artificial intelligence (AI) and big data. The importance of big data in the new economy is like that of oil in the old one. But associated with the unprecedented efficiency and convenience of the new economy, one of the biggest challenges we are facing is the aggressive violation of individuals' rights, including privacy.

In China's reform and opening up process, a transformative change was the introduction of a private property rights system. In fact, I believe that it was the most important and fundamental force in the so-called "Chinese miracle". And while the country has indeed made progress in protecting the private property rights of individuals over the past 40 years, compared with developed countries, China's protection of private property rights is still lagging far behind.

From the perspective of law enforcement, no law can be enforced impartially without judicial independence. Therefore, it is only meaningful to discuss legal issues related to privacy rights in the context of judicial independence. If this problem is not resolved, it will undoubtedly become an obstacle to the development of AI (artificial intelligence) in China and the development of its digital economy.

Government-market relations

In the field of AI, China and the United States are the two countries that are leading the world in terms of application development. Some say that China's government-led system of innovation contributes to the development of the entire AI industry. This is because Chinese companies can make full use of the data they collect. In contrast, companies in Western countries cannot make full use of the data they collect because of strict personal data protection laws.

For companies using algorithms and computing power, more data can lead to the faster development of machine learning. Limitations placed on what that data can be used for limits the development of machine learning. And while that may seem simple, it raises a challenging question: What should be the relationship between the government and the market?

Let us go back to 1929 when the US went through the largest financial crisis in human history, which caused the entire country to fall into a decade-long economic depression and triggered World War II. The world looked like this: On the one hand was the recession and crisis of the entire Western world, while on the other was the rapid growth of the Soviet economy. In the 1930s, many people were optimistic about the Soviet model. When the Soviet Union became the first country to launch satellites, many economists even mistakenly thought that the state-owned Stalinist economy established by the Soviet Union was better.

In 1960, Khrushchev, the leader of the Communist Party of the Soviet Union at that time, proudly announced to the world

> How the data is used can bring not only great benefits but also, potentially, great harm

at the UN Headquarters in New York that socialism with its rapid development would eventually bury capitalism. In his view, the "burial" would not be accomplished by war, but by peaceful competition and the rapid development of the socialist economy. It is easy to see why he, and many others at the time, held this view in the 1950s and 1960s, the Soviet economy was developing much faster than that of the US and Western European countries. However, it is known to all that Khrushchev's prophecy did not come true. And one of the fundamental factors that led to the eventual collapse of the Soviet Union was that the Stalinist economic system created an insurmountable obstacle to its own economic development.

Comparing the state-based economy with a market economy, we have been able to see two basic facts quite clearly over the past 100 years: First, all developed economies in the world are, without exception, market economies based on private ownership. Second, all state-owned economies in the world are inefficient, without exception, especially in terms of revolutionary innovation. And this will eventually lead to their failure. The collapse of the Soviet Union and Eastern Europe fully proved this.

Hayek and today's proposition

From the late 1930s to the early 1940s, there was a famous debate on market socialism between Hayek and Mises, and Lange and Lerner. This controversy gave birth to Hayek's famous book *The Road to Serfdom*. The book's primary focus was the Soviet state-owned economy. Hayek's argument was that the state-owned economy deprives citizens of private property rights, which not only leads to inefficiency, but also undermines the ability of the economy to innovate, which in turn will hinder the long-term development of the economy.

The background to Hayek's book was the second industrial revolution, the development of widespread electrification and advances in telecommunications from the telephone to television, and the third industrial revolution, marked by the development of computers and computing. At that time in the West, many engineers and scientists mistakenly believed that human beings could fully plan the future of humankind. They mistakenly believed that scientists had mastered the basics of science and could better determine the fate of society as a whole. Therefore, they thought, if property rights were concentrated in the hands of the government, allowing scientists and economists to plan, organize and operate everything, the economy and society would be at its most efficient. Hayek made a deliberate analysis of this issue and pointed out its fatal flaw. But in those days, many people did not think that Hayek's views were convincing, and saw Hayek as being either an extreme liberal, or an extreme right-wing intellectual.

But times have changed. It was only much later, when the ills of the planned economy were clearly exposed to the whole world, that people began to realize that Hayek may have been on to something. When people talk about artificial intelligence and the digital economy today, the nature of the problems they face are not exactly the same as the ones that Hayek discussed in the past, but they are closely related.

Who owns the data?

In July this year, Facebook agreed to pay more than $5 billion to settle a case over its responsibility in the Cambridge Analytica scandal, in which the British firm abused the data of more than 80 million Facebook users to manipulate voters in the 2016 US presidential election.

Such scandals have prompted calls for regulation. The European Union rolled out the General Data Protection Regulation (GDPR) in 2018, to give individuals greater control over how their personal data is collected, stored and used. But instead of being a solution, the GDPR has become a focal point for debate. The essence of the issue is property rights, which now extend to rights over individuals' personal data.

Traditionally, property rights referred to the control of tangible assets, such as gold or oil, or the control of intangible assets like patents and copyrights. In the digital era, technology can create huge amounts of intangible assets from individuals' data without their knowledge. How the data is used can bring not only great benefits but also, potentially, great harm. This raises a crucial question: who has the right of control over these new assets?

Going fast or slow?

When a new technology emerges and people are worried that it will have a negative impact on society, should the government vigorously promote the development of the new technology or slow down its growth to better address problems that have risen? When the voice of doubt forces you to slow down and forces you to face social concerns, I believe that the government should slow down the pace of the technology's development in order to face the problems at hand.

As an economist, I know that many mechanisms can be designed to help gain information, and information is the basis on which to make decisions. The simplest mechanism is to invite all stakeholders to a debate. Scientists and economists have no basis for decision-making when people won't, or can't, discuss the issues.

In the old economy, private property rights and institutions protecting property rights were the foundations for development. This is because, with

A student uses facial recognition technology to register himself at Zhejiang A&F University in Hangzhou city

private property rights, individuals are highly motivated to use and allocate their assets efficiently, through the market or, in the case of collective decisions, through democracy.

Now, in the new economy, the question is whether private property rights will be as important? The answer is: "yes."

Recognizing and protecting property rights to each individual's data, or all individuals' data, is vital to determining the fate of the new economy, although how to define these rights precisely poses huge challenges which are yet to be resolved.

Consistent with the basic principles of human rights and private property rights, the GDPR, which recognizes each individual's basic control over his or her data, is the first step in the right direction. Giving large companies the right to control how they use an individual's data may seem efficient, but is inconsistent with the fundamental principles of human rights and property rights. The Cambridge Analytica data scandal could well be only the start.

At the same time, however, state ownership or control of individuals' data is much worse than control by large companies in a society with the rule of law. State ownership of individuals' data will lead to inefficiency and a lack of innovation as people lack the motivation they would have if they had control.

But a much deeper worry is that state-controlled big data, together with state AI capabilities, would create a regime that directly damages social welfare by violating human rights.

Moreover, if the government had an unconstrained capacity to mobilize resources and silence society, the probability of economic catastrophes would be drastically increased.

One of the key reasons why China lagged far behind advanced economies before the post-Mao reforms was a complete lack of private property rights. Although such rights are now recognized by China's constitution after a quarter of a century of reforms, the country, which is without judicial independence, still has a long way to go compared with developed nations. Now, as the new industrial revolution emerges, China faces severe challenges in protecting the rights of individuals to control their data.

No one knows what will happen in the future. The only thing that is clear is that it is likely that some people will suffer in the era of artificial intelligence. These people should be heard. To guarantee a stable society, these people's demands need to be addressed and accordingly compensated. What is worrisome is that a highly-centralized society may choose to suppress the interests of some people in society for the sake of technological development. The Catch-22 situation lies in how new technologies could lead to a certain level of social instability, but technology cannot be developed in an unstable society.

Xu Chenggang is professor of economics at the Cheung Kong Graduate School of Business. He is one of the first recipients of the China Economics Prize for contributions in understanding government and enterprise incentive mechanisms for the transition economy of China.

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CKGSB BUSINESS CONDITIONS INDEX

A Delicate Balance

With all indicators falling, China currently faces the risk of deflation

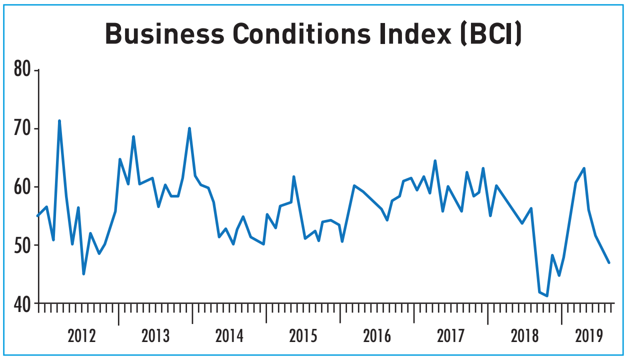
The BCI is directed by Li Wei, Professor of Economics at the Cheung Kong Graduate School of Business

Casting an eye over August's BCI report, the word most likely to spring to mind is "weak." Why? Simply put, whether by big or small margins, all indicators have fallen. We may not be able to classify this trend as a recession yet, but evidence of weakness is more than enough for concern.

Official statistics also show this weakening trend. In the first quarter of 2018, year-on-year GDP growth was 6.8%. Fast forward to Q2 2019, and growth has fallen to 6.2%. This weakness should not be underestimated, as it sets the tone for current economic trends, which determines our macroeconomic policies.

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

- The CKGSB BCI fell further to 47.2 in August, a deterioration on the 49.8 from the month before.
- Due to the BCI remaining below the confidence threshold of 50.0, the BCI's surveyed companies are pessimistic about prices in the next six months.
- China currently faces the risk of deflation, as indicated in the consumer prices index and the producer prices index.

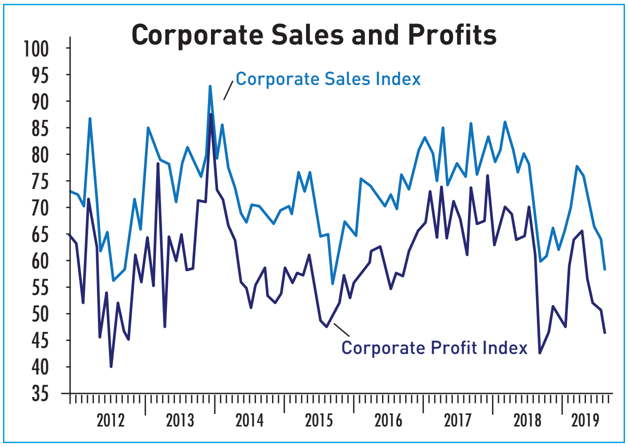
Analysis

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 climate.

In August, three fell and one rose. The corporate sales index fell from 64.6 to 59.0, and the corporate profit index fell from 51.1 to 46.6.

August's corporate financing index continued to fall, but very slightly, from 39.5 to 39.4. The inventory index rose marginally from 45.0 to 46.1.

Looking at prices, the consumer prices forecast fell from

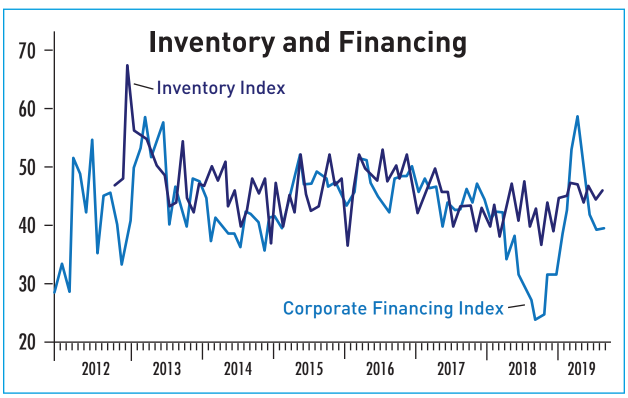


50.4 to 47.6, while the producer prices index dropped this month from 43.0 to 39.8.

We now turn to the important issues of investment and recruitment. These two indices have been consistently at the more confident end of the scale since the BCI began. This year, however, both have weakened, especially the recruitment index. In August, the investment index has fallen from July's 60.6 to 58.7, while the recruitment index has fallen slightly from 59.7 to 58.3.

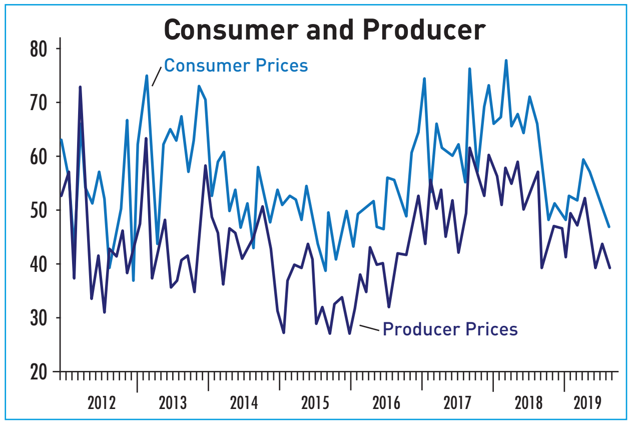
Conclusion

The economy is weak, and prices are expected to fall. If this continues, the Chinese economy will soon indicate deflation. By then, corporate sales will slow, profits will fall, company failure or bankruptcy will be more commonplace, and unemployment rates will increase.

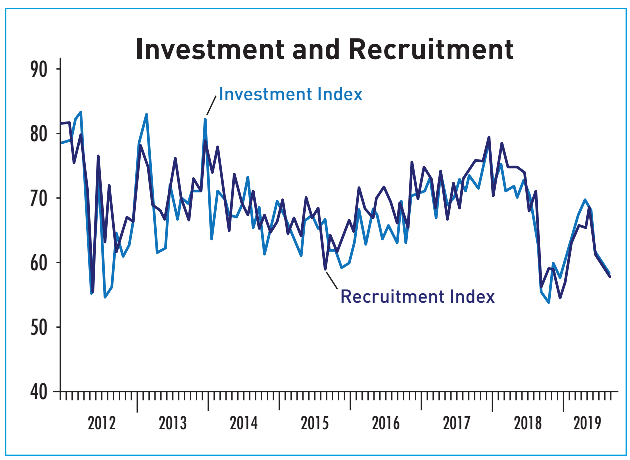


In fact, if we look at some grassroots surveys from this year, unemployment rates have already begun to rise in certain cities. Many people are frustrated by the lack of job prospects and poor salaries. These cases are still uncommon, but we should be extremely vigilant about this trend because even a large-scale macroeconomic expansion policy will take time to kick in.

However, there is no need to panic. The government can apply macroeconomic policies to address these issues. If there is deflation, then the government can fully expand its fiscal and monetary policies. China's central government has a low debt ratio and room for plenty of fiscal tweaks. In principle, as it does not trigger inflation and asset bubbles, monetary policy has no limits. Therefore, China's macroeconomic policy is resistant to future deflationary risks. If you have doubts, consider what happened with the "4 trillion RMB stimulus package" at the end of 2008.



In 2008, affected by the international financial crisis, China's economy stalled. In the first quarter of 2008, the GDP growth rate was 11.5%, and by Q1 2009, it was 6.4%. Economic stimulus led GDP growth to a rebound back up to 11.9% by the fourth quarter of 2009.



Macroeconomic policies are not simply anti-deflationary, but are there to smooth out cyclical macroeconomic phenomena, both anti-deflationary and anti-inflationary. Even though we are faced with the primary risk of deflation, we must also be attuned to the threat of inflation. It is an extremely delicate balancing act.

CKGSB BUSINESS SENTIMENT INDEX

Substantial Uncertainty

The biggest challenge facing the industrial economy in Q2 of 2019 was overcapacity, with the diffusion index hitting a historic high

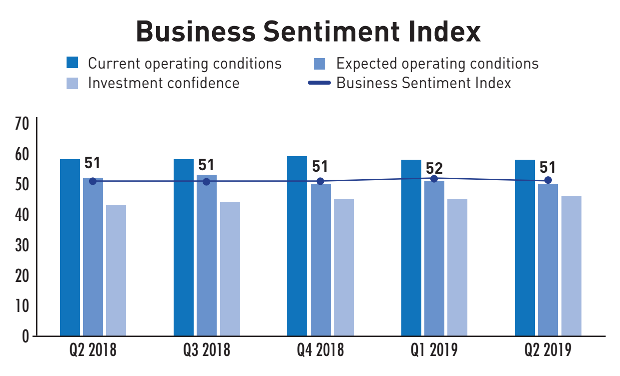
The BSI project is directed by Gan Jie, Professor of Finance at CKGSB

The CKGSB Business Sentiment Index continued to expand slightly in the second quarter of 2019, marking the first six consecutive quarters of expansion since the survey was launched five years ago. Real output, on the other hand, as reflected in production, electricity consumption, domestic and foreign orders, contracted slightly, mainly driven by private, small and consumer goods firms. In addition, investment was still sluggish and the proportion of firms making expansionary investments was 2%, the lowest in two years.

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 fifth 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 can construct business indices that are, to the best of our knowledge, the most informative ones available about the Chinese economy.



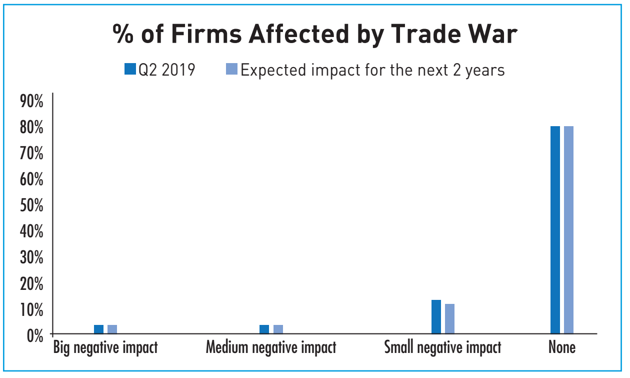
Key Findings

- Business Sentiment continued to improve, but investments and real output were in a slight contraction.
- The impact of the Sino-US trade war increased slightly in Q2, with the proportion of affected firms increasing by 2 points to 19%.
- Weak demand was still by far the biggest challenge for the industrial economy, with 59% of the firms surveyed in Q2 citing a lack of orders.

Analysis

Like the last quarter, state-owned and foreign firms mainly drove this quarter's expansion, with the diffusion indices being 61 and 55 respectively.

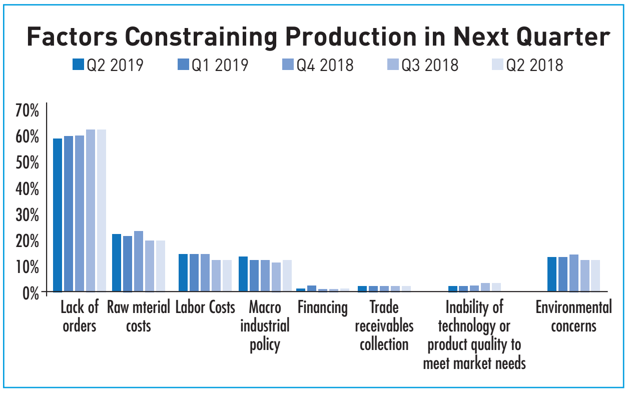
Private firms—the majority of industrial firms—stayed flat (diffusion index: 50). Real output, as reflected in production,



electricity consumption, and domestic and foreign orders were in a slight contraction, with diffusion indices being 46 (Q1: 45-47). Contraction was most prominent in nondurable consumer goods, private and small- to medium-sized firms.

Investments were still weak in Q2. The proportion of firms with expansionary investments dropped significantly from 5% in Q1 to a 2-year low of 2%.

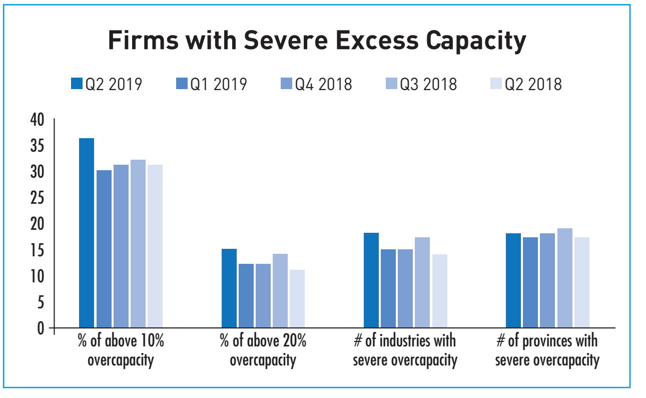
The impact of the Sino-US trade war increased slightly in Q2. The proportion of affected firms increased by 2 points to 19%, whereas the proportion of firms reporting a significant impact stayed nearly flat at 3%. Moreover, 3% of firms expected to be affected significantly by the trade war within the next two years.



Affected firms were mainly export firms, which accounted for 32% of our sample. Among these export firms, 33% were affected in Q2 and 7% reported a significant impact.

The top five most affected industries included textiles, cultural & sports products, textile wearing and apparel, rubber & plastic products and electric equipment (computers and communications). 30% to 47% of firms in these industries were affected. Among industries with a significant impact, the two most affected ones were textiles (12%) and cultural & sports products (9%).

Weak demand is still by far the biggest challenge for the industrial economy, with 59% of the firms surveyed in Q2 citing a lack of orders. Costs were listed as the second biggest issue, with raw materials and labor costs cited by 22% and 14% of firms, respectively. Thirteen percent of firms cited macroeconomic and industrial policies as limiting factors while another 13% of firms cited environmental concerns. In addition, financing was not found to be a bottleneck, with only 1% replying that financing was a limiting factor, a finding consistent with past surveys.



In Q2 2019, 71% of the firms surveyed reported oversupply in the domestic market, with the diffusion index hitting a historical high of 86 (Q1: 83). Thirty-six percent of the firms reported that their excess capacity was above 10% (Q1: 30%), while 15% (Q1: 12%) reported that their excess capacity was above 20%.

We categorize an industry as having severe excess capacity if more than 10% of firms in the industry report an excess capacity of more than 20%. There are 38 industries and 31 regions in total. In Q2, the number of industries and regions with severe excess capacity accounted for about half and two-thirds of the total firms respectively (18 industries and 18 regions in Q2 2019).

It is also worth noting that overcapacity in the international market was substantially better than in the domestic market, with the diffusion index 9 points lower.

Conclusion

The biggest challenge facing the industrial economy was overcapacity, with the diffusion index hitting a historical high. Financing was not a bottleneck for the industrial economy. Related to government policy, lending to small businesses improved significantly.

With the escalation of the trade war, there is substantial economic uncertainty going forward. Policy should focus on promoting long-term growth. Loosening of monetary policy can only be a short-term tool to prevent financial instability. The government needs to formulate systematic policies to promote technology innovation, which is the only path to long-term growth of the industrial economy.

ALTERNATE REALITY

China dominates the global gaming industry with its massive market. What is driving this trend?

By Colin Peebles Christensen

Massively Multiplayer Online Games (MMOG) are part of China's growing virtual entertainment culture, generating both cash and concerns about addiction and social isolation

On any given day, 200 million Chinese people are fighting monsters and minions as historical characters in an online universe far removed from the mundanity of daily life.

Close to 620 million Chinese people played online games last year—more than there are people in the European Union. China's most popular online title, *Honor of Kings* is a multiplayer battle game with a user base roughly equal to the population of Brazil.

China now dominates the global gaming industry with a market worth nearly twice that of Japan's and with nearly three and a half times as many players as the world's second-most active gaming nation, the United States. What's more, these Massively Multiplayer Online Games (MMOG) are playing a major role in China's growing virtual entertainment culture. But surrounding this success story are also nascent worries about addiction, myopia and social isolation.

To combat this, Beijing last year introduced a new regulatory framework that created further demarcation between gaming in China and the rest of the world, and for a time froze the approval process for new games to ensure that all met the stringent control and content requirements.

"There was growing concern over the effect of video games on children and teenagers in the months leading up to the stricter regulation policy," says Tom Wijman, senior market analyst at Newzoo. "There was also growing concern over the aggressive monetization practices used in multiple games."

Overview

Online gaming, which mostly involves fighting and overcoming challenges in fantasy worlds, is seen as a core activity amongst two-thirds of Gen Z males—the demographic cohort after millennials—many of whom regard it as an identity-defining pass-time.

Newzoo, a games and esports analytics firm, estimates that there are now more than 2.5 billion gamers worldwide, a quarter of whom—619.5 million players—are in China. Chinese people are expected to also spend $36.5 billion on online gaming in 2019, just below the US which is forecast to spend $36.9 billion. This means China will account for roughly one-fourth of the expected global total of $152.1 billion.

Internationally, the top three computer games are *League of Legends*, a fantasy battle game; *Minecraft*, a 'sandbox platform' where players create their own worlds; and *Counter-Strike: Global Offensive*, a first-person shooter game themed on counter-terror combat.

However, the most popular games in China are both from tech giant Tencent—*Honor of Kings* and *Game for Peace*, according to Turian Tan, a market analyst at IDC China's Client System Research.

Honor of Kings is a fantasy role-player battle game modeled after *League of Legends*, while *Game for Peace* (or *Peacekeeper Elite*), which recently replaced *PlayerUnknown's Battlegrounds* (PUBG), is a last-man-standing shooter game. *Anipop* stands out in third place on mobile as a casual puzzle game.

"MOBA [Multiplayer Online Battle Arena] and FPS [First-Person Shooter] games are still the biggest titles," says Tony Xu, a reporter at Technode. "The most popular ones are *League of Legends*, *Honor of Kings*, *Peacekeeper Elite*, *Knives Out* [and] *Identity V*."

While Chinese gaming habits and game preferences differ somewhat from other markets, the gap is narrowing, says Wijman. "In general, Chinese players have a stronger-than-usual preference for role-playing games. Games where the players' status is visible are quite popular in China, such as those with a competitive ladder with a displayed rank or those that provide visible character progression."

Profile of users in China

Mobile gaming accounts for two-thirds of the market, with computer games close behind and consoles still small in comparison.

Tan places mobile gaming at 67.6% in the first half of 2019—RMB 77.1 billion ($10.8 billion) of RMB 114.0 billion, with PC and web gaming at 27.5% and 4.5% market share respectively.

China's 138,000 internet cafés are a key part of the country's online gaming economy. Many people prefer to play from internet cafés rather than at home because of the more social setting, according to Wijman.

Chinese players spend between 11 and 50 hours per week on games. Core gamers, which make up the largest segment, average around 18 hours weekly. Game Analytics, an analysis platform, notes that Chinese tend to play fewer sessions but spend 48% more time in total than gamers in the rest of the world.

The economics

Tencent easily dominates the Chinese gaming industry by revenue. Game developers usually make money by offering the games for free but win their money back on in-game upgrades, with people paying for character costumes, powers or other virtual assets. Estimates from 2017 placed average spending per player at between about $1.50 to $6 a month.

Game Analytics says Chinese gamers spend less on average, but buy more often than gamers elsewhere. In sum, Chinese spend 50% more on in-app purchases than players in the rest of the world.

Last March, however, the government blocked monetization during a 10-month blackout on new releases, partly to limit addiction among young players. The freeze prevented Tencent from earning money from its popular *PlayerUnknowns' Battlegrounds* (PUBG). Tencent then replaced it with a more government-friendly alternative.

"The company successfully rebranded its previously unapproved *PUBG Mobile* into the patriotic-themed *Peacekeeper Elite* while retaining essentially all the important features," says Xu. "PUBG Mobile was unable to monetize due to its somewhat violent theme, but after the rebranding, it received no regulatory pushback."

Still, weighed down by weak gaming revenue, Tencent reported its first quarterly profit fall in nearly 13 years in late 2018, and China's gaming industry as a whole suffered its slowest growth since 2008.

"The top 10 game companies generated more than 90% of the total market revenue in 2018," says Tan. "The regulations would increase this gap since small and independent producers don't possess sufficient resource reserves when facing restricted policy on game licensing issues."

The US is scheduled to overtake China in revenue terms in 2019 for the first time since 2015. The main drivers are console growth in the US paired with the license freeze in China, says Wijman.

Policies

Addiction fears were a factor leading the Chinese government to ban gaming consoles in 2000. But players instead flocked to computers, creating a market for PC games, and the ban on consoles was lifted in 2015.

Similar concerns over addiction and short-sightedness in children, have recently encouraged the government to further tighten oversight. Under the new regulations, restrictions are imposed on age, content, monetization and playing time.

Content that involves mahjong and poker, and many storylines or situations from China's past are banned, as are the depiction of blood, corpses or ghosts. And time restrictions are now in force for minors.

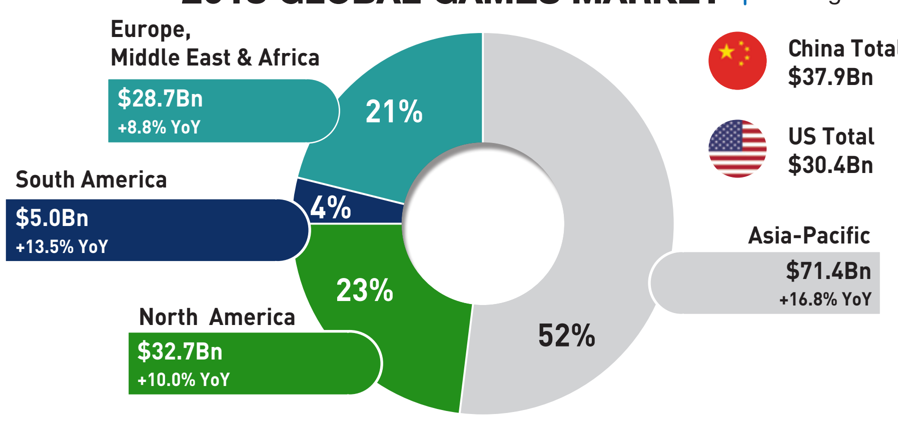
"The game content regulations are just a clearer, and in some cases stricter, interpretation of the content rules that have been in place for nearly two decades," says Lisa Hanson, founder and managing director of Niko Partners, a market researcher on Asia's gaming market. "New rules include that there can be no pooling blood, no spirits rising when a character dies in a game. But for the most part the content rules exist to promote unity and support government policy."

"The reason for tighter government regulation is to make games more in line with the core values of the [Communist] Party, which does not approve of elements such as gore, nudity and violence," says Xu.

The authorities resumed approvals in April 2019, but they are still working through a backlog of games waiting for permission to go to market.

"Titles that 'lack cultural value' or 'blindly imitate others,' as well as those that are 'excessively entertaining' will be rejected," says Xu. "The approval process

2018 GLOBAL GAMES MARKET | Per region with year-on-year growth rates



In 2018, almost

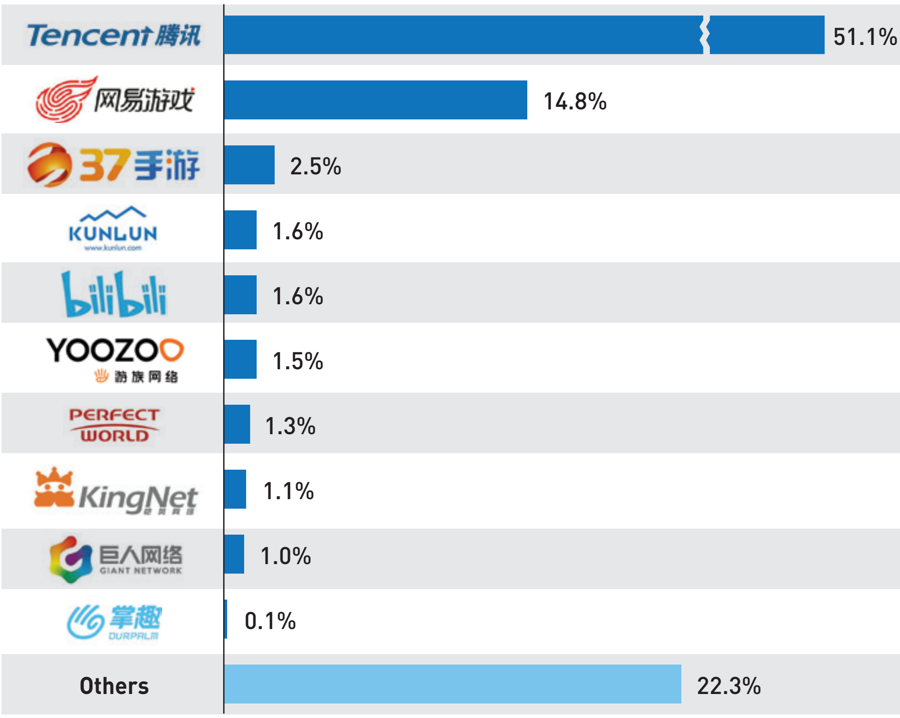
28%

of all consumer spend on games came from China

Source: Newzoo

MAKING THE GAMES | Tencent dominates China's mobile gaming production

Market share of listed video game companies in China as of Q1 2018, by mobile gaming revenue



will also tilt toward original high-quality games, but standards are not explained. The reasoning behind this could be to clear out low-quality copycat games that have been flooding the market, thereby making room for more well-made and innovative titles."

An enduring stigma

Optimists reckon that gaming can foster online interactions and improve decision-making and problem-solving skills. A study last year on *Fortnite*, one of the most popular games in the world, took issue with the assumption that video games are socially isolating, and found that the game instead strengthens friendships and gives gamers a sense of belonging.

"Besides the fun it brings, it's also a way to connect with people," says Chonglin Feng, a 27-year-old gamer from the eastern city of Wuxi. "The game requires teamwork and a lot of communication. Players can invite WeChat friends to play games, which makes it an easy way to get closer with people like colleagues or clients."

But critics fear excessive gaming steals time from real-world social interactions. They contend that gaming can be addictive, harmful to real-life relationships and taxing on families.

Several high-profile deaths over the years have spotlighted the negatives. In 2011, a man died in an internet cafe in Beijing after a sleepless three-day gaming session, and a *World of Warcraft* player collapsed in Shanghai in 2015 after playing 19 hours nonstop.

"Teenagers' access to games and gambling are among the major reasons that the government is calling for stricter game industry regulation," says Tan. "I would say we should expect more elaborate regulations regarding age control, in-game purchase and imported game content."

The *People's Daily* in 2017 labelled *Honor of Kings* a "poison" and a "drug." Tencent responded swiftly by limiting access to one hour of daily play for children under 12 and two hours for those between 12 and 18.

"They are very concerned with the health and safety of young gamers, so there are requirements for anti-addiction and real name registration and restriction of use of internet cafes," says Hanson. "There are anti-addiction mechanisms built into the development of most games now, and all of Tencent's games have an anti-addiction component."

A separation

Despite the concerns, gaming is definitely here to stay. Niko Partners predict China will have 767 million gamers by 2023, while the PC and mobile markets together will be worth $41 billion. Newzoo expects China to reclaim the top spot from the US in value terms in 2020.

Ironically, despite the global nature of online games, there is a clear division between the Chinese market and the rest of the world, and Beijing's recent regulations on content and licensing play a large role in the demarcation.

"There is a significant difference between gaming in China versus any other market, for multiple reasons," says Wijman. "First, the influence of the government leads to strong regulation on what games can be played. Content is checked on ethical grounds for potentially harmful content, for monetization practices and for violence." Second, Wijman points out, every game in China must be published by a Chinese company, which means the top global online game developers have to partner with a local company. "For example, Blizzard works with NetEase to launch any of their games in China. Or Valve has now partnered with Perfect World to launch a Chinese version of Steam."

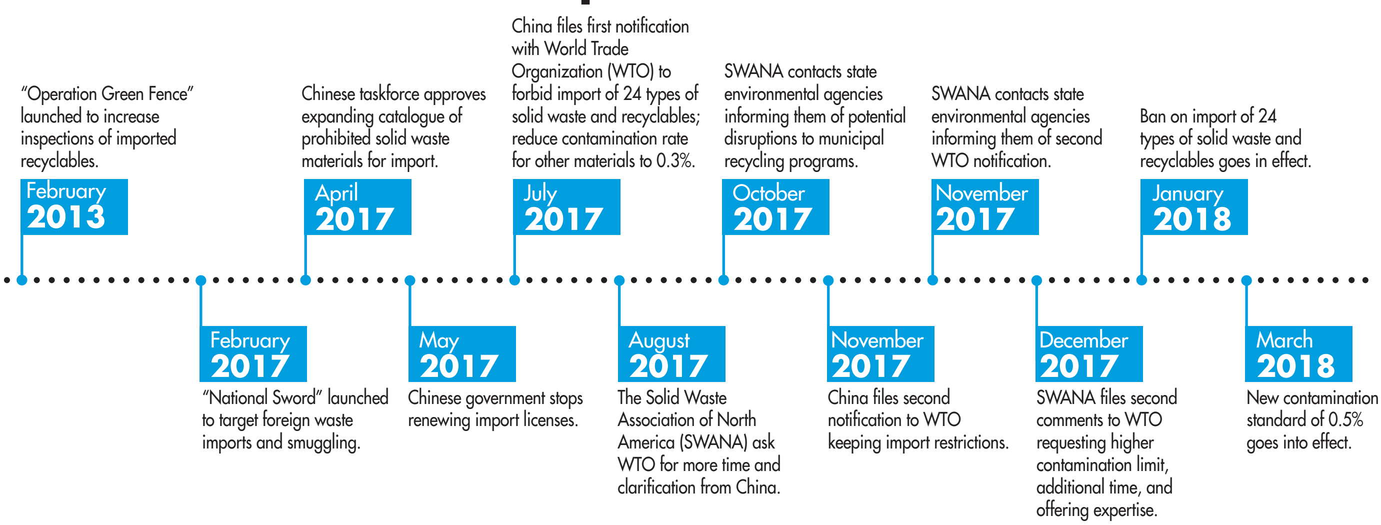
The number of hours people spend online playing these games will likely grow with the industry—as will fears of their dangers and attempts to offset them. But those in the gaming community don't necessarily share concerns about the future of gaming. "Sometimes people may spend too much time on it, but it happens more with teenagers or college students," says Feng. "Most of my gaming friends don't have any control problems."

Waste and Recycling

After nearly three decades, China is no longer willing to recycle the world's trash, triggering a global waste crisis

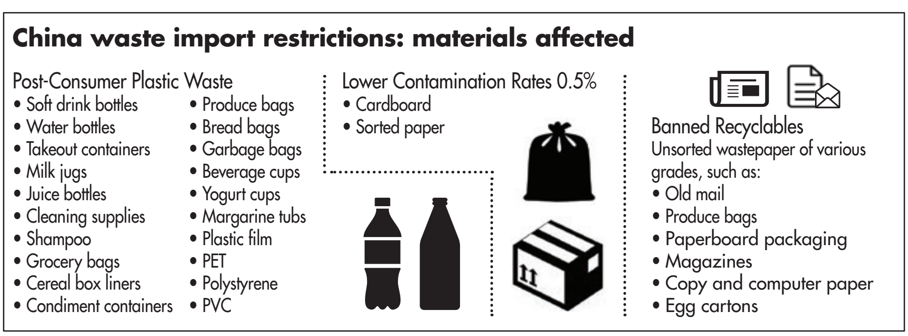
It has been over a year since China jammed up the works of recycling programs around the world by shutting down what had been the industry's biggest market. China's "National Sword" policy, enacted in 2018, banned the import of most plastics and other materials headed for that nation's recycling processors, which for the past quarter century had handled nearly half of the world's recyclable waste.

China waste import restrictions: Timeline



A Breakdown

In the year since, China's plastics imports have plummeted by 99%, leading to a global shift in where and how refuse is being processed. The materials that China is no longer accepting includes post-consumer plastic waste and unsorted wastepaper.



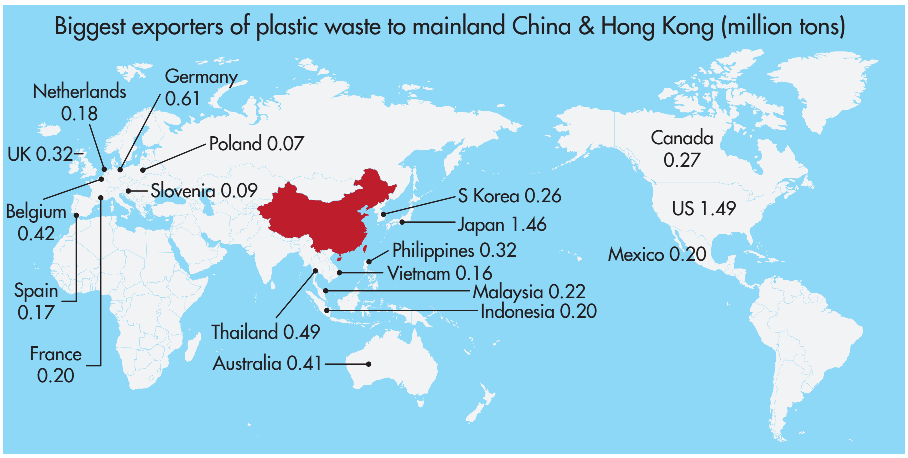
More plastics are now ending up in landfills and incinerators around the world, or littering the environment as rising costs to dispose of recyclable materials increasingly renders the practice unprofitable.

Sources: Oxford Analytica

Where is the waste coming from?

The biggest exporters of plastic waste to China before the ban took effect were the United States, Japan and Germany. The shock of China's decision brought about a dramatic shift in supply and demand.

In 2018, the price of mixed paper waste fell from $75 to just a few dollars per ton. The garbage trade between China and the US dropped by as much as 38%—a loss of $3.5 billion.



The countries importing the world's plastic waste

Cumulative figures related to the import of plastic waste from 1988 to 2016

	Total net weight (Million metric tons)	Total trade value (billion USD)	Share of global imports
China*	170.5	80.9	72.40%
United States	8.49	5.18	3.60%
Netherlands	6.43	2.40	2.70%
Germany	5.36	2.30	2.30%
Belgium	4.15	1.81	1.80%
Canada	3.83	1.76	1.60%
Italy	3.32	1.84	1.40%
India	3.10	1.20	1.30%

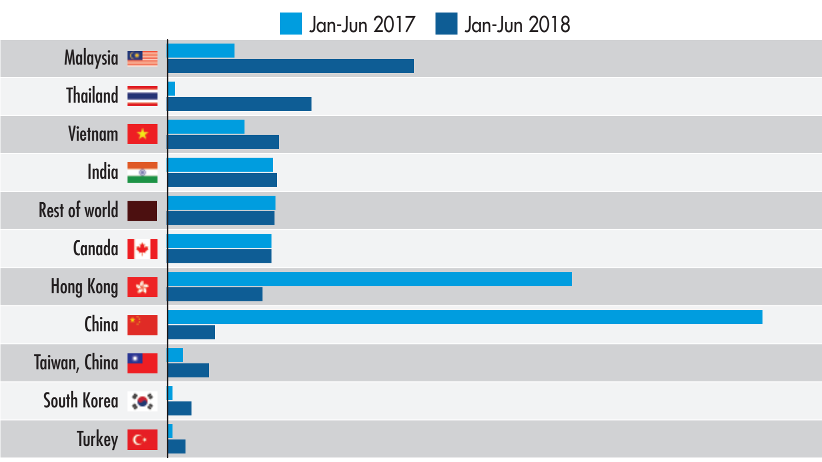
*Including Hong Kong

Where is the waste going now?

The trash has to go somewhere, and developed nations have maxed out their capacity to recycle their hundreds of millions of tons of plastic and paper, especially since plastic can't be completely recycled. Desperate trash traders have been forced to look for new customers. They have found them in South and Southeast Asia, in countries like India. Indonesia, Malaysia, Thailand and Vietnam—countries with fewer import regulations and less stringent controls.

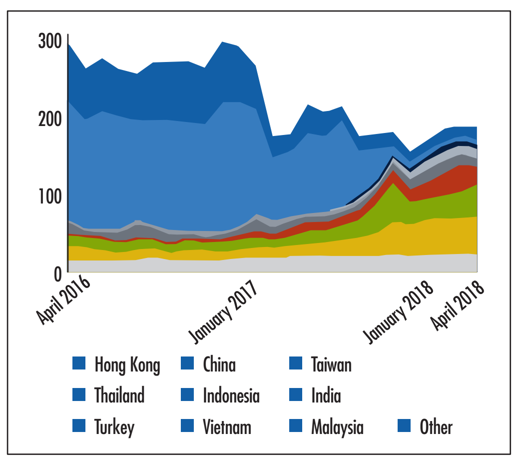
China won't accept US plastic waste. Now what?

Worldwide export volume of plastic waste from the US by import country (in 1,000 metric toms)



Where European plastic waste goes

Thousand metric tons



Sources: Oxford Analytica

The stats you need to know

Macro

Lost jobs

China's industrial sector has lost **5 million** jobs in the last year, with **1.8** to **1.9 million** of those lost due to the effects of the trade war. Those losses represent **3.4%** of total employment in the industrial sector and **0.7%** of total national employment.

Source: South China Morning Post

Far-reaching dramas

In 2015, President Xi announced the **10,000** Villages Project, a government initiative to take digital television to impoverished parts of Africa. Today the Star Times—the Beijing-based television provider contracted by the Chinese government—currently broadcasts Chinese TV shows into the homes of **10 million** subscribers in **30** African countries as a result of the initiative, dominating the African market.

Source: CNN

Property under pressure

Hong Kong's property market has begun to buckle under the strain of China's economic slowdown and global trade frictions. New leases to Chinese companies fell almost **40%** in the first half of 2019, with office rents in the city likely to fall in 2019 for the first time in **six** years.

Source: Financial Times

Rising surveillance

China has **eight** of the top **10** most surveilled cities in the world. Chongqing in the southwestern province of Sichuan is in first place with nearly **2.6 million** cameras—or **168.03** per **1,000** people.

Source: South China Morning Post

Technology

Interstellar glory

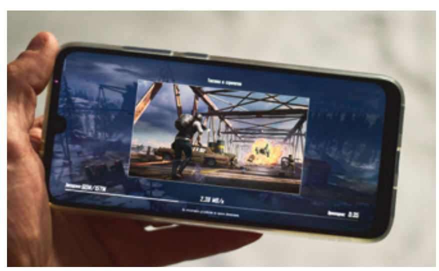
iSpace has become the first private Chinese space company to successfully launch a rocket into orbit, marking an important milestone in the development of the country's commercial space industry.

Source: Caixin

5G roll out

Huawei has released its first 5G phone in China, the Mate 20 X 5G with a price tag of **RMB 6,199 ($901)**. The company also said it would soon launch smart TVs equipped with its own Hongmeng operating system.

Source: Reuters



Teaming up on games

Tencent and Qualcomm have decided to cooperate on projects that will optimize the Chinese company's videogames with the help of Qualcomm chips, and create a 5G version of a Tencent-backed gaming phone.

Source: Reuters

Consumer

Huge savings

China's tax cuts have saved individuals **RMB 407.7 billion ($59.3 billion)** since the government relaxed personal income taxes last October, boosting the spending capacity of medium and low-income individuals and households spending capacity.

Source: Yicai Global

Smart care

China's Lanchuang Network Technology Corp., a smart home tech company, has made inroads into China's elderly care market. In just **four** months its system has already signed up **220,000** elderly clients in **16** cities, targeting **1.5 million** users this year.

Source: Reuters

Online growth slows

Online retail sales rose by **16.8%** year-on-year in the first eight months of the year, down from **28.2%** growth the year before. The domestic online retail market recorded sales of **RMB 6.4 trillion ($900 billion)**.

Source: Caixin

Business

Sellers welcome

Chinese e-commerce giant Alibaba will allow small US businesses to sell on Alibaba.com as it seeks to tap into the business-to-business e-commerce market. More than **95%** of sellers come from China, while roughly **one-third** of buyers on Alibaba.com are US-based.

Source: Reuters

Jack Ma's loan machine

Using real-time payments data and a risk-management system that analyzes more than **3,000** variables, Jack Ma's 4 year old MYbank has lent RMB **2 trillion ($290 billion)** to nearly **16 million** small companies. The default rate so far: about **1%**.

Source: Caixin

Tax-exempt Teslas

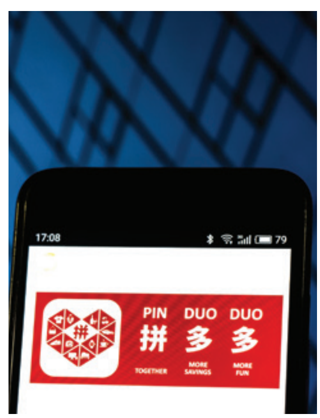
China will exempt Tesla's electric vehicles from its 10% purchase tax, a concession made amid trade tensions with the US. The exemption could reduce the cost of buying a Tesla by up to **RMB 99,000 ($13,957.82)**.

Source: Reuters

Pinduoduo takes Baidu down

E-commerce startup Pinduoduo's market cap has reached **$39.1 billion**, surpassing Baidu's **$36.5 billion**, replacing it as China's fifth-largest listed internet company. Pinduoduo's share price has risen nearly **90%** in a year.

Source: Caixin



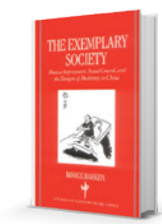
BOOKSHELF

China Through a Social and Cultural Lens

Sacha Cody, China anthropologist and business consultant, recommends books that help readers decode the social and cultural complexities of China

Sacha Cody has spent 15 years in China, during which time he was head of Client Solutions at Millward Brown as well as Global Account Director from Huawei at Kantar. Sacha holds a doctorate in anthropology from the Australian National University and was recently a Fellow at The Hong Kong University of Science and Technology where he researched intelligent computing in Asia. In this selection, Sacha recommends books that have profoundly impacted how he thinks and writes about China.

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

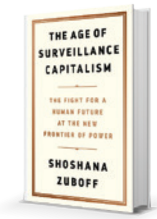


The Exemplary Society by Børge Bakken is one of the best books about contemporary China. Bakken's claim is serious and has wide-reaching implications: institutions across China, from the Party and government to education centers and places of work, are determined to 'produce' ideal citizens who are economically productive and loyal to the Party. To achieve this, they deploy exemplary morality. In simpler terms, they use role models to motivate change. Have you ever wondered why Lei Feng is so durable 50 years after his death? He is the quintessential role model, even depicted as a homeowner in recent guises. I cannot recommend *The Exemplary Society* enough; it will change how you think about China.

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

What does an encounter between a shop assistant and a customer reveal about China today? That's what Amy Hanser answers in ***Service Encounters***, a book I regularly return to for its wonderful ethnography and deep insights. Hanser worked across several department stores and markets to document the privatization of retail space across China, bringing to life the complex social and economic shifts underway. The arrogance of the new rich in private department stores; the comradery in state-owned stores; the struggle for social acceptance; these and more are explained in *Service Encounters*.

What are you reading currently?



I'm reading ***Surveillance Capitalism*** by Shoshana Zuboff. What is surveillance capitalism? It is 'a new economic order that claims human experience as free raw materials for hidden commercial practices of extraction, prediction and sales.' In this new economic order, our digital (and increasing physical) behavior feeds a complex supply chain that produces predictions of future behavior. Where *Surveillance Capitalism* examines Google and Facebook, we need only replace them with Alibaba and Tencent to appreciate its relevance.

What book totally changed your perspective on a certain topic?

The Yellow Peril is a metaphor for Western xenophobia and a belief that the people of East Asia pose an existential threat. But where did this color-metaphor come from? ***The Yellow Peril*** by Christopher Frayling is an authoritative cultural history on this topic. In examining the imaginary and fictitious world Rohmer created in the 1910s—full of opium dens, evil Chinese and, of course, the now infamous drooping moustache—*The Yellow Peril* reminds us that the serendipity of history yields long and dark shadows.

Which China book do you think is most underappreciated at the moment?

Reporting for China by Pál Nyíri is one of the most insightful books about China today that no one has heard of. It explores the expanding ways China is engaging with the world with an examination of Chinese foreign correspondents and how they go about their work. Given how Chinese foreign correspondents are often young, educated and single, Nyíri asks an interesting question: does this new cosmopolitanism lead to a questioning of China's place in the world? In exploring this and other themes, the book reveals hidden dynamics and tensions that compel Chinese foreign correspondents to report the way they do.

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APPLY

Ms. Mara YUAN
ytyuan@ckgsb.edu.cn
+86 (10) 8537 8408