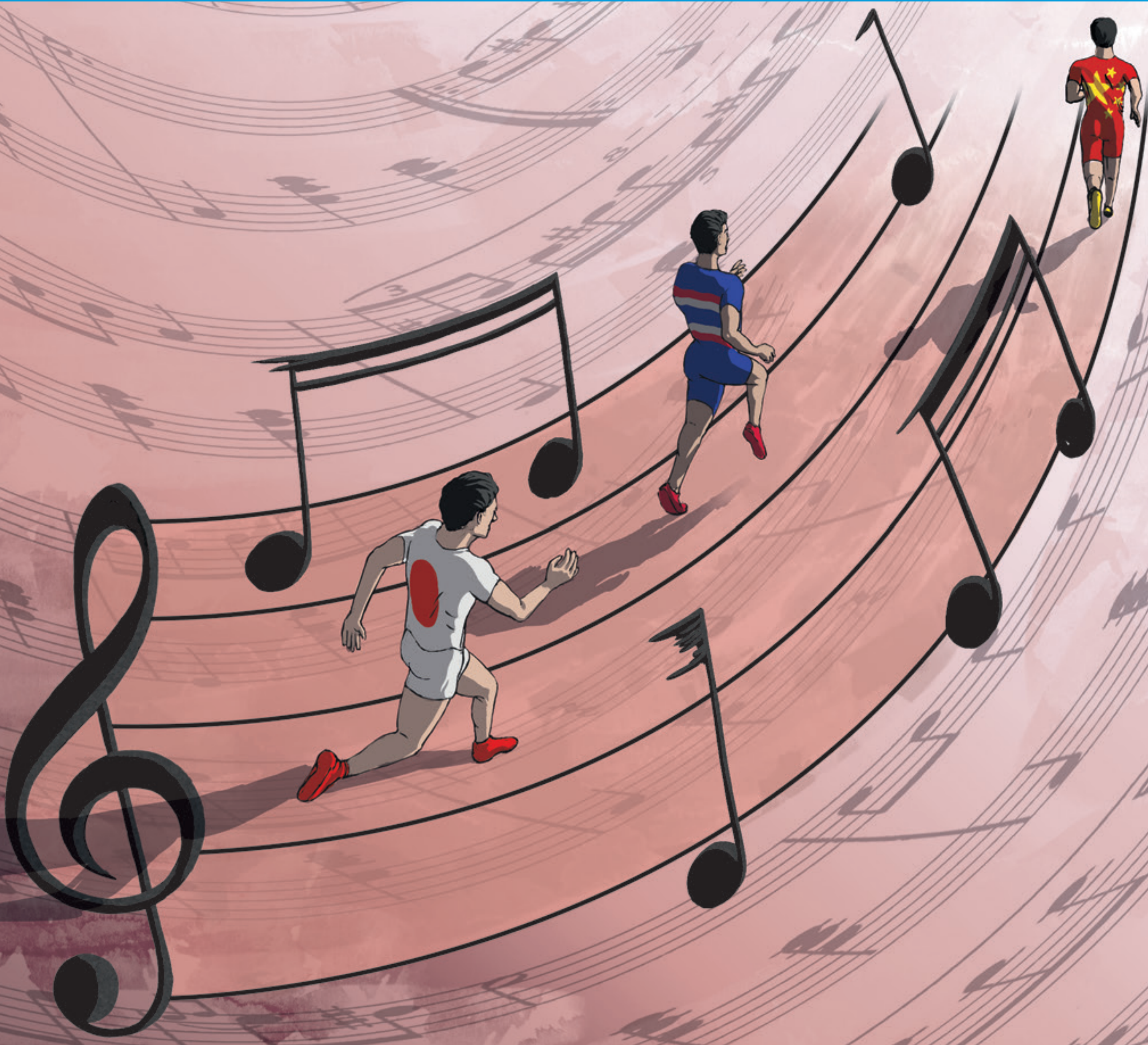
CKGSB KNOWLEDGE

CHEUNG KONG
GRADUATE SCHOOL
OF BUSINESS

Volume No. 48
AUGUST 2023



WORKING IN HARMONY

China is increasingly turning towards more equitable commercial partnerships in Southeast Asia as decoupling from the West grows

- The impact of AI means that business schools will have to adapt their offerings
- China becoming the world's largest economy is under question, but still likely
- China is at the forefront of wind energy adoption and manufacturing

Table of Contents

Issue: August 2023
Vol. No. 48

Editor-in-Chief
Zhou Li

Managing Editor
Patrick Body

Executive Editors
Cathy Chen
Ralf Qiao

Design
Jason Wong

Cover
Jamie Stevenson

Produced By
SinoMedia

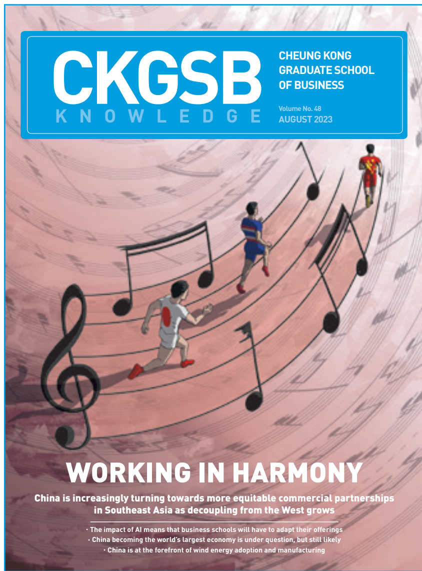
ISSN 2312-9905

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

Headwinds and Tailwinds

Increasingly over the past few decades, China's ascent to the peak of the global economy has seemed inevitable, and by some measures, such as purchasing power parity, the country has already made it to the top. But what was seen as a certainty five years ago—that China would soon have the world's largest GDP—is now under question and predictions for when China will reach the number one spot are being pushed back. Some of the more forthright analysts have even suggested that the country will never become the largest economy in the world. There are a plethora of arguments to back up this potential change in fortune, including the long-term impact of growing geopolitical tensions, demographic difficulties and COVID-related restrictions. But it is also true that the country has continuously defied expectations over the past few decades, and it is hard to say they will not do it this time either. We delve deeper into the topic in "**Eyes on the Prize**" on page 8.



One of the ways that Chinese businesses are looking to continue their, and by extension the country's, expansion is through the development of more equitable international partnerships, particularly in Southeast Asia. Historically, both China's state-owned and private enterprises took a more direct approach to doing business abroad, often buying out prospective partners rather than looking for joint ventures with a balanced equity split. But this tactic has been shifting, and companies are now turning to more interactive and back-and-forth partnerships designed to both increase profit as well as develop the competencies of both sides. It has not been entirely plain sailing, of course, and there are still many difficulties for Chinese companies expanding abroad, which can be seen in their efforts in countries such as India, Sri Lanka and Pakistan. But the trend in general looks positive and we take a look at the minutia of the topic in our cover story "**Stronger Together**" on page 41.

Speaking of business development, AI has been a hot topic across the world in recent months and it is likely to remain so into the foreseeable future. A number of CKGSB professors, led by Prof. Sun Tianshu, have been conducting research on the susceptibility to change of certain job roles with the implementation of AI. We are lucky enough to be able to publish their findings in this issue on page 21. This is complemented by our Commentary "**If anything can shift Business Schools, it will be AI**" on page 5, which delves into the need for business schools to return to a more holistic and interactive educational approach. AI will have huge implications on how the quantitative side of business will be conducted and business schools need to start focusing more on facilitating students to ask the right questions.

Elsewhere in the issue, we look at China's varying levels of soft power around the globe (page 16) and the difficulties inherent in the country's shift towards a more consumer spending-driven economy (page 28). We are also joined by Mark Dreyer, author of *Sporting Superpower: An Insider's View on China's Quest to Be the Best*, to discuss China's relationship with sports (page 61).

As always, we hope you find the topics addressed in this issue provide a useful insight into the contemporary China business world. If you have any comments or opinions to contribute, please feel free to contact us at (lzhou@ckgsb.edu.cn or ckgsb.knowledge@ckgsb.edu.cn).

Yours Sincerely,

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

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

COMMENTARY

If anything can shift Business Schools, it will be AI

Business schools need to embrace AI in order to adapt to the changing requirements of the real world

Zhou Li, Editor-in-Chief of CKGSB Knowledge

All commentaries reflect the personal opinion of the author and are not necessarily the official position of the school and the magazine

Rationale for business schools: finding a job vs creating a job

Business schools originated late in the 19th century during the period of rapid industrial expansion, first in Europe and then in the US. For most of the 20th century, the schools made important contributions to global economic development by training a large number of managers to meet the growing business demand. But things began to change during the transition to the Information Age in the late 20th century. Mass deployment of computers and easier access to the internet, followed by the mobile internet, fundamentally changed the business landscape around the world. Not only did business schools grow rapidly in number and scale, but also found themselves having to reassess their raison *d'être*, this happened again both after the Great Financial Crisis in 2008 and now, at the dawn of the AI Era.

The recent explosion of AI capabilities means that helping students find better positions in the job market—the current primary goal of most business schools—may not be as relevant in the coming years. Many of the jobs that business school graduates currently aspire to are likely to be replaced by computer programs, meaning that schools need to find a new way to add value for their students.

A recurring theme I often find coming up when discussing the value of a business school qualification these days is that many students, particularly those at the MBA-level, are attending less for the learning aspects of the courses, and more for the degree certificate that they receive at the end. But, people soon won't necessarily need that piece of paper to certify their skills and training, as AI will provide other ways for people to validate themselves and their unique skillset, going far beyond the knowledge that they are getting from business schools.

Starting from the early days of the Information Age, we have seen a trend in which increasing numbers of talented young people choose to start their own companies rather than join large, rigid and hierarchical corporations. This shift was facilitated by advances in computing, software and the internet which allows individual entrepreneurs to reach a massive number of customers around the world rapidly and at low or even no increase in

New normal: AI facial recognition in action on a visit to JD.com

cost. Today, millions of startup companies are launched each year, creating jobs and wealth in countries around the world. And the question is what the role of business schools will be as a result.

The growing number of available AI tools—such as image generation, coding, translators and Large Language Models (LLMs)—further lowers the barriers to entry for people starting companies. Thus, there will be fewer young talents searching for jobs in established large corporations, which will likely turn to AI to fill these roles anyway. Instead, they will look for opportunities to set up their own companies to meet their unique career and life interests, i.e. creating jobs for themselves and those of similar values and mindsets. Unlike the business school graduates of the 20th century who helped large corporations make more money, graduates now will be looking more to enrich themselves, while also prioritizing other issues, such as societal impact and other sustainability-related issues.

Students: start-up founders vs corporate execs

The increasing number of start-up founders are also likely to come from a wider range of university backgrounds, bringing with them the academic and practical knowledge required within their chosen sector. Students from engineering, law or humanities backgrounds will need special and personalized management education in the AI era to make business school courses, and the financial outlay they require, worthwhile. This change presents both challenges and opportunities for the schools, and many, especially those set up to serve established corporations, will find it hard to recruit top talents to their programs unless they address these issues.

At the same time, business schools must leverage AI technology to meet the personal learning needs of start-up founders, and those that design and deliver personalized management education packages that go beyond traditional business subjects are likely to be oversubscribed.

Curricula: personalized learning beyond the traditional business domain

In recent years, a large number of business schools have put a lot of emphasis on developing quantitative skills such as data analytics, mostly due to the rapid digitalization of the business world. However, the reality is that those data analytics courses do not necessarily help their graduates gain an edge over those from engineering, maths and statistics departments, who are far stronger in quantitative analysis. Now they are all facing the extra risk of being replaced by automation and AI.

At the same time, new developments in AI are creating unprecedented opportunities for management education, whether it be provided by the corporate world or by business schools. Critical thinking has always been essential in terms of running a business, which was especially true during the Industrial Age when cost and efficiency were key consideration, but now creative thinking is becoming increasingly important, as it helps businesses stand out within established industries, reaching the places that AI alone can't yet touch.

AI can help students not only better understand themselves but also help

> AI-enabled professors will have much better opportunities to develop alongside their students, organically integrating personalized content

them better understand their business stakeholders. Using the technology, students will be better able to identify their own specific learning needs and potential avenues for improvement before they sign up to any management education program. With this enhanced information from students and equipped with latest AI tools, educators will be able to provide each of the students with a unique learning package, including content beyond the domain of traditional business school knowledge. The personalized programs can be delivered to meet students' preferences. Some content may be delivered in person to fulfill the need for student interaction and networking, but also online for students in other locations who do not have the time to travel. AI can also help source and organize relevant content from around the world on subjects specific to students' needs, business-related or otherwise, in a way that has never been possible before.

While most basic skills can now be obtained quickly through the use of AI, the time saved should be invested in learning about a broader range of skills to provide students with more tools to understand and manage a world that is full of applied AI. These skills can be chosen to suit students' needs and capabilities and can range from biology, blockchain and engineering, to philosophy, history and international relations.

Above all, business schools must now add value by enhancing the skills that are hardest for AI to replace. Students should also spend more time on human issues which can help them lead and manage with empathy and compassion, while AI takes care of the business processes. In other words, business schools must start focusing on students' hearts as well as minds to remain relevant in the age of AI.

> New developments in AI are creating unprecedented opportunities for management education, whether it be provided by the corporate world or by business schools

Professorial role: from a knowledge provider to a creativity enabler

For years, the role of the professor has been one of academic distinction and while that remains true, for business schools there is a growing emphasis on those conducting classes having up-to-date industry knowledge and experience interacting with business people.

While you still see a number of professors from a wide range of academic backgrounds invited to speak on the global stage, fewer business professors are being invited to prominent events. Professors of political science share their views at such events on today's complicated geopolitical landscape and AI professors offer evaluations of the impact of the latest technological developments in business. But industry professionals are increasingly viewed as more relevant than professors to the business audience.

Within business schools, professors will be subject to the same forces of automation as the workforce at large, and opportunities for new roles will be created in the same way as traditional work tasks are taken over by machines.

One of the common arguments made by our MBA students is that academic research often has little to do with immediate business issues, which are their major concern. In some disciplines there is so much research already out there that it can take a lifetime just to catch up with all the developments. What business leaders need is information that they can use straightaway. Perhaps there is another opportunity here for AI to assist, but I believe that it may actually be an opportunity to reconsider the role of the professor.

Certain types of information will be increasingly accessible through AI, so a good education will be one that helps people to ask the right questions, and professors can and should play this role. This is not necessarily a revolutionary idea, but in order to add value in future, it will become an ever more important part of any curriculum.

AI-enabled professors will have much better opportunities to develop alongside their students, organically integrating personalized content.

The ability to distil information in a unique way so that anyone can understand and inspire students through engaging behavior will be a valuable skill for professors in the future.

Networking: at business schools or elsewhere

Another important function provided by business schools is the facilitation of networking, and courses will remain useful for meeting new people and forging connections even in the AI Era. But on the other hand there are myriad other places that offer similar networking opportunities without the same cost or time commitment.

The fact is that AI will make most parts of the current business school approach irrelevant while creating new opportunities for those who embrace the need for change, and leverage new tools to serve new purposes, curricula and pedagogies. It has proven difficult in the past few decades for business schools to introduce changes even when they were obviously needed. But the revolutionary nature of AI may provide a much needed push in the right direction. It may be their last chance.

EYES ON THE PRIZE

China's ambition to become the world's number one economy is still alive, despite economic headwinds

By Sean Williams

Image by Rómulo Gandolfo

The digital economy could prove to be the success story that China needs to reach the top of the global GDP charts

In the closing minutes of a lively debate in Seoul in 2019, economic historian Niall Ferguson and Chinese economist Justin Yifu Lin made a bet on perhaps the biggest economic question of this century: When will China overtake the US as the world's largest economy? Lin wagered a sum of ¥200,000 ($29,500) that it would happen within 20 years, and Ferguson said it would not.

"I think we should have learned by now from history, that it's pretty hard to overhaul the United States," said Ferguson.

With 16 years still to go, there is still plenty of time for the bet to go either way. But the willingness of both academics to address a topic that has shifted in the recent past from being an absolute certainty to being up for debate is significant. Few questions today are more consequential, whether it is for executives wondering where long-term profits will come from, investors weighing where to allocate capital, or generals strategizing over geopolitical flashpoints.

For some time now, an overarching theme of global economics has been the economic and soft power struggle between Washington and Beijing. "I see stiff competition with China," US President Joe Biden said in his first days in the White House two years ago. "They have an overall goal to become the leading country, the wealthiest country in the world, and the most powerful country in the world. That's not going to happen on my watch."

The rhetoric reflects how, for the first time since it overtook Great Britain in 1890 as the world's preeminent economy, the US now faces a formidable economic rival that is nearly as large and by some measures has already surpassed it. Modern China has managed the fastest sustained growth of any economy ever recorded and is out to reclaim the top spot, a position it has held at a number of points throughout history. But some think the chance may have already passed.

A growing challenger

The usual standard for measuring the size of an economy is nominal GDP and the US economy continues to lead the world in this. In 2022, at $25.46 trillion, it was 42% larger than China's $17.56 trillion economy. China has closed the gap considerably since 2007, when US GDP was four times that of China's, and has also contributed one-third of new global GDP since the 2008 financial crisis, replacing the US as the primary engine of global economic growth.

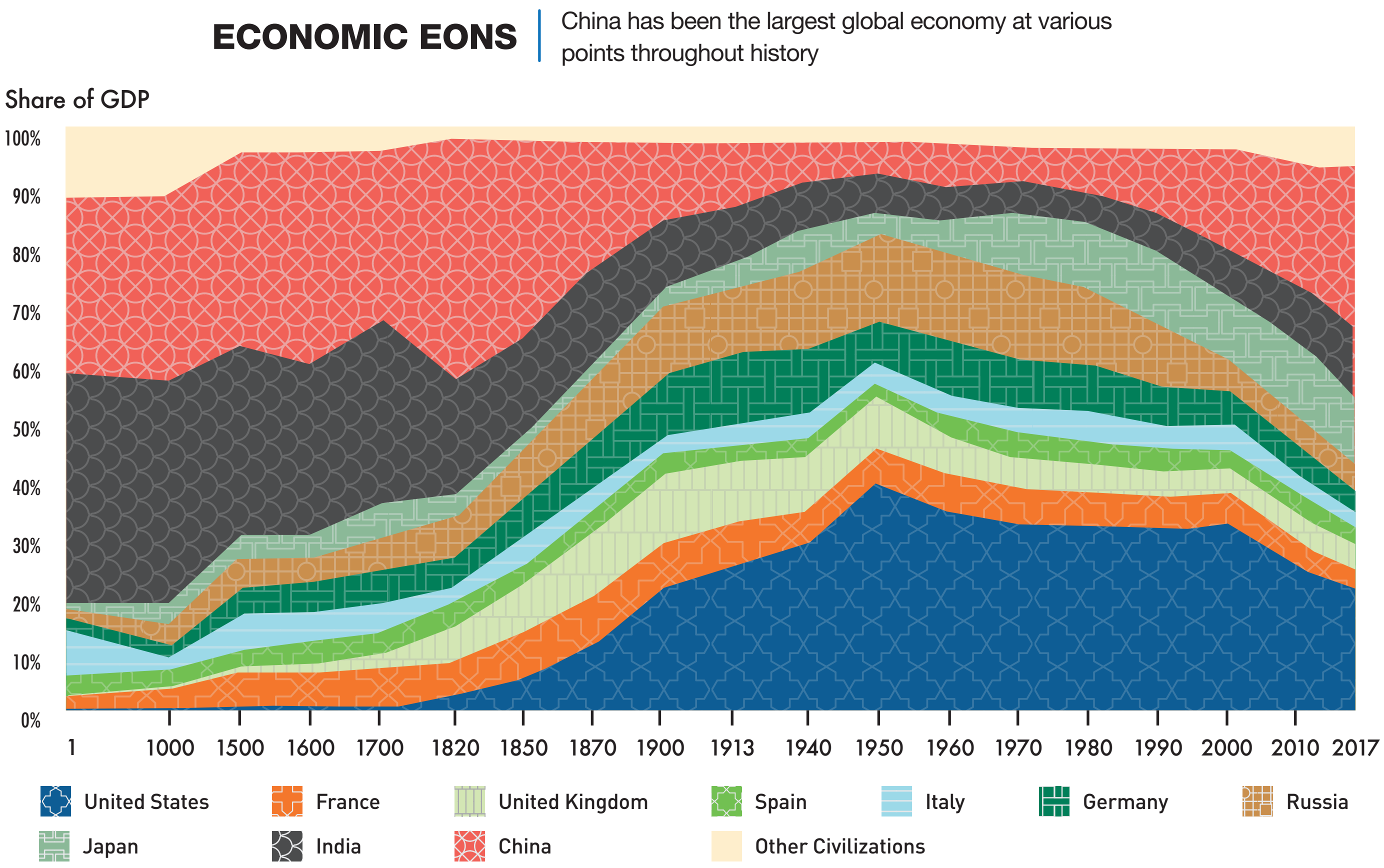
China has actually overtaken the US in purchasing power parity (PPP), which corrects for price differences across countries. The main drawback of PPP, and why it isn't used over nominal GDP, is simply that it is much more difficult to accurately measure.

Another key area where China may hold an advantage over the US is the digital economy, but the contribution of digital products and processes to a country's economy is hard to quantify. As of yet, there is no universal standard for measuring the impact of the digital economy on GDP, but China's rapid integration of digital technologies across a wide range of manufacturing, as well as the large e-commerce and fintech industries indicate a digital transformation is occurring.

Digitally transformed enterprises are expected to contribute over 50% of global GDP growth for the first time in 2023 and the World Economic Forum predicts that 70% of new value created over the next decade will come from the digital economy. For many analysts, the likelihood of the digital economy becoming dominant gives China better positioning in the GDP race.

The Asian giant has also overtaken the US as both the world's leading manufacturer and at times has been the top destination for foreign direct investment. Two-thirds of the world's countries did more trade with China than with the US in 2018 and Beijing is now an essential link in most of the world's critical supply chains.

While the US and China are seen as the main rivals wrestling over economic primacy, some have touted India—the fastest-growing major economy in 2022—as a possible contender given the size of its working-age population, economic liberalization and increasing strength of global supply chains. In 2023, India already surpassed China as the world's most populous country. But the latest long-term



Source: Visualcapitalist.com; Angus Maddison; IMF

forecasts from Goldman Sachs suggest New Delhi will not be able to topple Beijing economically in the next 50 years and will have to settle for second place in 2075, just ahead of the US which would be placed third by their estimates.

"No other emerging market is close to the size of mainland China's economy today, so no other emerging market economy has the potential to catch up with the size of mainland China's economy over the next two decades," says Rajiv Biswas, Asia-Pacific chief economist at S&P Global Market Intelligence.

Crystal balls

When Goldman Sachs published its first long-term growth forecasts for the BRICS economies two decades ago, the investment bank predicted China's economy would, under ideal conditions, overtake the US by 2041. Within four years of that prediction, the bank brought forward the milestone to 2035 and then 2027.

But weakening GDP growth in recent years, thanks in part to the strict enforcement of, and then chaotic exit from, the zero-COVID strategy which culminated in a full-blown downturn in 2022, has prompted some economists to revise their thinking about China's long-term economic trajectory. Add to this a host of other demographic and geopolitical concerns and it makes sense that, as of December 2022, Goldman's best guess now is back to around 2035.

On the Chinese side, the best official estimate has come from the Development Research Centre—the government think-tank inside China's State Council. In September 2022, it earmarked 2032 as the year that the country would become the largest economy by GDP.

"A few years ago, the idea that China would hit a wall before attaining the top position was a minority view," says Denny Roy, a senior fellow, and Asia security expert at the East-West Center in Honolulu. "The belief that China would be, or even already was, the next economic superpower was conventional wisdom. Now there is a debate about that, with the two contending sides closer to even."

In December 2022, the Japan Center for Economic Research—which has been publishing macroeconomic forecasts for the past 60 years—even went as far as saying that China would never overtake the US, reversing an estimate from two years prior that the swap would occur in 2028.

Others caution that both superpowers are dealing with temporary ructions that complicate forecasting. "Right now is a pretty extraordinary moment for China and the US," says Tom Orlik, chief economist at Bloomberg Economics who predicted two years ago that China could reasonably expect to surpass the US in 2033. "In China, the reopening from COVID lockdowns is a major one-off shock that will propel growth forward in 2023, but also make it hard to see what the underlying trend is. The US is still struggling with high inflation and very likely faces a recession in the second half of the year."

"What that means is that it's pretty difficult right now to make a big call about long-term growth in either China or the US," he adds.

Facing the competition

To get to the position it is in today, China has followed a different development model than the US free-market model. China has built upon the East Asian model where the state plays an outsized role in driving development.

"The advantage of [the reforms that started in the late 1970s] is that they didn't have to reinvent the wheel," says Orlik. "There was a lot of relatively easy catch-up growth just by looking at what has worked in other countries and trying something similar at home."

But despite China's remarkable economic performance over the past three decades, prompting bullish predictions on how soon it could leapfrog the US, timelines have started to shift backwards as threats to Chinese economic growth have become more evident. Annual GDP growth in the 13th Five-Year Plan (FYP) period covering 2016-2020, although on track to meet the official target of 6.5% prior to COVID, had dropped to 6.0% by 2019. The short-term shock of the pandemic in 2020 then brought the average further down, to 5.7% over the FYP period, but it is unclear whether there will be lasting effects from the dip.

"As developed economies transitioned away from COVID measures, China moved into the zero-COVID era," says Karl Thompson, an economist at the UK-based Centre for Economics and Business Research who contributed to the forecasts. "Any long-term impact has yet to be seen but in the short run, it definitely slowed down the country's growth rate from something the West would be envious of, to something in line with the rest of the world."

China defied global trends in 2020 by eking out GDP growth of 2.2%, which was followed by a further expansion of 8.1% in 2021. But 2022 saw a sharp slowdown to 3%, well below the government target of 5.5%, set in March of that year, and the second-lowest rate since 1976.

Other key factors have chipped away at the presumption that China is destined for the top. "The most important factor is that the US started to limit high-tech cooperation with China. That will have a fundamental influence on China's technology GDP growth, especially in the long run," says Wang Yikai, an associate professor at the University of Essex in the UK. "If China wants to surpass the US in economic influence and become a rich economy, one imagines it needs to upgrade technology and start producing things that Japan and Korea are already making."

Headed to the top

China has a number of points in its favor when it comes to its quest for the top spot. One advantage—so obvious it is often overlooked—is its enormous size. China's population of 1.412 billion at the end of 2022 was still more than four times larger than that of the US. This means average Chinese incomes only have to be slightly more than one-quarter of America's for China to take the top spot. "Thinking long-term, I'm not sure how many geopolitics strategists would want to bet that China can't clear that relatively low hurdle," says Orlik.

But in January 2023, Beijing acknowledged a pivotal demographic shift—the country's population declined in 2022 for the first time since the early 1960s.

The falling population is a real, but long-term issue, and the fact remains that Chinese productivity growth, which sat at 4.8% in 2022, still far outstrips the US, which contracted by over 1% in the same year.

Over the last few years, Chinese households have also amassed their largest savings in history, as consumers delayed home purchases and pulled out of the underperforming stock market. Deposits by households surged by a record ¥17.8 trillion in 2022 compared with ¥9.9 trillion in 2021. For some, this rate of saving indicates a population trying to cope with economic uncertainty, and is an ominous sign. But for Thompson, this extraordinary potential buying power could well be a driver of global markets for decades to come. "When you have a swelling middle class, that is hugely promising for your consumption prospects," hey says.

China has other benefits, too. It is home to a world-beating logistics network which has enabled the country to entrench itself in global supply chains. And China's R&D spending also remains consistently high.

"From Deng Xiaoping's open-door policy on, the ability to learn from global technology leaders has been an accelerator of China's development," says Orlik. "As that door starts to creak closed, closing the technology gap gets harder to do."

Running out of steam

On the other hand, the Chinese economy faces mounting headwinds. The property sector is overleveraged, US sanctions and export controls on China's high-tech sectors are having a significant impact and demographics are slowly becoming unfavorable.

Predictions that China will soon overtake the US in total economic heft depend on it maintaining robust growth trends, but this possibility looks shakier than ever. The International Monetary Fund expects GDP growth to average 4.24% through to the end of this decade and ease to 3.8% by 2030, while S&P Global Ratings believes it will slip to 3.1% between 2031-2040.

"The main driver of changing expectations is the decline in China's annual economic growth rate, combined with the expectation that nothing will come along to change this much given the shrinkage of the working-age population and policies that place stability and Party supremacy above innovation," says Roy. "The pandemic and partial economic decoupling from the rest of the world reinforce the belief that China is plateauing."

Beijing's lifting of the zero-COVID strategy in late 2022 does not necessarily change nor solve China's structural economic issues. Demographic changes pose the biggest long-term challenge as China's working-age population between the ages of 16 and 59 has declined every year since peaking in 2011, falling by more than 60 million to 875.56 million in 2022.

"Trend growth is basically labor force plus productivity, and China is facing poor prospects for both," says Wang. "There is a 1:1 relationship between the working-age population and economic growth. So with China's working-age population falling, that GDP will be lower by the same amount each year on average—unless it can be mitigated by, for example, immigration, higher labor force participation by women and older workers, and stronger productivity growth."

The other problem is the system's apparent unwillingness to construct robust demand-side measures to support consumption growth. While supply-side policies have been successful in generating growth for the past few decades, continuing to solely rely upon non-digitalized development when business investment is increasingly constrained by weak demand, will not have the same level of success.

In this case, infrastructure spending boosts China's GDP numbers, but the result is not a true measure of quality economic development. As Michael Pettis, a finance professor at Peking University wrote in a recent *Financial Times* article, "Economic growth will be powered by unwanted infrastructure investment, manufacturing subsidies, surging exports and rising debt, while household disposable income continues to lag, along with consumption and imports. For now, this remains the seemingly never-ending story of China's economy."

It remains to be seen if China can sustain its progress in innovation amid Washington's efforts to safeguard American tech hegemony. "Whether the US is willing to let a country's high-tech industry develop is a very important factor," says Wang. And trade difficulties may spread to other countries.

"The reality is that these big economies—the US, EU and China—are very much integrated," says Biswas. "There are certainly some policy issues that are affecting some aspects of trade, and there always will be between any pairing, the US and EU included, but in the end, they're also still trading in a big way."

Don't count China out

All these challenges come with the caveat that it is difficult to predict an outcome for China given the increasing lack of transparency of the system and decreasing availability of data. Many of these issues have been on the Chinese government's radar for years if not decades, and solutions may well be forthcoming.

Neither are the challenges likely to derail China's shot at overtaking the US in the near term. Take the slow-motion demographic reversal for example—a serious long-term problem for sure but one unlikely to drag on the economy until the mid-2040s, by which time China should have surpassed the US. "Although it's likely now that the Chinese population has peaked, the sheer size of its population will help to propel it to first place over the next 15 years," says Thompson.

And while timelines for when China could reclaim economic primacy have slipped, the math for most forecasters simply adds up to this being inevitable and taking place sometime in the next two decades. "Based on our global macro model, we currently expect China will become the world's largest economy in 2040," says Biswas. "At that point, per capita GDP is projected to be around $38,000 measured in US dollar terms—a huge increase compared with what it was in 1990 when China was a low-income developing country."

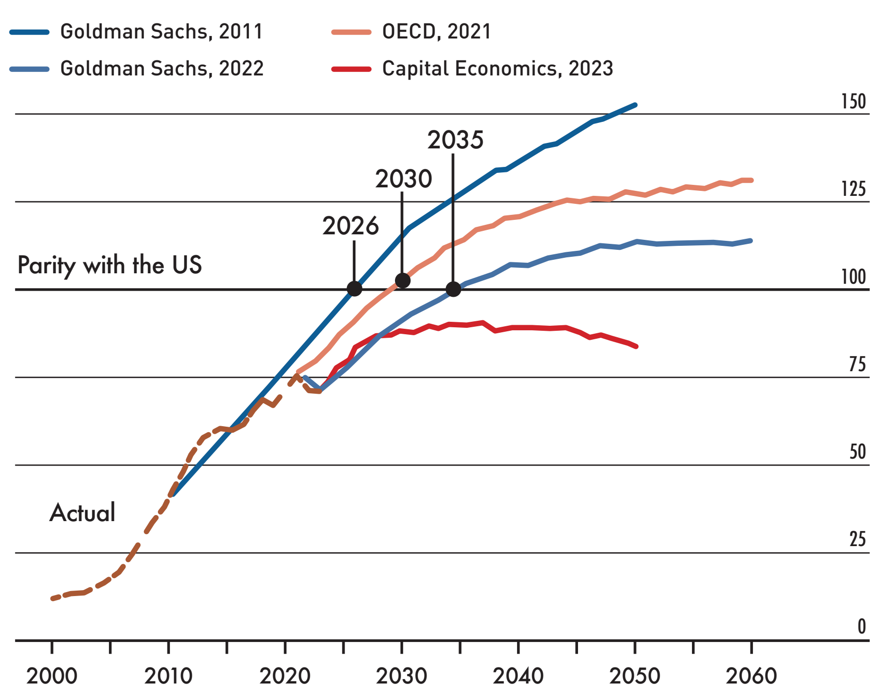
Others point out that China has managed to adroitly sidestep shocks to the system in the past and may very well do so in the future. "Is this China's most challenging moment in recent history? That's hard to say, but certainly the Asian Financial Crisis, Global Financial Crisis, yuan devaluation shock in 2015, and COVID pandemic in 2020 were all also extremely challenging moments," says Orlik.

"The thing that stands out from a review of China's reform-era economic history is not that Beijing never encounters challenges, it's that they're often pretty ingenious in overcoming them."

MULTIPLE FUTURES

Predictions for China's future GDP growth vary significantly and are regularly changing

Forecasts of China's GDP as % of the US



Source: Economist

Examining Enterprise

Christopher Marquis, author and Sinyi Professor of Chinese Management at Cambridge University, discusses attitudes towards private enterprise and the effects of past ideology on business

Across the last seven decades, China's business landscape has experienced a number of upheavals and reorganizations, and today is no exception. Following the explosion of private enterprise in the country since it acceded to the World Trade Organization in 2001, the private sector looked set to dominate the country's economy. But policy changes in recent years, as well as a return in strength of historical ideologies, has seen the value, size and importance of state-owned enterprises (SOEs) increase once more.

In this interview, Christopher Marquis, co-author of *Mao and Markets* and Sinyi Professor of Chinese Management at Cambridge University, discusses the importance of various types of business to the Chinese economy, the historical roots of both current policy and enterprise leadership strategies and the motivations behind trade-related sanctions in both China and the West.

Q. What is your sense of the current approach of the Chinese government towards private enterprise and entrepreneurs, both in terms of policy and actual implementation?

A. Over the last few years there has been a tightening in a number of sectors. Some of that is obviously legitimate, because for a long time the Chinese economy included a lot of freedom for entrepreneurs which ended up as an "act first and ask permission later" system, which was obviously not ideal. Ant Financial, for example, was functionally an unregulated financial institution, which is a legitimate concern.

But I also think that some of the tightening might be counterproductive. For example, the widespread nature of the crackdown on the tech industry, which is really the productive engine of China, seemed to include actions against some companies that really just hampered innovation. Also, despite there potentially

Christopher Marquis is the Sinyi Professor of Chinese Management at Cambridge University. He has recently co-authored the book *Mao and Markets: The Communist Roots of Chinese Enterprise*

being some legitimate national security concerns around data flow, the recent moves against Capvision, Bain and Mintz Group, as well as the restriction of access to the WIND database, will likely have long-term consequences. In the short term, these measures may allow the government to feel more comfortable, but a lack of information accountability to use for due diligence will negatively affect foreign investment, among other things.

Q. How important do you think private enterprise is to the stability and continued growth of China's economy?

A. You can't overestimate the importance of the private economy. It is responsible for a vast amount of income and an even larger percentage of China's employment. I think that people in the West don't really realize how big private enterprise is in China. The other thing that it brings, and has increasingly brought over the last 20 years or so, is innovation. Looking at AI now, but also fintech and e-commerce, much of this has developed through the private sector. Another reason why some of the crackdowns are counterproductive in my view, is that this innovation requires risk taking, and if you're worried about the possibility that you might end up shut down or limited in the future, then you're going to tone down the risks you take. It's also why you see a lot of VCs and entrepreneurs moving to places like Singapore. There is a lack of confidence in the future.

> On the one hand, recent trends reflect the fact that maybe they thought they had given private enterprise too free a rein and it is now time to pull it in

Q. What are the prospects for a readjustment to this lack of confidence from private entrepreneurs and investors?

A. I can't really see any changes happening until the end of these various crackdowns that cut right to the core of what private entrepreneurs and investors need. They need accurate data for reports and due diligence, that's the case anywhere in the world, but especially for those wanting to enter a new market and one as competitive as China. Some that are already here might have their own data sources and a bit of an easier time, but that's not a huge amount of cases.

Actions speak louder than words, and while there are lots of promises of opening up being made by various people, until things calm down, and calm down for a while, the reality is that it's getting harder for private enterprise across most sectors.

Q. Given the fact that there is often a lower return on investment and a lack of efficiency in state-owned enterprises (SOEs), why do you think the system still supports them to the extent that it does?

A. Social stability is a good reason, they keep people gainfully employed. The chip company SMIC for example, has about four times the number of employees they would have if their fabs were run privately. SOEs also build schools, towns and housing—it's all part and parcel of creating an economic and social safety net for more people. They play an important role from those different aspects, if not others, too.

Q. Where do you see Maoist influence remaining in the current government approach in China and do you see that reflected in the approach of private entrepreneurs as well?

A. I think there have been some overly simplistic comparisons between the current leadership and Mao, particularly around the 20th Party Congress, but I do think that there are many echoes of the Maoist approach in the system today. A large number of the older generation who now hold power, both politically and in the business sphere, grew up in the tail end of Mao's time in power and were socialized as such. I think one of the key indicators of this has been the increased focus on the Party being the center of the system in recent years, as well as an increased number of campaign activities, such as the anti-corruption campaign, zero-COVID and the chip self-sufficiency stuff. All of these are reminiscent of parts of the Mao era.

In terms of entrepreneurs, it's quite easy to see the effects of socialization on their business operations, they're often more nationalistic in their decisions and are much more likely to engage in social responsibility-related activities.

Q. A lot of those socialized at that time are now part of the older generation. To what extent are these types of entrepreneurs becoming less common?

A. They are still definitely still around, but many of those running the businesses are now very much into retirement age, so a change is probably due. But what would be interesting to see is whether this current refocusing on ideology under the current leadership, with all these movies and emphasis on things like Red tourism, etc., will have a galvanizing effect on a new generation of similarly minded entrepreneurs.

Q. What are the main differences between these nationalistically-oriented businesses and other private enterprises?

A. One of the outcomes we looked at was engagement with foreign companies, and it became clear that these companies are much less likely to expand abroad or take on international investment. The companies are often very focused on self-reliance and maintaining their independence.

We found that those who lived through the difficulties in the Great Leap Forward in the late 1950s were much more likely to be frugal with their spending and being more rigorous with their resource use, but at the same time likely to be more creative with their resource use as well. Many entrepreneurs from that time have talked about how living through that period really made them see outside the box in some ways, because that was how they had to ensure they had enough to get by at the time. There is also research that mirrors these results with US entrepreneurs who lived through the Great Depression.

Q. What are the fundamental reasons for the Party's hesitancy in terms of all-out support for private enterprise?

A. On the one hand, recent trends reflect the fact that maybe they thought they had given private enterprise too free a rein and it is now time to pull it in. This is something that has historically happened in China's push-and-pull type of system. There are also just generally more discussions around the Marxist foundations of the economy going on at the moment and I think this is perhaps because the country has reached a certain level. When Deng Xiaoping enacted his economic pivot in the late 1970s, China really needed to develop itself and now, even though there are still levels of inequality in the country, it is pretty well-developed. There are a number of companies leading in innovation in a number of very important industries and so perhaps they have decided that they have attained some or all of what they set out to attain and therefore will put the brakes on things through ideology a little bit.

Q. The US and the EU have imposed sanctions on various parts of the Chinese economy. What is your view on how they are impacting the system and what will be the system's response?

A. I think the US has gone somewhat too far in its sanctions. I think many of the tariffs on China have been enacted less because of international relations or national security, but because of domestic politics. A lot of the tariffs have been shown to mainly end up being paid by American consumers or hurting American businesses. Obviously, I understand the importance of sanctions on things such as telecoms infrastructure or chip technology, things that have serious national security implications, but we should carefully analyze those and find where things need or don't

> In terms of entrepreneurs, it's quite easy to see the effects of socialization on their business operations ”

need to be addressed. But I think generally the way that the US has closed off access to some areas of China business will have a negative impact on the US over time.

On the China side, there are some legitimate national security concerns around data security and movement, but at the same time it feels like there are areas where they have gone past what would be reasonably required. I think for both sides it ends up being much more of a domestic politics issue and things spiral out of control, so I'm not optimistic about the future.

Q. Given the dynamic you've put forward in your book, what is your sense of the possible scenarios for China in the coming decade?

A. I don't see further liberalization. I think that as long as the current leadership is in power, it seems that there will be a continuing tightening of ideological control, which will be to the detriment of both local economic growth and innovation, and also the interests of foreign companies doing business in China. It will probably also lead to an increased outbound flow of entrepreneurs and people who have the money and ability to go outward. At some point, things will reach a certain level and they'll change, but who knows when that will be?

Interview by Patrick Body

THE ART OF CULTURE

China's government-led efforts at generating soft power are at odds with the more organic popularization of culture elsewhere in the world

By Patrick Body

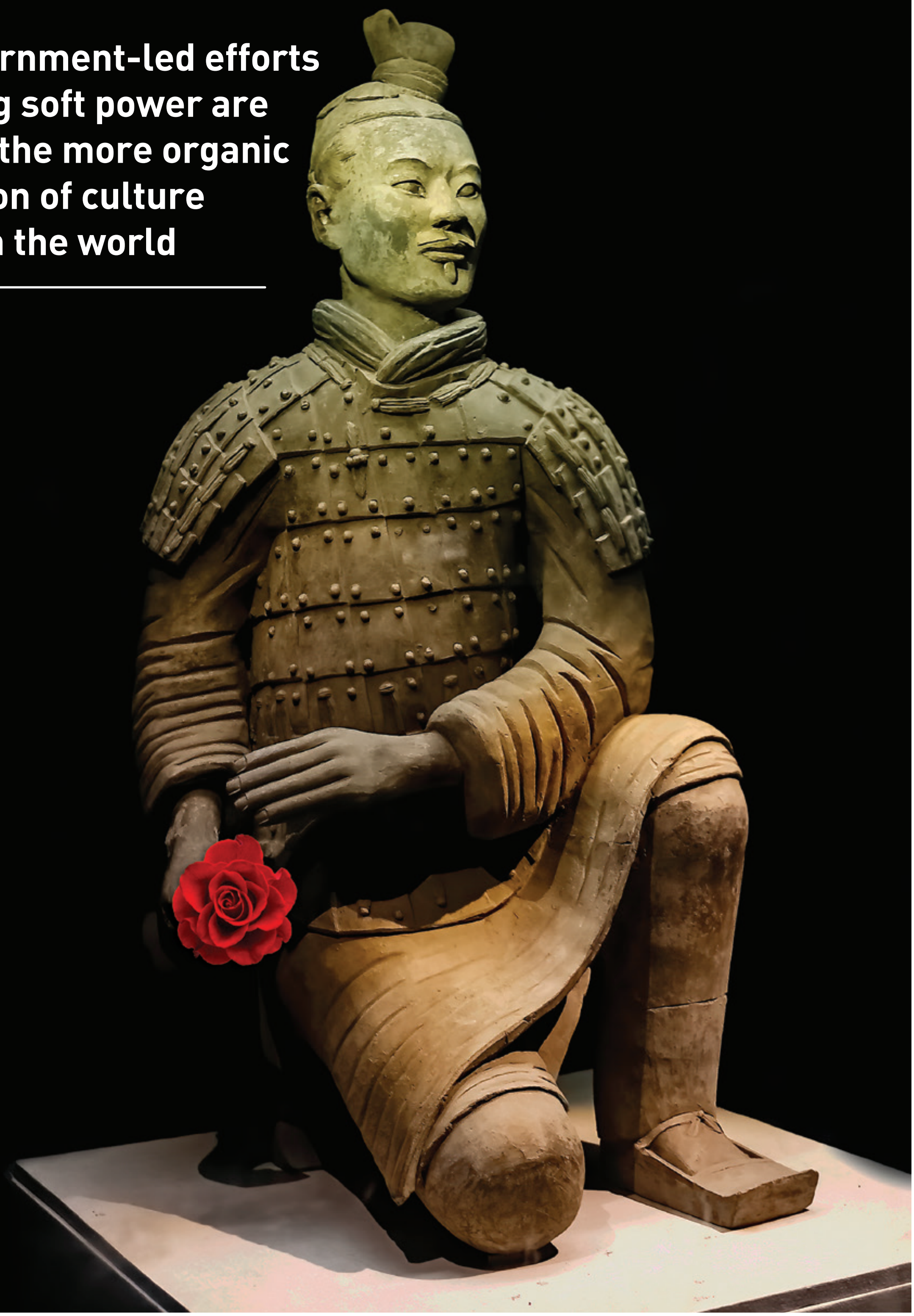


Image by Jason Wong

China has seen soft power success in the Global South, but the country would benefit from greater influence in the West

Scene after scene of multi-lingual family discourse forms the backbone of the hit film *Everything Everywhere All at Once*, the first movie on Western screens in several decades to offer a fresh look at Chinese culture, albeit an eccentric one. With seven Oscars in the bag, the film's success demonstrates a clear Western appetite for China-related culture.

Even though the world has always been curious about China, the country's cultural exports have seldom enjoyed the same degree of success as *Everything Everywhere All at Once*. The movie, an entirely private endeavor that was somewhat ironically developed in the West, had a certain populist appeal which helped it scorch movie charts wherever in the world it was screened. At some level, the movie was emblematic of the difference in effectiveness of the private industry's approach to building soft power versus that of the Chinese government—a top-down approach to building soft power through committee-designed cultural exports that rarely finds takers. At odds with the more organic and independent cultural industries across the Western world from which the film emerged, the official China approach has yet to capture the hearts and minds of foreign audiences as well as perhaps it could.

Cultural exports are an integral part of a country's "soft power," a term coined by American political scientist Joseph Nye in the 1980s, referring to the ability to influence other countries and individuals through non-coercive means such as culture, values, ideology and diplomacy. China's approach was most recently outlined in a 2022 document, jointly published by 27 government agencies, which seeks to develop "Foreign Cultural Trade" across radio, film and television programs as well as cultural creative and design services.

At a time of rising geopolitical tensions and decoupling from the West, China would stand to benefit greatly from increasing its soft power, but perceptions of China in much of the rest of the world are trending downwards, which could have a serious impact on the country's future development.

"Increased soft power is obviously good for a number of things," says Shuang Meng, Associate Professor at the School of International Trade and Economics at the Central University of Finance and Economics in Beijing. "It helps with international trade and attracting international investment, so it is good for economic and business goals on the one hand. On the other, it can also help the Chinese government to have more of a voice in international institutions and international cooperation."

Soft or hard?

Soft power is a subtle phenomenon as it often operates on subconscious or emotional levels, influencing the beliefs and values that people hold—think Marvel or K-Pop. Building strong positive impressions, trust and credibility takes time, and the benefits of soft power are often not immediately visible or easy to quantify.

Most research on soft power to date has centered on developed nations and almost equates soft power with liberal values. The Brand Finance Global Soft Power Index, which aims to eschew this historic bias, ranks 'nation brands' based on the responses of 100,000 stakeholders across the world on a number of topics, including whether they have favorable views on a country's *People & Values*, *Culture & Heritage*, *Business & Trade* as well as *Governance*.

The United States sat atop of the 2023 Index, and China ranked fifth, down one from the country's highest ever position the previous year. This may surprise many in the Western world, particularly given the current geopolitical environment, but for developing countries, China has been a growing, and largely positive, presence in recent years.

"They have been very successful at generating soft power in Africa in particular," says Stanley Rosen, Professor of Political Science and International Relations at the University of Southern California. "They have, by-and-large, been successful in areas where the West and in particular the United States is looked at with a sense of suspicion."

"For example, they have gained a fair

amount of control over African media by buying into it, as well as distributing Chinese programming free of charge," adds Rosen. "CNN and other major networks will charge you, but China has the state-backed channels that can be given away for free, absorbing the costs thanks to the benefits that come with its ownership."

China is ranked first globally in terms of favorable opinion on *Business & Trade*, having leapfrogged Germany, Japan and the US to reach the top. It also sits fourth for *Familiarity* and second for *Influence*, with these rankings being boosted by scores from the Global South. But the country's rankings in the areas of *Culture & Heritage* and *People & Values* remain low.

Although the positive impression of China in the Global South is important, and perhaps a precursor of a shifting global system, China also needs to start making more positive inroads into the Western consciousness to further its global ambitions.

"Western liberalism and values, despite being opposed in various ways in various countries across the world, are still common in the social and intellectual elites in many developing countries, even some of the authoritarian ones," says Li Mingjiang, Associate Professor in International Relations at Nanyang Technological University. "This can be a disadvantage for China as it may result in people being skeptical of close relations to China, even in countries where you wouldn't expect that to be the case."

According to the Pew Research Center, the general public's sentiment towards China in Europe and the US is overwhelmingly negative and has been trending downwards over the past decade—83% of Swedes now have a negative view of China, 82% in the US, 75% in the Netherlands, 74% in Germany and 69% in the UK.

In 2015, many of these numbers were much closer to 50/50, thanks to positivity resulting from China's rapid economic expansion lowering the cost of living in the Global North. But a recent swathe of high-profile issues have created a perception problem for China, and to rectify that it can no longer simply rely on business and infrastructure diplomacy. Rather, it must advance a more subtle cultural agenda, and it is here that the country appears to be falling short.

"China's soft power in the world has reached a bottleneck," says Li. "It is very difficult to make any further breakthroughs or further progress. In fact, there are signs of a regression of China's soft power."

Strategic moves

So far, a key component of China's soft power strategy has been its economic diplomacy. China has been investing heavily in infrastructure projects around the world through efforts such as the Belt and Road Initiative (BRI). In doing so, the country has been able to establish itself as a key player in economies around the world and has helped to spur economic growth in many developing countries, in turn building goodwill and by extension soft power.

"China seems more successful in attracting the hearts and minds of part of the developing world when it's seen as a helpful and capable power and an alternative to the West," says Daniele Carminati, a Senior Lecturer at Beijing Foreign Studies University. "This is especially true in those countries where the West is still seen as colonialist and patronizing."

Cultural diplomacy has long been a component of China's soft power strategy, particularly since former leader Hu Jintao made a speech underscoring the importance of soft power to the 17th Party Congress in 2007. Since then, the Chinese government has undertaken something of a three-part approach, the first of which is the most unique to China.

First, the government decides on the content and target audience of its soft power strategy, setting up committees that create a package that aim to appeal to both Chinese and international audiences.

"In terms of targets, the domestic market is actually the number one priority for Chinese soft power," says Rosen. "This is followed by overseas Chinese around the world, then the Global South as it was easier to make greater headway there at first than in the more difficult Global North."

But in most countries with high levels of soft power, decision-making in terms of cultural output is almost entirely decentralized and includes significant grassroots development.

"China is a country that runs top-down, so everything that it produces is assumed to have a stamp of approval from the government," says Rosen. "This means that there is a perceived lack of independence in creative output, which can harm soft power generation."

The second step is the promotion of Chinese cultural products and values,

NEAR THE TOP

China has consistently ranked in the top five in terms of soft power globally, sitting in fifth position in 2023

Rank	Country	Rank change	Score change	Score
1	United States		↑ +4.1	74.8
2	United Kingdom		↑ +2.4	67.3
3	Germany		↑ +1.2	65.8
4	Japan	↑ 1	↑ +1.7	65.2
5	China	↓ 1	↑ +0.8	65.0

Source: Brand Finance

drawn from the country's rich traditions, art and literature.

The final step is to create the channels and packaging through which this information can be successfully disseminated. For this last step, the government has invested heavily—around $10 billion every year—in promoting its culture and heritage. One of the main focuses of the money has been the development of state news outlets such as Xinhua and CGTN, as well as initiatives including the somewhat controversial Confucius Institutes, which are located on many university campuses around the world and largely aim to promote the study of the Chinese language and culture.

China-based companies have also been an important ancillary driver to this three-pronged approach, particularly in terms of cross-border e-commerce and digital platforms.

"There have been, and still are, a lot of people buying Chinese products, building the country's influence, particularly in countries that are starting to develop an online shopping infrastructure," says Meng. "Chinese e-commerce platforms are also facilitating this."

> China's soft power in the world has reached a bottleneck. It is very difficult to make any further breakthroughs or further progress
>
> Li Mingjiang
> Associate Professor in International Relations
> Nanyang Technological University

Culture clash

China clearly has an enormous amount of culture and creativity to offer, drawing upon its vast history. And this is now apparent in some areas of its music, movies, gaming, books and across social media. China's current external cultural impact may be limited compared to its size, but it would be incorrect to say that China has had no influence at all—the British people's penchant for tea drinking, for example, is a result of imports of Chinese tea that began in the 1600s.

Today, too, there are numerous examples of Chinese culture being deeply ingrained in the lives of people thousands of miles away. One of the most obvious examples is the global ubiquity of Chinese restaurants. The food itself changes to suit different tastes—General Tso's Chicken, anyone?—but the underlying ingredients and inspiration remain Chinese.

There has also been a solid Chinese presence in visual media. The world has long had a love for martial arts movies, spawned by Bruce Lee and kept alive today by Jackie Chan and animations like *Kung Fu Panda*, among others. In previous decades, TV shows like the historical drama *The Romance of Three Kingdoms* have swept through East and Southeast Asia with explosive popularity.

And the country has seen a few recent cultural export successes, such as the popularity of the online game *Genshin Impact*, published by Chinese firm miHoYo, and the explosion of Hong Kong-born pop superstar Jackson Wang onto the global stage.

"I would say that online gaming is one of the most successful areas for Chinese cultural exports at the moment," says Anthony Fung, Professor at the School of Journalism and Communication, Chinese University of Hong Kong. "When we play games, we don't need a strong association with certain countries and they are often somewhat transcultural. There are lots of games out there that you can't feel a country's influence on."

But overall there is still something lacking from China's soft power output, especially when compared to the successes of its Asian neighbors such as Japan, South Korea and even India. With different results often stemming from different incentives, money or enforcing national will, and approaches, bottom-up or top-down.

"China's cultural industries may not have the same levels of intellectual property value when you compare them to Japan or South Korea," says Meng.

Japan's cultural exports are easily recognized and almost ubiquitous in the Western world today. As well as its food, Japan has also carved out a corner of the entertainment market through the use of anime, manga and video games that allows others to experience stories either based upon the country's history or related to its popular culture.

One particularly pervasive example is the continued success of the Pokémon franchise. The first iterations of the game were released in the West in 1999, and, having sold over 31 million copies, they remain the best-selling games in the franchise's history. But the second-highest sellers, with 25.5 million copies sold, are Pokémon Sword and Shield, which were released 20 years after the originals in 2019. The multi-generational nature of Pokémon's success is a clear victory for Japanese soft power.

South Korea has built an entire industry around its 'idols'—individual members of the vast number of K-pop groups that have grown in popularity over the last few decades. The most well-known groups, like BTS and BLACKPINK, have enormous almost cult-like followings around the world. And these fans take it upon themselves to learn everything about their 'idols,' with many going as far as starting to develop Korean language skills in order to gather more information.

"Although both the Japanese and Korean governments have had some involvement in the promotional process and have assisted private companies and the cultural industries, there was enough room for creativity to flourish and to detach from political and ideological matters," says Carminati.

There is also India's film industry, known as Bollywood, which has some cultural reach in the West. Releases such as *RRR*, an epic action drama which won an Oscar for Best Original Song, and action-thriller *Pathaan* have seen success worldwide—the latter broke Indian box-office records but made $59 million of its almost $70 million earnings in international markets. It was also the first ever movie to shut down the road outside the Burj Khalifa in Dubai to film there, a feat unmatched by Hollywood.

Fitting in

There appear to be several reasons why Chinese cultural exports, and therefore soft power, have somewhat missed the mark, at least in the West, in recent years. The first, and arguably largest is that the committee-curated nature of the cultural products is at odds with the Western decentralized approach, and discerning Western consumers can easily spot the difference—creativity in the West is often a personal and emotional endeavor.

"In a nutshell, it's centralized in China and the influence of civil society is limited," says Carminati. "This means it often feels like a considerable part of the cultural output originating from China disguises some form of ulterior message, while there is more variety and innovation in cultural output from other countries which results in genuine appeal."

Another barrier China has to cross is that the rest of the world has relatively varied, but largely shared philosophical underpinnings. But China's history and culture, rooted from the other end of the Euro-Asian landmass, developed in a largely independent way from the outside world. This is not necessarily a bad thing, as it means there are so many new stories to tell, but it does mean a certain level of packaging is required to provide enough context for outside audiences to truly resonate with content.

"Shared history is important but it's also about shared culture and to a certain extent shared language," says Rosen. "In countries like France and Italy, the dubbing artists are often more famous than the actors in the films, and dubbing is often preferred to subtitles. But dubbing, say, a Tang Dynasty historical drama in Italian would not work, it would just become a comedy at that point."

Thirdly, foreign cultures are best absorbed by people if they are tailored to them in some way, but many of China's cultural exports are, by order of the committees that create them, kept very traditional to maintain a cultural purity. This, along with a lack of appropriate packaging can lead to a lack of interest from foreign audiences.

One example is the 2012 film *Lost in Thailand*, which was a huge success both domestically and internationally, and was developed with a business model unusual for China of funding by those collaborating on the film, rather than being recruited for an externally funded project which is the norm in China. The motivation and creative control provided by this approach resulted in a perceived level of authenticity, leading to the film breaking box-office records and pulling in over four times the revenue of its prequel.

Culture accumulation

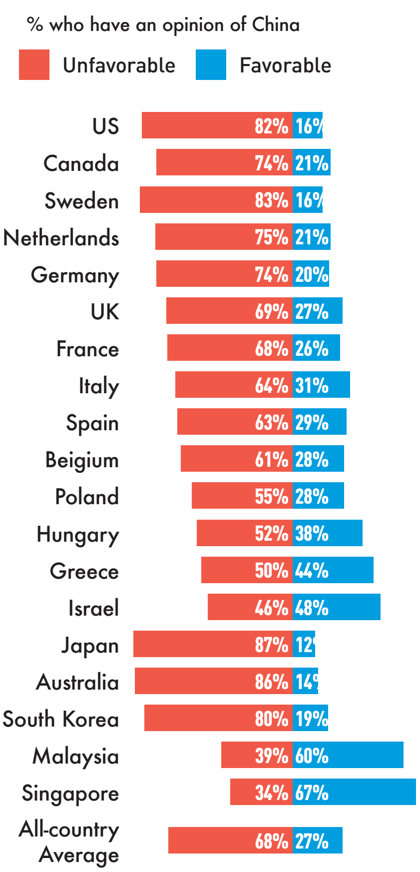
China has a lot more soft power than many people in the West give it credit for, thanks to its business and trade successes and its infrastructure project support for many non-Western countries. But given today's geopolitical tensions and the reality that much of the world's decision-making currently takes place in the Global North, more positive Chinese cultural influence may be beneficial for the country and its development.

"There is a great opportunity for China to come up with ideas that can help solve some of the major global challenges," says Li. "And if China does a good job in this respect, it will gain a lot of positive views and feedback from other parts of the world."

Culture is a fluid thing, and in order to successfully export it, a level of creative license is required, something that is difficult to achieve through committees. But there is an enormous amount of culture in China waiting to be shared, and the country's people have proven themselves hugely creative time and time again. "China's culture has immense potential to attract," says Carminati. "And I hope it will be unleashed sooner rather than later."

POLLING POORLY

Opinions on China in North America and Europe are increasingly unfavorable, but parts of Southeast Asia remain positive



Source: Pew Research Center

Reinventing Work and Education

Learning to co-exist, co-create, and co-evolve with AI is necessary to thrive in a world dominated by new generative tools such as ChatGPT

by Sun Tianshu, Visiting Professor of Information Systems at CKGSB; Prof. Lou Bowen, Prof. Jin Zhao and Prof. Mei Danqing, Center for Technology, Big Data and Digital Transformation; Li Mengjun, Senior Researcher at the CKGSB Case Center

Throughout history, new tools and technologies have continually replaced, impacted and reshaped human skills and jobs. Artificial Intelligence (AI) has already replaced humans in a wide range of areas including logistics, production inspection and transportation, but so far it has generally been assumed that AI technologies would have limited short-term impact on creative skills and jobs.

But given that ChatGPT can write poetry, code or even complete a science paper on its own, it is a quantum leap compared to previous generations of AI and its impact on human creativity-related skills and jobs will be unprecedented. Since its launch, ChatGPT has sparked much discussion concerning the impact of generative Artificial Intelligence (AI) tools on work and education. One way or another, these tools will have a direct impact on highly complex tasks dominated by creative and cognitive skills, as well as completely subverting the previous order of AI substitution from low-skilled to high-skilled workers, directly affecting knowledge-intensive industries.

Human skills can be broadly summarized into three categories: physical, process-related and creative. Generally, the latter two require a developed education system and long-term talent training. After a person attains a certain amount of education, they acquire skills and exercise creative thinking, thus enabling them to move towards various knowledge-intensive job roles.

As countries move through the transition from labor-intensive to knowledge-intensive industries, nurturing intellectual talents and improving related education and training have become increasingly important considerations for social and economic development. With the advent of ChatGPT, existing approaches to doing this may no longer prove effective.

In the eyes of academia and industry around the world, ChatGPT is an era-defining product and its impact on the labor market, education system, the social economy and even the global division of labor must be fully thought through. The difficulty being that the revolutionary nature of the technology makes it difficult to rely on past experience to make accurate predictions.

At the same time, fighting change would be futile, and we must face the challenges head on with a view to integrating the technology into our future development plans. Instead of focusing on what jobs or skills ChatGPT will replace, we should be thinking about how to co-exist, co-create and co-evolve with the technology.

This means we need to work out how to reconstruct vocational skills training, jobs and education methods, and even the logic of social and economic development, as well as ascertain how to use AI to stimulate cognition, empower innovation, and promote the prosperity and development of human civilization.

What is new about ChatGPT?

ChatGPT (Generative Pre-trained Transformer) is a natural language processing tool launched by OpenAI, backed by Microsoft. It is a deep-learning model of text generation trained on data available on the internet and conducts conversations by learning and understanding human language and is able to interact with people in context. It is not only good at analytical or mechanical cognitive computing, but also at creating or generating new, meaningful and even aesthetic content, such as writing poetry, designing products, making games and programming code.

Compared to previous iterations of AI models, ChatGPT contains five major innovations.

- Language Generation, meaning that it is now capable of handling open language tasks, such as generating copywriting.
- Process Multitasking, allowing it to handle many different types of text questions at the same time, resulting in richer answers.
- Integration of Manual Feedback, enabling it to learn through reinforcement.
- Contextual Understanding, providing more fluid and personalized responses that are useful as smart assistants or educational tools.
- Universality, meaning that the model can grow through use and be applied to a wide range of industries or topics.

More importantly, OpenAI has brought GPT technology to the public by providing it with a chat interface, which allows for a solid user experience and ease of use. There are now over 626 different GPT applications divided into 100 broad categories such as writing assistants, image generation and chat robots etc.

Will ChatGPT replace jobs?

ChatGPT's performance has reignited discussions about the impact of the AI wave on the labor market. According to our preliminary analysis, GPT does affect certain skills and occupations, but full human-level AI, capable of performing all cognitive and creative tasks that humans can perform, remains a long way off. The question then becomes, which jobs will be affected by ChatGPT and which will be relatively unaffected?

We found that there is no relatively objective measurable standard. With this in mind, we developed a quantitave research framework called Suitability for GPT (S-GPT) to evaluate the correlation between different occupations and the tasks GPT could perform.

The jobs with low GPT adaptability are mostly offline jobs that rely on physical labor, while the jobs with high adaptability are text-related editors, proofreaders, notaries and software information technology personnel. Some jobs that are recognized as relying on high intelligence, such as editors, translators, educators, accountants, bank workers, etc., are particularly at risk. But this does not mean that these occupations will be replaced in an instant. From past experience, technological change will make some skills and jobs redundant and others more valuable, and in addition, completely new jobs will emerge.

The long-term impact

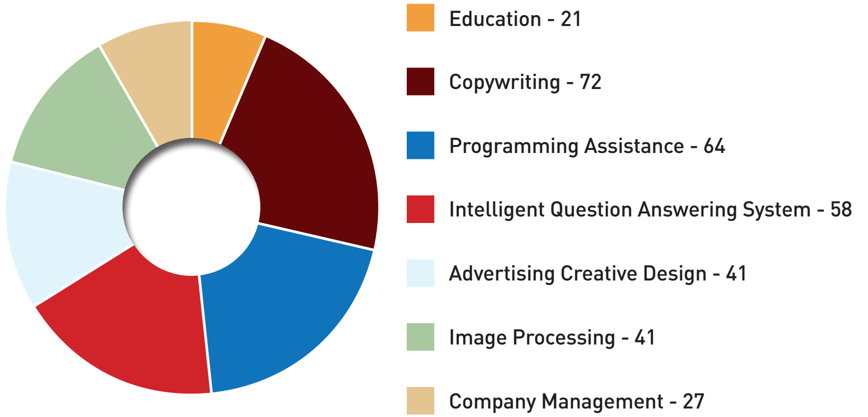
In the S-GPT analysis, we view an occupational position as a combination of different tasks and skills, some of which are more likely to be replaced by new technologies, while others are less likely to be replaced and are therefore more valuable. The impact of ChatGPT on the labor market ultimately lies in the deconstruction, reconstruction and re-creation of work tasks. Therefore, we believe that the impact of ChatGPT on the labor market will mostly be long-term and complex.

We also believe that ChatGPT technology will affect some industries and areas in the short-term, replacing some low-skilled or repetitive work and even some of the more intellectual work. There will be unemployment or job losses, but the possibility of completely replacing a job role is low.

In customer service, for example, ChatGPT can be centralized into a website application to improve the efficiency and quality of services, as well as being available 24 hours a day. But there will still be times when humans are required for customer service issues and dealing with complex problems.

In the medium term, ChatGPT's possible impact on the labor market falls into two categories: boosting or amplifying skills to enhance existing career values; and the creation of new high-skilled jobs and the emergence of new occupations or industries.

APPLICATION | The number of applications using GPT-3



Source: Author's findings

Despite the power of ChatGPT to complete certain tasks faster and more accurately than humans, over a longer time span, with job restructuring and education training, the substitution effect of ChatGPT becomes weaker, and the enhancement effect on specific skills and occupations becomes more obvious.

Looking at a historical example, the advent of electronic forms reduced the need for bookkeepers, but increased the demand for workers skilled in handling software data. So, in the end, technology can enhance or amplify human skills and create new jobs and industries.

To illustrate this point, let's look at where ChatGPT works best: text content generation. We believe that ChatGPT's impact on content producers will not be devastating, but will drive them to innovate and transform. In the case of novel writing, as long as the idea, framework and key plot points are provided to ChatGPT, a fully structured manuscript can be generated, and soon we will be able to read novels produced by ChatGPT in bulk. However, high-quality works written by human authors with richer content, more sophisticated structures, and a heavier spiritual core will still have a market, and will not be replaced. Rather they will have higher value.

When it comes to the creation of new jobs, we have already seen the emergence of 'prompt engineers,' whose main job is to generate solid questions for ChatGPT in order to get the AI to produce desired results. *The Atlantic* magazine called this "the most important career skill of the century."

In addition, there are machine learning engineers, data scientists, natural language processing experts, among many others. These professions require not only higher levels of technical, engineering and analytical skills, but also the full use of human intelligence and creativity. Humans have unique advantages over AI that will, for now, remain irreplaceable in some situations.

In the long run, business models and industry competition will be reshaped. In order to co-exist, co-create and co-evolve with ChatGPT we need to proactively embrace the GPT model and related tools and process in our work and education. For example, artists, writers and editors can use AI to integrate their unique experiences, stories and design elements into AI to help better their content. This will dramatically change the form of creative work, blurring the boundaries between cognitive and creative tasks, rather than replacing the artist. It will involve a different way of working.

The in-depth application of ChatGPT in various industries will also be accompanied by the dismantling and reconstruction of many business processes and tasks. At that time, basic jobs will no longer be recruited for, or will be reduced to a very small number, and technicians who can integrate AI tools and original people with creative thinking and deep thinking will be more highly valued.

In daily work, low-skilled tasks are more dependent on AI processing, and the way to obtain and process information will also change. As a result, greater emphasis will be placed on developing human-specific capabilities, such as innovation, collaboration and socialization, to cope with future changes in society's labor market.

ADAPTATION | Top 10 occupations with low and high GPT adaptability

Top 10 occupations with low GPT adaptability	Top 10 occupations with high GPT adaptability
Archaeology and heritage conservation specialists	Editor
Blind medical masseurs	Proofreader
Primary processing of agricultural products	Notary public
Other agriculture (animal husbandry, forestry, etc.)	Software and IT services personnel
Urban planners	Inspection and testing personnel
Crop geneticists	Packaging personnel
Repairmen (electricians)	Security protection services staff
Archaeological and heritage conservation operations staff	Caregivers
Library materials and microphotography professionals	Administrative business processors
Forestry and grass seedling breeders	Educational services staff

Source: Author's findings

Education integration

ChatGPT's impact on education has been obvious and given the interlinkages of education and labor skills, this is of equal importance to the future. There are already multiple studies showing a large number of university students are using ChatGPT both as a tool for retrieving information and for completing assignments or exams.

At present, the educational community is generally cautious about ChatGPT, with many schools in the US banning the tool due to concerns about cheating, IP issues and the impact on students' ability to learn and practice. Several scientific journals have also banned ChatGPT from being a "co-author." Some education experts believe it is a form of "high-tech plagiarism" and "a way to avoid learning," and according to Jenna Lyle, a spokeswoman for the New York City Department of Education, "ChatGPT does not foster critical thinking and problem-solving skills that are critical for academic and lifelong success."

However, some argue that the advent of ChatGPT is an opportunity for traditional education to be reformed, or even completely overhauled. From the perspective of technology application, ChatGPT can have many positive effects on the education industry, such as helping students to learn

> The in-depth application of ChatGPT in various industries will also be accompanied by the dismantling and reconstruction of many business processes and tasks

independently, personalized teaching, improved teaching efficiency and teaching level, improved auxiliary tools, which all promote the modernization of education and the development of more inclusive learning.

In the long run, the development and application of ChatGPT technology will unquestionably have a huge impact on all education systems. We believe that the root of the issue of proper adoption lies not in ChatGPT itself, but in how we view education and how we think about the challenges and opportunities that AI presents.

First of all, ChatGPT will likely redefine what talents will be needed in the future to ensure the progress of human society. ChatGPT will eliminate the advantages of the current education system in terms of training students, and many knowledge skills may be replaced by AI. What society really needs, then, will be more creative people, people who have the ability to ask questions, analyze problems, solve problems, synthesize knowledge and think critically.

Therefore, the primary goal of education should be to train people in independent thinking, to make balanced value judgment and the ability to innovate, rather than simply acquiring specific knowledge. This requires us to reconsider which knowledge is the most important, but also requires the education, science and technology industries to jointly explore the issue.

The three 'c's

It is also necessary to explore a new path: how ChatGPT can co-exist, co-create and co-evolve with the current education system to better achieve educational goals. Some educational institutions have already begun to address the problem.

Hong Kong University's ban on ChatGPT is a temporary measure, and the school is encouraging staff and students to discuss suitable solutions and uses together. Some high school teachers have begun to shift away from rote learning towards more socially interactive systems of evaluation.

One major change needed is for us to move from stressing good answers to prioritizing good questions. How to effectively talk and collaborate with machines has become especially important, and asking good open questions is a top priority, because the value of asking these questions has gone up at the same time as answers from original questions have also increased in value. Therefore, talent that has their own unique approach and can ask good questions is the goal of future talent training, while rote memorization will be eliminated.

We also need to really integrate AI tools into education and vocational skills development, learning content, learning methods and the work environment. To make use of this new technical power to improve education levels and vocational training, people need to be able to master a new generation of AI tools such as GPT to the same degree they have adopted computers and mobile phones.

With the help of AI tools, students can customize learning content according to their own foundation, needs and interests, so as to obtain a better learning experience and effect, and fully release their potential.

At present, it is difficult to create personalized content, which can hamper the development of students. With the help of technology tools, students can play to their own advantages through independent learning, combining their interests and expertise to continuously develop their own abilities. This can also solve the social problem of insufficient educational resources in China, particularly in remote mountainous areas, and help achieve educational equality.

AI-based and -related education can teach self-learning and self-development methods and habits to students, which can extend to vocational education and lifelong learning.

Future fears or future fun?

Looking to the future, the exact impact of ChatGPT on labor and education remains to be seen. But what is certain is that ChatGPT will profoundly change the way we produce and live, work and learn, restructuring the industrial landscape.

Furthermore, the success of ChatGPT reflects not only a breakthrough to a new language pattern, but also the beginning of the AI Industrial Revolution. The advent of ChatGPT has triggered a global competition in the field of large language AI models. In the future, if the ChatGPT model can evolve into a new generation of intelligent interactive portals and build a platform ecosystem, it is bound to cause great changes in the global industrial landscape.

In this round of AI technology competition, how will the pattern of global industrial competition evolve? What opportunities does this present to China? What are the intellectual property, information authenticity and security risks caused by ChatGPT? These questions all deserve our continued attention and further in-depth discussion.

Connecting Capitalism

Simon Commander, co-author of *The Connections World: The Future of Asian Capitalism*, discusses how the web of close relationships between business and politics underpins capitalism in Asia

The story of Asian economic development over the past few decades has been one of many great successes, the most notable of which is China. Underpinning this growth is a complex and iterating network of relationships between state and private actors.

But for the continent to lay claim fully to the 21st Century, as is frequently asserted, there are a number of fallibilities within existing national systems that need to be addressed. In this interview Simon Commander, co-author of *The Connections World: The Future of Asian Capitalism*, discusses the nuances of capitalism in Asia, how it manifests itself in state-dominated China and the often lop-sided benefits of systems heavily based on networks of connections.

Q. How would you define capitalism as it exists in different places in East Asia?

A. There are many standard definitions that look at the role of the market relative to the state, as well as the nature of the political system. In the book, we have a slightly different take on the issue. We basically argue that capitalism is dominant throughout Asia, but it has some different and important nuances. And those nuances can be political, whether a system is largely autocratic or more democratic, and, if the latter, thenthe nature of that democracy. There are also differences in the regulatory role and other competences of government. For example, in China and Vietnam, it's probably fair to say that the role of the state is significantly more intrusive than in say, India or Pakistan.

Having said that, our book about Asian capitalism has a simple argument.It says that it doesn't really matter what label is applied—for example, authoritarian or democratic—all of these economies have a very similar underlying way of functioning. That is, they are all based on pervasive networks of connections that run between politicians and businesses. These may be more exaggerated in countries like China or Vietnam, but they are nevertheless very important throughout Asia and they have many similar ramifications. So, capitalism, according to our definition, is present throughout and despite local nuances and variations, is based everywhere on what we call the Connections World—a world that webs together businesses and politicians. These webs of connections deliver major benefits to both sides and affect how the economies are configured.

Q. Can you define what you mean by connections?

A. The Connections World is essentially a world in which networks of politicians, political parties and businesses come together, interact and extract benefits. It's an immensely transactional world, with the fundamental question being: what benefits can I get from associating with this person or group? For politicians, it can be jobs for themselves or in their constituencies or provinces, and in democracies, you also see things like campaign donations. On the business end, you can get licenses and permissions, public contracts and other forms of preferment. Notably, businesses get market access and can establish market power from deft use of their connections.

Simon Commander is Managing Partner of Altura Partners, a public policy, investment and business strategy advisory firm and Visiting Professor of Economics at IE Business School.

Q. How would you say this capitalism manifests itself in China in particular, given the enhanced role of the state? And how would that compare to the traditional definition of Western capitalism?

A. The main thing in China is that the state is at the center of the economy, with significant parts of the economy directly owned, controlled or influenced by the government and the Party.

The other aspect that makes China very different is that it runs what we often term "industrial policy." And industrial policy can have two components. It can be horizontal, whereby it's just about certain framework policies being helpful for businesses to get established and flourish. Such policies are acceptable to most.

But the Chinese run something very different, which is called vertical industrial policy. That is they choose activities or sectors which they consider strategic and in which they are determined to play a role. A recent example is electric vehicles and batteries. For such strategic sectors, significant resources are made available as well as other policy supports. None of this is new in China. The question is whether the current set of priorities and the ways chosen for delivering those priorities are going to be more successful than earlier attempts at industrial policy. What is rather different is that some of these strategic goals have been effectively entrusted to private players rather than simply the public sector. However, as has become clear in the last couple of years, those private players have to be very attentive to the priorities of government. In fact, the line between private and public has if anything become more blurred in the last year or so. Not just in terms of funding but also in terms of business strategy..

> The connections world is essentially a world in which networks of politicians, political parties and businesses come together, interact and transact

Q. To what extent has this vertical industrial policy changed in China in recent years?

A. It has certainly changed. If you look at the strategic industries that are listed in the various five-year plans, they have evolved over time, there's no doubt about it. Things like AI weren't there 10 years ago, for obvious reasons, and other things like aviation and space have remained a constant.

In a way, China has gone back a little to some of its earlier ways of behaving, the so-called national champions approach but this time based on the so-called dual circulation idea of building domestic resilience. Yet, there are tensions there. Not only are exports still an important feature of the economy but supporting the domestic economy is constrained by chronic over-investment and the containment of domestic consumption. This is something that has proven hard to reverse. And so far, there are very few signs that they are going to do so. So the national champions approach ultimately boils down to building up specific industries that are related to the core concerns of the Chinese state.

Q. How does the nature of capitalism in China and its neighbors impact on the structure of their economies?

A. China's Asian neighbors really don't, for the most part, do "industrial policy," and insofar as they have, they do it badly. There's one big exception: South Korea. Elsewhere, it's basically about politicians and big business houses or big business groups, mostly family-run, often dynastic, having rather cozy relationships. This helps boost market power and the profits of the connected companies as well as supporting politicians, overtly or corruptly. But it also means that the incentives for these businesses to innovate are quite limited. And few of the neighbouring governments have meaningful strategic goals, other than supporting the nexus of connections and benefits that have been established.

In China, the world of connections is hugely important but of course, the transparency is much less. The politicians undoubtedly do benefit, and that is not very desirable and has led to some of the corruption investigations that we see today. But the more interesting stuff is really the way in which the state, with its focus on these national champions and strategic goals, allocates resources and deploys instruments that confer advantages on particular groups that they deem to be reliable, essential and strategic. In so doing, of course, they lay bare some tensions of their own—not least the extent of autonomy that businesses can have and the freedom to make decisions based on business goals. What is common, however, to both China and its neighbours is the fact that connections bestow benefits on only certain businesses and business groups and these then tend to become dominant in the economy. In other words, while industrial policy may in principle try to support particular industries and activities, the reality is that throughout Asia public policy has de facto supported a set of business interests and in effect built the foundations of their market power.

Q. What are the benefits and drawbacks of this system on development?

A. The benefits of the Connections World are far from trivial, which is why it is so widespread and resilient. Those benefits include coordination, the ability to achieve scale and solve all sorts of market fragmentation issues. After all, many of these large business groups are formed in this way because they are perfect for leveraging connections, both good and bad. It's much simpler for a politician to go to the head of a business group, rather than deal with a large number of separate companies and individuals. This can offer clear benefits.

The second thing, which is probably truer elsewhere in Asia than in China, is that many of these large business groups set themselves up in order to solve problems related to the way in which markets and capitalism work. For instance, they are quite useful vehicles for building up management cadres. Tata, for example, is one of the oldest Indian business groups and was one of the earliest to develop a really coherent and excellent management cadre. Business groups can also be a way of solving problems in finance—by having your own bank or having close relationships with financial institutions. This can, in some instances, lead business groups to behave dynamically. This is because they may have better access to capital, good quality staff, and so on.

The drawback of all of this is that it confers enormous advantages on very few players. And most of the markets in which these large business groups operate, including China, have very high degrees of concentration. For example, in South Korea, Thailand and Vietnam the top 10 companies' revenues amount to 35-40% of GDP and even in China and India that share is between 12-15%. This degree of concentration dampens competition. So given that most economists think that competition is an essential element in driving innovation and dynamism, the reduction of competition that comes from these powerful entities is something quite negative.

One striking consequence of the entrenchment of this Connections World has been the growth in wealth inequality. There has been an extraordinary increase in the number of billionaires in China since 2000, as indeed has also been the case in India. There is no doubt that enormous wealth is accruing to relatively few people. And,at the same time, while these top businesses and business groups may be very successful, the number of jobs they create is actually very limited relative to the economy. Therefore, what you're not getting, which is a

> **The Chinese run something...called vertical industrial policy, where they choose activities or sectors where they think they're going to have or want to have some strategic advantage, and plow resources into it**

central objective of just about every Asian government, is the broad-based growth in jobs and employment that these places need. In addition, whilst the jobs that the business groups create are often productive and well paid, this is not true in the rest of the economy. An allied consequence is that this difference also promotes growing income inequality.

Q. How important was China's accession to the WTO in guiding the creation of these economic models in China and how is this changing?

A. WTO accession for China was extraordinarily important. The country began to increasingly engage with the world, initially selling low-quality, low-cost and low-margin goods. It has since tried to shift upwards in the value chain with some success, but in general much of the country's recent thrust has been more towards developing industries oriented toward the domestic market. As already mentioned, that shift reflects not just geopolitical tensions but also runs up against other policy priorities, not least the aversion to boosting domestic consumption.

Interview by Patrick Body

UPS AND DOWNS

Consumer spending is a vital part of China's growth plans, but dented consumer confidence is a major problem

By Mable-Ann Chang

Image by Jason Wong

Convincing consumers to part with their cash can be a difficult prospect and there is a need for demand-side stimulus in China

As she picks out groceries at her local supermarket, Chen Jinwen now checks prices more than she has ever before. "I've always been quite conscious of my money and have the habit of tracking my expenses in an app on my phone," says the IT project manager who lives in the eastern Chinese city of Nanjing. "I feel like I need to be more careful with my spending, both because prices went up but also just in case my situation changes in the future."

Chen is one of a growing number of Chinese consumers who have become hyperaware of how much the cost of living has risen in China, with many adopting more conservative attitudes toward spending and thinking twice before making purchases. Inflation is a factor in this thinking, but the underlying issue for Chen, and millions of others, is confidence in the stability of the economy.

Economic headwinds, the lasting effects of the volatility of the COVID-19 years and growing uncertainty about the future have resulted in an increased reluctance to spend. What is worse is that the Chinese government's growth plans heavily rely on rising consumer spending to make the slowing cogs in the economic machine turn faster.

Many are trying to get a handle on how consumer spending is trending, with estimates in the first few months of 2023 varying and opinions ranging from "Consumers are being cautious" to "Consumer spending is in a strong rebound." But what is clear is that without robust spending, overall long-term economic growth will be impacted.

"Declining consumer confidence could have its origins in long-term structural headwinds. Slowing demographics and rising debt levels may have ebbed on households' propensity to consume because they felt less certain about the future due to these factors," says Carlos Casanova, Senior Economist for Asia at the wealth management firm Union Bancaire Privée. "If consumer spending remains low, if for example, China is unable to effectively pivot its economic growth model, then we would expect to see a decline in potential overall growth."

Royal flush

Over the past two decades, China has undergone a transition into an increasingly sophisticated consumer economy. According to the Center for Strategic and International Studies, over half of the country's 1.4 billion people are now categorized as middle class, up from just 3% in 2000, and disposable income per capita increased by around 700% over the same period—the global average increase was 200%.

As well as the increased availability of cash to spend, greater access to credit and other financial services have also helped drive consumption in the country across a number of different categories. Entertainment and leisure, food and beverage, education, health, renting, transport and apparel make up the large majority of spending, and according to figures by China's National Bureau of Statistics (NBS), the bulk of Chinese household consumption in 2022 was on food (30.5%), housing (24.0%) and transport (16%).

As incomes have risen, Chinese households have also increasingly begun to spend on luxury items and services that they previously could not afford, including high-end electronics, imported cars, luxury vacations and premium education and healthcare services. As a result, China became the world's second-largest luxury consumer market in 2008 and by some measures is now the largest.

"With the Chinese economy lifting as a whole, consumer spending went through a 'consumption upgrade' where people start buying higher quality products for less," says Allison Malmsten, a B2C marketing expert at Daxue Consulting.

Interestingly, thanks to the country's fast economic growth, while Chinese consumers' overall spending has increased over the last two decades, the country has also consistently managed to maintain one of the highest savings rates in the world, in part thanks to the prudent financial management endemic in the country's

> China's focus on supply-side stimulus has worked for them in the past, but continuing to do so will only result in more trade surpluses and more, mostly unwanted, infrastructure
>
> Michael Pettis
> Professor of Finance
> Guanghua School of Management at Peking University

culture. Gross national savings as a percentage of GDP reached 44% in 2021, significantly higher than savings rates observed in the United States (17%) and Japan (26%).

"Chinese consumers are more likely to save additional income rather than spend it compared to their global counterparts, especially amongst developed markets," says Casanova. "This ratio has declined gradually since its peak in 2010 (51.6%), reflecting a steady increase in Chinese households' marginal propensity to consume. However, this remains low compared to the United States."

At the same time, the country's private sector is also feeling the strain from a lack of consumer confidence, with the CKGSB Business Conditions Index (BCI), a measure of business confidence, showing a correlation with consumer confidence levels. The BCI however, while showing a similar trend, has managed to return to above the 50 point confidence mark, while the national tracker for consumer confidence remained at 94.9—below the 100 point neutral mark—in March 2023.

The long-term trend of slowing economic growth in the country has exacerbated the existing propensity for financial caution and made it more difficult for the government to kick-start spending.

Pinching pennies

Although consumer spending was on the rise over the past two decades, the COVID-19 pandemic had a notable negative impact. Following the outbreak, China saw a 32% decline, or ¥329.8 billion ($45.92 billion) drop, in offline consumption in 214 cities across the country. Despite an initial surge in spending after pandemic-related restrictions were lifted, Chinese consumers' willingness to shop has yet to rebound to pre-pandemic levels, and 2022 was one of the slowest years for economic growth in decades.

In the early stages of the COVID-19 outbreak, there was widespread panic-buying and hoarding of essential goods, such as food and medical supplies. This led to shortages and price spikes, which eroded consumer confidence.

"There were several waves of panic buying between 2020 and 2022," says Chen. "It was first masks, then groceries, and the last being COVID-19 home testing kits and flu medication. I remember there also being cases of stores hiking up their prices, even though the government had prohibited them from doing so. I felt really worried about getting ahold of basic necessities at the time."

Confidence has been dented by various other factors, including trade tensions with the United States, a slowing economy, and growing unemployment. Consumers are more interested in saving and investing their money than ever before. According to McKinsey's 2023 nationwide survey of Chinese consumers, 58% of urban households indicated their desire to "put money away for a rainy day," the highest level since 2014, and 9% higher than in 2019.

More reserved attitudes towards spending in recent years have, for example, led to South Korea overtaking China in terms of per capita luxury spending. In 2022, Koreans purchased $16.8 billion worth of luxury brand merchandise, equating to $325 per capita, compared to $50 in China. The China market remains larger in total due to its massive population.

"Chinese consumer spending has declined overall and you can see this in how luxury sales have dropped, how property sales have taken a hit, and how there are more and more stores selling second-hand products," says Joyce Ling, Chief of Transformation and Strategy Officer for Greater China at global marketing communications agency Wunderman Thompson. "I don't believe that spending power has changed to a great degree, but it's more about how consumers are choosing to spend their money that has changed."

China's labor market remains under pressure with high levels of unemployment, which also contributes toward an unwillingness to spend. The surveyed unemployment rate was above target in 2022, reaching 5.6% on average compared to 5.1% in 2019. More importantly, youth unemployment reached 20.4% in May 2023, almost double the pre-pandemic levels of 11.9%.

"A lot of Chinese people who were working abroad, such as in Silicon Valley, have been laid off and they're coming back to China to look for jobs," says Ling. "Students who would have studied abroad and perhaps started working abroad are still in China. This is exacerbating the already competitive job market."

"Another factor here is regulation," says Casanova. "This impacted predominantly the housing sector and platform companies.

However, given that both sectors play a sizeable role in the economy, this could have had an impact via wealth effects."

In China, the balance of assets is much more heavily weighted towards state and corporate holdings than households, compared to Western and developed economies. Data from the International Monetary Fund shows that as of 2020, households in China held about 57% of financial assets, while corporations held about 43%. The situation in China stands in sharp contrast to countries like the United States where households account for around 71% of all assets. Other countries like Japan and Germany also have significantly higher amounts of household financial wealth in comparison to China.

The new normal?

Now that China's zero-COVID policy has been lifted and borders are open again, consumption is expected to rebound to pre-pandemic levels eventually, but how long it will take to get there and when it will grow to become the economic driver that Beijing requires is yet to be seen.

Even with government officials and businesses hoping to see a greater rebound in the second half of 2023, experts predict that it could take significantly longer than that. "Consumption is going to bounce back a lot faster in Tier-1 cities," says Ling. "We're going to see a quick peak in consumption now because everyone is finally free to go out, travel and shop. But it's likely to drop and steady out after that. That steady point is going to be lower than pre-pandemic levels and it's going to take a few years before China can see the consumption levels that existed before COVID-19."

"The pandemic caused many businesses to close their doors for good," says Wei Li, a restauranteur in Shanghai. "Things remained very uncertain for years, and we had to let most of our staff go. When the zero-COVID policy was lifted, our restaurant was quite busy every day, but this level of business would have to be sustained for a long time to make up for all that we had lost during the COVID years."

The sudden decline in consumer spending due to COVID has had a ripple effect on many sectors of China's economy. As private consumption has accounted for 40% of GDP in recent years—compared to close to 70% in the US—this decline has made a significant contribution to the economic slowdown.

"China's future growth rate must lag the consumption growth rate, and so its overall growth depends crucially on the growth rate of consumption," says Michael Pettis, a professor of finance at Guanghua School of Management at Peking University in Beijing. "There is simply no way China can continue to maintain investment rates above 40% of GDP much longer."

The slow rebound is also having a severe impact on the many companies that flocked to China as it became the world's biggest consumer market. During the pandemic, consumers began focusing their spending on things that had a practical value in their lives, resulting in a surge of more wellness-oriented purchases, such as yoga gear, meditation workshops and cookware. Many businesses are already re-evaluating their approach and aiming to connect with consumers not just on a transactional level, while also aiming to show customers the value that their products could provide, in the hopes of stimulating faster recovery.

One example is IKEA's partnership with SONOS to create mood-boosting speaker lamps. Lululemon, which sells athletic apparel and only entered China 10 years ago, saw business really take off in China during the pandemic, thanks to the growing emphasis being placed on health and wellbeing by the country's middle class.

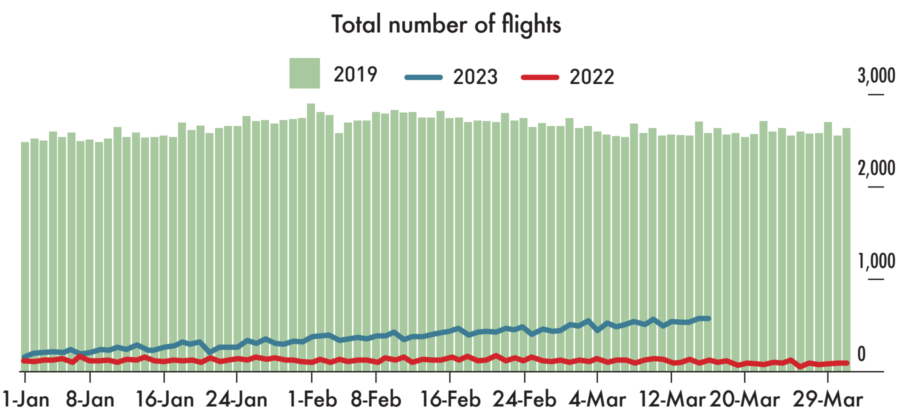
"Before 2022, a lot of Western companies were betting on China because things were not happening in the West," says Ling. "There are a lot of changes in foreign trade and domestic demand, so they're a little uncertain right now. Some of our clients in the beauty and consumer goods business are changing the way they look at marketing and investment. They're not going to be as aggressive in their investment as before, but they are re-evaluating how they can connect to consumers on a more personal level."

Cheques and balances

Beijing has taken various steps to rebuild consumer confidence and increase consumer spending, but efforts still appear to be insufficient and largely on the supply side. The People's Bank of China took measures to stimulate economic growth by lowering interest rates five times in 2020 and injecting nearly $1 trillion into the economy through various methods such as cutting the reserve requirement ratio and providing direct credit to certain industries.

Beijing has also taken steps to boost investment, both domestically and abroad. In 2020, the government launched a new foreign-investment law that promises to protect foreign investors' interests in the country while also increasing the number of industries foreign companies can operate

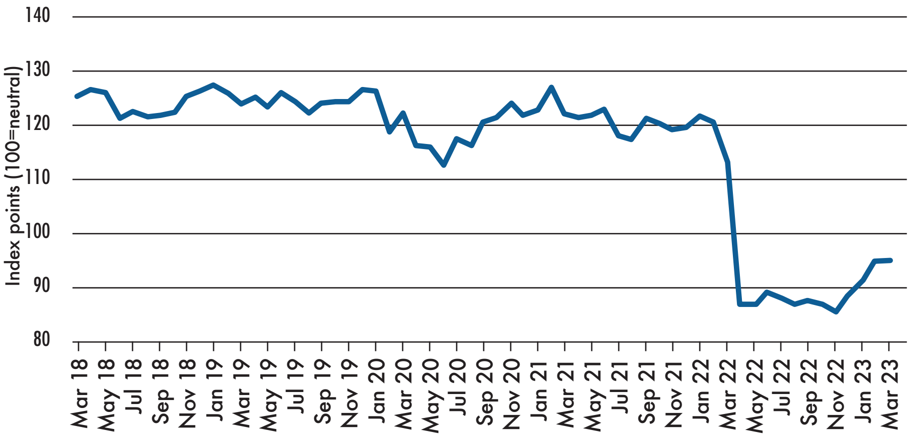
TRIPPING OVER | China's air travel consumption still remains well below pre-pandemic levels



Source: VariFlightPro

CONFIDENCE CRISIS

Consumer confidence in China remains well below historic levels which has major implications for economic growth



Source: China National Bureau of Statistics

in. It also increased its emphasis on key industries such as the digital economy, biomedicine and advanced manufacturing.

"China's focus on supply-side stimulus has worked for them in the past, but continuing to do so will only result in more trade surpluses and more, mostly unwanted, infrastructure," says Pettis. "Without demand-side changes, there is unlikely to be any increase in the household share of GDP and by extension the consumption share."

The government has also launched tax breaks to support small businesses and entrepreneurs. In addition, the government is encouraging people to shop online by providing financial incentives such as coupons and discounts for online purchases.

"During the pandemic, when people couldn't travel, the Chinese government opened up duty-free stores that didn't require shoppers to travel abroad to benefit from lower prices," says Ling. "That policy is going away soon, but they're really trying to encourage consumers to shop more. These efforts have worked as beauty retailers and wine and spirits retailers have seen higher sales as a result."

Economic experts have proposed a wide range of other solutions to promote consumer confidence, such as reallocating assets away from the state to households, providing greater support to small and medium-sized businesses, and ensuring consistent policies across the board. But these would require making difficult political decisions and could take years to bear fruit.

One example of going directly to households was seen in the US during the pandemic, where over half of stimulus spending was given to individuals. And while this may have been somewhat successful, with the US consumer confidence index remaining over the 100 point threshold, a similar approach to stimulus in Hong Kong hasn't resulted in a bounce back of confidence, and it remains unclear whether this would have benefitted China, which provided no such payments.

China's economic recovery hinges on revitalizing consumer demand, and while stimulating consumer spending may prove successful in the short to medium term, consistency in policies and reforms is required to provide a level of financial confidence in the country's population.

"Domestic consumption should take over as the main driver of growth as the government aims to pivot towards a more sustainable consumption-led growth model," says Casanova. "According to the government's 14th Five-Year Plan, consumption should grow quickly in the coming years, and account for up to 60% of China's GDP in 2025."

"There are many historical precedents, even if most economists following China are not familiar with them," says Pettis. "They suggest two most likely scenarios. The 'slow adjustment' scenario is more stable in the short term and will involve a small decline in consumption growth as investment growth declines sharply. The 'rapid adjustment' scenario, in which both GDP and consumption contract sharply, with the former contracting far more than the latter, is much more disruptive in the short term but tends to be resolved more rapidly. My best guess is that China will adjust very slowly."

Selective spending

In the past few years, Chinese consumers have gone from being generally optimistic to largely pessimistic and shifting the wave back the other way is the challenge that needs to be addressed. Consumers' attitudes towards what they spend money on have changed and perceptions of value have changed.

"My income hasn't increased in the past few years while the cost of everything has," says Chen. "I'm still willing to spend money on things like gym classes because I feel like they help me live a healthier life. But at this stage, it looks like I'm just going to have to tighten my belt on other expenses if I hope to achieve my financial goals."

Discretionary spending has declined largely due to a lack of consumer confidence, and it will be challenging for the government to convince consumers to shift thinking back to how they were a few years ago, particularly if they remain focused on supply-side reforms. But if Chinese consumers were able to fully financially benefit from the sacrifices they have made over the past few decades, namely low wages and long hours, then they would be much more inclined to spend freely.

"A large amount of the results of Chinese economic development over the last few years has actually been enjoyed by the rest of the world thanks to a massive drop in the cost of living, but this drop was driven mainly by weak Chinese consumption," says Pettis. "If more income were directed to Chinese households, then Chinese production would be less globally disinflationary and Chinese consumers more likely to spend."

FAN FAVORITE

Subsidies for companies in China's wind energy sector have ended, but the expansion of the industry certainly has not

By Shi Weijun

Wind energy production in China far surpasses anywhere else in the world and there are still efficiency increases to come

Surfers are now a common sight off the coast of the small Chinese city of Wanning. Located on the tropical island province of Hainan, China's 'surf capital' has benefited from the howling offshore winds that whip up waves, attracting surfers from all over the country. Very soon, these gusts will also drive the turbines of the world's largest floating wind farm.

Once completed in 2027, the wind farm will have one gigawatt of capacity—about 11 times greater than the current largest floating wind farm in Norway, and enough to meet the electricity demand of two million Chinese households. The ¥23 billion ($3.39 billion) project is a testament to how China is starting to embrace today's era of plentiful, cheap and renewable energy.

China is already the world's largest market for wind energy, accounting for 40% of global wind power capacity in 2022, according to the Global Wind Energy Council (GWEC). The country has ranked first in annual installations of wind power capacity every year since 2010, but also remains by far the largest fossil fuel polluter. China is seeking to increase the share of renewables in its energy mix, but a drop in subsidies for the wind sector has led to unusual competition between renewable energy sources.

"The pressure on wind is not coming from traditional energy sources like coal, but from solar," says the GWEC's China director Liang Wanliang. "Technological innovation and cost declines in solar have advanced faster than wind. These are compelling reasons to choose solar if you are a developer, so wind needs to work harder to compete."

Winds of change

China's energy mix is still dominated by coal, which in 2020 supplied 56% of China's primary energy consumption—twice the global average—but renewables are on the rise. Of the 5.4% of energy supplied by renewables in the same year, wind was the primary contributor at 2.8%, and this share is expected to reach 4% of the overall energy supply by 2025 and then a whopping 24% by 2060—the deadline for China to reach carbon neutrality, as pledged by leader Xi Jinping nearly three years ago.

Wind dominated China's deployment of renewable energy over the last decade thanks to massive government subsidies. By 2013, China was adding more wind capacity than the rest of the top 10 countries combined. And in the boom years of 2020 and 2021, China added nearly three times as much capacity as the rest of the world collectively, as developers scrambled to complete projects before national feed-in tariffs (FITs)—a guarantee of above market price for producers—expired.

More recently, solar has started to outshine wind on some metrics—total solar generation capacity in China surpassed that of wind for the first time in 2022, with 393 GW versus 365 GW. Despite solar's accelerating buildout, wind still produces far more electricity—wind farms clocked 687 terawatt-hours (TWh) of energy output in 2022, which was triple that generated by solar.

"Wind is still a far more important renewable energy source than solar," says Cosimo Ries, a renewable energy analyst at research firm Trivium China. "While solar has surpassed wind in total installed capacity, actual wind power output last year was nearly three times that of solar due to its significantly higher utilization hours. Even as solar continues to outpace wind in capacity growth, these disparities are unlikely to narrow significantly in coming years."

The cost for both onshore and offshore wind power has plummeted over the past decade. The global levelized cost of electricity—which measures the total expense of producing one megawatt-hour from a project—for onshore wind dropped by 56% from 2010 to 2020, while offshore wind fell by 48% over the same period. Offshore wind farms are considered more efficient than their onshore counterparts, thanks to the higher speed of winds, greater consistency and lack of physical interference that land or human-made objects can present.

This fall in costs, which is expected to continue, has been driven by dramatic reductions in the selling price of wind turbines in China, thanks to mass production. Wind turbine manufacturers have slashed turbine prices to $60/MW in June 2022, almost half that of 2016. The price war contrasted with Western manufacturers who were forced to hike prices to nearly $160/MW last year to mitigate supply chain disruptions and cost of inflation.

A gust of growth

China's wind power developers have been on a breathtaking building spree that shows no sign of slowing down. The 365 GW of total installed capacity at the end of last year represented a twelvefold increase from 2010 and was equivalent to 40% of global capacity in 2022. No other country comes close to China's frenetic buildout, with the US adding less than half of China's capacity.

New installations decelerated in 2022 but this was still the third-highest increase on record. Liang is confident the slowdown will be a one-off: "Last year's figure was not normal," he says. "COVID-19 control and prevention measures in China in 2022 were the toughest in the past three years, impacting construction for some wind farm projects."

Energy officials in Beijing clearly feel the same, targeting a total installed wind capacity of 430 GW this year which implies a growth rebound in 2023. The GWEC meanwhile are even more confident, with a predicted year-end total of 435 GW.

In terms of technological innovation, China is nipping at the heels of traditional wind energy giants Denmark, Germany and the US, according to Liang. "China has almost caught up with international players, but I don't think it is leading," says Liang. "European countries like Denmark have a longer tradition in wind energy and more experience with the science, so they still have a better understanding of the technology."

China now ranks first in the number of patent filings related to wind power generation and although patent volume is not necessarily equivalent to inventiveness, turbine manufacturers are among China's biggest corporate spenders on R&D. Industry giants Envision Energy and Mingyang Wind Energy Group ranked in the top 200 private companies in 2021 each spending around ¥60 billion on R&D.

China has also ousted multinationals such as Vestas, Siemens Gamesa, General Electric (GE) and India's Suzlon from the domestic market. "Around 2005, the Chinese government started requiring 70% of wind farm components to be sourced locally," says Leo Wang, senior wind associate at energy research firm BloombergNEF. "That's when the Chinese companies started to take off."

The sheer scale of China's wind power industry means local manufacturers are among the biggest in the world, although their business is concentrated at home. Goldwind is the dominant player in China's market, supplying more than one-fifth of the total new projects in 2022. Envision ranked second followed by Mingyang, Windey, SANY and CRRC. Vestas, the highest-ranked foreign company, finished 14th followed by GE in 15th.

Goldwind also edged out Vestas as the top developer globally in 2022, installing 12.7 GW worldwide versus 12.3 GW for its Danish rival, according to BloombergNEF. Six out of last year's top 10 global wind turbine makers were Chinese, accounting for 55% of the total installed capacity worldwide last year. But nearly 90% of the capacity commissioned by Goldwind last year was located in China, underlining how Chinese players are mostly thriving at home. It is worth noting, too, that Goldwind's revenue of ¥46.25 billion last year was less than half of Vestas.

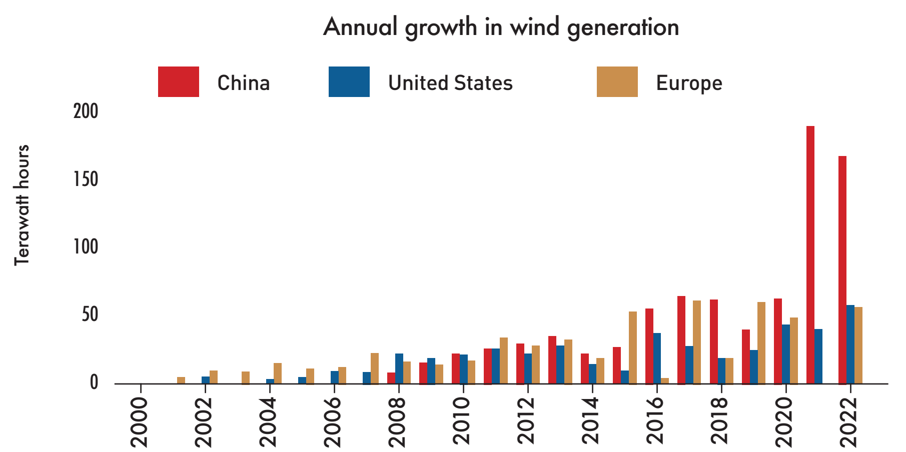
The presence of so many behemoths means China unsurprisingly dominates manufacturing of parts for wind farms—the country is forecast to account for 60% of global wind turbine manufacturing capacity this year, and is already home to two-thirds of turbine assembly plants worldwide, according to the GWEC. That said, nearly all of the output is used domestically, according to Liutong Zhang, director of Hong Kong-based consultancy WaterRock Energy Economics.

"Over time China has built up a lot of capacity and in the process also built up the domestic value chains," says Zhang. "For wind technology, domestic manufacturers and various other key component makers have been primarily focused on the domestic market."

But as cutthroat competition at home and manufacturing overcapacity force Chinese wind companies to tap overseas markets, the domestic focus is likely to shift. Turbine exports climbed in value from $2.9 billion in 2017 to $7.2 billion in 2021, and Chinese-made products are now found in wind farms around the world—overturning previous doubts about their reliability and capabilities.

For instance, Mingyang's turbines

WINDING UP | China's wind power generation is growing far faster than the rest of the world



Source: Reuters

have been generating power at Italy's first offshore wind farm since April 2022. The manufacturer followed up its maiden contract in Europe with another to supply a turbine to the Nyuzen wind farm in Japan and was selected last September to provide the turbines for the TwinHub UK offshore project that will demonstrate floating wind power's potential.

"These examples show that significant Chinese exports are beginning to take place in the offshore wind sector and momentum is increasing," says Ruth Chen, senior analyst at Westwood Global Energy Group. "With global turbine manufacturers making losses and suffering from cost inflation, China-made turbines could prove more cost-competitive in European markets."

Government support

Government support has underpinned the development of China's wind energy industry into a world leader. "Like in almost every country that has succeeded in scaling up renewable energy, the rise of China's wind industry simply would not have been possible without ample government support," says Ries.

This help took the form of direct central and local government subsidies, FITs, prioritized dispatch, industrial policy targeting wind turbine manufacturing, and many other non-tangible types of government support.

Policy support for wind power started to snowball after the implementation of the 2005 Renewable Energy Law, which emphasized Beijing's commitment to renewable energy and provided a legal framework for its operation and development. The law gave a leg-up to wind and solar by directing grid operators to prioritize renewable energy over other power sources.

Other supportive policies in the industry's early years—from tax rebates to a local component requirement that mandated manufacturers to source 70% of components domestically—helped the industry thrive, but a major sign that the industry had reached maturity came at the conclusions of 2020 and 2021 when national FITs expired, ushering in a new era of unsubsidized pricing for developers.

"The subsidized market is now a bygone era," says Liang. "The industry has developed so much that wind power is very cost-competitive so developers can make money without subsidies." The shift away from heavy subsidization can also be seen in both Europe and the US thanks to the development of technology and falling costs, but neither region has reached the same level of spending as China.

While direct financial aid for wind power may be a thing of the past, China remains more committed than ever to renewable energy. Xi Jinping's goal for the country to achieve carbon neutrality by 2060 is a long-term tailwind for renewables, as research from Tsinghua University suggests China may require as much as 8,300 GW of combined wind and solar capacity by 2050 to achieve a net-zero power grid—11 times the 758 GW currently installed.

"The carbon neutrality pledge's emphasis on renewable development provides a much longer timeframe of certainty for the industry to keep growing," says Wang.

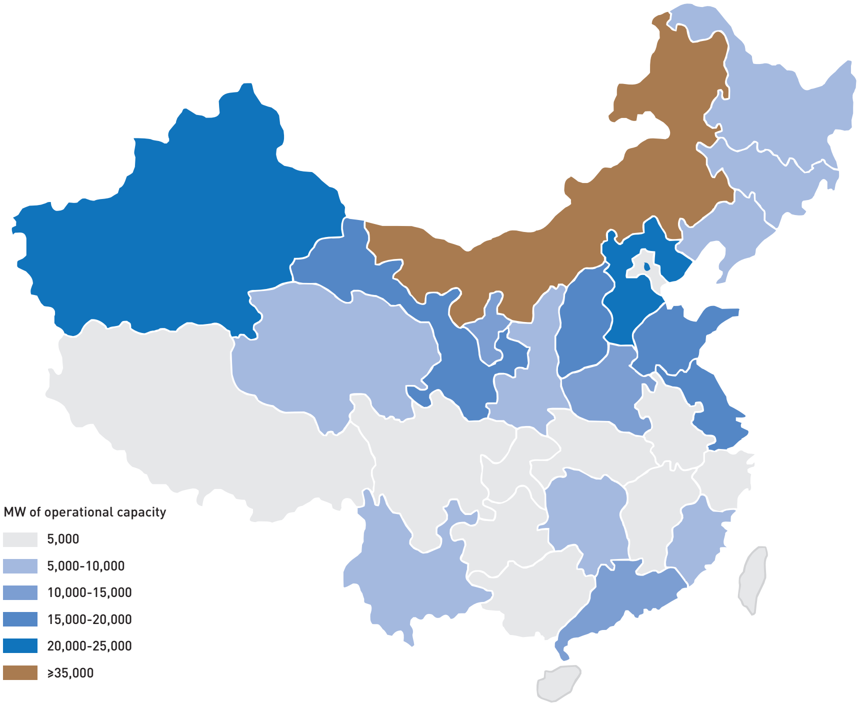
Headwinds

While wind power's long-term growth trajectory seems assured, it still faces challenges that might slow its adoption. Ries says the most significant barriers to increased use are interprovincial power market barriers, insufficient grid flexibility and inadequate interprovincial grid infrastructure connectivity—all of which limit wind power trading between the wind-rich northern and western provinces, and the coastal provinces where demand is greatest.

China's grid operators and power utilities are addressing these issues by building more long distance, ultra-high voltage (UHV) transmission lines, developing energy storage capacity, and

WINDY CITIES

China's northern regions are home to the majority of the countries wind power generation, but offshore numbers are also increasing



Source: Global Energy Monitor

implementing upgrades for existing coal-fired power plants.

But the distances between China's renewable energy generation assets and demand centers is a problem. State Grid Corporation of China has invested tens of billions in the last decade to build cross-country UHV lines to transmit electricity generated by solar and wind farms in the north to demand centers on the eastern seaboard.

"The question is not about how much you can build, but how much can be actually consumed by different sectors of the economy," says Wang.

To address this question, central and local governments are gradually enacting a series of critical power market reforms required to help increase the power system's ability to absorb rapidly growing renewable energy output. Among the many important measures are the development of integrated regional power markets, spot market trading and reducing the role of grid operators in interprovincial power market trading.

China is looking to address the intermittency of wind power by requiring developers to bundle projects with energy storage systems, mainly in the form of batteries. But these are expensive and could push up installation and generation costs for wind power, according to Liang.

For the offshore wind sector an important short-to-medium-term supply chain bottleneck likely to emerge in the coming years is a lack of specialized ships capable of installing the large, 10 MW-plus turbines required to help offshore wind farms achieve cost-competitiveness. "The gravity of this problem will be determined by how quickly shipyards can produce these next-generation vessels," says Ries.

China's wind power sector has so far largely been excluded from the hardening US policies toward Beijing, likely because turbine exports are relatively limited and the US has its own wind manufacturing industry and supply chain. Some companies have nevertheless taken preemptive measures to mitigate any trade restrictions that Washington could impose in the future, as it has done with China-made solar panels.

Nanjing-based NGC Transmission, a leading manufacturer of turbine gearboxes that counts GE as a customer, is one such example. "When the US-China trade war began in 2018, NGC was worried about its business with GE, so they invested in India to set up a factory there," says Liang. "But in general, the impact has been much smaller than on the solar sector."

A second wind

Today's state-of-the-art wind turbines are rapidly approaching, or have already reached, their maximum practical efficiency levels of around 50%, according to Ries. "As a result, one of the few ways for the wind industry to continue improving its economics is to cut costs through the development of ever-larger turbines, particularly for offshore wind," he says.

Leading Chinese manufacturers are at the forefront of this process. Mingyang and CSIC Haizhuang each unveiled colossal 18 MW offshore turbines in January—the first to be announced globally, ahead of similar models from Vestas, Siemens and GE.

These gains—bigger blades and taller towers for greater capacity—may sound unimpressively incremental, but Wang believes they should be seen in a bigger context. "Incremental may sound quite boring but actually making these things feasible requires a lot more fundamental improvement on the materials, on the aerodynamics design, and even on the supply chain itself." He points to the transition from 2-3 MW turbines to 4-5 MW models in 2019-2020, which required supply chains to be revamped to accommodate the physically bigger and heavier models.

China's manufacturers have made enormous strides in recent years toward technological self-sufficiency across most of the turbine supply chain. But one area where they still fall short is the ability to develop homegrown versions of certain bearings used in turbine engine housings. "This is an area where far more R&D will be required," says Ries.

There is a sense that offshore production, rather than onshore, could be the main growth driver for the wind industry going forward. China barely had any generation capacity installed offshore six years ago but it now leads the world with 30.5 GW in place at the end of 2022. More than half of this was built in 2021 alone, dwarfing what the rest of the world added in the previous five years.

"Provincial governments have very ambitious plans for offshore wind," says Liang. "It's going to play a very important role in supporting coastal provinces like Guangdong. Offshore is more challenging than onshore, so it's a good way to prove your technological credentials if you can master it.

The multibillion-dollar project underway next to Wanning underscores the growing interest in floating wind turbines too. The nascent technology is expected to become increasingly important in coming years as it will enable generation in deeper waters where winds are stronger. But with only a handful of projects around the world, "it's unclear how far along Chinese firms have gotten in terms of R&D and technological capabilities," says Ries.

A promising forecast

After last year's hangover from the frenzied buildout of 2020-2021, installations are set to pick up, as projects delayed by China's COVID-19 outbreaks in the final months of 2022 get back on track. "The momentum is still there in China, which will remain the dominant player in the market," says Wang, who forecasts annual capacity additions to top 50 GW onshore and reach 10-15 GW for offshore over the next decade.

But while the market potential is enormous, competition between the biggest players is intensifying too and there could be an industry shake-out in the future if prices maintain their years-long decline. "That's China—nothing is easy. You have to be really good to be profitable," says Liang.

Nevertheless, things are looking good for a sector that will support China's decarbonization for decades to come. "It's a case of so far, so good," says Liang. "With the future market guaranteed by the 2060 carbon neutrality target, people in the industry now joke we have enough work to last until retirement."

Selling the Future

David Bell, author, e-commerce expert and co-founder of VC firm Idea Farm Ventures, discusses the rapid-fire evolution of China's e-commerce and digital marketing

E-commerce is becoming an increasingly important part of lives around the world and the adoption of online shopping is particularly apparent in China. The country boasts the largest e-commerce penetration rate in the world but even then it only constitutes around a quarter of all goods sold, meaning that there is still a lot of room to grow.

In this interview, author and investor David Bell discuss the importance of digital payment systems to the creation of e-commerce infrastructure, the differences between goods with digital and non-digital attributes, and the future of hybrid online-offline future for commerce.

Q. How important are digital payment systems to the creation of all-encompassing e-commerce platforms?

A. It's a really critical part, but one of a wider number of things. If you think about what you need for full-blown e-commerce adoption, the main thing is that you need consumers to trust the system. This means they need to know that the things they order both exist and are of good quality, as well as that they will arrive when you order them.

You can have various sellers and platforms offering a massive range of products, but in order for that to gain momentum and take off, you also need to connect everyone, which requires fast internet access proliferated throughout the country. And then you need to overcome the other impediments. You have to know that the thing is going to show up, so you need reliable delivery infrastructure. You also have to know that if you give your information to the platforms, the payments are safe and secure. There needs to be some level of trust.

This lack of trust is why you originally saw cash-on-delivery across many markets, including China, early on—people didn't want to pay for things they couldn't see or feel, with no guarantee of a safe transaction. But with high-quality digital payment systems in place, consumers are much more willing to buy online.

And China is at the very forefront of these technologies. It's also a two-sided thing, all of the infrastructure is there to use, and you have a young, digitally-native Gen Z and Millennial group of customers to use it.

Q. To what degree is the push by China's e-commerce platforms into other regions such as Southeast Asia proving successful? Do you think China benefits from cultural closeness compared to, say, Amazon, especially going into places like Southeast Asia?

A. I had an academic friend that looked at the proclivity for people to consume products, services and information from other countries. If you think about physical trade, there's work by Paul Krugman that, in very crude terms, shows there are two main factors, geographical proximity and similarity of the economy. An easy example is US-Canadian trade where they share a border and are both developed economies. Meanwhile, for New Zealand, that trade would be harder, it's further away and significantly smaller.

The question my friend posed was whether this held true for purely information goods. Would people access websites or online services from further away given there were no barriers to doing so? Interestingly, what he found was that people still preferred to access stuff from countries that were "close" to them, and this was especially true for products that have cultural nuances like games and music. So, there is definitely something about cultural affinity that affects consumption.

Having said that, I think that looking at Southeast Asia, as well as some failures here and there, there have been Chinese successes, local successes, and successes by Amazon, and I think that in general there is room for all three.

Q. To what degree can e-commerce still be considered a new phenomenon and how would you categorize the industry's situation today?

A. There is an important delineation in terms of products when it comes to e-commerce that means that we're still seeing it evolve, and that is digital versus non-digital attributes.

Every product has some digital attributes and some non-digital. Take a book, for example. Basically, everything in it can be conferred to the target audience either online or offline, there is no concern when you buy an economics book online, that it will turn up as a different product on a different subject or with a different number of pages. You're happy to buy a book online because it is filled with reliable digital attributes.

But for something like clothes or food, there are a number of non-digital attributes that make this harder. They might not fit, you might not like the look of it or it might not taste quite right, and this might mean that you're less likely to buy these more tactile things. When e-commerce first kicked off, the easiest stuff to sell was stuff that only has digital attributes, which is partly why Jeff Bezos started with books. What accelerates the development of e-commerce is the ability of companies to figure out how to effectively assuage concerns about non-digital attributes.

Shoe delivery company Zappos is a good example of success here. Shoes have non-digital attributes, but they decided to offer the ability to order five pairs and just keep the one you want and send four back. They solved the problem of a product having non-digital attributes by offering totally free two-way shipping—they have to be sure this will be frictionless, though. The process is probably a bit more difficult with a product like an avocado, but there are already companies that will sell you a week's worth of avocados, each at a different stage of ripeness to ensure they won't all go off at once. These innovations are what are accelerating e-commerce penetration and keeping it new and interesting.

David Bell is an author, investor in new economy companies, a former Chaired Professor at Wharton and an award-winning researcher with expertise in digital commerce and entrepreneurship

Q. There has recently been a rise in the use of Virtual and Augmented Reality (VR and AR) in the e-commerce space. How do you see this affecting the digital economy?

A. I see AR, VR, and the associated technologies resolving a lot of the problems around non-digital attributes. You can now step into a virtual environment and be "touching and feeling" things. Using furniture as an example, there are now a number of companies that offer the option of AR to see how a piece looks in situ, rather than looking at it and trying to guess whether it would suit the rest of the room you want to put it in.

I think the more technology we develop, the more we can help people get over any uncertainties about whether what they're going to buy is going to be something that they actually want or like. They also facilitate a different form of social shopping, where you can bring your friends into a virtual showroom to see what they think about a potential purchase, or when you're virtually

> **There's more creativity around the adoption of new technologies in China**

trying on glasses, you can get an expert to help you out with advice and comments. All of this will drive more expansion of the digital economy.

Q. How would you compare the digital marketing systems of China and the rest of the world? Where are the greatest opportunities for one to learn from the other?

A. One big difference is about how individuals, as well as regulators, think about privacy. A big thing that really hurt a lot of e-commerce brands in the US, apart from Amazon, was when Apple changed their privacy settings [limiting advertisers tracking capabilities and allowing users to opt-out of data sharing]. This made their previous digital arbitrage practices, attracting customers at a low-cost using ads spread across Google, Facebook and Apple, etc., much more difficult, especially in the US and Europe. In China, however, people tend to be less concerned about privacy issues, per se.

The ability to understand an individual's data and to make attribution about what they're doing is increasingly critical. This has upped the ante on things like machine learning and artificial intelligence, and now there are techniques like "probabilistic attribution," which create tools to discern the probability of consumer data through correlations in purchasing practices, etc. Because access to data is becoming more limited, companies are trying to figure out ways to be more sophisticated with the data that they have on consumers.

Q. How does the massive increase in all things digital affect the offline marketing world?

A. China is right at the top of e-commerce penetration, but that is still only around a quarter of total sales. Different sub-sections of the market can vary in penetration levels but averaged out completely, the number is still quite low, and in other countries even lower. So, wherever you are in the world, the majority of stuff people buy is bought offline.

> In China, people tend to be less concerned about privacy issues, per se

The real difference is that many of these sales processes are now digitally assisted. For example, grocery stores where you scan QR codes throughout the store and walk to a collection area where your shopping waits for you.

I think the most important takeaway is that 20 years or so ago, everyone was looking at the future and was certain that the digital/virtual world and the real world were in opposition, with the digital world eventually overtaking the other and everything purchased online. But that turned out to be totally wrong, and the two are actually much more complementary—the fact that there is digital actually makes the offline experience more interesting.

I think the big question is where you can introduce e-commerce or commerce in general into offline spaces that are not traditionally shops. In South Korea, for example, you can scan grocery items for delivery while waiting for your train in the subway. You spend so much of your offline time in places other than shops, the question is how to make them shoppable environments.

Q. To what degree are there concerns about digital marketing becoming less effective as it becomes increasingly pervasive in our everyday lives?

A. It's 100% a concern. In the US, for example, especially since the iOS update changed to ensure a much greater degree of privacy, it has become obvious that things like Google paid search have become much less effective. This is thanks to people just being able to turn off data access, as well as using VPNs. Now you have to be more creative. Perhaps you need to create communities or content within which you can disseminate ads or figure out how to leverage famous people. All of those things are becoming much more in vogue and something that people are trying to catalyze.

Q. Given your experience working with companies in both China and the West, to what degree do their approaches differ and what are the benefits and drawbacks of these approaches?

A. In China, there's more creativity around the adoption of new technologies and also rapid growth of these things when they come out. Perhaps because they're more mobile-first among other cultural characteristics. For example, social shopping is such a big thing in China, but it still hasn't really taken off in the US. In China, people follow others because they like their style or taste and buy the things that they recommend, but these relationships haven't really been cracked in the US.

Where the US has always been good, though, has been around developing brands and narratives and things that really resonate with not only US consumers, but with the global audience. And maybe that's part of the benefit of having a very culturally heterogeneous population. It makes US brands pretty nimble at exporting their stuff globally, more so than China brands.

Interview by Patrick Body

STRONGER TOGETHER

China is increasingly turning towards more equitable commercial partnerships in Southeast Asia as decoupling from the West grows

By Patrick Body

Image by Jamie Stevenson

Information and expertise sharing are two of the benefits of the more transactional partnerships being pursued by Chinese businesses

On a momentous day in December 2022, the first delivery trucks filled with goods bought via e-commerce rolled out of a massive warehouse in Thailand's Eastern Economic Corridor (EEC). The deployment of these trucks would drastically slash shipping times between China and Thailand from 10 days to three.

The $300 million 'Digital Free Trade Hub,' a joint venture between the Thai government and technology giant Alibaba, is an example of a growing number of more balanced collaborations between Chinese companies and their international counterparts across Southeast Asia.

In the past, technology and knowledge acquisition was the name of the game for China's businesses, forming part of the context for the Belt and Road Initiative (BRI), and to do this, M&A deals were often 100% buyouts by Chinese firms. But there is now an increase in commercial partnerships formed of joint ventures (JVs) and minority stakes with an emphasis on cooperation over control, and both Chinese businesses and the government are increasingly looking at arrangements with local entities which are more equitable for both sides.

And with rising geopolitical tensions causing a decoupling between China and the West, as well as the growing consensus that there is a need for a fundamental shift in global supply chain structure, China and its businesses are increasingly looking to create a new kind of partnership across Southeast Asia.

"We are moving towards a type of globalization that is divided into three increasingly independent silos: Asia, Europe and North America with some parts of Asia such as Japan and South Korea," says Markus Taube, professor and chair for East Asian Economic Studies/China at the Mercator School of Management. "There will of course still be horizontal trade between the silos, but each will become more autarchic. The trends we're seeing with Chinese business partnerships in Asia is one indicator of this shift."

Power to partnership

China's integration into the global value chain started in earnest after the economic reforms enacted by former leader Deng Xiaoping in the late 1970s, with the country shifting from an agriculture-driven economy to an export-oriented industrial powerhouse. Prior to the BRI, China's cross-border collaboration was government-driven and focused on bilateral and regional cooperation agreements, such as the Shanghai Cooperation Organisation (SCO). This often took the form of provisions of financial and infrastructure support by state-owned enterprises (SOEs), as well as a smaller number of private enterprises, in exchange for access to markets and resources.

The creation of the BRI in 2013 encouraged this further, offering a mass of opportunities for companies to get involved in infrastructure projects across the developing countries of the world, not just in Asia. More recently, membership of multilateral and regional partnerships, such as the Regional Comprehensive Economic Partnership (RCEP), and increased involvement with the ASEAN region, have spurred China's businesses to look further afield.

"The core encouragement for Chinese businesses, particularly state-owned enterprises (SOEs), going out into Asia at the moment comes from these regional integration partnerships," says Taube. "RCEP and the other institutional frameworks, such as the BRI, provide things like guaranteed loans for projects."

Asia as a whole is now by far the largest recipient of Chinese FDI, receiving $128.1 billion of the total $178.8 billion in outflows in 2021, and much of this money comes from SOEs rather than private enterprises. For example, of the top 100 multinational enterprises active in the ASEAN region in 2021, 65 were Chinese and 46 of those were SOEs.

But China's rapid economic development has led to an explosion of private enterprise activity in the country, and many of these companies have also sought to expand internationally.

Historically, engagement and money

flows stemming from China mostly took the form of M&A deals where the Chinese company would be either the clear majority stakeholder or the outright owner of the local partner. This approach reflects the nature of the Chinese system and the country's business environment, but can often limit the effectiveness of partnerships through diluting or ignoring the relevant expertise provided by local partners.

The beginnings of a shift in engagement types by Chinese businesses in Southeast Asia, however, was becoming apparent even before the pandemic. More private companies and especially those in sectors related to the digital economy, are now seeking to utilize local partners through joint ventures or more equitably balanced partnerships.

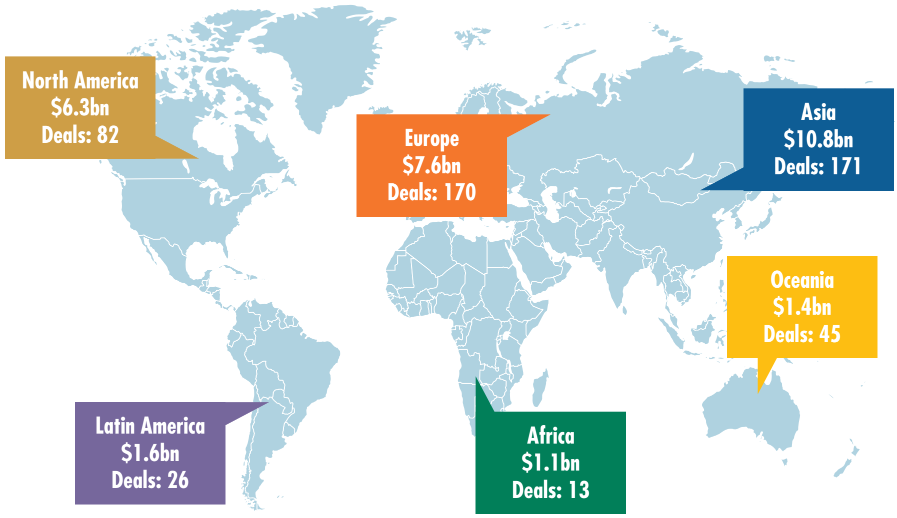
"Chinese investors are becoming more sophisticated, they understand the need and the importance of being able to have constructive discussions with future business partners in the relevant markets," says Addy Herg, Partner in M&A at Wong & Partners, a member firm of Baker McKenzie International. "They are thinking more holistically and further into the future and making more effort to bridge cultural or practical gaps."

Despite this, there is still a desire for acquisitions over partnerships in more strategic sectors, such as those related to new energy or electric vehicle (EV) manufacturing.

"The type of collaboration often boils down to why the investment is being made and whether it's a private or state-owned enterprise looking to make the investment," says Yuxin Shen, Beijing-based Corporate and M&A Partner at law firm Freshfields Bruckhaus Deringer. "For private companies looking to expand their foothold around the world, they are usually happy working with local partners in a more equal relationship. But for SOEs looking to make an investment into a strategically important industry, then that often isn't so much the case."

It is also worth noting that, thanks to the myriad COVID-related disruptions to China's trade and economy, the past few years have been hard to assess in terms of relationship trends.

MONEY MATTERS | Asia was the largest target for M&A-related investment from China in 2022



Source: Refinitiv; Mergermarket; EY

Good neighbors

In the past, Chinese companies looking overseas were primarily interested in doing deals that would provide them with access to raw materials and cheap labor and this remains true in many areas, especially sectors deemed strategically important. Indonesia, for example, has access to around two-thirds of the various minerals required to produce batteries.

The country is now seeing an influx of Chinese enterprises, both state and private, looking to invest in the sector, with many of them seeking out joint ventures. In April 2022, a subsidiary of Chinese battery giant Contemporary Amperex Technology (CATL) signed a tri-party framework agreement worth $6 billion. The deal, which brings together CATL and two Indonesian firms, is designed to develop the Indonesia EV Battery Integration Project, which includes nickel mining and processing, EV battery materials, EV battery manufacturing and battery recycling.

"I think these sorts of partnerships are likely to continue happening," says Shen. "With geopolitical tensions continuing to rise, Chinese companies are feeling a certain amount of pressure to secure resources wherever they still can."

As China's economy has evolved, so too have its priorities and the country's companies are increasingly looking for partnerships that will help them access new technologies, build brand recognition and establish a foothold in new markets. To do this, Chinese companies are looking to invest in or establish joint ventures with local firms in order to tap into local expertise and gain access to established distribution networks.

At the same time, Chinese companies' own technological and management knowledge has grown over the years, and they are increasingly able to offer more in terms of expertise to prospective partners.

This has been particularly evident in Southeast Asia, where Chinese companies are partnering with local firms to take advantage of the opportunities provided by the region's rapidly growing middle class. "Lots of Chinese businesses saw the similarity in current demographic structure in Southeast Asia compared to China 15-20 years ago," says Shen. "The population is young, there is a mass market for e-business and tech, media and telecom (TMT) companies, so there are lots of opportunities in these areas."

In e-commerce, Alibaba holds a large stake in the Indonesian platform Tokopedia, Tencent indirectly has the largest stake of Shopee and JD.com owns a piece of Vietnam's Tiki. All three of these local firms remain under the control of CEOs from their country of origin, but are now able to implement China's well-honed e-commerce best practices under the guidance of their Chinese partners who also reap the rewards of gaining greater access to a new market.

Chinese carmaker Geely is an excellent example of one company going full-circle, student to teacher. In 2010, Geely bought out Swedish firm Volvo Cars, with both financial motivations and technological and management knowledge acquisition in mind. Geely's success and subsequent shift in priorities for its partnerships is then evidenced by its 2017 purchase of a 49.9% stake in Malaysian car maker Proton.

"It was almost the opposite, Geely was the much more sophisticated partner of the two," says Lawrence Jin, Chairman of the Global Chinese Services Group at Deloitte China. "Geely brought some of the best models into Proton, whether that be the manufacturing technology, the supply chain or in product development."

Not plain sailing

Despite the vast amount of potential benefits, these newer commercial partnerships can often be tricky to execute. The first, and perhaps most obvious issue, is that even with profitability and growth in China, success in a new venture is not guaranteed. JD.com has recently exited the Thai and Indonesian markets—the platforms in both countries were joint ventures with local partners—after failing to beat out other Chinese-backed competitors.

There is also competition from other countries, including Japan and South Korea, whose companies are already embedded in markets. Both countries have been investing heavily in the region, with a particular focus on high-tech industries such as robotics and renewable energy, as well as automotive manufacturing.

"Competition is always going to be fierce because, especially in Southeast Asia, you have the European and US multinationals and the Japanese are very well entrenched in the marketplace," says Jin. "Toyota is a great example of a company that has already been in the market for around five decades or so."

This has made it more difficult for Chinese companies to establish a dominant presence in the region, but at the same time, has forced them to become more innovative and competitive in their approach.

Different levels of legal protections have also been barriers to harmonious relationships. In China, trust and good faith both have a higher relevance in the dispute resolution system. This means that if a dispute is brought to court, the court may look into the fairness of the contract and determine which party is being unfairly treated and make a ruling based on that, even if the contract does not expressly provide for the parties' respective rights and obligations.

"But if you look at the legal systems in several ASEAN countries that follow common law regimes, it's entirely different," says Herg. "If you don't have those terms set out clearly and specifically in the contract, it will be difficult to avail yourself of the intended protections."

Uncertainty over the similarity of long-term goals is another issue that is increasingly coming to the fore. Given that the majority of partnerships featuring Chinese firms in manufacturing, infrastructure and consumer sectors have been established within the last decade, many are only now reaching long-term status, and they have no blueprint to follow.

"Even with the best intentions, after a while expectations from both parties could start to differ," says Shen. "Many Chinese companies are still trying to learn how to deal with that phase of the relationship."

South central

While the more equitable partnership style is seemingly thriving in some areas of the continent, frosty diplomatic relations, among other concerns, are hampering its development in others.

"Chinese partnerships in Asia are trending in different directions in different areas," says Shen. "Relationships in some areas of the continent are deteriorating a bit, especially when compared to Southeast Asian relations."

The difficulties with partnerships outside of Southeast Asia are more fundamental, and there are concerns about China's growing economic involvement in some countries and the potential for it to lead to outsized political influence. This has been particularly evident in countries such as Sri Lanka, where worries about Chinese influence have led to tensions with the local population, and with India where Chinese apps and telecoms companies have come under increased scrutiny.

In addition, there have been concerns about the quality of Chinese infrastructure projects in some of these countries, leading to questions over their long-term sustainability and casting doubts over future collaborations. One such example is Hambantota Port in Sri Lanka, which was financed by a large loan from China and completed in 2010. But by 2017, the Sri Lanka government was struggling to repay the loan, in part thanks to the lack of commercial traffic to the somewhat inconveniently placed port, and was forced to lease control of the port to China for 99 years in a debt-for-equity swap.

"Chinese businesses have undertaken a vast number of infrastructure projects over the past few decades, and in many places they have done a good job," says Stephane Grand, President of S.J. Grand, a professional services firm based in Beijing. "But in some cases, whether the results will stand the test of time is unclear."

There are some examples of the newer style of Chinese business partnerships outside Southeast Asia. For example, in January 2023 the Indian government granted preliminary approval for 14 Chinese companies to form joint ventures with Indian firms to supply parts to Apple in a bid to develop the country's electronics manufacturing. They join existing Apple manufacturers Foxconn, Pegatron and Wistron in the country.

But in general, there are currently more barriers than opportunities in these areas.

"When comparing Vietnam with Bangladesh, for example, it is often cheaper, easier and more reliable for Chinese companies to produce the same goods in Vietnam, so they will choose the former because of the stronger market and skilled workers," says Shen. "Many South

Asian countries in particular are limited less by the politics and more by the strength of their market and labor forces."

Partner preferences

For businesses and governments outside of China, while there are many similarities between how SOEs and private enterprises run, there are also key differences when it comes to engaging in a partnership with either. Stylistically, management and decision-making within either type of company reflects the Chinese way of doing business. The key difference is what each can offer.

"The major difference isn't the management styles," says Taube. "It is that the so-called private companies are smaller, nimbler and more able to flexibly react to local circumstances. Whereas the SOEs, in particular the really large ones, can just push themselves into a market. They have state backing, all the finances they need and solid diplomatic support that really helps in securing licenses and permissions."

While this demonstrates some of the benefits each business type can offer, there are also contrasting drawbacks. "The downside with the SOEs is that the decision-making process can be quite a bit slower since you're not simply dealing with an entrepreneur who can make an executive decision," says Edward Radcliffe, partner at Vermillion Partners, a global financial advisory firm. "On the other hand, the private sector can have difficulties getting cash if they are not already flush, and getting funds out of China can also cause delays."

Southeast Asian companies looking for prospective Chinese partners would appear to prefer private companies over SOEs, but a shift is taking place. "The knee-jerk reaction has always been a preference for private," says Radcliffe. "But that is changing thanks to Xi Jinping's reforms as well as COVID. People see the SOEs as more solid and reliable, even if they are slow."

Coming in

Until recently, a joint venture with a Chinese partner was a legal requirement for a foreign company to be able to operate in many areas of the Chinese market. Although this posed a barrier for certain companies, large especially ethnic Chinese-owned businesses in Southeast Asia have shown an appetite for the country. "These businesses in Singapore, Malaysia and Indonesia were the pioneers," says Jin. "They have the cultural linkage and have been here, in some cases, for 40 years or more."

The JV requirements for almost all industries have been scrapped in the last few years, but COVID-related disruptions replaced it as the main barrier to increasing overseas investment and business involvement in the country.

"There hasn't been much new in terms of businesses looking to the China market recently," says Taube. "There has been a small amount of reciprocal investment from some areas, aimed at strengthening existing cross-border business models, but not much. But given that the restrictions are seemingly behind China, there is a logic to expecting an increase over the next few years."

Together forever?

With the maturing of the first real cohort of Chinese cross-border partnerships, which often took the form of full acquisitions, there are a number of lessons that Chinese private enterprises and SOEs have learned.

"Chinese companies are becoming more farsighted in terms of decision making," says Herg. "This means that in the future we're expecting to see Chinese business partnerships increasingly taking the form of joint ventures or other forms of collaboration to enhance their understanding and integration into the respective local markets."

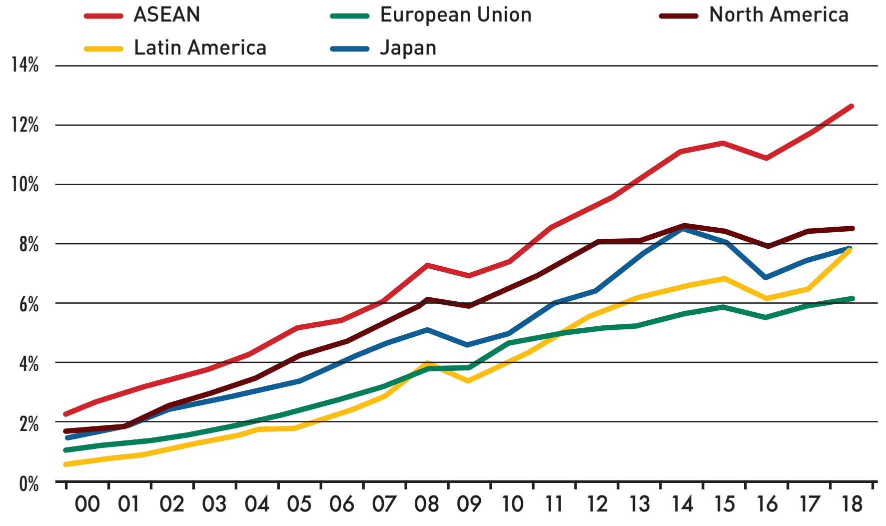
The changing nature of globalization means that China's outgoing businesses have been moving away from the West and refocusing on developing their involvement and the value chain in Southeast Asia in particular.

The fundamental intention for many of these businesses is accessing new markets as well as securing strategic supplies, but Chinese companies are increasingly realizing the benefits brought about by having more equitable partnerships with endemic businesses, rather than just buying them out completely or muscling in.

"In contrast to more developed countries which can often be harder markets to penetrate for various reasons, Southeast Asia in particular offers room for rapid development and there are a number of production, consumer and supply chain advantages," says Jin. "If you look at the global stage and ask where is the right place to go and make money but also help their globalization agenda is, it's there."

VALUABLE ASSETS

The percentage of overall value added by China to manufactured products is most pronounced in ASEAN regions



Source: OECD

entertAInment

Intellectual property will become an even more important commodity after the adoption of modern AI tools in digital entertainment production

By Alex Xu, Director and CEO of MultiMetaverse

AI in some form or another has always been a necessary element of making computer games, and when I started out as the first game developer in China in 1994, I was already employing it even in a simplistic form. But today, we're seeing something of an AI watershed moment, not just in the entertainment industry, but across business as a whole.

The last few years have also seen increasing discussion of the metaverse and how this will shape the future of digital entertainment. We're still in the early stages of metaverse development and there are varying predictions on exactly what form it will take, ranging from multiple individual worlds with limited interaction, to fully-fledged all-encompassing universes.

The explosion of interest in and adoption of AI tools in recent months is also adding another dimension to the development of the digital entertainment industry as a whole. Given my history of involvement in gaming business development and now as the CEO of an animation company, I have seen the development of both of these phenomena over the past 30 years, and foresee even greater changes to come.

AI in particular, is going to permeate almost every aspect of our digital lives, affecting the way we work and create, and spend our leisure time. There are many reasons why I am optimistic for the future, but there are obviously also some concerns.

MultiMetaverse

What constitutes a metaverse varies depending on how wide a view you wish to take. At the lowest level, you can consider an individual game as a metaverse, with its characters, storyline and universe as a stand-alone product. Above that, there are some games that include mixed IPs such as the fighting game *Super Smash Bros.* which includes characters from Mario, Pokémon and Zelda, amongst many others.

Looking wider, there are products like *Decentraland*, *Roblox* or *The Sandbox*, which offer a central world that you can log into, with multiple different games and activities available within this world. Beyond that, you could also even argue that Amazon Cloud is its own metaverse, given that it is a centralized storage space for a huge amount of content.

For many people, including Mark Zuckerberg at Meta, a vision of the future metaverse falls along the lines of *Decentraland* and is akin to the world depicted in the film *Ready Player One*. Put on a VR headset and other accouterments to provide a more immersive experience, and log into a central digital world, from which you can go anywhere and do anything. You have a single avatar, and that avatar constitutes your presence in the ever-expanding metaverse.

I, however, believe it will remain closer to the simpler definition that I described above, and there will be a great number of metaverses—that is why I named my company MultiMetaverse—with each providing a separate world in which you can enjoy various experiences, with little or no overlap. An example would be a gamer deciding on Monday to play a game where their character is a dog in a world of dogs, but the next day playing a game where they are a Transformer in the *Transformers*' universe. The worlds are unrelated, and users don't consider other possible worlds until they log off from the first. Progress made in one metaverse does not affect the other.

To draw a comparison with the real world, we can imagine that a person inhabits several metaverses, one through their job and their colleagues. But when that same person leaves their job, they may take part in sports as part of their downtime and for the most part that would be in another metaverse with a mostly separate group of people. There will also be several other parts of their lives, such as family and friend groups, that constitute further metaverses. There may be some overlap between the worlds, but for the most part, they are largely separate and self-contained.

A major reason for this prediction relates to intellectual property (IP) ownership, which will play a major role in determining which worlds can interact with each other. At the moment, only Disney would be in a position to collide fictional worlds in a meaningful way, but they are a unique example.

Each different IP has its own lore and gameplay style and to combine more than one, there are a number of integrity issues to be addressed. The reason that a game such as *Super Smash Bros*. can exist with multiple unique IPs is that there is very little lore-based gameplay in fighting games. The main element of the game is to simply beat your opponents. But other game structures don't have this luxury, and this will stop the intertwining of each separate metaverse in a meaningful way.

Alex Xu is the Director and CEO of MultiMetaverse, an international animation and entertainment company. He also has over 29 years of experience working in the gaming industry, both in China and internationally.

AI

Right from the very beginning of game development you needed to create some form of AI to make the environment and non-player controlled (NPC) characters work. It used to be a much simpler form of AI than we have today—using a fixed knowledge base and simple decision tree to ascertain outcomes—but it was AI nonetheless.

In-game uses of AI have come a long way since then, and in some areas we now have computers that can now mimic the human brain, depending on how they've been programmed, and display a good level of IQ. ChatGPT is an excellent recent example, offering people a glimpse into the future possibilities of AI.

But one thing these tools cannot yet do is develop a level of emotional intelligence or EQ, and it is the subtleties that come from a high EQ level that are required to improve the digital content we have today. Users care about stories and how immersive a world is, so subtle tweaks of NPC behaviour in games using the same underlying software can decide whether a game is a successful one and whether it can make a lot of money or be a total failure. It's mostly based on the human psychology model and is something that AI cannot do yet.

When it comes to the actual production process of digital entertainment products, many game producers have for a long time been using tools such as Houdini—which helps with AI generation of environments—but we are starting to see more changes with the increased availability of AI tools. Things like Midjourney are already being used for the creation of sketches and concept art, and some aspects of voice-over work can also be AI generated, although there are again some EQ limitations there.

The pace of adoption is still slow, however, and the key changes will only come in a few years' time when companies that create the major engines that games run on, such as Epic and Unity, start properly incorporating AI tools into their development software. For the creators of

> **Markets in other countries aren't so large, but there are still opportunities to be found with localized IP that is already embedded in that country's zeitgeist**

AI products, such as Microsoft and OpenAI, specific industry applications are too small for them to concentrate on, and small companies will not have the capability to add AI into their gaming production due to cost and knowledge limitations.

Once these tools are included by Unity and Epic, game production will go through a whole host of changes. The costs of creating a new product will drop dramatically and we will likely see individual creators being able to do at home what entire studios today employ hundreds of people to do. A single person being able to create something like the movie *Avatar* in six months will be a game changer and will result in a flood of new, high-quality content.

But this also means the number of people employed by large studios will be massively reduced. I am in two minds about this. As a boss, I am happy because my costs will drop and I can create better and higher-quality content for less, but I also have to lay people off. How are they going to make a living?

One possibility is, that these people will be able to create at home and they will not be limited to creating another person's vision. I currently employ around 300 people in my animation studio, many of whom have incredible ideas, but realistically we can only greenlight maybe two of those ideas a year. People enter this industry to be creative and with the help of AI tools, they won't have to pray to a boss for funding anymore.

Plans for the future

With these changes in the pipeline, many companies, including my own, are trying to work out how to tackle the future. Our approach will be to focus on the acquisition of different IPs from around the world. The mobile games that we produce using our animated characters as interest drivers are wide-ranging, we can find the best model to fit different IPs to produce a profitable and fun game.

One of the benefits of the China market is that it is quite large, so in order to be somewhat successful you only need to corner a small percentage of the market. In China, our main show *Aotu World* has a fan base of around 30-50 million people and can offer us a solid and consistent income.

Auto Aotu: the characters from MultiMetaverse's Aotu World

Markets in other countries aren't so large, but there are still opportunities to be found with localized IP that is already embedded in that country's zeitgeist. Large entertainment providers such as Disney or Netflix are mostly interested in IPs that can be disseminated internationally, rather than content that only has a limited reach within one country. There are a very limited number of studios across the world who know how to make profitable mobile games, most of these game studios only do subcontracting work on larger PC/Console games for big Western gaming companies. Because of this, they are unable to monetize their local IPs effectively.

Our plan is to take localized IPs from around the world and use our China team to develop mobile games for those markets. We already have a number of different game modes, ready to be retrofitted with the characters and plots from the purchased IPs. By using IP that is recognizable in a certain territory, we are setting ourselves apart from the vast swathes of original new content that will be created by individual developers and companies using AI tools in the future.

For those that aren't in the position to purchase IP outright as we are going to, licensing will be the only way. But the point is that, without an obvious emotional connection to your content, it will be hard to set your product apart from the ever-expanding crowd.

What's next?

Looking to the future of digital entertainment in general, I foresee the large platforms utilizing AI-based distribution methods becoming even more of a monopoly. TikTok for example, will see a massive wave of new content which will be ever-better targeted at your own tastes, which means you will be more likely to use it. This also means that it is increasingly unlikely for you to see the same content as other people, meaning that IP will become more scattered rather than more centralized. Big platforms are likely to become increasingly powerful, and I would expect content creators to lose some of their power in the market. So, owning already established famous IPs will become more and more valuable.

Just the Start

David Roth, CEO, The Store - WPP, Chairman BAV Group, the global retail practice of WPP, discusses the fact that today's AI tools have only just begun to remake industries and economies across the globe

AI tools have been going through research and development for decades now, but the recent rapid commercialization of tools such as ChatGPT or image-generator Midjourney have brought about a level of public awareness for AI not seen before. While these tools may seem, and to some extent are, revolutionary we are clearly only just skimming the surface of the capabilities of AI.

In this interview, David Roth, CEO of The Store EMEA and Asia, the global retail practice of WPP and Chairman of BrandZ and BAV Group, discusses the impact of AI tools on the branding and consumer industries, the need for legislators to catch up with current AI technologies and the fact that we are at the beginning of what is likely to be a hugely developmental period for the world as a whole.

Q. To what extent would you say the branding and consumer facing industry has been impacted by the commercial availability of AI models such as ChatGPT?

A. It is very contextual, because I think all industries, including the advertising industry, have been caught out. Not by AI itself as it has been around in some form or another for 20 or so years, but because of how quickly it's become consumer-focused. ChatGPT is a good example of AI moving from a research environment to a commercial environment. On top of this, the other thing that's been quite extraordinary is the speed of adoption, both from a consumer perspective, and also from a commercial perspective of how quickly people are starting to do some really interesting things that have commercial, and obviously from my particular discipline, marketing applications so you can now go from having a thought to implementing it in five minutes.

Q. With the speed of change toward commercial availability, how soon will it be before we see the true impact of the technology?

A. I suppose because of the speed, we're forgetting that the adoption of AI applications is still in the nascent phase. The impact this is going to have is going to be massive and I think we are yet to scope out exactly what that impact will be. There are some existing applications, but for the most part we are seeing glimpses of potential applications and some of those are very distant right now. It's an amazing proposition and we are going to be capable of creating things that have never been able to be created before, but you also realize that we are functionally still at day one. The direction is clear, but the speed of travel and what will appear along the way are still very unclear. That's both very liberating and very scary. If you look at this from a political dimension, I'm not certain there's been an adoption of technology that has exercised the political environment as much as this has in such a short space of time. It usually takes politicians and governments 10-15 years to get to grips with new technology and start to understand what the legislative framework around it is going to be. But you can't do that with this, it's pretty obviously an unstoppable trend.

> The optimum use of AI technology is when you have complete transparency in what's being fed into the various different models

Q. What are the benefits and drawbacks of using AI tools to create marketing content across mediums and how does this compare to solely human generated content?

A. You can split this into a number of areas. The first is clearly speed. AI tools will speed up all sorts of processes, not completing them, but taking you from, for example, zero to 50% much quicker than a human currently can. And in a few years, when people have optimized the desired outputs, it could well be something closer to zero to 80%. Of course, with speed also comes productivity. But with productivity there is also a potential reduction in employment, and that's a huge issue that needs to be addressed.

Another impact is the ability to use the technology across various different parts of the marketing mix and join them together in a coherent and cohesive way. This will have an impact on creativity and craft skills, fast-tracking new marketing environments and creating deeper relationships with consumers. For example, the digital practice of using 2D objects to create 3D objects to simulate different environments has been unbelievably prohibitive. But this type of technology totally simplifies this process. That is just one example, and the more of them there are, the quicker the move to a more affordable and immersive type of marketing platform.

Q. To what extent are there real risks to transferring responsibility of content generation to AI tools?

A. We have so much universal visibility of products through things like Amazon, Alibaba and JD.com. But the brands attached to them denote a certainty of expectation and have great importance because of the trust they hold. People often purport that brands have become less important because of the information consumers have at their fingertips these days, but actually the reverse has happened. Brands are becoming more important because of the sheer amount of choice available and consumers do need and value curation of that choice, and they trust brands to do it.

If you add AI into the mix, the questions then become: What is the trust relationship we're going to have with artificial intelligence? Who are we trusting? Are we just trusting it because it's new? I think perhaps we will end up with delineations of AI tools, maybe groups like the EU, trusted existing brands or even a completely new brand could certify trustworthiness via some sort of certification.

It will also be important to make sure that the data going into the AI tools is as bias-free as possible. People have inbuilt bias, socialized or otherwise, and transferring this into the function of AI tools even unintentionally could have serious long-term consequences. Ensuring that computer vision algorithms, for example, are universal has been a big topic of debate, especially as you start moving the models from country to country.

Q. How are you using generative AI models in your day-to-day work, whether it be companies you work with or you personally?

A. Details are hard to say, due to confidentiality, but what I would say is that everybody is experimenting, either out of interest or fear thanks to some board director grilling them on what they are doing about AI. In terms of broad categorizations, there is the use of AI for improving internal processes and helping to understand and use corporate knowledge.

Then there is the external, which is around the consumer proposition. So there are different types of consumer propositions that start to come out of these technologies which enable brands to have a deeper, more meaningful and more trustworthy relationship with their consumers. This might see the use of AI to assist with analyzing customer feedback to improve product development and customer-facing processes.

Q. Who are the main players in terms of generative AI technologies, both in China and internationally?

A. As with any disruptive technology, it provides an opportunity for new players to suddenly enter into the mix in an environment that was originally shut out to them by existing brands with good positioning and plenty of resources. But something like this has the capacity to be phenomenally disruptive. If the current players of today, like Microsoft, Google or Baidu, don't cement their position in the space, they will find it significantly weakened and we're likely to see a whole new set of businesses in a few years' time.

The question for me is whether there is going to be a baseline technology stack that everybody dips into in order to run their particular applications or will it be the main players, because this is a very expensive game, out there using their own base level in order to create things that are differentiated and distinctive?

If you look at it from a global perspective, this is something that will have to be global. It isn't something that can just be developed by the UK, US or China, it's going to have an impact on every single country around the world. It may well actually be something of a leapfrog technology, like with China going from no phones straight to mobile phones, that helps springboard development in countries in the global south. For the global north, we'll see rapid development and for China in particular, it used to develop 10 times faster than anywhere else, but it could almost be double that at this point.

Q. One of the reasons China is so advanced in their fintech development is that they leapfrogged credit cards, while countries like the US and UK are slowly weaning themselves off them. Do you foresee any sticking points like this for AI development?

A. The optimum use of AI technology is when you have complete transparency in what's being fed into the various different models. So I think there is a big question about the freedom of data pools in various different countries and how easily AI can access and ingest data. It will also affect which AI engines Country A or Company A choose to use, depending on the transparency and universality of data. Again, this is probably somewhere that needs politicians and legislators to step in.

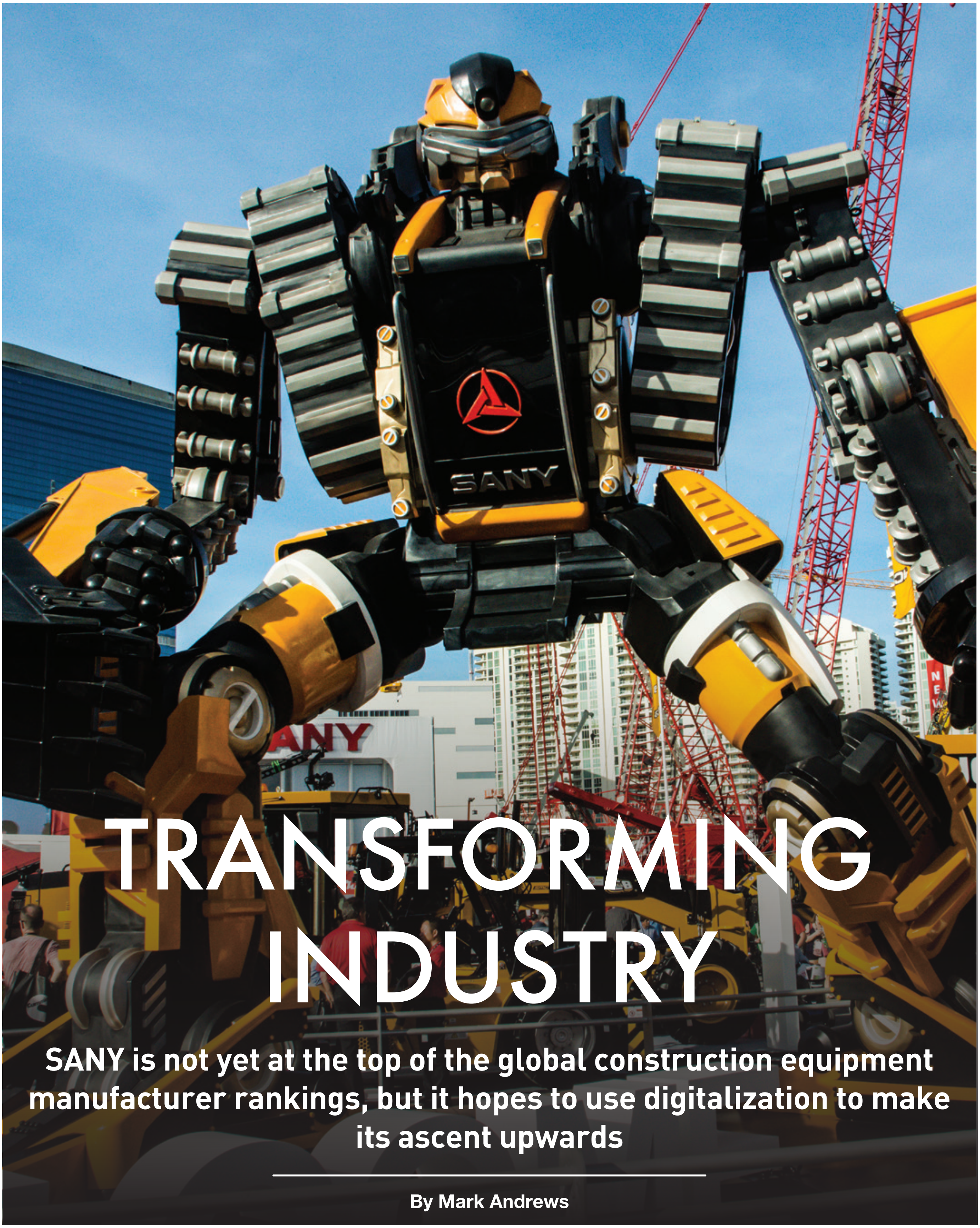
Q. Looking forward, what other opportunities do you see for AI?

A. My hope is that this type of technology enables the world to become more equal. It is hard to envisage how that might work just yet, but we have a massive opportunity to level out the disparity between even the very poor and the middle class in countries around the world that have so far been unable to take advantage of the various technologies invented over the last few decades for whatever reason. I think it can be a fantastic contribution to humankind. ChatGPT has done an amazing job in terms of commercialization and there are a massive amount of other applications being developed on various data sets, but we have to be careful of where this all goes and really get ahead of developments because they will come thick and fast and probably exponentially, and we are already quite far behind in terms of understanding and especially in terms of legislation.

Interview by Patrick Body

David leads WPP's BAV, the largest, most comprehensive Brand Analytics platform in the world. David is an acknowledged expert in branding and consumer change in China. He is a leading authority on digital, artificial intelligence and voice recognition in retail.

People often purport that brands have become less important because of the information consumers have at their fingertips these days, but actually the reverse has happened



TRANSFORMING INDUSTRY

SANY is not yet at the top of the global construction equipment manufacturer rankings, but it hopes to use digitalization to make its ascent upwards

By Mark Andrews

Sustained R&D spending has given SANY a strong history of innovation and should help in the shift to more digitalized production

In July 2022, the first excavator rolled off the production line of SANY's new robot-dominated manufacturing plant on the outskirts of the Indonesian capital of Jakarta. The KIM Industrial Plant is the first Chinese "Industry 4.0" production base outside of China in the excavator industry, boasting a 5:1 ratio of robots to humans, but it certainly will not be the last.

SANY has gained its position by stressing robotic digital production more than any other producer globally. It now has 40 of these robot-dominated plants mostly in China, which embrace the latest manufacturing technologies, from proprietary intellectual property to the Industrial Internet of Things (IIoT). Such factories can supply a considerable competitive advantage, which SANY needs as it charges toward becoming the largest construction equipment manufacturer globally.

SANY also boasts two World Economic Forum-certified "Lighthouse Factories," which take technological adoption to a higher level, the only two such factories in the heavy equipment manufacturing industry globally. The use of robots and technology has allowed the SANY plant in the central Chinese city of Changsha, to double its productivity when compared to standard plants and reduce unit manufacturing costs by 29%.

SANY currently sits in fourth place in the global construction equipment manufacturer rankings behind Caterpillar and Komatsu and Chinese state-owned XCMG but the company's ambitions are clear. "SANY is striving to build a global brand and become an industry-leading equipment manufacturer," a SANY spokesperson told *CKGSB Knowledge*. And the company's high-tech approach will help it significantly in getting to the top.

Manufacturing business

SANY Group can trace its origins back to a welding materials factory founded in 1986 in Lianyuan, a city in China's central Hunan Province. In 1991, the company was renamed SANY Group and its headquarters moved to the provincial capital of Changsha.

The group has since dramatically expanded and diversified, both geographically and in terms of the services that it provides. There are now 11 main companies, with almost 30 total subsidiaries, across the world under the SANY Group banner, including heavy equipment and engineering tool manufacturers, a bank, two types of insurers, a property developer and a polytechnic college in Hunan.

Although they seem disparate, each of these individual companies holds something of a link to SANY's core business. The Bank of Sanxiang is the first private bank in China oriented towards the integration of industry and finance and the Hunan SANY Polytechnic College offers engineering courses, among others.

While many of the businesses under the SANY Group banner are registered, and in some cases listed, in China—SANY Heavy Industries went public on the Shanghai Stock Exchange in 2003—there are also subsidiaries registered in India, Europe and the US. SANY has production bases in Brazil, Pakistan and Indonesia, among other places.

The company has been exporting its products since 2006 and in 2021, SANY's sales reached $16 billion, of which $3.72 billion were attributed to sales outside China, a 76% increase on the previous year.

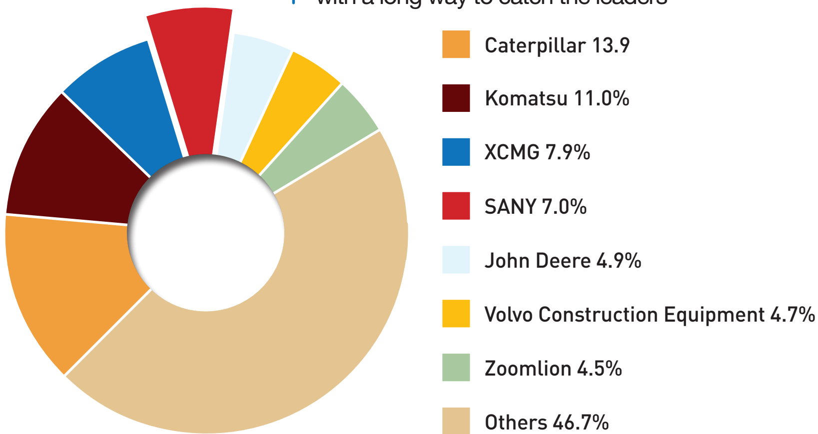
SANY has mostly grown through sustained investment in R&D and a service ethos. "Although SANY has received various subsidies from the Chinese government throughout the years, the company has mostly grown to become one of the world's largest machinery makers through the reinvestment of its profits," says Rashad Sablouh, an independent construction and mining machinery consultant.

"Sticking to our mission 'Quality changes the world,' SANY invests about 5% of its annual revenue on R&D and in terms of technology development, SANY holds 10,613 patents," says a company spokesperson.

According to the 2022 Yellow Table, a ranking of heavy equipment manufacturers made by construction media company KHL, SANY was fourth in global heavy equipment sales in 2021,

HEAVY LIFTERS

SANY is the fourth-largest heavy equipment manufacturer in the world, well ahead of the competition below but also with a long way to catch the leaders



Source: Global Construction Guide

trailing international rivals Caterpillar and Komatsu, and Chinese firm XCMG. Sales in 2021 for the world's 50 largest construction equipment OEMs amounted to $232.7 billion.

In terms of heavy equipment manufacturing, SANY's core product line, the company has managed to take a global lead in some categories. For 11 years, SANY has been number one for excavators in the Chinese market and since 2020 it has been the global leader with around a 15% share. SANY sold more than 100,000 excavators in 2021, generating $6.3 billion in revenue, 40% of the company's overall revenues.

While there is no shortage of Chinese competitors, there has only been one other aside from XCMG to really challenge SANY. "One of SANY's main local competitors is Zoomlion, which has recently beaten their Guinness World Record for the tallest concrete truck pump, with an impressive 101m," says Diana Derval, Chief Investigator at DervalResearch.

Built different

SANY broadly operates in four main business areas: excavators, heavy equipment, mining machinery and renewable energy. The company competes effectively in each of these fields by providing a combination of advanced technology and services.

But large-scale digital transformation has been crucial to the success of the company in building an efficient organization from its vast array of businesses. As part of the transformation, SANY has developed an Industrial Internet of Things (IIoT) platform to spearhead the wider digitalization of the company. The platform, RootCloud, has since been spun off into its own company.

RootCloud surveyed all of SANY's 90 factories across China and worked out that 6,000 of the 8,000 pieces of manufacturing equipment were "dumb," that is not connected through IoT technologies. It determined that this resulted in a serious lack of coordination and the siloing of gathered data which was having an impact on SANY's business.

RootCloud's analysis had a huge impact and led to SANY's massive digital transformation. Speaking at the 2018 China's National People's Congress SANY Chairman Liang Wengen said, "Either say goodbye to the past or say goodbye to the industry."

SANY's transformation had begun in 2012 with the opening of its first smart factory, which is called the No.18 Factory. The production process was simplified and mixed-model assembly—assembling multiple different products with similar production processes in the same place—was introduced, saving space and materials and thereby simplifying manufacturing. Most importantly, the new factory required less labor and thus played a part in SANY reducing its workforce by 20,000 between 2012 and 2021 despite increasing its output.

First implemented in 2017, the RootCloud platform covers tools such as digital twins to enable more efficient testing and R&D as well as data collection and AI analysis tools, grew out of SANY's drive to integrate the Internet of Things (IoT) into both its production and products.

The No. 18 Factory has since been designated a Lighthouse Factory, and using the RootCloud platform it produces 30TB of data every day from 1,540 sensors and 200 networked robots. Before RootCloud, the analysis of 10GB of R&D test data could take up to three hours, but it can now be achieved in under five seconds.

"SANY is utilizing several emerging technologies including artificial intelligence, big data, and the IIoT to enhance its operational and service capabilities," says Sablouh.

The use of IIoT also enables greater operating efficiency in SANY products, enabling the "+ service" portion of SANY's new ethos. Not only does the technology help with diagnosing problems when there are stoppages in the field but it can also be used proactively to prevent damage to the equipment. It is innovations like these that have led to SANY being named one of the "50 smartest companies" by *MIT Technology Review*.

Low costs are a part of SANY's appeal to customers, but particularly in international markets, the service it provides plays a large role in making it a global force. As of June 2022, SANY had established localized distribution systems in more than 100 countries and regions, facilitating quick service in those areas.

"In the US, there has been a rapid growth in the number of SANY dealers across the country. Most places where you will find CAT, Komatsu and John Deere dealers, you will now see SANY machines also," says Andrew Forrest, CEO of The Attachment Company LLC.

SANY offers a five-year, 5,000-hour warranty across all of its machines, an offer that surpasses all of its major competitors. "This warranty term combined with the competitive prices makes it a very good choice for customers looking to upgrade older equipment or buy new," says Forrest. "We hear from a lot of customers that are really happy with their SANY machines and these are the two biggest reasons that they tell us of why they chose SANY."

According to Sablouh, the total cost of ownership for a SANY machine can be 30% less than that of comparable top-tier manufacturers.

Digging a hole

While SANY's international business has been thriving over the past decade, it is now facing a number of threats to its expansion. In particular, the risks associated with China's decoupling from the West and the general negative perception of China in the US, are taking its toll.

"I think that there is now a negative connotation of Chinese-made equipment in the US heavy equipment industry," says Forrest. "I can imagine that being one of the toughest barriers to entry to the US market."

What may help SANY weather decoupling better than some of its Chinese competitors, however, is its emphasis on expanding the number of its overseas plants. Following on from the Indonesian factory, SANY has plans for ten more similar plants outside of China. "While most of the construction machinery and equipment companies manufacture their products locally, SANY has manufacturing facilities across the world, including in the Americas," says Sablouh. "And that can help with impressions."

The company, like many others in China, may also suffer short-term threats from the slowing of the Chinese economy, particularly in areas such as housing construction where the market is facing a variety of demand-side difficulties. For SANY's equipment business, though, these risks might be offset by the government's insistence on increasing infrastructure spending.

But perhaps the company's biggest upcoming hurdle will be concerns related to sustainability and carbon neutrality—SANY's products are being used in the so-far still dirty business of mining for commodities like cobalt and lithium used in products like solar panels and batteries. "SANY's business is by definition environmentally unsustainable and constitutes a serious ESG risk for investors," says Derval.

She feels that the management have yet to fully comprehend the problem. "Reading in SANY's last CSR report that 'water resource management' and 'community public welfare' were considered by the company and their stakeholders as a medium priority and 'climate change response' as a low priority was therefore quite surprising," Derval adds.

All windmills

But it is not all doom and gloom. SANY is already acting to make its product lines greener and also to make inroads into new greener product areas. In 2020, the company entered into a strategic partnership agreement with Chinese battery giant CATL.

"According to the agreement, both parties will expedite their joint development of new energy products in concrete machinery, mining machinery, cranes, port machinery, excavators and heavy trucks, alongside new big data-based technologies such as battery behavior tracking and fault self-diagnosis," says a SANY spokesperson.

SANY has already developed electric port tractors which are in use in the Port of Xiamen, off-highway electric trucks are being used in mining in Brazil and electric mixer trucks are also in development. Electrification across the range is set to continue. In collaboration with GPSC, Leadway and RootCloud, the company is looking at providing battery swapping and battery-as-a-service to its clients.

Founded in 2008, SANY Renewable Energy is also one of the world's top 10 wind turbine producers. In 2022, *Windpower Monthly* named the SE-17260 turbine as one of the top 10 onshore turbines for the second year running. Such recognition is likely to lead to further growth for this part of SANY's business.

Road to development

SANY's goal is to become a global brand and industry-leading manufacturer. To achieve this goal, SANY is concentrating on localizing production, greening products, and improving services, all underpinned by digital technology and solid R&D investment.

Xu Ming, SANY's Senior Vice President, recently said to industry leaders in Munich, "SANY's clients should never be concerned about the service or availability of equipment. All our equipment must be served and attended correctly." For operators of equipment, unscheduled downtime can be extremely costly and lead to delays in infrastructure projects.

But looking to the future is the real target and Ding Shifeng, project leader on the opening of the Indonesian factory, said in a company statement that, "being smart means to be farsighted, and so we are now refocusing from international sales to international manufacturing, especially intelligent manufacturing."

SALES GROWTH

China's two largest heavy equipment manufacturers still have a way to go before they catch up to the global leaders

2022	2021	Company	Country	Equipment Sales $mn
1	1	Caterpillar	US	32,069
2	2	Komatsu	JP	25,318
3	3	XCMG	CN	18,101
4	4	SANY	CN	16,048
5	6	John Deere	US	11,368

Source: Global Construction Guide

CKGSB BUSINESS CONDITIONS INDEX

Going Down

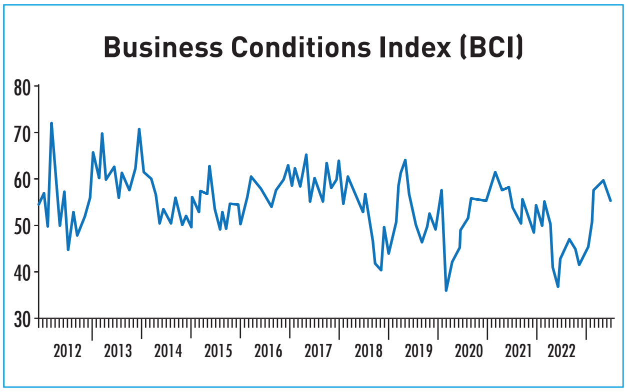
CKGSB's Business Conditions Index, reflecting confidence levels in China business, shows an all-round drop in business sentiment

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

The CKGSB Business Conditions Index (BCI) registered 55.0 in May 2023, sliding from April's score of 58.8, but remaining above the confidence threshold of 50.0. All of the indicators in this month's BCI also fell.

Introduction

The CKGSB Business Conditions Index (CKBCI) 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 a value below 50 means that the variable is expected to fall. The CKGSB BCI uses the same methodology as the PMI index.

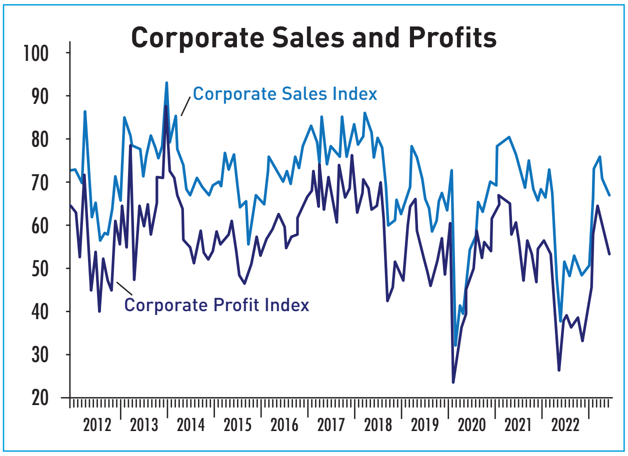


Key Findings

- All of the BCI sub-indices fell in May 2023
- Overall cost expectations was the only forecast to rise this month
- While there were drops all round, many indicators remained over the confidence threshold

Analysis

The CKGSB BCI comprises four sub-indices: sales, profit, financing environment and inventory. Three measure prospects



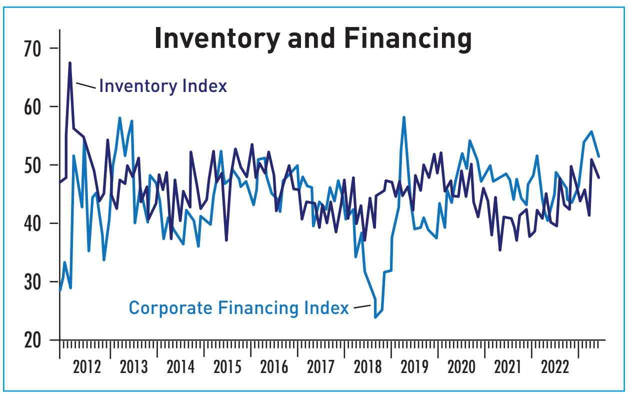
and one, the corporate financing index, measures current conditions.

The corporate sales index continued to drop, from 70.4 to 67.4, while the corporate profit index fell again from 59.6 to 53.9.

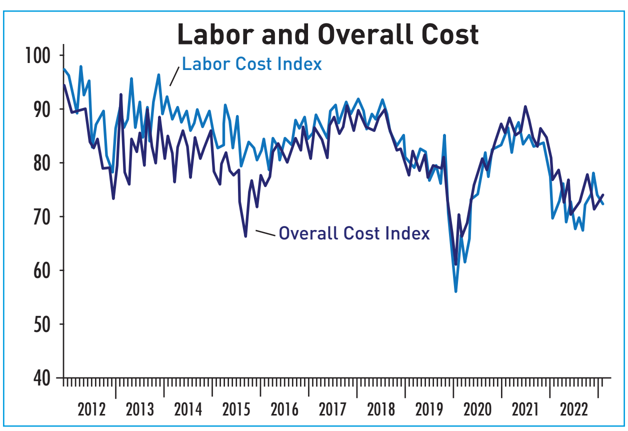
Corporate financing prospects fell slightly from 55.9 to 51.7, staying above the confidence threshold. The index for inventory fell back to 47.6 from 50.5, falling below the confidence line of 50.0 again.

While for the other sub-indices—sales and profit—a positive trajectory indicates growth, when it comes to inventory, a positive trajectory indicates falling numbers of goods held in warehouses and a falling index suggests goods are not being shifted as fast as companies would like.

Aside from the main BCI, we also forecast costs, prices, investment and recruitment demand over the next six months. This month, labor cost expectations fell from 74.4 to 72.9. The overall costs index rose slightly, from 71.9 to 73.8 this month. The rise in overall cost expectations is the only rise across the BCI this month. Although rising labor and overall

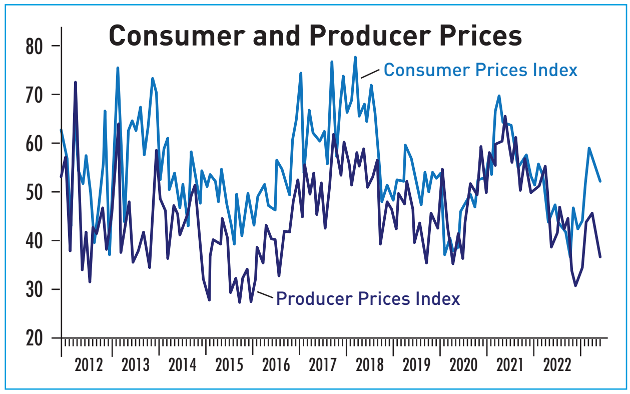


costs increase pressure on companies' bottom lines, they do not necessarily mean a deterioration of business conditions in China over the next six months. It could also mean the economy is improving, as companies are pushed to spend more as demand warms up. When the economy is improving, the

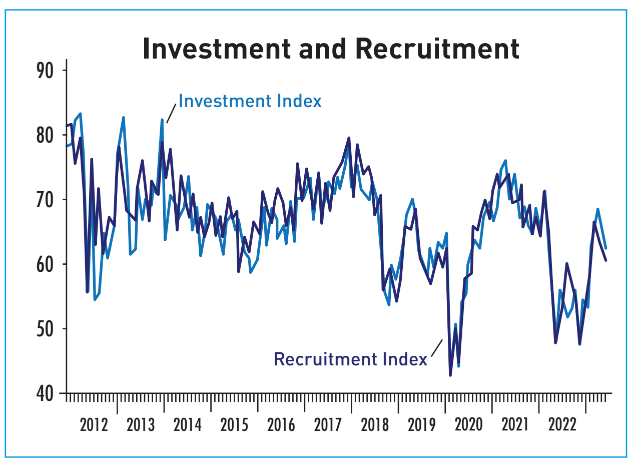


output or sales of enterprises increase, and more people and materials need to be invested in production, which may mean that the operating conditions of enterprises improve. It is when the unit costs of production or sales rise that companies feel the impact of worsening business conditions.

Turning to prices, consumer price expectations fell from 56.5 to 52.3. The producer price forecast fell from 43.0 to 36.5.



We now turn to investment and recruitment. These indices have both been at the more confident end of the scale since the BCI began. In the past few months, they have trended downwards. This month both fell, yet they remain above 60.0. Since the Chinese economy is largely investment-driven, and investment has a strong link with job recruitment, they are important to follow. In other words, these two indicators look at plans for expansion in China's business world. The index for investment fell sharply this month, to 62.7 from 68.2 last month; the index for employment fell slower, to 61.6 this month from 64.6 last month.



Conclusion

While there has been an all-round drop in the BCI, sub-indices and forecasts many of the indicators remain above the confidence threshold.

CKGSB CASE STUDY

Keeping Food Competitive

The digital transformation of KFC China has given the company an enviable consumer "membership" base and is keeping them well ahead of their competitors

by Sun Baohong, Dean's Distinguished Chair Professor of Marketing at CKGSB,
Huang Xi, MBA student at CKGSB and Yan Min, Researcher at the CKGSB Case Center

KFC entered the China market in 1987 with the opening of their first store in Beijing, and as the core brand of fast-food restaurant company Yum China, KFC has since become the leading fast food brand in the country. In 2015, Yum's China business accounted for more than 50% of its global revenue and as a result shareholders demanded that Yum's China business be split off and re-listed as its own entity. The next year, Yum formally divested its China operations, including KFC and Pizza Hut, and placed them under the Yum China banner.

The company, which now has about 13,000 restaurants under seven different brands across China, brought in revenues of $9.57 billion in 2022, surpassing the parent, Yum! Brands' $6.84 billion in revenues from the rest of the world. KFC China's development has played a major role in this success, with 2022 revenues of RMB 48.6 billion ($6.84 billion), nearly 72% of Yum China's, and reaching 9,094 stores across China—far outstripping McDonald's' 4,978.

Finding the recipe

The development of KFC in the Chinese market has gone through three stages. In the first stage, between entering the market and around 2000, KFC built on a brand image of "foreign fast food." The classic combination of fried chicken, fries and a Coke, and the American fast food culture it represented, was very attractive to Chinese consumers. The price and brand positioning of the products at the time were relatively high.

In the second stage, after 2000, KFC began to make adjustments to their offerings and introduced some products that were closer to traditional Chinese tastes, such as Old Beijing chicken rolls, Chinese doughnuts and other Chinese fast food. Behind the scenes, KFC also did a lot of work on localizing its supply chain, cultivating local suppliers and building its own logistics system. At the same time, due to the gradual saturation of stores in first- and second-tier cities, KFC began to expand to third- and fourth-tier cities, with the KFC brand also moving from high-end to affordable.

The third stage began around 2013-2014, when KFC found themselves facing three main issues. The first generation of customers had entered middle age and their enthusiasm for the product was waning, a new generation of consumers felt that there was no real novelty to KFC compared to other products and the emergence of a new swathe of fast food brands made market competition increasingly fierce. These issues, along with rising costs, particularly in first- and second-tier cities, and the impact of food safety incidents in the industry as a whole, resulted in declining profits for the company. Something needed to change.

Deciding on digital

KFC China management identified two directions for company transformation. They realized that they needed to consolidate KFC's core strengths and to optimize outlets, products, services and communications. They also understood that these changes would facilitate the second transformation, using digital transformation to empower KFC's business.

In order to do this, it was agreed that KFC China's existing IT department wasn't capable of successfully conducting the required digital transformation, thus the System Review Board (SRB) was set up to research new technologies and lead the company in upgrading its network infrastructure as well as introducing and developing software. Additionally, with social media becoming more popular, the Yum China marketing team focused on learning new non-traditional digital marketing methods.

When it came to consolidating its core strengths, the company focused on youth and individuality, adopting a development strategy that encouraged people to "eat, drink and play, all in one place." KFC focused on creating a warm, casual and stylish atmosphere through its restaurant designs, making them suitable not only for Western-style fast food, but also for things like afternoon tea.

Products-wise, the company stuck to its positioning as a "fried chicken expert," while at the same time developing more localized products and consistently updating its menu. To improve service and communication, KFC tracks the interests of younger people online, creating new channels to interact with these potential customers, making full use of cooperation opportunities with games, sports, entertainment, culture and other industries. For example, KFC cooperated with popular mobile game *Glory of Kings* to create a themed restaurant, as well as cross-over co-branding with popular games such as *Pokémon*.

For its digital transformation, KFC sought to integrate technology across the customer decision journey to enhance the brand experience, creating a robust member database to generate private domain traffic. In order to do this, KFC conducted in-depth research on customer behavior and the entire customer journey, including pre- and post-meal, to identify pain points and look for digital solutions through innovation.

Digital direction

Through various media, KFC now provides a wealth of product and campaign information to attract and inform consumers. Stores provide purchase access as well as offer coupons for repurchase or communication that supports users in having positive experiences through the purchase, use and sharing phases of the consumer journey.

The key part of KFC's success, however, has been the building and curation of its own private online domain through its app and other media and e-commerce platforms, transferring offline customers into online users. The company applies a series of AI algorithms to analyze user data related to behavior, using product reviews, among other things, to understand consumer preferences. This improves decision-making efficiency and provides more opportunities for product innovation.

This development has been achieved through work in three areas:

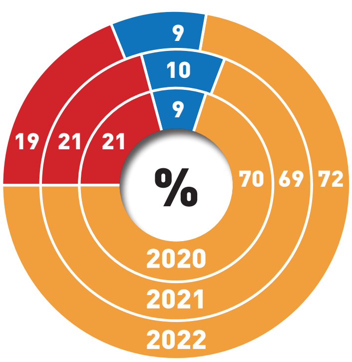
1: The role of the business

The main goal of digital transformation for brands is to attract consumers from the public domain to their private domain and keep them there. Public domain marketing, represented by advertising, aims to expand publicity and increase sales; while private domain marketing, which aims to maintain long-term relationships with customers, includes things like point rewards given directly to customers to increase the benefits of membership.

For KFC China, the public domain is an important way to engage consumers through paid advertising, key opinion leaders (KOLs) and social media. The company also has stores on almost all third-party platforms such as ele.me and Meituan and continues to utilize traditional advertising channels, for example, placing outdoor advertisements on subways, buses and roadways.

In terms of the brand's private domain, the KFC business center is concerned with

YUM YUM! | KFC produces the large majority of Yum China's revenues



	KFC ($mn)	Pizza Hut ($mn)	Other Income ($mn)	Total Revenue ($mn)
2020	5,821	1,730	770	8,321
2021	7,003	2,109	993	10,105
2022	7,219	1,960	924	10,103

KFC Pizza Hut Other Income

operating its four functional modules: online community, online store, offline media and offline stores.

KFC China has its own online media and its own e-commerce, with its own official website and microblog, as well as mini-programs on WeChat and Alipay that function similarly to the main app. In addition to ordinary chain stores, KFC has music-themed restaurants, movie-themed restaurants, future concept stores and so on, and also builds special delivery channels at gas stations, railway stations and universities. For offline media, KFC makes full use of its own catalogues and touch screen advertisements in offline stores to interact with customers.

2: The app

A brand's mobile application should easily facilitate customers' decision making and shopping. It provides easy access to the brand's marketing through digital content and online store options, as well as personalized information services to customers at any time, attracting their attention and increasing customer loyalty and conversion rate.

The functionality and design of KFC China Super App supports the above objectives. First, by giving away new user benefits and coupons, KFC encourages customers to sign up for membership through many channels such as store codes, WeChat, Alipay or Tmall, etc. KFC especially encourages customers to download the KFC app and sign up for membership to attract offline customers to become online users. After becoming a member, customers will immediately receive points and exclusive coupons, and they will also receive more points after ordering and spending. Users also have the option to sign-in, like and forward things to others, to enhance user activity and app usage time.

The various parts of the app, as well as these rewards, are designed to give the consumer a feeling of exclusivity and satisfaction.

3: Data Center

The concept of users being assets is deeply rooted in the approach of the digital team at Yum China. By the end of 2022, KFC China had accumulated 380 million registered members. Such performance is not only far better than KFC China's domestic competitors, such as McDonald's China, but also superior to KFC USA. Yum! Brands has not publicly released membership figures, but third-party agency data puts active membership of KFC's US app at just 10 million.

The use of such large quantities of data means that the picture of users created by the company's data team is increasingly accurate and the delivery of personalized smart marketing services will be more successful.

There are many examples of this in KFC's case: First, through intelligent advertising pushes, coupon distribution and other methods, the maximum scope for attracting customers will expand and improve customer repurchase rates. Second, it also allows for increasing customer unit purchase prices through offers such as coupons with a certain minimum spending threshold. Third, accurate pushing and precise marketing through data analysis can reduce marketing costs and improve marketing efficiency. Fourth, KFC can expand its business scope and develop new sources of profit growth: for example, when consumers place orders online, they will not only buy the meal itself, but also buy KFC's services, and customers pay for membership cards to get more professional services.

With this level of digital infrastructure already in place, KFC China is expected to be well positioned to carry out a further digital transformation into the Web 3.0 era.

Secret blend = success?

In terms of cost reduction, sales and marketing expenses as a percentage of operating revenue have decreased year-by-year, from 4.76% in 2014 to 3.78% in 2021. With the improvement of cost control, Yum China's gross sales margin and net sales margin have also improved by different degrees after 2014, although the COVID-19 pandemic did lead to drops in 2020-2021.

In terms of revenue growth, both EBIT (earnings before interest and taxes) and EBITDA (earnings before interest, taxes, depreciation and amortization) are growing steadily after the implementation of the ongoing digital transformation in 2014. KFC's net sales margin was almost zero in 2013 and the company even lost money in 2014, but steadily recovered in 2015-2021, reaching a level of 10% in 2020. In terms of improving efficiency, the total asset turnover ratio decreased from 2.1 in 2015 to 0.9 in 2021; sales per employee increased from ¥112,200 in 2015 to ¥139,600 in 2021, and net profit per employee increased from ¥5,200 in 2015 to ¥14,000 in 2021.

The three-year long pandemic caused a large number of restaurant companies to see their revenues and profits decline, but Yum China was not hit as hard as some of their competitors. The contribution of the company's digital transformation is clear: 89% of revenue from KFC and Pizza Hut restaurants in 2022 was generated through digital ordering, and, as a percentage of its total sales, KFC China's 380 million community members contribute about 62%.

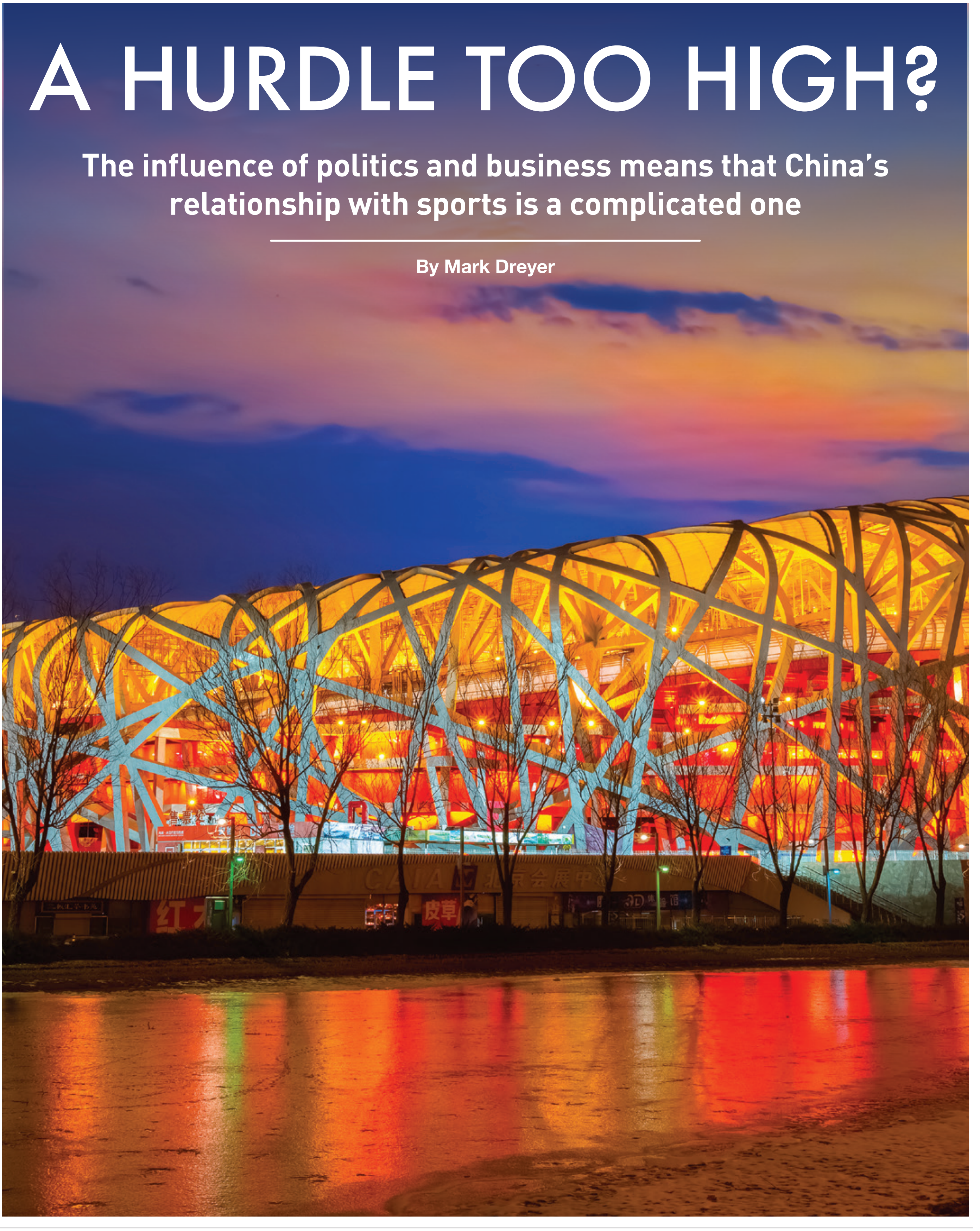
Due to its investment in technology and the number of new technological innovations it has tried, KFC is sometimes even referred to as a technology company that sells fried chicken. Beyond the content of this case study, which focuses on the outward facing digitalization of the company, areas such as supply chain, logistics and inventory management have also seen great strides in their digitalization. In 2021, Yum China opened digital R&D centers in Shanghai, Nanjing and Xi'an, which utilize a wide range of technologies to develop new solutions and services to further drive the company's end-to-end digitalization.

For Yum China, digital transformation is a key part of the enhanced competitiveness of the company. Joey Wat, CEO of Yum China, said, "We use digital to continuously strengthen the company's core competencies and widen and deepen our moat to forge a stronger business model to drive long-term growth." Their investment in digitalization has proven to be well worth it.

A HURDLE TOO HIGH?

The influence of politics and business means that China's relationship with sports is a complicated one

By Mark Dreyer



According to China sports expert Mark Dreyer, political support for the sports industry in China can be a double-edged sword

The one question I've been asked more than anything else in China is why the country appears unable to find 11 decent (male) football players despite its huge population of 1.4 billion. On the surface, it's a headscratcher; but dig a little deeper and it reveals a number of things.

First and foremost, Chinese people care about football. My time in China has been bookended by two Olympic Games—in 2008 and 2022—and the nation is full of sports fans, with football at, or near, the top of the list. But while sporting success for China at the Olympics has been so bountiful as to become almost routine, success in football has remained puzzlingly elusive. China's women reached the final of the World Cup in 1999, but 24 years later, China has never made it past the quarterfinal stage.

Meanwhile, the so-called "golden age" of the men's team came in that same era, with their sole appearance at the FIFA World Cup in 2002. They lost all three games, by a combined score of 9-0. It's been downhill ever since.

World Cup love affair

Chinese sponsors collectively spent $1.4 billion, or one dollar for each of its citizens, on advertising at the Qatar World Cup last year—more than any other country—but that spending is underpinned by the country's love of the sport rather than the success of its team.

Chinese companies sponsor the World Cup for a variety of reasons, including global brand exposure, overseas business opportunities, national pride and more, but imagine how much more attractive the tournament would be for companies such as Wanda, Hisense, Mengniu and Vivo if a Chinese team was not just participating, but actually flourishing there?

The country's next chance will come for the women later in 2023 at the Women's World Cup in Australia and New Zealand, while the men will aim to qualify for the 2026 tournament in North America. The men's tournament will be expanded from 32 to 48 teams, meaning that Asian teams will have roughly double the number of allocated spaces. That should, in theory, mean China has a dramatically improved chance of qualifying for the tournament, but I would estimate those chances at no more than 50-50, given their current standing in Asia and performance trajectory.

Sports, politics, and business

One of the things that has fascinated me during my time studying the sports industry here—and is a central theme of my book *Sporting Superpower*—is the interwoven threads of sports, politics and business. You can see examples of this in almost any sport, but football provides some of the most obvious ones.

Unfortunately, football clubs in China have tended to have failing business models. Unlike their European counterparts, the usual revenue streams, which include TV broadcast fees, ticket sales, merchandise and sponsorship, don't add up to nearly enough in China to cover the expense of a club's wage bill and running costs. But what they do have in their favor is the support of a significant entity, typically a local government, state-owned enterprise, or property conglomerate, and the political capital gained by bankrolling a club has historically more than made up for the lack in organic revenue.

In 2015, China rolled out an ambitious plan, complete with long-term targets, to overhaul its football industry, and this was widely believed to have the personal support of Chinese leader Xi Jinping. As a result, money poured into the sector from all sides. After emerging from a period that had been blighted by match-fixing, football was suddenly in favor and everyone wanted a piece of the action.

Losing its luster

But even before the pandemic began three years ago, the sport had begun to lose its shine. In the build-up to the 2022 Beijing Olympics, winter sports—not football—had become the most favored part of the sports industry, and as investors looked to gain their political capital elsewhere, the only thing football had to fall back on were its failing business models.

Fast forward to today, after three seasons of spectator-less matches due to stringent pandemic restrictions, and football in China is once again on the brink, with clubs broke or bankrupt and a wide-ranging corruption investigation purging senior figures that include former national team player and manager Li Tie and Chinese Football Association (CFA) chairman Chen Xuyuan. Against that backdrop, China's chances of qualifying for the 2026 World Cup look very bleak indeed.

"Each time the CFA, professional clubs and academies are 'cleansed'," says Rowan Simons, "it chops the top of China's football pyramid clean off. All that is left is the foundation, where people love the game so much they still want to play." Simons runs China ClubFootball, a network of junior football academies, and has been preaching the values of grassroots football in China for well over two decades.

"World football has fallen in and out of love with China many times over the last 40 years, while seldom addressing the needs of football's core base," he says. "Once the Li Tie case reaches its conclusion, the grassroots will be all that is left with value—yet again. If we do not start there, then where?"

Double-edged sword

Political support in China can be a double-edged sword for the sports industry. For example, having a national football association that's controlled by the government—as the CFA appears to be—directly contravenes FIFA's governing statutes. Additionally, when the country's leadership stresses the importance of the successful development of football, that also places an extraordinary amount of pressure on senior figures in the sport to achieve their goals.

But the government's significant role in shaping the sports industry also paves the way for many of the top sports organizations and national teams to achieve success on the global stage. The most obvious example is in Olympic sports, where Chinese budgets and resource allocation for its elite athletes are the envy of the world.

This relationship between politics, business and sport in China is like a marriage of convenience. The government uses sports to promote its political agenda as success on the global stage boosts national pride and soft power; businesses, meanwhile, can use sports as a way to increase their profits and gain political influence; and athletes and sports organizations navigate these political and business interests to achieve their own sporting objectives—winning gold medals.

The 2022 Beijing Winter Olympics saw a record-breaking performance from the Chinese team, winning nine gold medals—four more than they'd ever won before at a Winter Games. But with the Olympics now complete, the political incentives have vanished. As a result, the most recent winter sports season has been disastrous for China on the World Cup circuit with an almost total lack of success and a depleted team across the board. The Olympics last year showed what China can achieve when the political will exists; this year has indicated the opposite.

But there have been plenty of longer-lasting benefits that have resulted from China's 2014 plan to build the largest sports industry in the world. There has been impressive progress in winter sports involvement at the amateur levels, even though it may have fallen short of the "three-hundred-million participants" desired by the government.

In the past, sporting pursuits at the recreational level were seen as a distraction to more important things, such as academic study. But the last decade has seen a steady rise in sporting participation at all levels, notably in areas like running and fitness. This shift towards healthier and more active lifestyles, as well as rising per capita disposable income, has meant an increase in participation. Overall, this trend ticks many boxes, across political, financial and sporting spectrums.

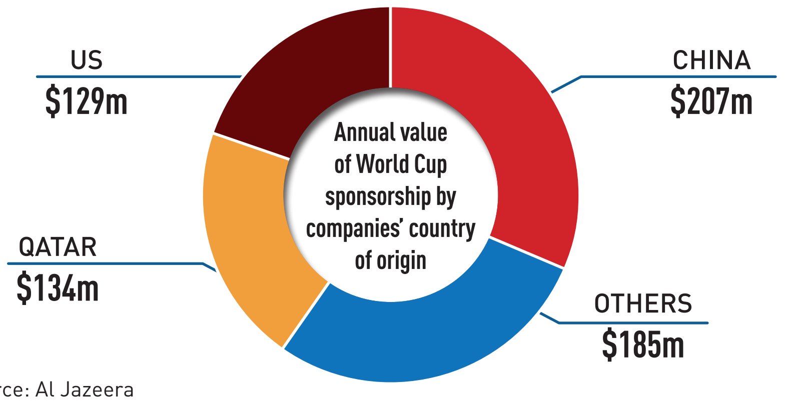
Re-engaging the world

Looking ahead, China's biggest task if its sports industry is to continue to grow, will be to re-engage with international sporting federations, leagues and teams, now that COVID-era restrictions are finally a thing of the past. Where once those organizations were tripping over themselves to get a foothold in the China market, an increasingly uncertain geopolitical environment coupled with an exploration of alternative markets as China remained closed to the world, means that, today, international sporting events in China are few and far between.

Formula 1 now has a bona fide Chinese star in driver Zhou Guanyu, who is as articulate and presentable as he is talented behind the wheel. But as he now enters his second season with the Alfa Romeo team, the Shanghai native remains unable to race in his home country. Throughout the pandemic, China's prohibitive regulations prevented F1 from coming to Shanghai, where it had raced every year from 2004 to 2019. For this season, shortly after China reopened, Shanghai authorities pleaded with F1 to return in April 2023; but the

SPONSORING ABSENCE

Chinese companies were the largest sponsors of the 2022 World Cup in Qatar, despite not sending a team to the tournament



Source: Al Jazeera

feeling in the sport was that too much uncertainty remained surrounding a visit to Shanghai in spring—despite the boost they knew the sport would receive due to Zhou's homecoming.

Meanwhile, the NBA is still struggling to regain its prior dominance in China following a tweet by a Houston Rockets executive in late 2019 that devastated its business here due to a nationalistic backlash. Around the same time, England's Premier League also saw its China broadcasts abruptly canceled after one player's social media post about the treatment of Muslims in Xinjiang angered Chinese officials and netizens alike. The Women's Tennis Association (WTA), which currently has five Chinese women ranked among the world's Top 65 players, has not yet announced when it plans to return to China following the uproar around the temporary disappearance of retired Chinese player Peng Shuai in 2020.

But despite the challenges that increase the risk of engaging with China, the reality is that its market is simply too large for many to ignore. With 20-year-old tennis player Zheng Qinwen the most likely of China's players to become a legitimate successor to two-time Grand Slam winner Li Na, the WTA will simply have to find a way to get its Chinese stars playing in front of their country's adoring fans. And while this year's Asian Cup was moved from China to Qatar by the Asian Football Confederation, the rescheduled Asian Games in Hangzhou will provide China with another chance to show off its inimitable hosting skills to the world. Interestingly, e-sports—a fast-growing area in which China is at the forefront—will become a full medal sport for the first time in Hangzhou.

"My suggestion is just come to China and stay here," Shankai Sports CEO Feng Tao told me recently. "There are 300 million [middle-class] consumers. All the international brands need to consider this."

Domestic brands

Another main reason for optimism about the Chinese sports market is the rise of domestic brands in the sector. Sportswear manufacturer Li-Ning, founded by the former Olympic gymnastics champion Li Ning, was at the forefront of that charge, most notably after Li was chosen to light the flame at the 2008 Olympics—with his company's shares immediately soaring. But another Chinese company, Anta, now leads the way and recently overtook Adidas for second place in China's market share, eagerly eyeing Nike for the top spot. With the domestic sports market continuing to grow, Anta, Li-Ning and others are all poised to benefit—and none of them will mind if the international brands get squeezed out of the market, whether for geopolitical reasons or simply waning brand power in the Middle Kingdom.

There's a long way to go, though, before Chinese sports brands make inroads into the global market. A handful of NBA players have signed lucrative sneaker deals with Chinese shoemakers over the past decade or so, but those have been more about promoting the brand back to a watchful Chinese audience than targeting the NBA's fans in the US and elsewhere. And those same geopolitical reasons that might squeeze foreign brands out of China could conversely prevent Chinese brands from making headway overseas.

Future success?

China's relationship with sports is complex, with sports playing a significant role in the country's national identity and political discourse. While China has achieved considerable international success in certain sports, it has struggled mightily in others, reigniting debate about the best way forward.

Political and financial motivations have often trumped sporting ones—often to the detriment of the sport involved—but if China's next wave of rising sports stars can help to inspire a new generation of sports participants and consumers, China may yet be able to capitalize on some organically developed success.

Events Return: The 2022 Asian Games in Hangzhou was postponed until this year

Formerly a football reporter with Sky Sports in the UK, Mark Dreyer has been covering sports around the world for more than 20 years, including seven Olympic and Paralympic Games. He has worked with a number of media outlets in China and is regularly asked to comment on the Chinese sports industry for BBC, CNBC, Bloomberg, Financial Times and many others. He runs the China Sports Insider website and co-hosts the China Sports Insider Podcast on the Sinica Network. Mark has been based in China since 2007.

***Sporting Superpower: An Insider's View on China's Quest to Be the Best*, a book that examines the parallel threads of sports, business and politics as China bids to build the world's largest sports industry, was published in 2022.**

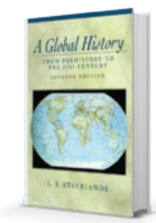
BOOKSHELF

Understanding China

Nelson Wong, Vice Chairman of the Shanghai Centre for RimPac and International Studies, says that reading has enriched his understanding of China and shaped his perspective on a wide range of issues

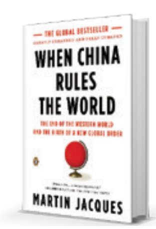
Born and educated in mainland China, Nelson Wong taught English on the mainland for three years before emigrating to Hong Kong in 1986. From a commercial property negotiator, Wong worked his way up and became the vice chair and global chief executive of Vigers in 1993, the then 150-year-old British firm. He established the ACN Worldwide group of companies in 1995 and still chairs this global investment and business consultancy. Wong is also an independent director and audit committee chair of two publically listed companies on Nasdaq.

Which book provides the best insight into the world at large?



A Global History: From Prehistory to the 21st Century by L.S. Stavrianos. This is by far the most valuable history book of our world and is considered as one of the three most important works on humanity of the 20th century. Designed in its later editions for courses in World History and World Civilization, this classic exploration of world history takes an interdisciplinary global (rather than a regional or national) approach—tracing those major forces, movements, and events that have had a worldwide impact. It stresses connections between the past, present and future, emphasizing the question, "What does it mean for us today?"

What China book made a lasting impression on you?

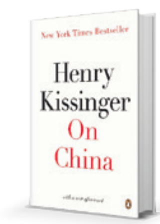


When China Rules the World by Martin Jacques. Amidst widespread critical acclaim—and controversy, Martin Jacques renews his assault on conventional thinking about China's ascendancy, showing how its impact will be as much political and cultural as economic, thereby transforming the world as we know it. People may not agree with the author's conclusion or prediction, the latest edition of the book has included nearly three-hundred pages of new material backed up by statistical data that support his argument of why China will replace the United States as the world's dominant power.

What book are you reading currently?

The Spirit of the Chinese People by Hung-Ming Ku. First published at the beginning of the 20th century, this book is the most important work written by the author for introducing the Chinese culture to the West. Growing up in a Western environment, the author later became well-known for his deep understanding of China and the culture to the extent that he earned himself the reputation of being the "must-meet" master for anyone who wanted to learn about China, making this book still relevant until this day, even for the average Chinese reader.

What China book did you read recently?



On China by Henry Kissinger. In his own words, Henry Kissinger claims to have had the good luck of being able to pursue both the American and Chinese strands of thinking simultaneously as a senior official, as a carrier of messages, and as a scholar. While the book's target and prime readers could be the non-Chinese, it actually proves to be an interesting and worthwhile read for those Chinese who are interested in international relations, global politics, and managing business ventures worldwide. Personally, I have found this book fascinating as it provides a reasonably balanced view about China which I believe is much needed by us Chinese as well.

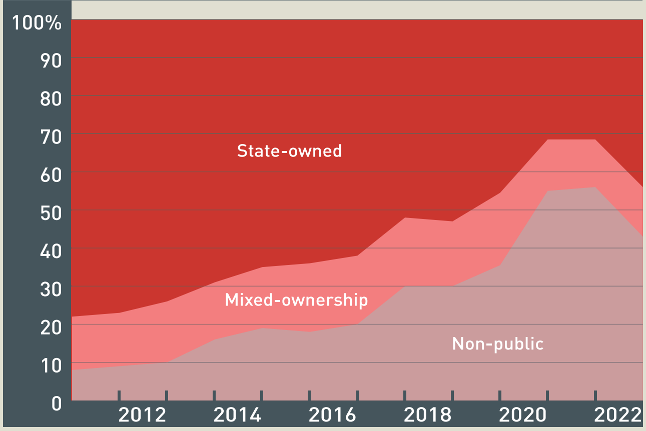
Which China business book do you think is the most underappreciated?

My Country and My People by Lin Yutang. The writer was considered one of China's top scholars of the 20th century, making great academic strides and writing over 35 books in English and Chinese on a variety of topics. Having been born in China but growing up in the US, Lin had a unique perspective and *My Country and My People* demonstrates that. With a very unique angle and insight into Chinese culture he discussed everything about anything you may want to know about the Chinese people. The comprehensiveness of this book makes it a must-read.

KEEPING GOOD COMPANY

One of the main things that sets China's economy apart from economies in the West is the large involvement of the state, and nowhere is this clearer than in the makeup of the country's businesses. The market capitalization of China's state-owned enterprises (SOEs) has dropped overall since 2010, but it remains a significant portion of the value of the country's top 100 listed firms. Here, state-owned is defined as the state controlling over 50% of a company, while mixed ownership varies between 10-50% control, and private enterprise has less than 10% government ownership.

Market Share of China's top 100 listed firms, by ownership



Private Revenue Growth

Private enterprise revenues across all of the country's businesses have grown dramatically in the past two decades since China's accession to the World Trade Organization in 2001. In 2005, there were no Chinese private enterprises in the Fortune 500 list, meaning that those on the list now, currently accounting for just under 20% of the country's aggregate revenues, represent an increase from nothing.

Revenue for Chinese priv. enterprises on Fortune 500 list

2005 - $0

2011 - $104 billion

2021 - $1.7 trillion

Listed vs Not Listed

Outside of China, most of the largest corporate entities are listed on the various global stock exchanges, with the few large companies that remain unlisted usually operating in sectors or disciplines that don't really benefit from a stock market listing. In China, however, most of the country's largest firms remain unlisted, regardless of operating sector, and those that are often list an individual unit rather than the entire organization.

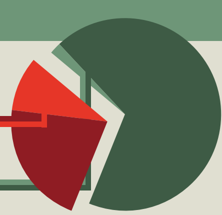
Top 100 Global Companies in 2021

30 Chinese

9 listed (30%)

70 Non-Chinese

68 listed (97%)



State-Owned Enterprises

China has a mix of both locally and centrally administered SOEs, with the 98 controlled by the central government slightly out-earning their local counterparts in 2022.

Local SOE revenues 2022 — ¥33.7tn ($4.77tn)

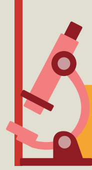
Central SOE revenues 2022 — ¥39.6tn ($5.6tn)

At the same time as being China's highest earners, centrally administered SOEs are playing a growing role in China's innovation and development, with their R&D spending crossing the RMB 1 trillion mark for the first time in 2022.

Centrally-administered SOEs have:

Built 760 national R&D platforms

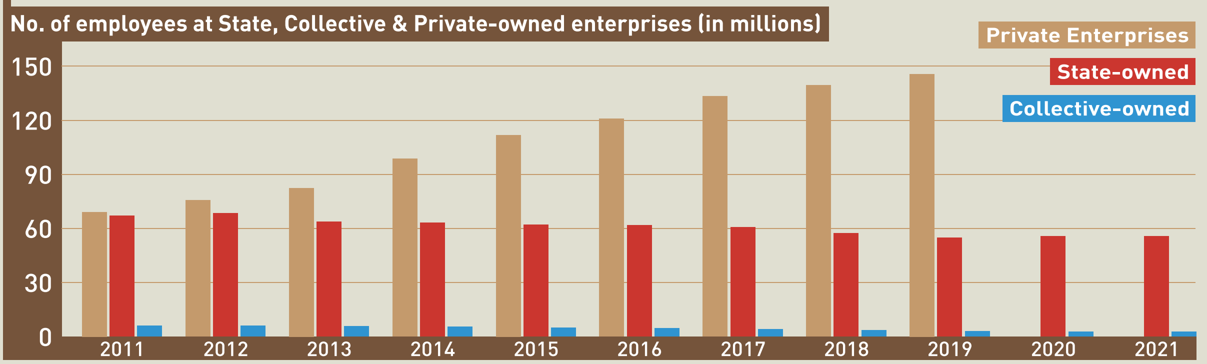
Built 91 key laboratories



Employ 1.045 million professional researchers (1/5th of national total)

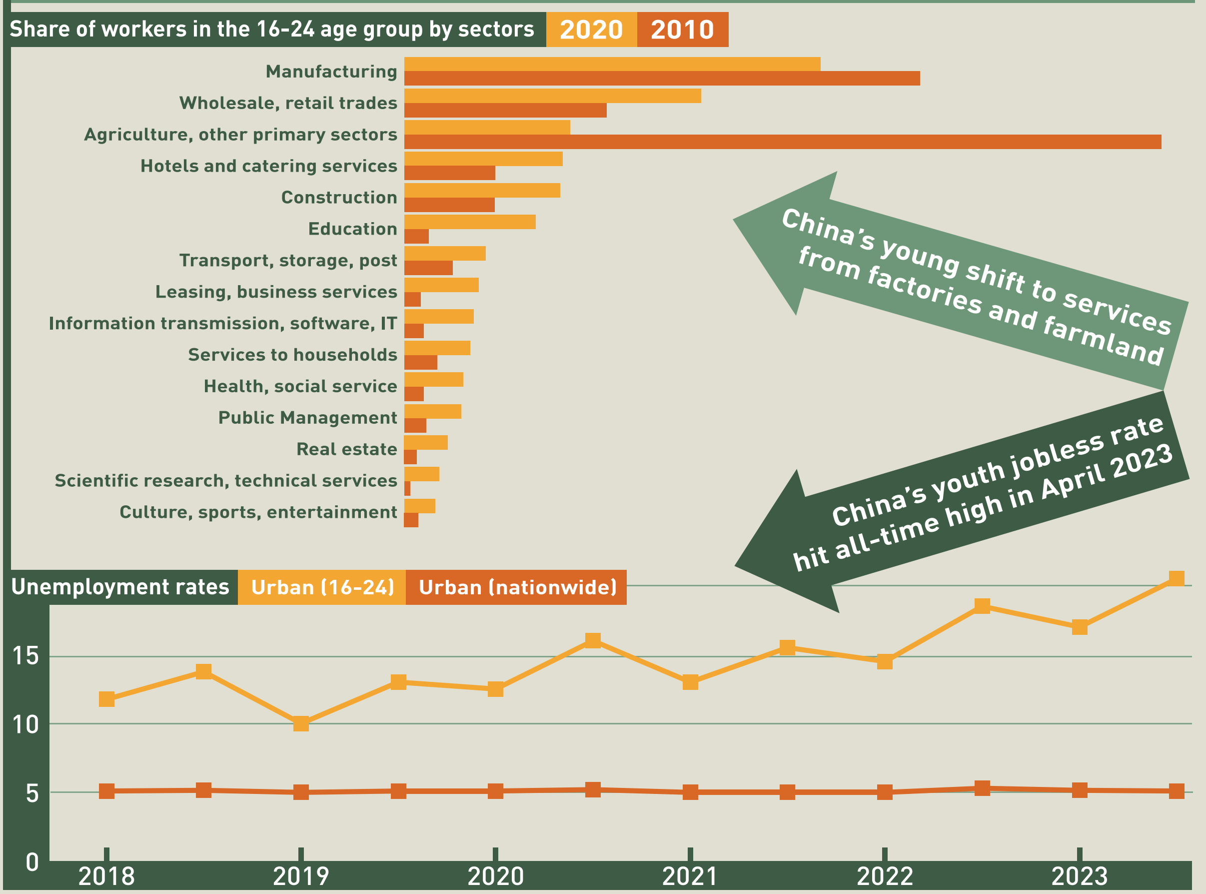
Labor Market

Although SOEs dominate the country's economy in terms of aggregate revenues, the number of jobs available in the public sector is dwarfed by the private sector. Despite the statistics for private sector employment in 2020 and 2021 being unreleased, the growth of employment in non-SOEs showed a clear upward trend over the last 10 years.



Unemployment

For the majority of Chinese workers, employment levels across industries and sectors has remained the same over the past few years, however for the country's urban youth a shift towards more services-oriented roles has resulted in a growing level of unemployment.



Sources: PIIE; Fortune; Global Times; SASAC; China National Bureau of Statistics; China Briefing; Bloomberg

The stats you need to know

Macro

Up and Away

A made-in-China aircraft to rival Boeing and Airbus underwent its maiden commercial flight in May. The COMAC-built C919 carried **128** passengers between Shanghai and Beijing. The manufacturer first started developing the narrow-body airliner in 2008 and the C919 received official certification to fly in September 2022.

Source: *Bloomberg*

Reimbursed in Renminbi

Argentina will start to pay for Chinese imports in yuan rather than dollars, a measure that aims to relieve the country's dwindling dollar reserves. In April, it paid around **$1 billion** of Chinese imports in yuan instead of dollars and going forward around **$790** million of monthly imports will be paid in the Chinese currency.

Source: *Reuters*

Pensions Postponed

A provincial government in eastern China is relaxing the upper age limit for construction workers to help resolve labor shortage issues at construction sites. Now, **10%** of a company's workforce at a construction site can be up to **five** years over the national retirement age for men (**60**), or up to **10** years over for women (**50**).

Source: *Nikkei Asia*

Business

Tightening Belts

Online fashion company Shein raised **$2 billion** in its latest fundraising round that values the company at **$66 billion**, about **a third** less than a year earlier. The online-only retailer, which was founded in China and is now based in Singapore, cut its valuation after tech-company share prices have come down. The company also faces intensifying pressure from US lawmakers on its labor and environmental practices.

Source: *The Wall Street Journal*

Liabilities Abound

China Evergrande Group has announced that its overdue debt, unpaid bills, and payments involved in lawsuits have piled up to nearly **¥900 billion** (**$127 billion**), revealing the depth of the debt and legal woes the mainland Chinese developer faces amid its restructuring struggle.

Source: *SCMP*

Electric Propulsion

Rapidly-growing EV manufacturer BYD sold **119,603** fully electric vehicles in the month of May as it seeks to knock US heavyweight Tesla off its perch as the world's biggest seller of EVs. The May number took BYD's annualized sales rate to **1.4 million** NEVs slightly higher than Tesla's 2022 total sales of **1.3 million**. The May sales numbers represent a **124%** year-on-year sales growth.

Source: *thedriven.io*

Barbecue Business

Banks in the newly-famous town of Zibo in Shandong province, recently dubbed the "outdoor barbecue capital," are offering loans of up to **¥1 million** (**$140,000**) to restaurants and suppliers in a bid to capitalize on the craze that is sweeping the country.

Source: *SCMP*

Technology

Patent Payments

Huawei Technologies made **$560 million** in revenue from its patent licensing deals in 2022, disclosing for the first time its annual income from that part of the business. The Shenzhen-based company has collected slightly more in royalties than it paid out over the past two years because of its falling smartphone sales.

Source: *Bloomberg*

AI Investments

Chinese search giant Baidu is setting up a venture capital fund of **¥1 billion** (**$145 million**) to back start-ups focused on content generated by artificial intelligence applications. The company will also launch a competition for developers to build applications off its ERNIE Large Language Model or integrate the model into their existing products.

Source: *Reuters*

Links in the Chain

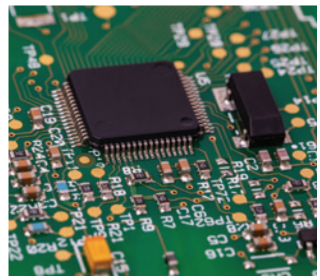
China is aiming to train **500,000** blockchain professionals after the launch of its national blockchain research centre, as its work to make the technology a central part of the digital economy continues amid a strict ban on cryptocurrencies. The research centre, located in Beijing and approved by the Ministry of Science and Technology, will work with universities, research institutes and companies to train workers and support China's digital economy.

Source: *SCMP*

Chips Down

China's chip imports continued to slump in the first four months of 2023 amid a global semiconductor industry downturn and continued value chain adjustments in the face of ongoing US restrictions on the export of advanced chips and semiconductor equipment to the country. China imported **146.8 billion** Integrated Circuits between January and April, down **21.1%** from the same period last year.

Source: *Bloomberg*



Consumer

Delivery Development

Chinese food delivery company Meituan reported a **26.7%** rise in first-quarter revenue from a year ago, as demand surged after China's reopening from COVID-19 restrictions. The Beijing-based firm said its total revenue was **¥58.62 billion** (**$8.3 billion**) for the three months to end-March.

Source: *Reuters*

Carnival Atmosphere

China's theme park industry has recovered well with May Day holiday sales proving strong. Tickets for both Shanghai Disneyland and Universal Studios Beijing almost sold out ahead of the holiday. Some **92,000** visitors arrived at Atlantis Sanya, a water park in southern Hainan Province during the so-called Golden Week, more than **four** times the number in the same period last year.

Source: *SCMP*

Consumer Concerns

China's largest supermarket operators are struggling to recover from the pandemic as weakening demand continues to drag on sales. **Seven** out of the **14** publicly traded supermarket chains reported year-on-year declines in first-quarter sales, according to their financial reports.

Source: *Nikkei Asia*

CKGSB 长江商学院 CHEUNG KONG GRADUATE SCHOOL OF BUSINESS

Upcoming Programs

Become a part of a global ecosystem that fosters a new generation of economic disruption with a renewed and enhanced emphasis on global responsibility, social purpose and long-term perspective.

Global Unicorn Program – Seoul

Sept 12-15, 2023

In partnership with MAEKYUNG MEDIA GROUP, SEOUL METROPOLITAN GOVERNMENT, sba Seoul Business Agency

Despite its relatively small population, South Korea has managed to produce over 20 unicorn companies, with 400 future unicorns valued between $100m and $1b. This program will help you decode South Korea's secrets to nurturing unicorns and allow your organization to leverage a global ecosystem of talent, investment and markets. Apart from transformative learning driven by world-class scholars, this program will also bring insights from founders of Korean unicorns as well as high potential startups. As a participant, you also gain exclusive access to Try Everything, Korea's biggest global unicorn forum.

Program manager: Ms. Madi YOO madiyoo@ckgsb.edu.cn

https://english.ckgsb.edu.cn/program/seoul/

Emerging Tech Management Week – Silicon Valley

Nov 5-11,2023

In partnership with Berkeley Engineering

A 7-day program in UC Berkeley jointly developed and delivered by CKGSB and UC Berkeley College of Engineering to help you capitalize on opportunities brought by new technologies that are shaping the future business landscape. This timely program will leverage the complementary strengths of the two institutions to help high-potential start-up leaders, investors and techno-centric executives to individually and collectively leverage emerging technologies in order to establish, grow or disrupt their businesses.

Program manager: Ms. Renee RONG xrong-bp@ckgsb.edu.cn

https://english.ckgsb.edu.cn/program/silicon-valley/

Global Unicorn Program in Luxury Management – Milan

Nov 13-16, 2023

In partnership with SDA Bocconi SCHOOL OF MANAGEMENT

With a special focus on fashion, food, furniture and luxury management, this program takes you to the world's fashion capital, Milan, and aims to help you understand the trends in the luxury market, fine-tune your strategies to elevate your brand, and grasp opportunities in the growing luxury consumption markets.

Program manager: Ms. Jennifer WANG jenniferwang@ckgsb.edu.cn

https://english.ckgsb.edu.cn/program/milan/

Global Unicorn Program: Frontiers in Social Innovation – Stanford

Dec 11-15, 2023

In partnership with Stanford | Center for Professional Development

This 5-day program will equip you with the tools, insights, and skills necessary to lead a new generation of unicorn companies with a long-term, socially-minded perspective. Throughout the dynamic program, you will have the opportunity to engage in cross-cultural interactive discussions, work on real-world projects, and collaborate with peers from diverse backgrounds. The program aims to foster the development of leaders equipped to drive meaningful change and impact on the global community and build a strong global network of socially responsible innovators focused on purposeful change and long-term sustainability of business and society.

Program manager: Ms. Renee RONG xrong-bp@ckgsb.edu.cn

https://english.ckgsb.edu.cn/program/stanford/